THE LEGAL SYSTEM OF DEEP SEA BED EXPLOITATION

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To my parents and
my uncle

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ABSTRACT

The legal dispute over the system of deep sea bed exploitation was one of the critical and most controversial problems that faced the Third United Nations Conference on the Law of the Sea. In spite of that, the 1982 Convention on the Law of the Sea declared the deep sea bed and its resources to be the common heritage of mankind and its exploitation exclusively for the benefit of mankind under an international regime. Some states have enacted unilateral legislation for deep sea bed mining providing a legal framework for their nationals to exploit the resources of the deep sea bed on the basis of freedom of high seas.

The objective of this thesis is to attempt an examination of one of the important current problems of the international law of the sea, that is the legal system of deep sea bed resources exploitation.

This study contains four chapters.

Chapter one presents the concept of the deep sea bed as a "common heritage of mankind." It provides an historical background beginning from Maltese Ambassador Arvid Pardo's proposal, and through the General Assembly resolutions to the United Nations Convention on the law of the sea. It will also consider the issue of the legal status of the deep sea bed as one of the important questions which had been debated since the emergence of the new concept of the common heritage of mankind.

Chapter two analyses the system of exploitation and its essential elements such as transfer of technology, production control...etc, incorporated in the United Nations Convention on the Law of the Sea with reference to its provisions of Part XI and Annex III.

Chapter three examines the International Sea-Bed Authority (ISA). This Authority is endowed with a significant role to play in implementing

the system of exploitation embodied in the Convention, through managing, organizing and controlling the deep sea bed activities. More specifically the chapter discusses the functions and the structure of the Authority, and examines the system of deep sea bed disputes settlement.

Chapter four looks at the alternative regime of unilateral legislation. It comprises five sections. Section one deals with the common characteristics of unilateral legislation. Section two discusses the area of application of the unilateral legislation. Section three outlines with the liabilities under this regime such as financial terms, transfer of technology, diligence requirement...etc. Section four discusses the issue of the unilateral legislation and international law. Finally, section five focusses on examining the Reciprocating States Agreements (RSA).

The study concludes that only an agreed international legal system can secure and protect the benefits of mankind. Thus a compromise to resolve the basic difficulties and reconcile the various conflicting interests involved should be reached.

TABLE OF ABBREVIATIONS

A.D.I.	Academie de Droit International
A.F.D.I.	Annuaire Francais de Droit International
A.J.I.L.	American Journal of International Law
A.S.I.L. Proc.	Proceedings of the American Society of International Law
Am.U.L. Rev.	American University Law Review
Area	Sea bed and Ocean Floor and Subsoil Thereof Beyond the Limits of National Jurisdiction
Authority	International Sea-Bed Authority
B.L.D.	Black's Law Dictionary
Boston.U.I.L.J.	Boston University International Law Journal
B.Y.I.L.	British Yearbook of International Law
Cal.W.I.L.	California Western of International Law
Cam L.J.	Cambridge Law Journal
Can B.R.	Canadian Bar Review
Can Y.B.I.L.	Canadian Yearbook of International Law
Convention	The 1982 Convention on the Law of the

	Sea
For.Aff.	Foreign Affairs
Harvard I.L.J.	Harvard International Law Journal
I.C.L.Q.	International and Comparative Law Quarterly
I.L.C. Rep.	International Law Commission Reports
I.L.C. Yearbook	International Law Commission Yearbook
I.L.M.	International Legal Materials
ICJ	International Court of Justice
ICNT	Informal Composite Negotiating Text
ILC	International Law Commission
Indian J.I.L.	Indian Journal of International Law
Int'l.Law.	International Lawyer
ISNT	Informal Single Negotiating Text
Italian Y.I.L.	Italian Yearbook of International Law
J.Mar.Law & Com.	Journal of Maritime Law and Commerce
J.W.T.L.	Journal of World Trade Law
Ll.M.C.L.Q.	Lloyd's Maritime and Commercial Law Quarterly
L.Sea.Inst. Proc.	Proceedings of the Annual Conference of the Law of the Sea Institute

LOSC	1982 Convention on the Law of the Sea
Lou.L.Rev.	Louisiana Law Review
N.L.R.	Natural Resources Lawyer
N.R.F.	Natural Resources Forum
Netherlands I.L.R.	Netherlands International Law Review
Netherlands Y.B.I.L.	Netherlands Yearbook of International Law
O.D.I.L.A.	Ocean Development and International Law Journal
Off. Rec.	Official Records
Oreg.L.R.	Oregon Law Review
PIP	Preparatory Investments Protection
R.G.D.I.P.	Revue General de Droit International Public
Res.	Resolution
RSNT	Revised Single Negotiating Text
San Diego L. Rev.	San Diego Law Review
Syracuse J.I.L. & Com.	Syracuse Journal of International Law and Commerce
Texas I.L.F.	Texas International Law Forum
Texas I.L.J.	Texas International Law Journal
Tulsa L.J.	Tulsa Law Journal
U.Day.L. Rev.	University of Dayton Law Review

INTRODUCTION

Since Pardo's 1967 question of which principle should govern the deep sea bed and who has the right to exploit its resources in 1967, the issue has been critical and has long attracted the attention of those involved in matters relative to the law of the sea up to the present time. It has received considerable attention from international forum like the United Nations and legal writers, and constituted a major concern of the land-based producers which fear the adverse effects on their economies because of any commercial production of the deep sea bed resources.

Moreover, because of the strategic and economic importance of the deep sea bed and its resources, the issue received considerably concern. The economic significance of the sea has increased when natural resources of different kinds have been found thereto in prodigious quantities. Manganese nodules, which contain significantly large amounts of nickel, copper, cobalt and manganese, cover around 25 percent of the ocean floor, a weight evaluated at about 600 billions tons which is enough for approximatively 400 thousand years.[1]

Modern technology made the exploitation of the deep sea bed resources feasible. In fact, advanced ocean mining technology has conquered the seas and it has become clear that the resources of the deep sea bed can be progressively exploited if not fully recovered for economic purposes more especially.

Marine resources had long been regarded as abundant resources and therefore, free for all. Thus, the principle of abundance governed the exploitation activity in the seas. It was only after world war II, and due to

[1] N. Shaw, International Law, 272 (1977).

the advances in marine technology that, it became possible to exploit some parts of the ocean. States promulgated different laws to appropriate some areas of the sea. In this connection, Truman in 1945 issued a presidential proclamation to extend the national jurisdiction on the so-called Continental Shelf granting the United States sovereign rights for the purpose of exploration and exploitation of the living and non-living resources. Many countries from Latin America and the Arab Gulf followed suit.[2]

To depress the effects of crawling national jurisdiction, which is due to dramatic development of technology, the importance of deep sea bed and its resources has come before the United Nations General Assembly When Ambassador Arvid Pardo submitted a proposal in 1967 affirming the areas beyond the limits of national jurisdiction and its resources being the common heritage of mankind. In 1969, the United Nations General Assembly intervened with a resolution of 15 December placing a moratorium on deep sea bed mining. One year later, 1970, the United Nations General Assembly intercedes a Declaration of Principles of Which it declared that the deep sea bed and its resources are the common heritage of mankind. It further stated that the Area and its resources shall not be subject to appropriation and no sovereignty or sovereign rights will be claimed by any state or person over any part thereof.

Since the Caracas Session in 1974, participants from different socio-economic systems have had disputes over the contingent deep sea bed access of private entities and the International Sea-Bed Authority. In other words, during UNCLOS III, participant states made a stand as to who would exploit the deep sea bed resources and under which principle should the resources be exploited.

Reaching an agreement between the developed states, which have

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[2] W. Monton, The Continental Shelf, 9 (1952).

made efforts to call upon the extension of the freedom of the high seas principle to the exploitation of the resources of the Area on the one hand, and developing states which have tried to put into effect the common heritage of mankind principle in order to protect the interests of mankind on the other, was the most difficult task for the Third United Nations Conference on the Law of the Sea negotiators and a major point of controversy among participants.

From the beginning of the negotiations, delegates to the Third Conference on the Law of the Sea strongly held dissimilar views on the international legal regime which govern the deep sea bed mining. The outstanding issues of disagreement in particular were centered on the system of exploitation, the legal status of the deep sea bed and the structure of the International Sea-Bed Authority.

Developing countries advocated the common heritage of mankind as a legal principle and binding upon all states and that exploitation of the resources will be carried out on a common basis rather than on individual grounds. They strongly supported a powerful Authority as the sole representative of mankind. This Authority will exclusively have rights to manage and use the resources of the Area.

However, developed countries rejected the common heritage concept as being vague, imprecise and having no legal content. Therefore, it is not an appropriate principle to be applicable as a legal status of the Area and its resources. Further developed states opposed the creation of an Authority which enjoys discretionary powers to adopt rules to regulate activities in the deep sea bed. Instead, they favoured an Authority which only grants licenses to the miners and adopt measures for the protection of the marine environment. This impasse constituted a real obstacle for the establishment of an agreed international regime between those countries.

Despite the fact that awkwardness made negotiations circuitous because of the divergence in the ideological and economic grounds of the states participants, the efforts of the participants were fruitful in reaching a compromise between developed and developing countries. The compromise was a parallel access to the Area and its resources known as the "parallel system" which was to a great extent worked out by the developed states. Under this system, the Authority and state parties to the Convention and their entities would conduct activities of exploration and exploitation side by side in the Area.

However, when the Conference reached a final decision to adopt the Convention on the Law of the Sea, some developed countries showed dissatisfaction with Part XI of the Convention, which envisaged the parallel system of deep sea bed exploitation. These countries felt obliged to take a different route and got under way with unilateral legislation embodying a different system of mining the deep sea bed and its resources, in order to provide a legal regime under which their nationals explore deep sea bed and exploit its resources.

The question which we are confronted with, here, is, what is the legal system of deep sea bed exploitation?. Although such a study is very broad for the aim of this dissertation in that every point of it merits a separate study, it is the purpose of this work to consider this issue through analyzing and examining the legal system of deep sea bed exploitation.

The present study consists of four chapters.

Chapter one deals with the concept of deep sea bed (referred to as the "Area" or the "common heritage of mankind"). The purpose of this chapter is to provide an historical background on the development of the concept which went through many stages until the adoption of the United Nations Convention on the Law of the Sea. Owing to the relation which

exists between the status of the Area and the system of exploitation incorporated in each regime, this chapter will also consider the issue of the legal status of the deep sea bed as one of the important questions yet to be resolved in international doctrine and legal writings.

Chapter two is concerned with the system of exploitation as laid down in the United Nations Convention regime. The main purpose of this chapter is to analyses the major elements of the system in order to demonstrate how the resources of the Area should be exploited. It deals with the core of the system, the "parallel system" as the basis on which the Authority and private entities carry out activities of exploration and exploitation of the deep sea bed and its resources. Financial terms, transfer of technology, production limitation control, pioneer investment and review conference are discussed in this chapter. Concerning the issue of pioneer investment, attention is focussed on the problem of overlapping claims for mining sites and the difficulties which faced the Preparatory Commission on the International Sea-Bed Authority and the International Tribunal on the Law of the Sea to find an acceptable solution to this problem.

Chapter three is devoted to discussing the mechanism of the International Sea-Bed Authority as the sole representative of mankind in carrying out deep sea bed mining activities. It discusses the important functions of the International Sea-Bed Authority and its organs, their composition and decision-making system. Moreover, and because of the indirect relation between the Authority and the Sea-Bed Disputes Chamber, it also examines the system of settlement of sea bed disputes.

Chapter four aims to analyse the system incorporated in unilateral legislation in order to throw light on how this system differs from the system embodied in the Convention. Section one, two and three outline the common features of the domestic legislation. In section four, the issue of

unilateral legislation and international law will be examined. The final section deals with the reciprocating states agreements under which unilateral legislation are co-ordinated and creating the so-called "reciprocating states regime."

The literature concerning studies in the deep sea bed mining is voluminous. Nevertheless, different sources were used in this work:

(I) Series of Official Records of the Third United Nations Conference on the Law of the Sea; (II) the United Nations Publications; (III) International Legal Materials; (IV) Reports of the International Law Commission, (V) Reports of the Preparatory Commission on the International Sea-Bed Authority and the International Tribunal on the Law of the Sea and (VI) the legal writings of international lawyers.

CHAPTER ONE

THE CONCEPT OF THE DEEP SEA BED

The deep sea bed (Area) is defined as the sea bed and ocean floor and subsoil thereof beyond the limits of national jurisdiction (LOSC. art. 1(1). It is also referred to as the "common heritage of mankind."

The theory of the "common heritage of mankind" was first enunciated by the President of the United States, Lyndon B. Johnson in 1966. He said:

> Under no circumstances, we believe, must we ever allow the prospects of rich harvests and mineral wealth to create a new form of colonial competition among the maritime nations, we must be careful to avoid a race to grab and to hold the lands under the high seas. We must ensure that the deep seas and oceans bottoms are, and remain, the legacy of all human beings.[1]

In the following year, on August 17, 1967, the first significant recognition of the economic and political importance of the deep sea bed was made by the Ambassador of Malta, Dr Arvid Pardo. In a famous speech before the General Assembly of the United Nations, he initiated the discussion on the deep sea bed issue, declaring that the deep sea bed should be considered as "common heritage of mankind" and not as "freedom of high seas." He also suggested that the deep sea bed should not be subject to national appropriation. He urged the establishment of an international agency to serve as a trustee for all mankind.

Ever since Ambassador Pardo raised the importance of the deep sea

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[1] Quoted in L. Brooke, The Current Status of Deep Seabed Mining, (1983-84) 24 Virg.J.I.L., p.371.

bed and its resources and recognized that the common heritage of mankind as the only comprehensive principle for the sea bed and ocean floor beyond national jurisdiction, the "common heritage of mankind" concept has been reflected in numerous resolutions in particular, the Declaration of Principles. In 1969, a resolution was passed by the General Assembly establishing a moratorium on deep sea bed mining recognizing the common interests of mankind. A year later, in 1970, the General Assembly adopted a Declaration of Principles announcing the formulation of an international regime administered by an international agency.

In spite of support by a great number of states for the Declaration of Principles, the members of the United Nations disagreed on the exact meaning and the legal content of the "common heritage of mankind." One lawyer stated that,

> common heritage of mankind, no matter how well motivated, in a legally binding document...carries no clear juridical connotation but belongs to the realm of politics, philosophy or morality and not law.[2]

Developed states viewed that the meaning of the concept is ambiguous and subject to legal problems for the future regime of the deep sea bed. Mr Oda of Japan believed that the concept of common heritage of mankind "might give rise to unnecessary confusion in the establishment of a legal regime applicable to the Area, and would therefore be undesirable."[3]

Moreover, developed states maintained that the deep sea bed exploitation is a freedom of high seas, which has been incorporated in the

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[2] S. Grove, The Concept of Common Heritage of Mankind a Political, Moral, or Legal Innovation, 9 San Diego L.Rev., p.402.

[3] UN. Doc. A.AC.138.SC.1.SR. 14 August 1969, p.24.

reciprocating states agreements and unilateral legislation. Developing states, especially the Group of 77 rejected both concepts: "freedom of high seas" and *"res nullius"*, and endorsed the "common heritage of mankind" principle. With respect to the legal status of the deep sea bed, the Group of 77 stated that the freedom of high seas does not apply to the exploitation of the sea bed areas beyond the limits of national jurisdiction, because when the common heritage of mankind principle emerged the exploitation of the resources of the deep sea bed was beyond the capacity of states. The Group went on to argue that even on the assumption that the freedom of high seas principle would be applicable to the exploitation activity, "it would certainly have ceased to be applicable in consequence of the Declaration of Principles" which is an event "reflecting a conviction incompatible with "*opinio juris sive necessitatis.*" The Group added that,

> there is an obvious difference in legal status as regards the superjacent waters of the area and as regards the sea bed, subsoil and resources of the area. Whereas the legal status of the superjacent waters is that of *res communis*, the legal nature of the sea bed, subsoil and resources thereof is that of an indivisible and inalienable common heritage of mankind.[4]

The concept of the common heritage of mankind was finally confirmed as a legal status for the deep sea bed in the Final Draft of the United Nations Convention on the Law of the Sea. Accordingly, the Area "common heritage of mankind" shall not be subject either to sovereign claims or appropriation. All states, have the right to administer and regulate the activities in the Area under the control of an international agency, and share the benefits gained from the mining of the resources on an equitable basis. The concept of the common heritage of mankind went through many developments as a legal principle applicable to the deep sea

[4] UNCLOS III, Off. Rec., Vol.XI, pp.80-82.

bed and its resources.

This chapter will examine the historic development of the concept of deep sea bed and discuss its legal status according to the principles which have been applied to it.

Section 1. History of the Concept of Deep Sea Bed

The concept of the common heritage of mankind was the basis on which the future international regime of exploitation of the resources of the deep sea bed was to be established.

1.1.The Maltese Proposal

In a verbal note addressed by the Permanent Mission of Malta to the United Nations to the Secretary General on August 17, 1967, Arvid Pardo requested the inclusion of an item entitled "Declaration and Treaty Concerning the Reservation Exclusively for Peaceful Purposes of the Seabed and of the Ocean Floor, Underlying the Seas Beyond the Limits of Present National Jurisdiction, and the Use of their Resources in the Interests of Mankind"[5] in the twenty-second Session of the General Assembly. The reasons which explained why Malta proposed that the item calling for the establishment of a treaty on the question of the deep sea bed should be taken into consideration, are set out in the accompanying Memorandum.

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[5] U.N. Doc. A.6695, 18 August 1967.

In the Memorandum attached to the verbal note, Malta expressed that the sea bed and ocean floor beyond national jurisdiction had not been appropriated so far because of their technological unfeasibility to be used for economic exploitation of their resources. However, the technological progress of new techniques reached by the developed countries might change the situation. Gradually, jurisdiction on the sea bed and ocean floor could extend beyond the limits of national jurisdiction and be subjected to national appropriation which would consequently lead to the militarization of the ocean floor and depletion of its resources for the national benefit by the developed countries. Therefore, Malta sought immediate steps to establish a treaty declaring that the seabed and ocean floor is a "common heritage of mankind" and not subject to national appropriation; should be reserved exclusively for peaceful purposes; the exploitation of the sea bed should be carried out to safeguard the interests of mankind and the benefit derived from such exploitation must be used for promoting the development of the poor countries.

Malta felt that the time had come to declare the sea bed and ocean floor a "common heritage of mankind" and suggested that, immediate steps should be taken to draft a treaty embodying, inter alia, the following principles:

1. The sea bed and the ocean floor, underlying the seas beyond the limits of present national jurisdiction, are not subject to national appropriation in any manner whatsoever.

2. The exploration of the sea bed and of the ocean floor, underlying the seas beyond the limits of present national jurisdiction, shall be undertaken in a manner consistent with the principles and purposes of the Charter of the United Nations.

3. The use of the sea bed and of the ocean floor, underlying the seas

beyond the limits of present national jurisdiction, and their economic exploitation shall be undertaken with the aim of safeguarding the interests of mankind. The net financial benefits derived from the use and exploitation of the sea bed and of the ocean floor shall be used primarily to promote the development of poor countries.

4. The sea bed and the ocean floor, underlying the seas beyond the limits of present national jurisdiction, shall be reserved exclusively for peaceful purposes in perpetuity.[6]

When the request was accepted, Dr Arvid Pardo was invited on November 1, 1967, to introduce the item before the First Committee of the General Assembly. He made a historic speech of over three hours, referring to the rapid progress of technology made by advanced countries which had made it possible to exploit the resources of the sea bed. He pointed out that the Area was also of vital strategic importance, where an effective exploitation for military and economic purposes could be feasible because of new technology.

Pardo's concern was to end national claims to appropriate the sea bed and to have its resources exploited under the aegis of an effective international agency which would not act as a sovereign, but as a trustee for the whole of mankind. Pardo stressed in his speech the establishment of an effective international regime under which the international community would be able to avoid the dangers of national claims to appropriate the sea bed and ocean floor. Lastly, he called upon the General Assembly to take action to declare the sea bed and ocean floor the "common heritage of mankind" to be used and exploited exclusively for peaceful purposes and for the benefit of mankind, taking into account the interests and needs of developing countries. Ultimately, due to the Maltese

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[6] Note verbal, dated 17 August 1967 from the Permanent Mission of Malta to the United Nations, addressed to the Secretary General. Ibid, pp.2-3.

initiative, the General Assembly reached a compromise after an extensive debate in the First Committee. It adopted the Resolution 2340 (XXIL) of 18 December 1967,[7] and created an Ad-Hoc Committee composed of thirty five members to study the peaceful uses of the sea bed and ocean floor beyond the limits of national jurisdiction. At the following session, the General Assembly reconstituted the Ad-Hoc Committee into a Standing Seabed Committee entitled "The Committee on the Peaceful Uses of the Seabed and the Ocean Floor Beyond the Limits of National Jurisdiction" [hereinafter referred to as "the Sea-Bed Committee"]. The Sea-Bed Committee was enlarged from thirty five to fourthy two in 1968, in 1970 to around eighty six, and in 1971 it was enlarged to ninthy one members. This Committee was charged with making studies and recommendations on the reservation exclusively for peaceful purposes of the sea bed and ocean floor as well as for the legal and economic issues related to the exploitation of the sea bed.

Clearly, the Maltese proposal was effective and almost universally supported because it was concerned with the hopes and interests of the international community.

1.2. UN General Assembly Resolutions

1. The Moratorium Resolution

The most controversial endeavour to enforce negotiations on the question of the deep sea bed before 1970 was the promulgation of the Moratorium Resolution.[8] It was of particular concern to the

[7] G.A. Res. 2340 (XXIL), 18 December 1967.

[8] G.A. Res. 2574 (XXIV), 15 December 1969, in (1970) 9 I.L.M., pp.422-23.

international community to establish a moratorium on any commercial activity of deep sea bed resources until the establishment of an international regime. Because of the belief that the advanced technology realized by developed countries might enable those countries to exploit the resources of the common heritage of mankind before an agreed international regime is established, the United Nations General Assembly adopted a resolution on December 15, 1969 by a vote of sixty two in favour to twenty eight against, with twenty eight abstention. This resolution declared that, pending the establishment of an international regime:

1. States and persons, physical or juridical, are bound to refrain from all activities of exploitation of the resources of the area of the sea bed and ocean floor, beyond the limits of national jurisdiction.

2. No claim to any part of that area or its resources shall be recognized.

The Moratorium Resolution was faced by a vigorous opposition from a number of technologically advanced countries. For instance, the United States did not want the freedom to explore and exploit the resources of the sea bed to be restricted by recommendations which have no legal binding. This position was confirmed by the statement by Mr Stenvenson, the Legal Adviser of the United States Department of States:

> The resolution is recommendatory and not obligatory. The United States is, therefore, not legally bound by it. The United States is, however required to give good faith consideration to the resolution in determining its policies.

He added that,

> the United States considers the recommendations contained in

> the Moratorium Resolution an important statement to be given weight in the determination of United States policy. The United States is not, however, obligated to implement the recommendations and has made clear its opposition to the concept.[9]

The United Kingdom viewed that they do not believe that the General Assembly by virtue of its recommendations purports to modify existing international law.[10]

This resolution was passed in the First Committee by fifty two votes to twenty seven, with thirty five abstention. The aim of the resolution was to endorse the principle of the common heritage of mankind by halting any attempt to exploit the resources of the sea bed and ocean floor until an international regime is established. In other words, the Moratorium Resolution sought from the developed countries to stop enhancing their deep sea bed technology and techniques until the international community established a treaty on the regime of the sea bed and ocean floor.

The developing countries have therefore, attached a great aspiration and importance to this resolution. They reiterated that the sea bed and ocean floor beyond national jurisdiction should be regarded as a "common heritage of mankind" and its resources should be exploited for the benefit of the whole mankind. In expressing the views of the countries which supported the concept of the "common heritage of mankind" and which voted in favour of the Moratorium Resolution, Mr W. Pinto, the representative of Sri Lanka stated that,

> In our view, it was a solemn expression of the opinion held by a substantial majority of the members of the United Nations that there existed a moral obligation on all countries, developed and

9 Quoted in E. D. Brown, The Area Beyond the Limits of National Jurisdiction, (1986) Vol.II, p.II.222.

10 UN. Doc. A.C.1.PV. 1709 (1969).

> developing, to cooperate with one another to achieve a rational and equitable regime for the sea bed, and not to take any action in the interim period which would have the effect of prejudicing that endeavour. A part from this, my delegation felt that it could be of real practical assistance exploitation and in building up pressure for early agreement on an international regime, we saw it as addressed primarily to the private sector in the developed countries who would thus be placed on notice that the rules of exploitation of the deep sea bed had not yet been worked out. The private investor being well-known to be a prudent and cautious individual, with plenty of alternative and lucrative investments on dry land as it were, might be slow thereafter to invest in ventures operating on the deep ocean floor while the law remained in a state of flux.[11]

Thus, the Moratorium Resolution did not create any sense of binding rules upon the developed states because the dispute was completely controversial over the character of the regime which governs the sea bed and ocean floor. However, for the developing countries the resolution was an important step towards protecting the common heritage of mankind.

2. Declaration of Principles

The Declaration of Principles 2749 (XXV), which embodied six preambular and fifteen paragraphs, was adopted by the General Assembly by votes, one hundered eight in favour, none against and fourteen abstention. While there was a general agreement on the concept of the common heritage of mankind between developing and developed states, these countries disputed the exact meaning of this principle. For the developed states, the concept was without any legal content. However, developing states viewed that the concept has a legal basis.

In response to the request of the twenty fourth session of the General

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[11] Quoted in P. S. Rao, The Public Order of Ocean Resources, (1975) p.85.

Assembly, the Legal Sub-Committee of the Sea-Bed Committee held a series of formal and informal meetings held from March to August 1970 which, failed to reach a final draft Declaration of Principles. However, the Chairman of the Sea-Bed Committee, Mr F. Amerasinghe, made an enormous effort to reach the draft Declaration of Principles in relation with the issue of the sea bed and ocean floor. After extensive negotiations and debates between the members, a recommendation for a draft of general principles was passed to the General Assembly by the Sea-Bed Committee. On December 17, 1970, the General Assembly accepted the recommendation and adopted the resolution 2749 (XXV) entitled "Declaration of Principles Governing the Seabed and Ocean Floor, and the Subsoil Thereof, Beyond the Limits of National Jurisdiction."[12]

This resolution affirmed that the legal regime of high seas is not applicable to the exploration of the deep sea bed and the exploitation of its resources. The resolution declared that the deep sea bed and its resources are the "common heritage of mankind"; the deep sea bed (Area) is not subject to appropriation and no state shall claim or exercise sovereignty or sovereign rights over it and its resources; exploration and exploitation activities shall be governed by an international regime to be established; the Area shall be reserved exclusively for peaceful purposes and the activities shall be conducted for the benefit of the whole mankind, irrespective of the geographical location of the states, taking into account the interests of the developing countries.

The Declaration of Principles indicates that the legal regime of the deep sea bed is the "common heritage of mankind" and its exploitation shall be carried out for the benefit of mankind. The Declaration was regarded as a milestone for the future international legal regime of the

[12] G.A. Res. 2749 (XXV), 17 December 1970, in (1971) 10 I.L.M., pp.220-23.

deep sea bed, under which the Area is not subject to appropriation or any national claims. Such actions would be regarded as illegal. The Declaration of Principles instigated many legal questions. Among them: does the Declaration create a new international law principle to govern the sea bed of high seas?. On what basis, would the exploitation and distribution of the mineral resources be realized?. Developed and developing countries had different views and opinions. Developed states confirmed that the Declaration does not create any principles of international law and therefore, are considered as recommendations. On the other hand, developing states affirmed that the Declaration raises the inception of a new regulatory measure and a principle of international law. Thus, any exploitation of the resources outside the regime of the Declaration is regarded as violative to it and is illegal.

The General Assembly of the United Nations lacks formal legislative power. Its resolutions are generally regarded as being without any legal binding upon state members of the United Nations. According to Articles 10 to 14 of the Charter of the United Nations, the General Assembly is allowed to adopt resolutions, which are merely recommendations to the state members and are not legally binding upon these states. Article 13 (1) of the Charter provides that, the General Assembly is charged with making recommendations in order to promote "international cooperation in the political field and encouraging the progressive development of international law and its codification." However, despite the lack of legislative power, resolutions of the General Assembly have a significant effect in international law. They contribute, in particular the labeled "Declarations" which may have more political force, to the development of a new international law. Mr Lissitzyn argued that,

> If such statements or declarations emanate from a large number

> of states and purport to deal with a large matter, they may be regarded in some circumstances as indications of a general consensus amounting to a norm of general international law.[13]

The affirmative vote of a great majority of state members on a resolution may have a significant role in determining its influence on state practice. The state practice if supported by the *opinio juris*, may bring the resolution to a possible legal effect upon states. Some examples of the resolutions which amounted from mere recommendations to a codification of a general rules of international law are: Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space (1962 (XVIII)); the Universal Declaration of Human Rights (Res.217 A (III)); and Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction (2749 (XXV)).

Although some advanced countries voted in favour of the Declaration of Principles, they insisted that the Declaration cannot impose any legal consequences on states. Because the Declaration is a recommendation which offers only guidelines for establishing an international regime. The Soviet Union was among the states which regarded the Declaration as not being legally binding. The Soviet Union stated:

> Needless to say, adoption of the declaration by the General Assembly cannot create legal consequences for states in view of the well-known fact that decisions of the General Assembly have simply the force of recommendations.[14]

Further, the developed states went on to deny the principle of the "common heritage of mankind" as a legal principle for the deep sea bed

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13 O.J. Lissitzyn, International Law Today and Tomorrow, (1965) pp.35-36.

14 UN. Doc. A.C.1.PV.1798, p.32.

and its resources. Although, they did not consider the concept as a legal principle, they agree that the resources of the Area should be regarded as the common heritage of mankind. For them the common heritage of mankind is a,

> concept to which the international community can give specific legal meaning and as a concept upon which we can together construct the machinery and the rules of international law which will together, comprise the legal regime for the area beyond national jurisdiction.[15]

The Declaration of Principles provided basic regulations reflecting the "common heritage of mankind" and represented a significant instrument for the future international regime of the deep sea bed. It was considered as a bridge that linked the economic gap between developed and developing states, as the Somali delegate said:

> General Assembly resolution 2749 (XXV) was a positive step towards narrowing the economic gap between the rich and poor nations,....[16]

The developed states led by United States and Soviet Union regarded the resolutions e.g., Declaration of Principles and the Moratorium Resolution, as having recommendatory powers. Within this context, the United Kingdom expressed:

> First, like any other resolution of the General Assembly, the draft declaration has in itself no binding force. Secondly and arising from this, it must be regarded as a whole; and interpreted as a whole, and as whole it has no dispositive effect until we have agreement on an international regime and, as part

15 UN. Doc. A.C.1.PV. 1779, p.4.

16 UNCLOS III, Off. Rec., Vol.I, p.186 (51-52).

> of that agreement, we have a clear, precise and internationally accepted definition of the area to which the regime is to apply.[17]

From the viewpoint of the Australian delegation, the Principles of the Declaration have no binding effect upon states and are only general guidelines for the establishment of a regime.[18]

In expressing the same opinion on the legal binding of the resolution, Mr Schwebel argued that,

> General Assembly resolutions are neither legislative nor sufficient to create custom, not only because the General Assembly is not authorized to legislate but also because its members don't mean what they say, in other words, they do not mean that the resolution is law.[19]

It can be said that according to the Charter of the United Nations, resolutions are not legally binding, but it would be unrealistic to ignore their moral obligation which resides in the overwhelming support of the majority members of the international community. The Declaration of Principles was adopted by an affirmative votes, including both developed and developing countries, purporting to provide a legal framework for the future international regime of deep sea bed and its resources.

1.3. UN Convention on the Law of the Sea

The concept of the common heritage of mankind is deemed to be the cornerstone for the future legal regime of the deep sea bed and the legal

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17 UN. Doc. A.C.1. PV. 1799, p.6.

18 UN. Doc. A.C.1. PV. 1777, p.27.

19 S. M. Schwebel, The Effect of Resolutions of the UN. General Assembly on Customary International Law, (1979) A.S.I.L. Proc., p.302.

concept under which the exploitation of the resources should be compatible with its fundamental principles. Undoubtedly, since the adoption of the Convention on the Law of the Sea, there has been disagreement between the Group of 77 and developed states on the system of exploitation of the resources of the deep sea bed. On behalf of developing countries, the Group of 77 sought to create a strong International Sea-Bed Authority that can control the conduct of activities in the Area, while the developed states insisted that the deep sea bed exploitation should be carried out by international consortia subject to a system of registration.

The notion of the "common heritage of mankind" was finally endorsed in Article 136 of the Law of the Sea Convention [hereinafter referred as "LOSC"], "The Area and its resources are the common heritage of mankind."

The provisions of the Convention seek to meet the interests of developed and developing states alike through the establishment of an equitable international regime for the deep sea bed, and by which the whole mankind will benefit from the exploitation of the resources. Correspondingly, Article 137 (2) provides that all rights in the resources of the Area are vested in mankind as a whole and as such mankind should be represented by an international organization. Also Article 140 (1) states that "activities in the Area shall be carried out for the benefit of mankind as a whole." The term mankind includes all states and peoples who have not attained full independence or other self-governing status (LOSC, art.162 (o)(i)).

The concept of mankind has a comprehensive and universal character with regard to the interests of mankind. In other words, the financial and economic benefits derived from the sea bed mining should be distributed

to the international community on a non-discriminatory basis, taking into account the needs of the developing countries, including the interests and needs of peoples who have not attained full independence or self government. According to Mr Dupuy mankind has two significant meanings:

> –une signification interspatiale, parce que l'humanite regroupe tous les contemporains quel que soit le lieu de leur residence, la race ou l'ethnie a laquelle les uns et les autres peuvent appartenir.
> –une signification intertemporelle, parceque l'humanite, ce ne sont pas seulement les gens d'aujoud'hui, mais aussi ceux qui vont venir. L'humanite se pense au-dela des vivants.[20]

According to Section 2 of Part XI of the Convention, the fundamental principles of the "common heritage of mankind" governing the Area are cited in Articles 140, 141, 143 and 145 of the Convention.

Thus, Article 137 (1) sets out the first fundamental of the common heritage of mankind. It stipulates that "no state shall claim or exercise sovereignty or sovereign rights over any part of the area or its resources, nor shall any state or natural or juridical person appropriate any part thereof. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized." The second fundamental principles is contained in Article 141 which states that the Area shall be open "to use exclusively for peaceful purposes by all states, whether coastal or land-locked, without discrimination and without prejudice to the other provisions of this part."

It is clear that the technology and the new techniques can make the deep sea bed feasible for installing, for example, nuclear minefields and

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[20] R.J. Dupuy, Introduction du Sujet, in Workshop of the Hague Academie of International Law, (1981) p.11.

nuclear missiles; in other words for military purposes. Therefore, for the purpose of peace and development of deep sea bed resources, the Area must be used exclusively for peaceful purposes. The third fundamental principle is concerned with marine scientific research (LOSC, art. 143) and protection of the marine environment (LOSC, art. 145). Last but not least, Article 140 of the Convention deals with the matter of benefit to mankind. Article 140 (1) provides that, activities in the Area shall "as specifically provided for in this part, be carried out for the benefit of mankind as a whole, irrespective of the geographical location of states, whether coastal or landlocked...."

The Convention endorsed that the deep sea bed and its resources are the common heritage of mankind. Therefore, no state shall claim exclusive rights or exercise sovereignty and no right of exploitation of the resources of the Area can be acquired only in conformity with the provisions of the Convention.

Section 2. The Legal Status of the Deep Sea Bed

The issue of the legal status acquired a great importance in the mid 60s when the exploitation of deep sea bed resources become possible thanks to technological advances made by the industrialised countries.

States began to practice their sovereignty over some parts of the seas. Beginning with the extension of the territorial sea from three miles to twelve miles, states subjected parts of the seas adjacent to their territorial seas to their national jurisdiction, such as the Continental Shelf, Contiguous Zone and Exclusive Economic Zone. It was of great concern to stop this creeping of appropriation of the seas which was thought to be

endless. For that reason, the United Nations General Assembly called for the international community, by enacting the Moratorium Resolution and the Declaration of Principles, to regard the deep sea bed of the high seas beyond national jurisdiction as "common heritage of mankind."

The issue of the legal status attracted the attention of international bodies such as the ILC and many international legal writers. Lawyers differed on the matter of the legal characterization of the principle of the high seas. A group of writers regarded the deep sea bed and its resources as *res nullius*-that is the Area belongs to no one but is subject to sovereign rights by effective occupation. In other words, this opinion stipulated that high seas are *res nullius*. A second group viewed that deep sea bed and its resources are subject to the freedoms of the high seas and therefore, the exploitation of the deep sea bed resources is one of the freedoms. A third group argued that deep sea bed mining is permitted because no international law principle prohibits it on the basis that "what is not prohibited is permitted." However, what is not prohibited by the rules of international law is not necessarily permitted by it. Accordingly, it has been argued by one of the members of the ILC while speaking on the Continental Shelf that, "there were no prohibitive rules forbidding a state to exercise rights over the Continental Shelf but there were, on the other hand, no permissive rules either."[21] This principle was rejected by the international community. A fourth group considered that the deep sea bed of the high seas is *res communis*-that is the Area which belongs to every one of the international community as common property and nations have the right to benefit from it on an equal basis. Roman Law held that certain objects were *res communis*, the property of all of which cannot be the object of private rights and subject to the sovereignty of any state. These

[21] A.CN.4.SER.A.1950, (1950) 1 I.L.C. Yearbook, p.220 (32).

objects generally include: the air, rainwater, water of rivers, the sea and its shores.[22] Since the speech of the Maltese Ambassador in 1967, the international community, with the exception of some states, welcomed the "common heritage of mankind" principle as a legal principle applicable to the deep sea bed and its resources.

The issue of the legal characterization is still a controversial matter which could not be solved within the scope of international doctrine and legal writings.

This section will discuss the most striking legal doctrines that have been applied to the deep sea bed and its resources.

2.1. Freedom of High Seas Doctrine

The freedom of high seas doctrine can be traced back to Hugo Grotius (D utch Scholar) in the seventeenth century. His theory was that the seas must be free for navigation and fishing because natural law forbids the ownership of things that seem to have been created by nature for common use. In his book Mare Liberum (The Freedom of the Seas), which was published in 1609, Grotius defended the freedom of fishing and navigation and regarded them as susceptible to appropriation. Grotius announced and defended the freedom of navigation by affirming that each nation has the right to communicate with other nations and to trade with them. Because oceans were created by nature as means for trade and communication, they must not therefore be subject to appropriation. He affirmed that the benefit of any nation from the ocean does not preclude other nations to benefit from it as well. He said that,

> The sea is common to all, because it is so limitless that it cannot become a possession of any one, and because it is adapted for the

[22] M. Kaser, Roman Private Law, 81 (2nd ed. R. Dannenbring Transl. 1968).

> use of all, whether we consider it from the point of view of navigation or of fisheries.[23]

Article 2 of the Convention on the High Seas of 1958 did not explicitly mention the deep sea bed exploitation as one of the freedoms of high seas. Certain developed countries began claiming that deep sea bed exploitation is one of the freedoms of high seas under international law. It has been seen that the commentaries of the ILC can be regarded as evidence to the fact that the exploitation of the deep sea bed resources is a freedom of the high seas. It asserted that the list of freedoms within Article 2 of the 1958 Convention on the High Seas was not restrictive. The commentary on Article 2 emphasizes that the ILC has specified four of the main freedoms and the Commission "is aware that there are other freedoms...."[24]

It has also pointed out that the Commission explained why it did not mention the exploitation of deep sea bed resources as one of the freedoms. It is considered that, "...such exploitation had not yet assumed sufficient practical importance to justify special regulation."[25]

It has also been argued that the insertion of the words "*inter alia*" in Article 2 bear witness on the fact that the list of freedoms is not exclusive.

Mr Scelle, one of the members of the ILC, thought that the exploration and exploitation of the deep ocean should be regarded as a freedom of high seas. Commenting on Article 2, he regarded it important to retain the words "inter alia" which make the list of freedoms extend to other freedoms such as the right to scientific research and to the

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[23] H. Grotius, The Freedom of the Seas or the right which belongs to the Dutch to take part in the East Indian trade (Magoffin Translation), (1916) p.28.

[24] A.CN.4.SER.A.SER.A.1955.Add.1, (1955) 2 I.L.C. Yearbook, pp.21-22.

[25] I.L.C. Rep. to General Assembly, UN. Doc. A.3159: Reprinted in A.CN.4.SER.A.1956.Add.1, (1956) 2 I.L.C. Yearbook, p.278.

exploitation of the resources of the sea bed.[26]

Nevertheless, it was doubtful that the ILC intended in its commentaries to consider the exploitation of deep sea bed resources as a freedom of high seas. Those commentaries do not express or codify customary international law, as Vandyke and Yuen said:

> These commentaries therefore do not have the force of law but they can be used to flesh out a convention when it proves to be ambiguous, absurd, or unreasonable.[27]

Moreover, the 1958 Convention on the High Seas[28] did not mention deep sea bed exploitation as freedom of high seas. Article 2 (1) of this Convention reads:

The high seas being open to all nations no state may validly purport to subject any part of them to its sovereignty. Freedom of the high seas is exercised under the conditions laid down by these and by other rules of international law. It comprises, inter alia, both for coastal and non-coastal states:

1) freedom of navigation,

2) freedom of fishing,

3) freedom to lay submarine cables and pipelines,

4) freedom to fly over the high seas.

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

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26 A.CN.4.SER.A.1955, (1955) 1 I.L.C. Yearbook, p.222.

27 Vandyke & Yuen, "Common Heritage" v. "Freedom of the High Seas": Which Governs the Seabed ?, (1982) 19 San Diego L.Rev., p.373.

28 U.N.T.S., (1964) Vol.450, p.82.

According to this provision, it is clear that Article 2 did not insert the exploitation of deep sea bed resources as one of the freedoms and included only those recognized by the rules of international law.

Since the provisions included in Article 2 were regarded as codifying rules of international law, the exclusion of the exploitation activity freedom from the list of freedoms of the high seas affirmed that this freedom did not exist as a general principle of international law at that time.[29] Since the time exploitation of deep sea bed resources became possible in the mid 1960s, it was subject to the claims of the international community as there was no state practice in that area to establish a general principle of international law.

It can be said that the commentaries of ILC were inadequate because there was no evidence to indicate that deep sea bed exploitation was meant to be one of the freedoms of the high seas.

Deep sea bed exploitation cannot be applicable to the freedoms of the high seas. It differs completely from the rest of the freedoms of the high sea because of the nature of the resources of the deep sea bed as non-renewable resources. In other words, fishing for example does not reduce the potential for the same use by others. The same can be said about navigation, lying submarine cables and pipelines. Polymetallic nodules, however, are exhaustible resources.

Many states protested against the principle of the "freedom of high seas" being applicable on the exploitation of deep sea bed resources. The representative of Tanzania for the Third Conference on the Law of the Sea stated that,

> In order to develop a modern international law, it was inevitable that certain concepts and dogmas would be challenged,

[29] G. Biggs, Deep Seabed Mining and Unilateral Legislation, (1980) 8 O.D.I.L.A., p.233.

> particularly that of the freedom of the seas, which was completely inappropriate in the modern world. Freedom of the seas had ceased to serve the interests of international justice. It had become a catchword and an excuse for a few countries to exploit ruthlessly the resources of the sea,....[30]

2.2. *Res Nullius* Doctrine

Res nullius is determined as "the property of nobody, a thing which has no owner, either because a former owner has finally abandoned it, or because it has never been appropriated by any person, or because (in the Roman Law) it is not susceptible of private ownership."[31]

The theory of "*res nullius*" arose from Roman Property Law with regard to unclaimed and unoccupied land. Similarly, like land territory "*res nullius*", the sea bed is abandoned until it is claimed by the first comer and acquires sovereign rights. Therefore, ownership could be acquired by occupation to become the object of private property.

The sea bed area is analogous to unclaimed land and is therefore subject to possession by any first occupier. In other words, the resources of the sea bed and ocean floor belong to no one, but are subject to exclusive appropriation by the first party that can possess them on the basis of "first come first serve." One of the supporters of the *res nullius* doctrine is Mr Richard Young. He bases his arguments on the similarity of the sea bed and unclaimed land,

> The existing customary law is, of course, rudimentary with respect to the deep sea floor. It would presume, however, that under this law it is possible in principle for a state to acquire rights of a territorial character over a portion of the floor through occupation. This view would accord with general

[30] UNCLOS III, Off. Rec., Vol.I, p.93 (67).

[31] B.L.D., (5th ed.), (1979) 1174.

> principles for the acquisition of territory on land, and is supported in some measure by a limited amount of practice with respect to such resources as sedentary fisheries.[32]

Historically, the *res nullius* doctrine by which nations can acquire sovereign rights by occupation was very popular early in the twentieth century and was supported by many legal writers. They treated the sea bed as *res nullius*. Hurst said:

> Wherein it was stated that where effective occupation has been long maintained of portions of the bed of the sea outside the three mile limit, those claims are valid and subsisting claims, entitled to recognition by other states.[33]

The Judge Lauterpacht made it clear that, on the basis of an effective occupation without interfering with the freedom of the high seas, the sea bed could legitimately be appropriated.[34]

However, the *res nullius* theory was rejected by the Convention on the Continental Shelf of 1958 as a principle for national claim and jurisdiction over the Continental Shelf. It was mentioned in Article 2 of this Convention that the rights of exploitation of the natural resources of the sea bed were based on existing legal title and not on any doctrine. Article 2 provides that,

1. The coastal state exercises over the Continental Shelf sovereign rights for the purpose of exploring it and exploiting its resources.

2. The rights referred to in paragraph (1) of this article are exclusive in the sense that if the coastal state does not explore the Continental Shelf

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[32] R. Young, The Limits of the Continental Shelf-and Beyond, (1968) 62 A.S.I.L. Proc., pp.233-34.

[33] H. Cecil, Whose is the Bed of Sea?, (1923-24) B.Y.I.L., p.34.

[34] H. Lauterpacht, Sovereignty over Submarine Areas, (1950) B.Y.I.L., p.376.

or exploit its natural resources, no one may undertake these activities or make a claim to the Continental Shelf, without the express consent of the coastal state.

3. The rights of the coastal states over the Continental Shelf, do not depend on occupation, effective or national, or on any express proclamation.[35] This is a very clear indication to the practice of states in rejecting this concept.

The trend of rejection of the *res nullius* doctrine was extended in the reports of the ILC. In a report in 1951, it had been said that,

> It would seem to serve no purpose to refer to the sea bed and subsoil of the submarine areas in question as "*res nullius*", capable of being acquired by the first occupier. That conception might lead to chaos,....[36]

Furthermore, the ILC endorsed its rejection of such doctrine in another statement:

> There were three possibilities for that area of control: it might be argued that it was *res nulius*. That must be contend out as being incompatible with the principle adopted on the previous day. If the shelf were *res nullius*, it could be acquired by any state, whether littoral or not; and that was inadmissible. It could be argued again that it was *res communis*; but that too was incompatible with the previous day's decision. *Res communis* was common property, and the Continental Shelf in that case could not be subject to the control and jurisdiction of any particular state. It would be better to say that the Continental Shelf belonged *ipso jure* to the littoral state.[37]

It is clear from these comments that, the ILC rejected the concept of

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35 UNCLOS I, Off. Rec., UN. Doc. A.Conf. 13.42, 1958.

36 A.CN.4.SER.A.1951.Add.1, (1951) 2 I.L.C. Yearbook, p.142.

37 A.CN.4.SER.A.1950, (1950) 1 I.L.C. Yearbook, p.227.

being a legal basis of the coastal states for exclusive rights over the sea bed of the Continental Shelf and its resources, and considered the occupation of the sea bed as practically impossible.

In the late 60s and early 70s, the theory of *res nullius* received a warm support from developed states and few legal writers like Northcut Ely and L.F.E.Goldie. This is because under this doctrine developed states could exclusively explore and exploit the deep sea bed and its resources,[38] and their national entities therefore, may enjoy many advantages. Among the advantages are that: the entities that have explored and made huge investments in deep sea bed might be in a good position to claim the sites. Entities will avoid the unacceptable principles of the international regime established by the United Nations, including the principle of sharing the benefits obtained from the exploitation of the deep sea bed resources. In addition, entities can acquire exclusive rights over the sea bed and its resources. As the most concrete example of supporting the theory of *res nullius* was the claiming of exclusive mining rights in an area of the deep sea bed in the Pacific Ocean by an American Company (Deep Sea Ventures Inc.) in 1974.[39]

3.3. Common Heritage of Mankind Doctrine

As a proper legal basis for the international community to claim rights to the mineral resources, this principle emerged to fill up a legal vacuum and determined the legal status of the deep sea bed and its resources as common heritage of mankind.

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[38] Biggs, op. cit., p.236.

[39] Notice of Discovery and Claim of Exclusive Mining Rights, and Request for Diplomatic Protection and Protection of Investment, by Deep Sea Ventures Inc. (hereinafter referred to as Notice of Discovery), reproduced in (1975) XIV I.L.M., pp.51-65.

This theory reveals a notion that the resources of the areas beyond the limits of national jurisdiction should be exploited for the benefit of mankind as a whole on a common basis via an international agency.

The emergence of this new term in international law was first endorsed in 1967 when the Maltese Ambassador made an eloquent speech before the United Nations General Assembly. He suggested that the principle of the sea bed and ocean floor "should be recognized as having a special legal status as the common heritage of mankind."[40] In 1969, the General Assembly of the United Nations adopted the Moratorium Resolution, and in the following year, the international community agreed on several principles in relation to the deep sea bed question.

During the negotiations in the Sea-Bed Committee of the United Nations, there were two different opinions: the first supported the "freedoms of the high seas" and regarded it as the legal principle to regulate the deep sea bed exploitation. The second gave considerable weight to the concept of the "common heritage of mankind."

The principle of the common heritage of mankind received a warm support from a great majority of states including the developed and developing countries. The developing countries regarded the concept as a new legal principle in international law which could change the existing situation of inequalities between themselves and the developed states. It was believed that the legal status of the sea bed beyond the limits of national jurisdiction is neither *res nullius* nor *res communis*, and which proved to be inappropriate to the said area, but a common heritage of mankind.[41] According to the representative of Yugoslavia, the concept is extremely important in international law because it would assure substantial equality in international relations.[42]

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[40] UN. Doc. A.AC.135.WG.1.SR.7, 27 June 1968, p. 52.

[41] UN. Doc. A.AC .1.PV. 1597, p.23 (Libya).

The Norwegian representative expressed:

> It is now settled...in solemn words and in a most authoritative way that the riches on and under the seabed are the common heritage of mankind. This is new item in "international law" and met with opposition from many quarters...It is a new term and it denotes something new in international relations. It is also a term which speaks to the imagination of ordinary people like the term in outer space treaty that astronauts are "envoys of mankind." I believe that terms such as these are often of great significance to international life just because they are "loaded" terms, because they express a program and an aspiration. They appeal directly to people and convey an idea which no elaborate legal terminology could ever do. They counteract the inherent danger in international law becoming so esoteric that only the initiated few understand what it is all about.[43]

The Maltese Ambassador, Dr Arvid Pardo asserted that, *res nullius* and *res communis* concepts were unacceptable.[44]

It was further affirmed by Mr Rinz Morales, the representative of Spain that,

> The legal regime for an international area of the sea-bed – which was the common heritage of mankind – should be created in keeping with the principles of social justice and in a spirit of co-operation, and that the Declaration of Principles adopted by the General Assembly in its Resolution 2749 (XXV),....[45]

States which supported the freedoms of the high seas criticized the concept of common heritage of mankind as lacking any precision having

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[42] UNCLOS III, Off. Rec., Vol.I, p.92 (54).

[43] Quoted in Aguilar, How will the Future Seabed Regime be Organized?, in Law of the Sea: Emerging Regime of the Oceans, (1974) pp.45-46.

[44] Ibid, p.50.

[45] UN. Doc. A.AC.138.SC.I.SR.14, 4 August 1971, p.183.

no legal meaning. The rejection of the common heritage of mankind come from industrialised and socialist states. On behalf of socialist countries, the Soviet Union provides a different interpretation to the concept by asserting that the deep sea bed should be used jointly by all states without any discrimination, and without claiming sovereignty or appropriation of that area.[46]

In supporting the freedom of the high sea, the representative of Denmark insisted on free access for all states without any discrimination to explore and use the resources of the sea bed beyond the limits of national jurisdiction, but without claiming any sovereignty to any part of that area.[47]

The Belgian representative asserted that they never accepted the common heritage of mankind principle as having any clear juridical meaning or importance, and that it represented a moral and political complex of great value.[48]

The Principles laid down in the Declaration of 1970, in particular the principle of the common heritage of mankind, were subject to intensive debate during the sessions of the Third United Nations Conference on the Law of the Sea. Thus, in 1982, the international community adopted a Convention on the Law of the Sea in which the common heritage of mankind principle was confirmed as the legal status for the deep sea bed. Accordingly, Article 136 of the Convention provides that "the Area and its resources are the common heritage of mankind."

In the light of the foregoing discussions, it can be said that the traditional doctrines of *res nullius* as well as *res communis* were completely rejected from any official discussions concerning the legal

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46 UN. Doc. A.AC.138.SR.30, p.15.

47 UN. Doc. A.AC.135.1.Add.2, 13 March 1968, p.6.

48 UN. Doc. A.C.1.PV. 1788 (1970), p.24.

status of the sea bed and its resources. In this context, Mr Gidel rejected these two concepts from any discussion on the legal status of the high seas. He said that,

> Il faut donc categoriquement et definitivement rejeter les expressions "res nullius" et "res communis" de la discussion sur la condition juridique de la haute mer. Elles obscurcissent encore un debat deja difficile par lui-meme.[49]

These concepts were also rejected, as has been seen above, even by the ILC discussions on the Continental Shelf. Exploitation as a freedom of high seas lacked any support from the international community and also lacked the necessary state practice to acquire the status of the freedoms of high seas determined by the general rules of international law. In criticizing the principle of the freedom of the high seas, Biggs argued that,

> ...those theories...based exclusively on the laws pertaining to the oceans-such as that of the freedom of the seas – fail to provide adequate justification to deep sea-bed mining because their subject matter-the oceans – is only peripheral to the main issue: the exploitation of the soil and subsoil underlying that ocean and their corresponding mineral resources.[50]

The areas beyond the limits of national jurisdiction as the common heritage of mankind was widely, if not universally, supported. However, while the majority of states insisted on conferring a legal basis and meaning on the concept, only a few number of states regarded it as ambiguous and incapable of being legally determined.

Resolutions enacted by the General Assembly of the United Nations

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[49] G. Gidel, Le Droit International Public de la Mer, (1932) Vol.I, p.215.

[50] Biggs, op. cit., p.226.

established the basic principles of the concept and confirmed the general majority of support in state practice of the international community to the common heritage of mankind as becoming a rule of customary international law.

The common heritage of mankind for the majority of states, especially developing countries, means that all rights to the Area and its resources belong to mankind as a whole, and only an international Authority on behalf of mankind can have the exclusive right to carry out deep sea bed mining activities. However, for some other states, in particular developed countries, the concept means that natural and juridical persons are free to explore and exploit deep sea bed and its resources, without asserting any exclusive sovereignty or exclusive rights over any part of the deep sea bed. For the United States, the common heritage of mankind principle,

> ...means no more than commonness of a common field wherein all may pasture their stock, or a common well wherefrom all may draw their water, or a common stream in which all may fish. Its commonness means that no state may assert exclusive, territorial sovereignty over any part of it.[51]

Whereas developed states believed that the legal regime of the high seas is applicable to the deep sea bed and its resources, developing countries maintained that the common heritage of mankind provided the necessary regulations to fill up what was a legal vacuum in the deep sea bed.

As a result of these fundamental differences in views on the legal meaning of the concept and the legal status of the deep sea bed, each state took its own route in determining the legal regime as applicable to the

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[51] L.F.E. Goldie, A Note on Some Diverse Meanings of The Common Heritage of Mankind, (1983) 10 Syracuse J.I.L & Com., pp.80-81.

deep sea bed. And there has been an emergence of two different systems. Firstly, the 1982 United Nations Convention on the Law of the Sea system embodied an international regime based on the common heritage of mankind principle. Secondly, a unilateral system co-ordinated by Reciprocating States Agreements based on the principle of freedom of high seas.

CHAPTER TWO

UNITED NATIONS CONVENTION SYSTEM

At the eleventh and final session, the Third United Nations Conference on the law of the sea succeeded in adopting a Convention[1] embodying a generally acceptable legal regime for the exploitation of the deep sea bed based on the so-called "parallel system." On December 10, 1982, the Convention document was opened for signature. One hundred and seventeen states signed the Convention, four nations voted against it, and seventeen abstained.

The vote against and the abstentions by several developed countries, most notably the United States of America, were founded on the argument that the Convention's provisions on deep sea bed mining were unacceptable. For example, The United States argued that, certain aspects of the envisaged international legal regime of deep sea bed exploitation, such as contract approval, production control and mandatory transfer of technology are disagreeable and unsupportable. The Convention gives states, private entities and the Enterprise of the International Sea-Bed Authority parallel access to deep sea bed areas. It will enter into force twelve months from the date of deposit of the sixtieth instrument of ratification or accession (LOSC, art. 308 (1)).

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[1] United Nations Convention on the Law of the Sea. UN. Doc.A.Conf. 62.122. 7 october 1982. Reprinted in (1982) 21 I.L.M., p.1261. The Convention as adopted contains 320 Articles together with nine Annexes which constitute an integral part of this Convention (art. 3 (8)). The four Resolutions adopted with the Convention are annexed to the Final Act of the Convention. The Convention received 159 signature by the closing date for signature on 9 December 1984. See UN Monthly Chron., (August 1986) XXIII (4), p.107. As of September 1986, the Convention had received 32 ratifications. See UN Monthly Chron., (November 1986) XXIII (5), p.86.

The crucial issue which faced the Third Conference on the Law of the Sea was the system of exploitation of the deep sea bed. Despite the wide difference and in positions between different the attending states, the Conference succeeded to adopt a Convention on the Law of the Sea. This Convention establishes an international regime to explore and exploit the Area and its resources on the basis of the "common heritage of mankind."

The issue of the system of exploitation was part of a struggle by the developing states to bring about a New International Economic Order (NIEO) by which all countries could benefit from the resources to be exploited in the deep sea bed. The Convention declares the deep sea bed and its resources as "common heritage of mankind."

The object of this chapter is to analyse the essential elements and features of the system of exploitation incorporated in Part XI of the Convention. It focuses on the parallel system, applications and contracts, production control, transfer of technology, pioneer investment and the review conference.

It is imperative, therefore to first consider the core of the system, that is the "Parallel system" under which the Area will be exploited by the Enterprise of the International Sea-Bed Authority and by states and private firms, at least for the interim period until the review conference reaches an agreement on a new system of exploitation.

Section 1. The Parallel System

The idea of who or which party may conduct activities in the Area is not entirely new.[2] It has been raised since the enactment of the

[2] There were many proposals submitted to the Sea-Bed Committee in 1970 and 1971. These proposals showed a wide range of views about the International Sea-Bed

Declaration of Principles, though the Declaration was characterised by general features, and did not specify explicitly which party may have the right to exploit the deep sea bed.

As regards the system of exploitation of the deep sea bed, two periods in the work of the Conference can be distinguished. The first period lasted until 1976 and was characterised by ideological controversies and opposed sets of objectives between many countries.[3] In the said period, negotiations on the issue were polarized because of the radical differences in views with regard to the conduct of activities. On one hand, the developing states wanted an international machinery with discretionary powers to conduct activities. Whereas, the developed states favoured the idea of the deep sea bed activities being conducted by states parties and their entities.

The second period extended from 1976 to the adoption of the Convention of the Law of the Sea in 1982. During this period, the efforts of developed and developing countries focussed on finding a compromise for the system of exploitation.

At the Conference, in particular the Caracas Session, the major debated issue was who may exploit the Area?.[4] The Caracas

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Machinery, especially, in respect to the power to be enjoyed by the Authority. For instance, the Latin American/ Caribbean proposal confers the Authority almost total discretion and wide scope to control in all stages in relation to production, processing and marketing, and enable the Enterprise to undertake all those activities by itself. France and the United States confine the Authority's jurisdiction to a registry body. See A.AC.138.25 of August 3 1970 (USA); A.AC.138.27 of 4 August 1970 (France); A.AC.138.49 of 10 August, 1971 (Chile, Columbia, Ecuador, El-salvador, Guatemala, Jamaica, Mexico, Panama, Peru, Trinidad and Tobago, Uruguay and Venezuela).

[3] Especially, the irreconcilable views between developed and developing countries. The developed states defended the principle of "freedom of high seas", and developing states supported the "common heritage of mankind" principle.

[4] For more details about what was discussed at the Caracas Session. See

negotiations exemplified the divergent positions of the developing and developed countries on the system of exploitation with regard to two basic aspects. These being; (a) whether there should be a single system or a multiple system of exploration and exploitation of the sea bed area, and (b) The role to be played by the proposed International Sea-Bed Authority in the activities of the deep sea bed.

Negotiations in the First Committee have been extremely difficult in view of the fundamentally different interests that were to be reconciled. Debates in this Committee reflected the basic ideological dispute as to whether the exploitation of deep sea bed resources should be left to free enterprise or to direct control by the Enterprise of the Authority. While the industrialised states contended that the deep sea bed be exploited by private enterprises, the developing countries fought for an international regime that would conform to the world order goals set out in the New International Economic Order.

At the Caracas Session, the Group of 77 made proposals on behalf of developing states, centred on the notion of a "unitary system" under which an international authority enjoys the right to mine the "common heritage of mankind." That is, all activities should be carried out by the Authority. At the outset of UNCLOS III, developing countries wanted an international body to be the sole representative of mankind for the carrying out of exploration and exploitation activities in the Area. This idea was in opposition to the claims registry concept espoused by most of the developed states. Besides, the Authority should have the flexibility at its discretion to confer certain tasks to private entities under contractual arrangements.

For the developing countries, the dictates of the Declaration of

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UNCLOS III, Off. Rec., Vols.II and III.

Principles as well as the aspirations of that category of nations could be met only by strong international machinery. In effect, this called for the establishment of an international institution with full powers to act on behalf of mankind as a whole. This institution was supposed to have the legal capacity to exercise effective control over activities in the Area, and to have a monopoly on the exploitation of the resources. The object of the existence of such an institution is to safeguard the common interests of the international community.

The international institution would, at its discretion, be able to enter into joint ventures or conclude contracts with states and private entities. Moreover, it would have the right to insist on its partner, either to a joint venture or to a contract in providing the necessary funds, know-how and training for personnel from developing countries.

Therefore, a unitary system whereby exploitation would be conducted only by a strong Authority was, indeed, the initial majority agreement by socialist and developing countries.

Nonetheless, the firm position of the developing countries was opposed by the industrialised countries on the basis that the unitary system gives no assurance of access to sea bed resources to states and enterprises.

Developed countries favoured a "single system", whereby exploration of the Area and exploitation of its resources shall be carried out only by contracting parties and natural or juridical persons under the sponsorship of such contracting states. They wanted to promote sea bed exploitation by their national mining companies so as to reward them for their expenditures on the development of sea bed technology. They approached the negotiations with the view that the Authority should act mainly as a simple licensing or registration board and, thus, the sea bed activities would only be conducted by entities and national undertakings.

Industrialised countries sought to create a weak international authority which would act essentially as a claims registry. They believed that the benefit of mankind was best served through a liberal regime based on the "laissez faire" for exploitation of the resources of the Area. This liberal regime would lead to the increase of metals supply and the decrease of prices for all.

The fundamental task of the First Committee during Caracas Session was to bridge the huge gap between developed and developing states. Unfortunately, Caracas Session ended with indications of polarization. The polar positions largely persisted until 1976, when, during the fourth session of the Third Conference on the Law of the Sea, both developed and developing countries accepted the idea of "dual system."[5] this system allowed private entities to mine in line with the Enterprise the deep sea bed resources.

Negotiations on the system were designed to ensure that each side of the "parallel system" was given a fair opportunity to succeed. Supporters of the private side feared the decisive advantages to be given to the Enterprise by the Authority and, therefore, sought to restrain the potential for disincentives to mining on the private side. However, supporters of the Enterprise also feared the monopoly control of technology by states and private companies that oppose the Enterprise and, thus, sought to ensure that the Enterprise would receive the necessary capital and technology to function independently or to enter into joint arrangements. Some delegations redirected these negative approaches by giving each side some interests in promoting the success of the other.

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5 The Chairman of the First Committee incorporated the "dual system" in the RSNT at the close of the fourth session. Doc. A.Conf.62.WP.8.Rev.1. 6 May 1976. See UNCLOS III, Off. Rec., Vol.V, p.125.

During the fifth session, the Group of 77 refused to accept the idea of the "parallel system" embodied in the RSNT. Because the RSNT was more favourable to the developed nations. For that reason the issue of the system was again insisted upon according to three working papers.[6] The Group of 77 paper favoured a "unitary system" whereby the Authority enjoys an exclusive right over exploitation in the Area. The United States paper advocated the "parallel system" which assures access for both the Authority and private enterprises. The Soviet Union paper provided for exploitation by states' parties and the Authority. The Soviet paper stressed the equal rights and opportunity to participate in activities in the Area, irrespective of the geographical location of the states.

Nevertheless, the insustrialised states succeeded in turning the balance in their favour by embodying the idea of "parallel system" in all Negotiating Texts that were produced as from 1977.[7]

At the seventh session an agreement seemed to have been reached. Some changes were made on Article 151, as Mr Nejenga pointed out:

> It is precisely with the the object of finding the point of equilibrium between the partisans of guaranteed access by states and other entities to the Area and the partisans of absolute discretion of the Authority that changes have been made in the text of article 151 which, while ensuring the participation of the states parties and other entities in the activities to be carried out in the Area, also give the Authority a predominant role in the organization, conduct and control of those activities. This was the intention behind the amendments made to article 151, which constitutes the heart of the system of exploration.[8]

6 The three working papers are summarised in the final Report by the Co-chairman on the Activities of the Workshop. Doc. A.Conf.62.C.1.WR. 5 September 1976. See UNCLOS III, Off. Rec., Vol.VI, pp.166-67.

7 The compromise of the "parallel system" was incorporated and revised in the following negotiating texts: SNT; RSNT and ICNT, Rev.1.2.3., and lastly in the Convention on the Law of the Sea.

The net results of the negotiations produced an entirely new legal regime for the exploration and exploitation activities in the deep sea bed. The new regime was the product of difficult negotiations and active participation by a large number of countries. This historical compromise was subsequently reflected in Article 151 of the ICNT,[9] and later in Article 153 of the Convention.

The key of the "parallel system" in the Convention is Paragraph 2 of Article 153 which stipulates that "activities in the Area shall be carried out as prescribed in paragraph 3:

(a) by the Enterprise, and

(b) in association with the Authority by states parties, or state enterprises or natural or juridical persons which possess the nationality of states parties or are effectively controlled by them or their nationals, when sponsored by such states, or any group of the foregoing which meets the requirements provided in this part and in Annex III.

This means that the Authority uses its commercial arm (Enterprise) to conduct mining operations, and at the same time issues permits to states and private companies so that such companies could operate in parallel with the Authority.

The cornerstone of the parallel system is the so-called "banking system." The objective of the parallel system is to give states and private companies sponsored by states parties, on the one hand, and the Enterprise of the Authority, on the other hand, a genuine opportunity to mine the deep sea bed. Hence, a state or private applicant for a mine site must

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[8] Explanatory Memorandum by the Chairman concerning document NG1. 10.Rev.1. See Doc. NG1.12 , UNCLOS III , Off. Rec., Vol .X, p.19.

[9] ICNT. UN. Doc. A.Conf.62.WP.10. Text reproduced in (1977) 16 I.L.M., p.1108.

propose two sites, one of which should be reserved for mining by the Enterprise or by developing countries.

The site-banking scheme, as an important move towards compromise, was first introduced in the RSNT, in 1976, and finally incorporated in the Convention.[10] According to Article 8 of Annex III of the Convention, the applicant must, in order to get a contract, submit data relating to mapping, sampling, density of nodules and minerals content for two parts of equal estimated commercial value. Within forty five days of receiving such data, the Authority would select a reserved site while approving the plan of work for a non-reserved site. Reserved areas would be exploited either by the Enterprise or by developing countries. However, the designation of the reserved site may be deferred for a further period of forty five days if the Authority requests an independent expert to assess whether all data required by this Article have been submitted.

The compromise on the system of exploitation of the resources of the deep sea bed, which was originally suggested and to a great extent worked out by the industrialised countries, became unacceptable to some of these countries. As such, when the Convention was adopted, many industrialised countries including United States, United Kingdom and West Germany refused to sign it. These countries argued that some elements of the "parallel system" like production control, transfer of technology, review conference and financial terms of contracts were unpleasant.

All in all, it can be said that under such parallel system, the Authority exploits the Area directly through its Enterprise, would acquire through site banking areas of equal value to those mined by private entities, and

[10] LOSC, Annex III, art. 8.

would be guaranteed the loans to enable it to mine such sites. In return, qualified applicants have rights to conclude contracts with the Authority to mine the deep sea bed.

Section 2. Applications and Contracts

To get the right of access to the Area, entities shall meet certain qualifications and respect the procedures for approval set forth in the rules and regulations of the Authority. Once the plan of work is approved, the plan takes the form of "contract", giving the applicant, therefore, security of tenure.

2.1. Qualifications of Applicants

The Convention spelled out categorically the qualifications which would be required to be fulfilled by applicants for sea bed mining contracts. Three substantial qualifications must be satisfied by an applicant in order to get a contract, and to enjoy the exclusive right to explore and exploit a site of the Area. These qualification requirements are outlined in Article 4 of Annex III of the Convention.

First, applicants would have to be a state party to the Convention or an entity possessing the nationality of states parties or effectively controlled by them. In other words, states parties or sponsoring states are responsible for ensuring compliance with the Convention by the relevant entities.[11] Second, the applicant should supply evidence testifying his

[11] Article 4 (1) provides that "applicants, other than the Enterprise, shall be qualified if they have the nationality or control and sponsorship required by Article 153, Paragraph 2 (b), and if they follow the procedures and meet the qualification standards

financial and technical capabilities, and his performance under previous contracts with the Authority.[12] Third, each applicant would have to agree to accept the Authority's control over deep sea bed activities.

Moreover, other undertakings are required to be completed by the applicant. Thus, every applicant is required to comply and accept the applicable obligations set forth in the provisions of Part XI, the rules and regulations of the Authority and decisions of its organs.[13] More precisely, applicants are obliged to give the Authority a written assurance of a good faith in fulfilling the contractual obligations, and to comply with the provisions on transfer of technology.[14]

With regard to the first qualification, Paragraphs (3) and (4) of Article 4 outline the general terms on sponsorship of national entities and consortium and on the responsibility of sponsors.

Paragraph (4) of Article 4 specifies what a sponsoring state shall do in order to avoid any responsibility for damage caused by the person sponsored. Accordingly, so as to ensure compliance with the terms of the Convention, the sponsoring state is required to adopt laws and regulations, and take administrative measures which are within the framework of its legal system, reasonably appropriate for securing compliance by persons under its jurisdiction.

2.2. Plans of Work

States and entities do not have direct access to the Area and its

set forth in the rules, regulations and procedures of the Authority."

[12] LOSC, Annex III, art. 4 (2).

[13] Ibid, Annex III, art. 4 (6) (a).

[14] Ibid, Annex III, art. 4 (6) (c) (d).

resources, and they can only conduct sea bed mining operations after having obtained a contract and an authorisation of production from the Authority. Any qualified entity sponsored by a state party must apply to the Authority and submit a written plan of work.

Before a mine site is allocated, an application to the Authority would have to be submitted covering two sites of equal estimated commercial value. Each site should be large enough to support a mining operation. Data concerning both sites and their resources must also be submitted, and the applicant would indicate the co-ordinates dividing the area into two parts of equal estimated value. One of the two sites would be assigned to the applicant by the Authority for the proposed operations, while the other site would be reserved for the Enterprise of the Authority.

After determining the mine site, the applicant would need a plan of work in the form of "contract" authorising him to develop the mine site.[15] Besides, the applicant needs a production authorisation[16] permitting him to produce up to a limited amount of minerals from that site each year. Once the plan of work is approved, the applicant is automatically conferred exclusive rights to explore the areas designated in the plan of work and exploit its resources.[17]

Under Article 153 (3) of the Convention, all activities in the Area have to be carried out in accordance with a formal written plan of work drawn up in accordance with Annex III and approved by the Council after review by the Legal and Technical Commission.

The principal provisions of Annex III governing the procedures for approval of plans of work submitted by qualified applicants are contained

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15 Ibid, Annex III, art. 6.

16 Ibid, Annex III, art. 7.

17 Ibid, Annex III, art. 3 (c).

in Articles 3 and 6. The fundamental provision of Article 6 is in Paragraph (3), which was amended at the eleventh and final session of the Conference so as to make it agreeable and satisfactory to the industrialised countries.[18] Amendments were made on the role to be played by the Authority in determining whether the proposed plans of work conform with the requirements laid down. The revised Paragraph (3) therefore, clearly removes any distrust and doubt that the Authority hold any powers of inquest into proposed plans of work other than those enumerated in the above provisions. In other words, the Authority's powers are confined to those defined much more precisely in Articles 153 (3), 165 (2) (b) and 162 (2) (j) of the Convention.

The plan of work would have to be approved by the Council of the Authority. Such approval of plans of work would normally be almost automatic so long as the plan of work was endorsed by the Council's Legal and Technical Commission. However, in case the plan of work is rejected by the Council itself, a consensus decision of the Council would be required.

The procedures of approval of plans of work cited in the Convention ensure almost the automatic approval of plans of work. The provisions of Annex III of the Convention dealing with procedures and formalities for the submission of applications and plans of work restrict the Authority to exercise discretionary powers. Consequently, if a plan of work is in conformity with the requirements mentioned in the Convention, the Authority cannot reject the plan of work except in certain specified circumstances. In such cases the approval of a plan of work is no longer sufficient to start commercial production during the interim period,[19]

[18] See the Report of the President of the Conference. Doc. A.Conf.62.L.141 and Add.1, 29 April 1982, UNCLOS III, Off. Rec., Vol .XVI, p.248 (10).

[19] LOSC, art. 151 (3).

and the contractor has to obtain from the Authority a production authorisation.

In all cases, the procedures begin at the level of the Legal and Technical Commission. The Commission first reviews the proposed plan of work and submits it to the Council together with its recommendations,[20] concerning the adequacy of data, sites identified and compliance with regulations. These recommendations must be based "solely on the grounds stated in Annex III",[21] which means that, the recommendations shall not be characterized with any political consideration or the general policy of the Authority. If plans of work have been recommended positively and no objection has been raised in writing by any Council member specifying an alleged violation of the foregoing rules within a period of fourteen days,[22] the Council is supposed to approve the plan of work. But, in case an objection is raised by a member based on the non-compliance by the applicant with rules and regulations of Article 6 of Annex III within the said period, such an objection is to be followed by a Conciliation Committee. This Committee is formed in attempting to override the objection within another fourteen days.[23] However, if the objection persists, the plan of work is deemed to be approved by the Council unless it is rejected by consensus among the Council's members excluding the state which made the application or sponsors the applicant in question.[24]

In case the Legal and Technical Commission recommends disapproval or makes no recommendation, the Council may still approve

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[20] Ibid, art. 165 (2) (b).

[21] Ibid.

[22] Ibid, art. 162 (2) (j) (i).

[23] Ibid, art. 161 (7) (e).

[24] Ibid, art. 162 (2) (j) (i).

the plan of work by a three-fourths majority of the members present and voting,[25] provided that such majority includes a majority of the members participating in the session.[26] In case the Council fails to approve the plan of work, dispute settlement procedures may be prompted e.g., in the Sea-Bed Disputes Chamber.[27] Therefore, there exists a powerful weight in favour of the approval of plans of work.

As can be seen from the foregoing discussion, the adoption of recommendations by the Legal and Technical Commission is a crucial stage in the procedures for the approval of plans of work. That is why the issue of how the members of the Council, particularly the members of the Legal and Technical Commission, to be elected took a considerable attention during the negotiations at the Third Law of the Sea Conference. Hence, a compromise was reached at the final phases of the Conference and it was agreed that fifteen members are to be elected with regard to equitable geographical distribution and representation of special interests.[28]

Assuming that the proposed plan of work meets the requirements, and complies with the rules and regulations of the Authority, the Authority may not approve the plans of work and, therefore, not issue a contract to a qualified applicant. Though, to preclude any possibility of the Authority unreasonably impeding development of the sea bed, it is provided that approval of plans of work can be refused only in certain specified circumstances.

These circumstances are: First, where there is more than one application for the same site, that is all or part of the proposed area falls in

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25 Ibid, art. 162 (2) (j).

26 Ibid, art. 162 (2) (j) (ii).

27 Ibid, Annex V, sec. 4.

28 This principle is embodied in the LOSC, art. 163 (2) (4).

a plan of work already approved, or awaiting final decision by the Authority.[29] Second, no approval can be given by the Authority in respect of areas disapproved by the Council for exploitation, because substantial evidence indicates the risk of serious harm to the marine environment.[30] Third is the anti-monopoly clause, which allows disapproval of the plan of work if it violates anti-monopoly limits.

Under the anti-monopoly clause, the Authority may not approve a plan of work sponsored by a state party which already holds: first, approved plans in non-reserved sites, together with either site of the area in the proposed plan, amount to more than 30 percent of the area of a circle of 400.000 square kilometers surrounding the centre of either site of the area of the proposed plan. Second, has had plans approved in non-reserved sites which constitute 2 percent of the total Area, excluding reserved sites and areas disallowed on environmental grounds.[31] The anti-monopoly clause is designed to guarantee that no one state, including entities sponsored by it, should hold plans of work covering excessive areas of the sea bed.

In spite of meeting the anti-monopoly criteria, the Authority has the discretion to determine that such approval of plans of work in question would not permit a state party or its sponsored entities to monopolise the conduct of activities in the area or to preclude other states parties from activities in the Area.[32]

The issue of rejection of an application for a contract has been given great concern by negotiators, especially, at the seventh session in 1978. The industrialised countries wanted to impinge that some specific

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29 Ibid, art. 6 (3) (a).

30 Ibid, art. 162 (2) (x).

31 Ibid, Annex III, art. 6 (3) (c) [(i),(ii)].

32 Ibid, Annex III, art. 6 (4).

conditions be enumerated in the Convention so as, in the event an applicant met these conditions, he would be automatically granted a contract. The Group of 77, on the contrary, sought that the Authority should have broad competence to study each application, and could take its decisions according to requirements for each individual case.

2.3. Financial Terms of Contracts

Among the crucial issues which took a great part of the discussion during UNCLOS III, and which proved difficult even to debate over a period of three years, was the subject of financial obligations required to be fulfilled by the contractors.

Specifically, the debates on the financial arrangements did not start until the New York Session in 1977. During this session two different proposals were submitted; by United States of America and India. The primary type of financial undertakings contemplated during negotiations were royalties (production levies) and profit sharing.

The three years period of negotiations was marked by many shortfalls for the developing countries. The developing countries mainly believed that processing is an inseparable fraction of the activities and therefore, to be subject to taxes payable to the Authority. But, the developed countries maintained the opinion that transport and processing are not part of the activities and, thus, not subject to charges.[33] More precisely, the argument arose with due regard to the question that, the nodules themselves were not saleble and, consequently, profits can be generated only after they had been processed. In other words, it was

33 Article 170 (1) of the Convention clearly indicates that transport and processing are not considered as activities in the Area.

contended that since transport and processing were not activities in the Area, it was not in any circumstance applicable to fix payments before the recovered nodules had been transported and processed. Thereafter, another problem was raised on how to levy charges on profits with regard to the three different stages, mining, transport, and processing since there is inter-relation between the three stages.

At the New York Session (sixth session) in 1977, two delegations: India and United States of America offered two financial proposals to the First Committee. The Indian proposal included both production charge and profits payment. It suggested that, the production levy should comprise a "flat-rate royalty" of $5 per ton of nodules actually mined and a "tax" of 20 percent of the revenue from the sale of processed metals derived thereafter from them.[34] India supplemented the production levy with a profit tax of 60 percent on any net proceeds accruing after the contractor's return had exceeded 200 percent of his investment.[35] The United States, on the other hand, formed the two types of payment alternatives. Thus, a contractor who prefers the profit-based alternative would be charged depending on the "net proceeds" of the mining stage of the operation in each year, and the overall rate of return on investment up to that point. There would be no payments if the rate of return is 0 percent. But the contractor would pay 15 percent of such net proceeds if the return did not exceed 25 percent, and 50 percent if the rate of return exceeded 25 percent. The other type of payment embodied a fixed percentage of the imputed value of the unprocessed nodules, which is to be set at one-fifth of the "gross fair market value" of the minerals derived from them. From this "imputed value", the contractor would pay 10

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[34] R. Ogley, Internationalizing the Seabed, (1984) p.158.

[35] Ibid.

percent in the first ten years and 50 percent thereafter with a choice of changing to the profit-sharing system at that point.[36] So, while "profit sharing" was an alternative to the production levies in the United States proposal, it was an accession in the Indian proposal.

Nevertheless, the United States was against the Indian proposal, because it contained the so-called "front-end loading", that is burdens induced from the start and inappropriate to any success. The United States preferred a flexible system, which grant high rates of payments when there is high rates of return, and low charges when an operation proved unprofitable, that is low rates of return.[37]

At the seventh session, seven negotiating groups were designated to deal with what was called "hard-core issues." Three groups dealt with deep sea bed matters. The first with the system of exploration and exploitation, and resource policy; the second with financial arrangements; and the third with organs of the Sea-Bed Authority.[38] During this session, financial arrangements were described as one of the seven "hard-core issues" that halted of the eminence of the Conference.

The central question with respect to the financial obligations were, what are the specific amounts of application and annual fees?, and what should be the basis for profit calculations?. Both fixed and variable payments were considered accordingly. Fixed payments encompass an application and an annual fee. The second category (variable payments) covers percentages of production or percentages of profit that are fixed or that vary according to the rate of return.[39] Thus, there were

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[36] Ibid.

[37] Ibid.

[38] B.H. Oxman, The Third United Nations Conference on the Law of the Sea: The Seventh Session (1978), (1979) 73 A.J.I.L., p.3.

[39] Ibid, p.12 .

divergence of opinion not only on the sort of payments to be fulfilled, but also the opposite percentages.

Many countries submitted proposals with regard to the levels of payments which should be fixed. The determination of percentages were disputed because there was a substantial difference of opinion regarding the amount of cost and the expected profits attributable at each stage. The industrialised states, United States, EEC countries and Japan, for example, alleged that only 20 percent of the value of finished metals produced from nodules could be attributed to the mining stage. The estimate of the developing countries ranged up to 100 percent (India). With regard to production charges, the USSR advocated a 7.5 percent of the market value of the processed metals; Norway 8 percent for the first five years and 16 percent thereafter. Japan and EEC suggested a much lower production charge of 0.75 percent.[40]

By the second part of the seventh session, Mr Koh, the Chairman of the Negotiating Group Two, gave a proposal in an attempt to reach a compromise on the types of charges to be levied. In his revised proposal which was released at the conclusion of the New York Session, he suggested to maintain a $500.000 application fee, an annual fixed fee of $1 million, and the contractor's choice between a production charge or a mixed system that combines a production charge with a share of net proceeds.[41]

During the eighth session, the issue of financial arrangements were broadly considered. Article 12 of Annex III of the ICNT., Revised.1 was comprehensively condemned by the industrialised countries, and they criticized the annual fixed fee as "front-end loading." The changes introduced in the text and which were considered as a significant

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[40] Ogley, op.cit., p.159.

[41] Supra note 38, p.13.

contribution in finding a solution to the complex problems of financial arrangements, were aimed at making the financial obligations tolerable for the contractors and profitable for the Enterprise so as to generate enough funds to be able to enable it commencing its own activities.[42] The developed countries could not tolerate a "stiff" financial arrangements system. They argued that, only a "flexible" system of payment based primarily on the profit-sharing could be the best way of preventing the deterrence to mining caused by "front-end loading" and initiate an optional return and profits to the Authority.[43]

Generally, Koh's proposals were included in the subsequent revised texts, the second and third revisions of the ICNT. Finally, after comprehensive discussion in the 1979 session and the subsequent 1980 New York Sessions, the proposals were embodied in the Convention (Article 13 of Annex III) as an agreement on the financial arrangements.

Some identified proposals which were offered during the negotiations on the financial arrangements from 1977 to 1979 are shown in the following table:[44]

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[42] S. Mahmoudi, The Law of Deep Sea bed Mining, (1987) p.195.

[43] Supra note 38, p.13.

[44] Chart adapted from K. Sebenius, Negotiating the Law of the Sea, (1984) pp.41-44.

Proposal/ session	Application fee	Fixed charge	Royalty	ANP	Profit share
US-1A NY, 1977	$ 0.5 mm	____	_____	20%	15% of low increment (0-25% return); 25% of medium increment (15-25% return); 50% of high increment (>25% return).
India-1 NY, 1977	_____	$60 mm	20% plus $5/ ton of mined nodules	100%	60% once 200% o f investment is recovered
USSR Gen, 1978	_____	_____	7.5%	____	_____
Norway-1B Gen, 1978	_____	_____	8% years 1-5; 16% years 6-25	50%	_____
Norway-1A Gen, 1978	_____	_____	3% years 1-10; 5% years 11-25	50%	50% years 1-10 80% years 11-25
India-2 Gen, 1978	_____	_____	10%	100%	50% until 200% is recoverd, 60% thereafter
US-2 Gen, 1978	$ 0.5 mm	_____	2%	20%	30% of low increment (0-7% of return; 60% of medium increment (7-20% return); 70% of high increment (>20% return
Japan Gen, 1978	_____	_____	0.75%	20%	25% years 1-10; 50% years 11-25
EEC Gen, 1978	$ 0.1 mm	_____	0.75%	20%	10% if return < 10%; 18% if return 10-14%; 26% if return 14-18%; 34% if return 18-22%; 42% if return 22-26%; 50% if return 26-30%; 58% if return > 30%
Koh-2A Gen, 1979	$ 0.5 mm	$1 mm/Y	2% in 1 st period 5% in 2 nd period	35%	45% in 1st period until 200% is recovered ; 65% in 2nd period after 200% is recovered
Norway-3 NY, 1979	$ 0.5 mm	$1 mm/Y	2% in 1 st period 4% in 2 nd period	20% in 1st period 40% in 2nd period	40% in 1st period until 200% is recovered; 75% in 2nd period (after 200% of investment is recovered)

US/ EEC/ Japan NY, 1979	$ 0.5 mm	———	1% in 1st period; 2 % in 2nd period	20%	25% in 1st period until NPV of investr ent is 0 at 15% discount rate; 50% in 2 nd period (when NPV of investment i positive at a 15% discount rate
Koh-3B NY, 1979	$ 0.5 mm	$1 mm/Y	% years 1-10; 12% years 11 -25	—	———

Sources.

Proposals of USSR; Norway-1B; Norway-1A; India-2; US-2; Japan; EEC in UNCLOS III, Off.Rec., Vol.X, pp. 66,68,69. Koh-2A, UNCLOS III, Off.Rec, Vol.XI, " second report to the First Committee by the chairman of Negotiating Group Two", A.Conf.62.C.1.L.22, pp.103-107. US-1A; India-1; Norway-3; US, EEC, Japan; Koh-3B are quoted in James K. Sebenius, Negotiating the Law of the Sea, 1984, pp. 41-44.

2.4. Types of Payments

The financial objectives which should direct the Authority to approve rules, regulations and procedures concerning the financial terms of contracts and in negotiating those terms are set out in the Convention.[45] The main objective is to "ensure optimum revenues for the Authority from the proceeds of commercial production",[46] and to attract investments and technology to the exploration and exploitation of the Area. Over and above, to "enable the Enterprise to commence activities effectively at the same time as the other entities."[47]

During the seventh session, some developed states insisted on removing objectives (d) and (e) from the Convention. But, Mr Koh sustained his decision to maintain them on the basis that he regarded them

[45] LOSC, Annex III, art. 13 (1) (a) (b) (c) (d) (e) (f).

[46] Ibid, art. 13 (1) (a).

[47] Ibid, art. 13 (1) (b).

as "part of the package offered by the developed countries to the developing countries for the acceptance of the parallel system of exploration and exploitation."[48]

The Convention has laid down three sorts of charges for the contractor:

1. An application fee;

2. An annual fixed fee;

3. Either a production charge only or a mixed system of production charge and share of net proceeds.

1. An Application Fee

There was a great divergence of opinion with respect to the amount of application fee. Some countries proposed a fee of $US 100.000, while others favoured a sum of $US 500.000.[49] A general agreement was reached among the negotiators to pay a fixed amount for the administrative costs of processing the applications which amounts to $US 500.000 per application.[50] According to the Convention, the amount of the fee should be regularly reviewed by the Council so that it covers the administrative cost incurred.[51] However, if the administrative cost of processing is less than the fixed amount $US 500.000, the difference should be refunded to the applicant.[52]

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48 UNCLOS III, Off. Rec., Vol.X, p.63 (2).

49 UNCLOS III, Off. Rec., Vol.X, p.64 (5).

50 LOSC, Annex III, art. 13 (2).

51 Ibid.

52 Ibid.

2. An Annual Fixed Fee

Each contractor shall pay an annual fixed fee of $1 million from the date of entry into force of the contract.[53] The contractor may stop paying the annual fixed fee if the production charge which is due from the time of commencement of the commercial production is higher than $1 million.[54]

It was argued by the developing states that this type of payment has two profits. First, it would encourage production and discourage contractors from sitting on their mine sites. Second, the annual fixed fee will provide revenue for the Authority even before the commencement of commercial production. On the other hand, the developed countries objected to the annual fixed fee as it increases the "front-end" burden on the contractors before production commences.[55]

3. Production Charge or Production Charge plus a Share of Net Proceeds.

The industrialised countries particularly, EEC countries, Japan and United States favoured a mixed system of royalty plus profit sharing which prevent heavy "front-end" payments. The USSR with the support of many developing countries advocated the royalty-only system, because it is more compatible with socio-economic order.

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53 Ibid, art. 13 (3).

54 Ibid.

55 UNCLOS III, Off. Rec., Vol.X , pp. 64-65 (6).

1. A Production Charge Only[56]

Mr Koh was clearly appreciative that the production charge system had both advantages and disadvantages. With regard to the advantages, Mr Koh said:

> First, it is a constant payment of a fixed percentage of the gross proceeds from the time of commencement of production and would especially helpful to the Authority in the earlier years. Second, it assures the Authority of revenues irrespective of the profitability of the contractor's project. Third, it frees the Authority of the necessity to verify the accounts of the contractor. Fourth, it does away with the troublesome question what percentage of the contractor's gross proceeds or net proceeds is attributable to the mining of the resources of the contract area.[57]

Speaking of its disadvantages, Mr Koh said:

> First, the heavy obligation may be difficult if not impossible for some contractors to bear at the outset of their commercial production. Second, under this system, the revenues to the Authority do not vary with the profitability of the contractor's operation.[58]

The production charge is calculated on the basis of a certain percentage of the market value of the processed metals produced from the polymetallic nodules recovered from the area covered by the contract.[59]

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[56] After several revisions of the percentage rates it was, thus, worked out that the production charge would ascend in two stages. For more details about the legislative history of this provision, see UNCLOS III, Off. Rec., Vol.XI, pp.104 and (for text of para. 7, 106; Vol.XII, pp.78-79 and (for text of art. 12 (5)) 86; and Vol.XIII, pp.125-126 and (for text of art. 12 (5)) 128.

[57] UNCLOS III, Off. Rec., Vol.X , p.66.

[58] Ibid.

[59] LOSC, Annex III, art. 13 (5) (a).

This percentage is 5 percent of the market value of processed metals produced from the nodules for each of the first ten years of commercial production, and 12 percent for the rest of the contract's period.[60]

2. A Mixed System of Production Charge and Share of net Proceeds

The alternative system which had occupied the attention of the negotiators, includes both royalty and profit-sharing. This system has also, its merits and shortcomings. Speaking of its merits, Mr Koh said:

> First, it places less burden on the front-end than the first system does. The Authority's revenues rise with the rising level of the contractor's profitability.[61]

Of the shortcomings, he said:

> First, it is much more complicated than the other system and is more difficult to administer. Second, the back-end payment to the Authority is not assured. If the contractor does poorly, the Authority does poorly too.[62]

This mixed system,[63] which was designed for capitalist contractors, encompasses two components, a production charge and a share of net proceeds. According to the mixed system, the production charge is determined differently during the two periods of commercial production. The first period commences in the first accounting year of commercial

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60 Ibid.

61 UNCLOS III, Off. Rec., Vol.X, p.67.

62 Ibid.

63 This mixed system was like the "production charge only" system, revised in the eight session in 1979 so that it can be acceptable to both industrialised and developing countries.

production and ends when the contractor's development costs[64] with interest on the unrecovered portion thereof are fully recovered by the contractor's cash surplus, that is his gross proceeds minus operating costs[65] and his payments to the Authority.[66] During the first period the production charge will be 2 percent of recovered metal market value. The second period which begins in the year following the termination of the first period, the production charge is 4 percent.[67] Nevertheless, if in any accounting year, the payment of 4 percent production charge results in the fall of the return on investment below 15 percent, the production charge shall be 2 percent for that particular year.[68] In other words, if during the second period it happens that, the return on investment in any accounting year drop below 15 percent, the production charge then will be decreased to 2 percent in that accounting year.

It was admitted in the Conference that, the production charge rate of 4 percent based on the market value of the processed metals can be a heavy burden for the contractor even during the second period, especially so, in a particular year the contractor's project is doing badly.[69]

The highly complex formula of the share net-proceeds element survived in the Convention (Annex III, Article 13 (6)), only after controversial debates.[70]

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64 Development costs means all expenditures incurred prior to the commencement of commercial production. LOSC, Annex III, art. 13 (6) (k).

65 Operating costs means all expenditures incurred after the commencement of commercial production . LOSC, art. 13 (6) (k).

66 LOSC, Annex III, art. 13 (6) (d) (i).

67 Ibid, art. 13 (6) (a) (ii) and (d) (ii).

68 Ibid, art. 13 (6) (a) (ii) .

69 UNCLOS III, Off. Rec., Vol.XII, p.79.

70 For a legislative history of this formula, see UNCLOS III, Off. Rec., Vol.X, pp.58-69 and pp.144-154; Vol.XI, pp.104-107; Vol.XII, pp.77-83 and pp.86-88; Vol.XIII, pp.124-128 and pp.128-130; and Vol.XIV, pp.167 and pp.179-181.

A share of the contractor's Attributable Net Proceeds (ANP), which would be received by the Authority, is to be assessed on the basis of various levels of the contractor's return on investment. Thus, the higher the level of return on investment the greater the rate of payment. The period in which commercial production is carried out is divided into two parts. The first ends when the contractor's development costs are fully recovered by his cash surplus. The rates of payment are higher in the second period of commercial production than in the first.

The method employed to calculate the Attributable Net Proceeds, was the combination of the "cost-ratio method" and the predetermined constant ratio method.[71] Using the "cost-ratio method", Attributable Net Proceeds will be based on the ratio of the development costs of mining the nodules to the contractor's total developments costs, including not only the costs of mining but also the costs of transport and production of the metals.[72] The product of this ratio and the contractor's total net proceeds form the Attributable Net Proceeds are as follows:

$$\text{Attributable Net Proceeds} = \frac{\text{development costs of mining the nodules}}{\text{development costs mining, transport, and processing}} \times \text{total net proceeds.}$$

Via the "predetermined constant ratio" method, Attributable Net Proceeds may not drop under 25 percent of the total net proceeds for three metals, specifically cobalt, copper and nickel in an integrated project, comprising mining, transport and production.[73] In all other cases, including a four metal integrated project, viz; cobalt, copper, nickel

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71 For details, see UNCLOS III, Off. Rec., Vol.XII, p.79.

72 LOSC, Annex III, art. 13 (6) (c) (ii).

73 Ibid, art. 13 (6) (e).

and manganese; the Authority may, in its rules, regulations and procedures, prescribe "appropriate floors which shall bear the same relationship to each case as the 25 percent floor does to the three-metal case."[74] Nevertheless, if the contractor engages in mining only, Attributable Net Proceeds means the whole of the contractor's net proceeds.[75]

The payment from net proceeds is based on an incremental schedule.[76] From that portion of net proceeds which represents up to 10 percent return on investment, the contractor shall pay to the Authority 35 percent in the first period and 40 percent in the second. This amount augments to 42.5 percent in the first period and 50 percent in the second period for that portion of net proceeds which represents between 10 percent to 20 percent return on investment. On the portion connected to more than 20 percent return on investment , the contractor shall pay 50 percent in the first period, and 70 percent in the second.[77]

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[74] Ibid.

[75] Ibid, art. 13 (6) (n) (i) .

[76] Ibid, art. 13 (6) (c) (ii).

[77] Ibid, art. 13 (6) (c) (ii).

Portion of ANP on which return on investment is:	Share of the Authority	
	First period of commercial production	Second period of commercial production
_ greater than 0% but less than 10%,	35%	40%
_ 10% or greater but less than 20%,	42.5%	50%
_ 20% or greater.	50%	70%

The return on investment in any accounting year is determined as the ratio of Attributable Net Proceeds in that year to the development costs of the mining sector of the project.[78] This formula offers benefits to both the miner and the Authority. According to this formula, the miner will benefit from low rates of taxation when the annual return on investment is low, and the Authority will enjoy the benefit of high rates of tax when the annual return is high.[79]

Ultimately, consideration is to be taken with regard to the monetisation of the formula. In other words, to determine in money terms the Authority's share of the contractor's net proceeds. The single system and the mixed system would supply varying amounts of earnings for the Authority and diverse internal rates of return for the contractor depending on the technical and economic aftermath of sea bed mining projects.[80] The figures shown in Table (1) of Annex (E) demonstrate the distinction of the Authority's receipts and the contractor's internal rates

[78] Ibid, art. 13 (6) (m) .

[79] For more details about the Formula, see Mr Koh's Report, in UNCLOS III, Off. Rec., Vol.XII, p.79.

[80] Ibid.

of return. These figures assumed a mining operation financed with 100 percent equity which pays United States taxes after sharing with the Authority. It was mentioned that the internal rates of return would be higher by about 1 to 3 percent if national taxes were not levied. Furthermore, it was indicated that the internal rates of return would also alter if debt-equity ratio was 1:1.[81]

The Table (1) below makes mention of six cases, A, B, C, D, E, F. The six cases were illustrated by the Chairman of the First Committee, Mr Koh as follows:

"Case (c) is the original Massachusetts Institute of Technology baseline set of assumptions. Case (A) represents a low-profit situation with higher costs and lower ore grade (development costs and operating costs are increased by 25 percent, research and development costs are increased to $150 million, and ore grade is reduced to 2.4 percent). Case (B) is the same as case (A) but with metal prices increasing 1 percent per year. Case (D) increases metal prices to near-current levels and the original Massachusetts Institute of Technology baseline costs. Case (E) is the same as case (D) except that the original Massachusetts Institute of Technology baseline development and operating costs are increased by 25 percent and prices are allowed to increase by 2.5 percent per year. Case (F) is the same as case (E) but with the original MIT baseline cost estimates."[82]

Table (1) in Annex (E) shows payments to the Authority under the mixed system which are from about $260 million to about $2 billion as the contractor's internal rates of return range from about 6 percent to 24 percent. In the baseline case, payments to the Authority are $574 million.

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[81] Ibid.

[82] Ibid.

Under the single system, payments range from about $527 million to about $1.3 billion with payments in the baseline case equal to $599 million. The contractor's internal rates of return range from about 5 percent to 25 percent.

Case (E) represents the situation in which the original baseline price and cost estimates are revised to reflect more current values, and metal prices are allowed to increase 2.5 percent per year. Some observers believe this case to be more realistic. Payments to the Authority in case (E) would be $1.792 million under the mixed system and $1.312 million under the single system."[83]

Table (1). "Monetisation of the Proposed Tax Systems." Annex (E).

Single System (production charge only)			Mixed System (of production charge and share of net proceeds)		
Case	Payments to Authority ($ millions)	Internal rates of return (%)	First year of second period (year)	Payments to Authority ($ millions)	Internal rates of return (%)
A	527	5.1	—	258	6.1
B	638	7.9	20	429	8.5
C	599	13.9	8	574	13.8
D	807	20.1	5	1.015	19.5
E	1.312	20.9	6	1.792	20.2
F	1.312	25.0	5	1.964	23.9

83 Ibid, p.80.

The aim of the developing countries, in particular the delegation of India, during the negotiations on the financial arrangement was to insist on the maximal amounts of taxes upon the contractors and thereby assuring the greatest conceivable incomes for the Authority. A comparison between the Convention's provisions on the financial terms and what was demanded by developing states show how far away these provisions are from that purpose. For instance, while the industrialised countries claimed that, only 20 percent of Attributable Net Proceeds of the value of finished metals produced from nodules could be attributed to the mining stage, the developing countries claimed a great percentage of about 60 percent. Indeed, the Convention reveals the aim of the industrialised countries by establishing a minimal percentage (25 percent of Attributable Net Proceeds).[84] The industrialised countries, especially the United States were satisfied and pleased with the result of the negotiations and thus, the issue of financial arrangements was not among the critical aspects, until 1982 after the Reagan administration took over that the United States sought to renegotiate.[85]

It is interesting to note that, the value by which the production charge and the net proceeds are assessed, is determined in a market completely monopolised and controlled by multinational entities (consortia). The regime of the financial arrangements is almost in the benefit of the industrialised countries.

2.5. Tenure of Contract

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[84] LOSC, Annex III, art. 13 (6) (e).

[85] Ogley, op.cit., p.161.

Throughout the contract period, the Authority will supervise operations and may require operators to transfer to it any data necessary for the performance of its functions.[86] Thus, in compliance with the terms of plans of work and production authorisations to which operators will be contractually bound, can be checked as can compliance with other regulations concerning, for example, environmental matters or the obligation of operators to establish training schemes for personnel from the Authority or developing states.[87]

The Authority may impose monetary penalties, and in serious cases suspend or terminate the contract. In all cases however, the contractor has the right to take the matter through the dispute settlement procedure.[88] Between the entry into force of the Convention and the end of the review conference,[89] Article 155 (5) of the Convention provides that, as long as a contract is signed, the rights under the contract over the life of the mining operation will remain unaffected by actions of the review conference. Thus, billions of dollars of investment made by commercial undertakings that result in contracts issued before the review conference are immune to from the effects of future changes. In fact, this principle is clearly recognized in the Convention. The Convention provides for security of tenure in Article 153 (6), which stipulates that "a contract under paragraph 3 shall provide for security of tenure. Accordingly, the contract shall not be revised, suspended or terminated except in accordance with Annex III, articles 18 and 19." Moreover, much more

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[86] LOSC, Annex III , art. 14.

[87] Ibid, arts. 15-17.

[88] Ibid, art. 18; arts. 186-91.

[89] Fifteen years after the first commercial production has started, the Convention requires that a conference should be convened to review and evaluate the system of exploitation.

security of tenure is provided in Article 19 of Annex III. Article 19 provides that if changes occur in which the contract becomes inequitable, or the achievement of objectives in the contract or in Part XI of the Convention becomes impracticable or impossible, the contract must not be revised without the consent of both parties. Besides, the contract must not be suspended or terminated except in accordance with Article 18 of Annex III. In other words, neither the Authority nor the contractor has the right to modify the terms of a contract, except in compliance with Articles 18 and 19 of Annex III.[90]

However, there are exceptions on the principle of security of tenure whereby, the contract can be revised, suspended, or terminated. These exceptions are provided for in Articles 18 and 19 of Annex III.

The contract can be terminated only if, in spite of warnings by the Authority, the contractor had conducted his activities in such a way as to result in serious persistent and willful violations of the fundamental terms of the contract, the relevant provisions of the Convention, the rules and regulations of the Authority; or if the operator fails to comply with a final binding decision of an applicable dispute settlement body.[91]

Furthermore, the contract might be revised if new circumstances make the contract inequitable, impracticable, or impossible.[92]

In each instance, except for emergency cases,[93] the Authority may not punish a contractor until the contractor has had a reasonable opportunity to exhaust remedies available under Part XI.[94]

It means therefore that, such security of tenure might be somewhat

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90 LOSC, art. 153 (6).

91 Ibid, Annex III, art. 18 (1).

92 Ibid, Annex III, art. 19 (1).

93 Ibid, art. 162 (2) (w).

94 Ibid, Annex III, art. 18 (3); also Part XI, sec. 5.

pointless and insignificant, since the grant of contracts does not entitle a contractor to produce minerals until he has received a production authorisation, or if the issue of an authorisation is unduly delayed.[95]

Section 3. Transfer of Technology

The issue of compulsory technology transfer envisaged in the Convention was problematic to the industrialised countries, especially, their private industries which depend on market forces, and much of the technology is basically possessed by such private entities.

For instance, the United States did not support the provisions on the mandatory transfer of technology, by arguing that it would bring pressure upon private firms to give away their valuable assets to the Enterprise and developing countries.[96] In other words, private companies are anxious that requirements on technology transfer might be imposed on them to disclose their expensive know-how to other countries. Such know-how is considered as an industrial secret which needs to be employed for the exclusive economic benefit of the owners.[97]

It was generally conceded that the actual technology should be kept a matter of secrecy to safeguard the manufacturer's, or developer's

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95 E. D.Brown, Seabed Energy and Mineral Resources and the Law of the Sea, Vol.2, The Area Beyond the Limits of National Jurisdiction, (1984) p.II.420.

96 S. Houston, An Analysis of the Deep Seabed Mining Provisions of the Law of the Sea, (1985) 10 U.Day.L. Rev., p.334.

97 J. Kodwo, The Foreshadowed Global Legal Regime of Deep Seabed Exploration and Mining and some Pre-emptive National Legislative Enactments, (1983) Ll.M.C.L.Q., p.274.

copyrights or patents on account that, such unlimited transfer of technology would devastate the economic value of the trade secret to the mining company for subsequent licensing.[98]

Mandatory transfer of technology will have momentous expense to the miners since, it comprises a marked exception to the western commercial concept of trade secrecy and competition. On that account, it is not surprising that municipal legislation do not include any provision in relation to transfer of technology.[99]

It has been suggested that, under the provisions on technology transfer, United States entities cannot stand to do business. Richard A. Legatski attested before the Sub-committee on Oceanography,

> Technology is defined much more broadly than in commercial practice, to include the very essence of the engineering skill which permits owners of an advanced technology to maintain a competitive advantage in the market place; employees of the "Enterprise" who misuse confidential or proprietary information after a transfer are subject to only taken penalties so the risk of commercial or military espionage is quite real; since U.S. patent law is not extraterritorial in effect, there is no equivalent to "patent" protection on the high seas; should a loss of proprietary information occur, the treaty text provides no compensation for the owner of the affected technology; any technology not made available to the Enterprise must also be withheld from the resource company which is seeking the right to mine in the first instance. Therefore, for want of need equipment, the resource may not be able to conduct operations, and the technology supplier will lose a market. The burdens imposed on technology suppliers would create disincentives to

98 Marsteller & Tucker, Problems of the Technology Transfer Provisions in the Law of the Sea Treaty, (1983) IDEA (the Journal of Law and Technology)., p.170.

99 McDade, The Interim Obligation Between Signature and Ratification of a Treaty, (1985) 32 Netherlands I.L.R., pp.39-40.

> innovation, thereby damaging the economies of all nations at least indirectly.[100]

Notwithstanding, the fundamental objective of the provisions on mandatory transfer of technology is to facilitate the access of the Enterprise and of the developing countries to deep sea bed mining technology, under fair and reasonable terms and conditions. This is to assure that such technology is not monopolised or limited to the developed countries. Accordingly, entities are required to transfer technology for the Enterprise to function competitively and simultaneously as private consortia, and for the benefit of developing countries.

As far as developing countries are concerned, their objective is not only to get the technology working in the developing countries, but also to facilitate the developing countries to bring about a "certain amount of technological autonomy so that it can make its own technological decisions with a full awareness of what the world has to offer."[101]

The deep sea bed mining technology transfer,[102] as a key issue in the developing countries campaign for a New International Economic Order, was debated in the First Committee during UNCLOS III.

The transfer of technology is not a new concept, but has emerged as a concrete issue even prior to the start of the Third United Nations Conference on the Law of the Sea. Thus, according to various statements submitted to the Sub-Committee Three of the Sea-Bed Committee since

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100 Houston, op.cit., p.333.

101 Gamble & Pontecorvo, Law of the Sea: The Emerging Regime of the Oceans, (1974) p.86.

102 Transfer of technology was identified by the United States in the resumed eight session as one of the outstanding issues remained in the deep sea bed mining. See H. Oxman, The Third United Nations Conference on the Law of the Sea: The Eighth Session (1979), (1980) 74 A.J.I.L., p.6.

1971, many participants from developing countries contended that, so as to narrow the gap between the rich and poor nations of the world and to engage entirely in the exploration and exploitation of deep sea bed resources, the industrialised countries should share their technical know-how with the developing countries.[103] In this context, developing countries regard transfer of technology as part of the "common heritage of mankind" which might contribute in their successful economic development.[104]

The efforts of the developing countries were successful in having the issue of technology transfer, which can be regarded as one of the important elements of the so-called New International Economic Order, discussed and debated in the Third United Nations Conference on the Law of the Sea. From the very beginning of the Conference, developing states endorsed the effective role which the technology plays in the economic development of all countries.[105]

The huge gap between the developed and developing countries is effectively illuminated in the access of marine technology of deep sea bed, which is monopolised by a few developed countries. During the negotiations on the law of the sea, developing countries' view was that, the technology should be regarded as a striking means of promoting and

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[103] See supra note 101, pp.91-92.

[104] Article 13 of the United Nations Charter of Economic Rights and Duties of States. UN. G.A. Res. 3281 (XXIX), 15 Jannuary 1975, reprinted in (1975) 14 I.L.M., p.251. This Article acknowledges the need for developing nations to acquire technology on terms appropriate to their own capacity to pay for and benefit from such transfer.

[105] See e.g., the statement of the Tanzanian representative, in UNCLOS III, Off. Rec., Vol.II, p.346. The Cuban representative stated that "the wealth and the technological superiority of many developed countries derived in part from imperialist, colonialist and neo-colonialist policies of exploitation of the developing countries." See ibid., p.347.

enhancing the socio-economic development of poor countries.[106] Developed and developing countries argued that all states should profit from the development of marine technology by giving all states the right of access to marine technology.[107]

It was accepted during the negotiations of the Conference by many delegations that in order to exploit the Area effectively, it must be ensured that the Enterprise and developing states will have access to the substantial technology, but the transfer of the technology should not be so onerous as to be unsupportable to the developed countries. However, after a long debate on the issue, the efforts of both countries were not successful. The developing states wanted unlimited time on the transfer of technology, and a broad concept of technology so as to include different stages of mining, processing, marketing, and transport technology. Hence, the

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106 Numerous statementswith regard to this matter were presented by many representatives from developing countries. The representative of Sri Lanka said: "as long as marine technology remained in the hands of a few developed countries, the peoples of Asia , Africa and Latin America would be unable to harvest effectively the resources of the sea which they so desperately needed." See UNCLOS III, Off. Rec., Vol.II, p.337. The representative of Cameron also stated that "developing countries had often spent large sums of money to import technology from developed countries which was in some cases already outmoded,....Taking a laissez-fair approach to transfer of technology would aggravate certain aspects of under-development instead of eliminating them...." Ibid, p.340. Mr Bayonne, the representative of Congo stipulated that "scientific research and the transfer of technology could help to establish more equitable economic relations between developed and developing countries." Ibid, p.353. The representative of Venezuela asserted that "it was in the interest of the whole international community to seek ways of narrowing the technology gap by facilitating the transfer of technology from the developed countries to the developing countries." Ibid, p.343.

107 The representative of Romania affirmed that "... The programmes proposed in that document would give all states, and especially the developing countries access to marine science and technology on an equitable basis." See UNCLOS III, Off. Rec., Vol.IV, p.103. Guinea delegation also stated that the transfer of technology "was a means of rectifying past injustices and bringing about a more equitable distribution of the world's wealth...." Ibid, p.103.

developed states opposed what was contemplated by developing countries in order to protect their technology which is a private property.[108]

Provisions and terms of technology transfer went through some important changes during the negotiations in favour of the industrialised countries. For example, modifications which were introduced on the related provisions in Annex II, Paragraph 4 (c) (ii), aimed at removing the transfer of technology obligation as a precondition for obtaining a contract, and instead to oblige the applicant to agree to undertake to negotiate with the Enterprise and to make available to the Enterprise after receiving a contract, the technology he would use on fair and reasonable commercial terms.[109] Another change in the ICNT. Revised.1 was that the contractor is required to make the technology available to the Enterprise, if the Enterprise finds that it is unable to obtain the same or equally efficient and useful technology on the open market and on "fair and reasonable terms and conditions."[110] Furthermore, the important change in technology transfer provisions was the introduction of a ten year limit from the time the Enterprise begins commercial production for demanding any contractor to transfer the technology to the Enterprise.[111]

Nevertheless, the developed states failed to eliminate Article 5 (1) (e) of Annex II in ICNT. Revised.1 which requires the contractor to transfer

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[108] The United States representative confirmed that "in the United States such technology was private property and therefore not subject to government transfer." He added that "his delegation would find it impossible to agree to any such provision." See UNCLOS III, Off. Rec., Vol.IV, p.103.

[109] According to the ICNT provisions on transfer of technology, the Authority is permitted to issue contracts, pending agreement on technology transfer. In other words, the conclusion of the contract with the Authority was preconditioned to the transfer of technology.

[110] UN. Doc. A.Conf.62.WP.10.Rev.1. Annex II, art. 5 (1) (c).

[111] Ibid, Annex II, art. 5 (7). Annex II of the ICNT. Rev.1 became Annex III in the Second and Third Revision of the ICNT.

the technology to the developing countries conducting activities in the reserved areas. Alternatively, they made such a transfer conditional in the sense that such an obligation existed only if "technology has not been requested or transferred...to the Enterprise."[112] The final attempt to achieve a compromise is contained in Article 5 of Annex III of the Convention.

In discussing the question of technology transfer from developed countries to the Enterprise and developing countries, one must first define the term "technology."

The notion of technology is rather vague, and several interpretations are given to the concept in question. Technology is generally conceived of as "the application of science to the solving of well-defined problems."[113] According to T. Franssen, transfer of technology could merely consist of transferring technical know-how to major industrial and service sectors in the economy, or could be defined as to include the total process of transferring scientific and technical know-how, including training of scientific, technical, managerial, and administrative personnel, the development of science policy institutions to other nations.[114] Marine technology as it appears in a report of the Secretary General prepared for the Third Conference on the Law of the Sea, is

> a product of mains attempt to control or adapt to the ocean environment by means of rationally organized systems of operations.[115]

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[112] ICNT.Rev.2.and 3. Annex III, art. 5 (3) (e).

[113] Mirabito, The Control of Technology Transfer - the Burke - Hartke Legislation and the Andean Foreign Investment Codes: the MNE faces the Nations, (1975) 9 Int'l.Law., pp.215-216.

[114] See supra note 101, p.90.

[115] Report of the Secretary General, Description of some Types of Marine Technology and Possible Methods for their Transfer, in UN. Doc.

The Convention on the Law of the Sea defines technology as encompassing "...the specialized equipment and technical know-how, including manuals, designs, operating instructions, training and technical advice and assistance, necessary to assemble, maintain and operate a viable system and the legal right to use these items for that purpose on a non-exclusive basis."[116]

It is worth noting that the definition of the construct "technology" has been introduced by some changes. For instance, the word "specialised" was added "to make more specific the kind of technology to which this article refers."[117] Another amendment was the word "viable."[118] The intention of Mr Nejenga behind making those changes was "to establish in a clear and acceptable manner that the technology in the context of this provision covers all the operations referred to in all paragraphs of Article 5 particularly, in Paragraph 5 which refers to the recovery and processing of minerals from the area. In other words, the system has to be comprehensive."[119]

Nonetheless, developing countries did not accept the formulation of the provision. Nor did they accept Mr Nejenga's assertion that "... this addition is enough for this purpose and no other more specific terms in the definition are required."[120] Thus, developing countries insisted on a more explicit definition of technology which includes, processing technology as well.[121] The Chairman refused the demand of the

A.Conf.62.C.3.L.22, UNCLOS III, Off. Rec., Vol.IV, p.202.

116 LOSC, Annex III, art. 5 (8).

117 UN. Doc. A.Conf.62.C.1.L.27, UNCLOS III, Off. Rec., Vol.XIII, p.115 (22).

118 Ibid.

119 Ibid.

120 Ibid.

developing countries on the basis that "any change in this provision made at this time would create serious difficulties for some delegations."[122] Therefore, the definition of technology as incorporated in the Convention does not embrace processing technology.

Part XIV of the Convention deals with the general principles which govern the transfer of technology entitled "development and transfer of marine technology." The aim of this part is to promote the marine scientific and technological capacity of states particularly, developing countries and accelerate their social and economic development.[123] States are required to promote the acquisition, evaluation and dissemination of marine technological knowledge and facilitate access to such data; the development of necessary technological infrastructure to facilitate the transfer of marine technology; the development of human resources through training and education of nationals of developing states; and international co-operation at regional, subregional and bilateral levels.[124] These objectives might be achieved through the establishment of programmes of technical co-operation, promotion of favourable conditions for the conclusion of agreements, holding of conferences, seminars and symposia on scientific and technological subjects, exchanging technology scientists of and other experts.[125]

According to Article 144 of the Convention, technology transfer of deep sea bed mining shall be conducted by the Authority through taking measures in accordance with this Convention. The International Sea-Bed Authority is entrusted to co-ordinate the acquisition of technology for the

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121 UN. Doc. A.Conf.62.C.1.L.28, UNCLOS III, Off. Rec., Vol.XIV, p.162.

122 Ibid.

123 LOSC, art. 266 (2).

124 Ibid, art. 268.

125 Ibid, art. 269.

benefit of the Enterprise and developing countries.

The Convention provides that the applicant must undertake to make available to the Enterprise and developing countries, the necessary technology on fair and reasonable terms and conditions.[126] Consequently, to guarantee the access to the necessary technology, the contractor is legally entitled and obliged to transfer the know-how he employed in sea bed activities. The transfer is to be done only when such technology or equally efficient and useful technology is not available on the open market.[127]

The transfer can be accomplished by virtue of licenses or any other appropriate arrangements agreed upon negotiations with the Enterprise and which shall be set forth in a specific agreement supplementary to the contract.[128] It was, accordingly, asserted at the ninth session that violations of those terms concerning transfer of technology may bring about suspension or termination of the contract.[129]

In the event that, the technology employed by the contractor is not his property and he is not legally authorised to transfer it to a third party, then he is required to either obtain a written assurance from the owner indicating that the owner is prepared to directly negotiate with the Enterprise for such a transfer;[130] or he should by means of an enforceable contract acquire from the owner the legal right to transfer to the Enterprise the technology he uses if the Authority so requires and

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126 Ibid, art. 144 (2) (a).

127 Ibid, Annex III, art. 5 (3) (a). If the Enterprise cannot find such technology in the open market, the Authority's Enterprise would have the option of buying it from the contractor.

128 Ibid, Annex III, art. 5 (3) (a).

129 UN. Doc. A.Conf.62.C.1.L.27, UNCLOS III, Off. Rec., Vol.XIII, p.114 (14).

130 LOSC, Annex III, art. 5 (3) (a).

whenever it is possible to do so without causing substantial cost to the contractor.[131]

Under the first situation, if the Enterprise decides to negotiate directly with the owner of the technology, the contractor is required upon a request from the Enterprise to facilitate the acquisition of the technology.[132] However, this undertaking is to be applicable only if the technology in question is not available on the open market. If it happens that the contractor fails to negotiate this assurance and, consequently, it is not obtained, the technology in question shall not be used by the contractor concerned in carrying out activities in the Area.[133]

For the second case, the Enterprise may decide to acquire from the owner, not by virtue of direct negotiations with the owner but by means of an enforceable contract, the legal right to transfer such technology. This obligation also applies only if such technology is not available on the open market.[134] In order to achieve this objective, the Authority is to be informed of any substantial corporate relationship between the contractor and the owner of the technology in question.[135] The closeness of this relationship and the degree of control or influence exercised on the owner will be regarded relevant in this determination. If the contractor fails to acquire from the owner the legal right to transfer the technology, he may not gain or qualify for any subsequent application for approval of a plan of work.[136]

One of the crucial issues during the negotiations on technology

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131 Ibid, Annex III, art. 5 (3) (c).

132 Ibid, Annex III, art. 5 (3) (d).

133 Ibid, Annex III, art. 5 (3) (b).

134 Ibid, Annex III, art. 5 (3) (c). This provision goes on to explain that the contractor must take all feasible measures to acquire such technology.

135 Ibid.

136 Ibid.

transfer was the requirement to transfer such technology to the developing countries. Accordingly, the contractor is obliged, after the Enterprise commences commercial production, to take the same measures as with regard to the Enterprise so that technology will be available to developing countries. That is, options of the technology transfer open to the Enterprise shall also be assigned to developing states oragroup of developing states applying for a contract on one of the reserved sites.[137]

Under this obligation, developing countries do not have an absolute right to the transfer of technology. Thus, the undertaking applies only when developing states would involve transfer of technology to a third party (state) or their nationals.[138] Moreover, this obligation shall apply only if the technology has not been requested by the Enterprise or transferred by that contractor to the Enterprise.[139] Finally, this undertaking is only applied on reserved sites, where developing states have applied for a contract under Article 9 of Annex III.[140]

The objective of the developing states was to gain access to the advanced technology so as to be able to compete with the developed states and to participate effectively in the activities conducted in the Area.

The right of access to technology can be considered as a real breakthrough to ease the establishment of a New International Economic Order. To this extent, it seems that provisions of the Convention would meet part of the developing states' objectives. Generally, the objective of the obligation of technology transfer according to the provisions of the Convention is to allow the Enterprise and developing nations to have access to the advanced technology.[141]

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137 Ibid, Annex III, art. 5 (3) (e).

138 Ibid.

139 Ibid.

140 Ibid.

Having discussed the ways on how to transfer the technology from the contractor to the Enterprise and developing states, attention will be directed to other matters related to transfer of technology.

One of the important questions related to the technology transfer is the training programmes. The contractor is required to "draw up practical programmes for the training of personnel of the Authority and developing states, including the participation of such personnel in all activities in the Area which are covered by the contract ...."[142] As it was argued that, even if the developing states are provided with the advanced technology, they still need well trained people to operate and preserve the technology. From this context, it was generally acknowledged during the negotiations by many delegations from developing countries and even from developed countries that training programmes play an important role in the effective transfer of technology.[143]

The obligations of the applicant for the transfer of technology, as set forth in Article 5 (3) of Annex III, are subject to a time limit contemplated in Article 5 (7).[144] The objective of the industrialised

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141 Ibid, art. 144.

142 Ibid, Annex III, art. 15; art. 144 (2).

143 See e.g., statement by the representative of France. He asserted that training and educational programmes "were one of the ways to carry out the transfer of technology." UNCLOS III, Off. Rec., Vol.II, p.339 (47). Many other countries affirmed the importance of the personnel training. For example, Nigeria said: "the most effective means of transfer was by training and education." Ibid, p.348 (15); Senegal, "Personnel qualified in marine technology were needed by the developing countries." Ibid, p.354 (76); Madagascar, "Existing international agencies and the International Seabed Authority should draw up programs for training personnel from developing countries in marine technology, using the knowledge and experience of advanced industrialised countries, which should be urged to co-operate fully to ensure the success of the programmes." Ibid, p.336 (3).

144 Article 5 (7) of the Convention states that "the undertakings required by Paragraph 3 shall be included in each contract for the carrying out of activities in the Area until 10 years after the commencement of commercial production by the

countries during the negotiations on transfer of technology was to accommodate and restrict a time limit for technology transfer. Indeed, on the basis of the demands of the industrialised countries, the compromise was reached by fixing a ten year period to transfer the technology.

The transfer of technology requirement starts even before the plan of work is approved. The provisions of the Convention put it clear that in applying to the Authority for approval of a plan of work, the applicant must provide "a general description of the equipment and methods to be used in carrying out activities in the Area, as well as other relevant non-proprietary information as to where such technology is available."[145] In addition, following the approval of the plan of work, the applicant must inform the Authority on the descriptions given if a substantial technological change or innovation is introduced.[146]

The operator is also required to transfer non proprietary data relevant to the effective exercise and the function of the Authority, such as data which are necessary for formulation of rules by the Authority regarding protection of environment and safety.[147] However, data transmitted to the Authority shall not be disclosed to the Enterprise or to any other party. In addition, data given to the Enterprise shall not be divulged to the Authority or any one external to the Authority.[148] However, data transferred to the Authority on the reserved areas may be disclosed to the Enterprise.[149]

Commensurate with Article 4 of Annex III, states are responsible to

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Enterprise, and may be invoked during that period."

145 LOSC, Annex III, art. 5 (3) (1).

146 Ibid, Annex III, art. 5 (3) (2).

147 Ibid, Annex III, art. 14 (1) (2).

148 Ibid, Annex III, art. 14 (3).

149 Ibid.

guarantee within their legal system that, the contractors they sponsor shall perform the terms of contract and obligations under this Convention.[150] Subsequently, states parties are responsible for obtaining the technology if their operators fail to conform to the measures mandating transfer of technology.[151]

A group composed of those engaged in activities in the sea bed and those who have sponsored entities engaged in such activities, and states parties having access to such technology, may be convened either by the Council or the Assembly. This group will act to effectively ensure that the Enterprise can acquire the necessary technology to commence in a timely manner the recovery and processing of minerals. To this end, states parties are required to take all feasible measures within their own legal system.[152] Seemingly, this relevant provision does not show that governments may be compelled to arouse appreciable expense, and possibly to intrude in their national market place by virtue of expropriation or other means, but it implies in addition that, the Enterprise must be given processing technology also.[153]

Disputes on the terms of technology transfer are subject to compulsory dispute settlement. Therefore, it is provided in the provisions that disputes over the fairness and reasonableness of the terms on which transfer is offered may be submitted by either party to binding commercial arbitration according to UNCITRAL rules, or other rules and regulations laid down by the Authority.[154] The Sea-Bed Disputes

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150 Ibid, Annex III, art. 4.

151 Ibid, Annex III, art. 5 (5).

152 Ibid.

153 J. Breaux, Technology Transfer: A Case Study of the Inequity of the New International Economic Order, (July 1979) 13 Marine Technology., p.22.

154 LOSC, Annex III, art. 5 (4).

Chamber has jurisdiction over disputes concerning the interpretation or application of a relevant contract or a plan of work.[155] Unless however, the parties otherwise agree such disputes over a contract must be submitted, at the request of any party to the dispute, to binding commercial arbitration.[156] The commercial arbitral tribunal does not have any jurisdiction over the interpretation of the Convention and therefore, it shall refer such question of interpretation to the Sea-Bed Disputes Chamber for a ruling.[157] In case of absence of an arbitral procedure in the contract, the arbitration shall be conducted in accordance with the UNCITRAL arbitration rules or such other arbitration rules as may be prescribed in the rules, regulations and procedures adopted by the Authority.[158] The transfer of technology provisions were disputable. For example, the term "commercial" which was inserted in the "reasonable terms" clause. It has been argued that it is hard to reunite a mandatory transfer with commercial terms and conditions.[159]

It is important to note that the most controversial aspect in relation to the marine technology during the negotiations was the transfer of deep sea bed mining technology.[160] During the negotiations, participants attempted to find a compromise on the transfer of technology profitable to developing states, and less burdensome to developed countries.

If the contractor complies with the provisions laid down in Article 5 of Annex III and related provisions, he is guaranteed the exclusive right to explore and exploit the area covered by the plan of work in respect of a

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155 Ibid, art. 187 (c) (i).

156 Ibid, art. 188 (2) (a).

157 Ibid, art. 188 (2) (a) (b).

158 Ibid, art. 188 (2) (c).

159 Supra note 153, p.22.

160 The debates took place in the First Committee, where many delegations especially, from developing countries competed to ensure the access to deep sea bed mining technology for the profit of the Enterprise and developing states.

specified category of resources. No other entity can operate in the same area, even for a different category of minerals as it might interfere with the contractor's operations.[161] Moreover, the operator enjoys a security of tenure.[162]

To sum up, it can be said that the technology transfer, as an important element of the New International Economic Order and as a significant mean of promoting the socio-economic development of mankind, has got an efficacious role to play to narrow the huge gap and to reform the economic imbalance between the developed and developing countries.

Section 4. Production Policy

According to the production policy set out in Article 151 of the Convention, the International Sea-Bed Authority shall establish a production system control and a system of compensation for affected land based producers. In addition, the Authority is empowered to enter into and engage in international commodity arrangements covering all sea bed minerals extracted from the Area provided that such agreements involve producers and consumers countries. These measures are geared to achieve the objective of protecting land-based producers and promoting the development of the common heritage for the benefit of mankind as a

161 LOSC, Annex III, art. 16.

162 Ibid.

whole. Accordingly, the Convention intends to encourage the production of sea bed minerals with the least possible harm to the land-based producers of the same minerals.

The production control formula[163] set out in the Convention establishes a system of a fixed quantity control of which miners would be allowed to produce a certain fixed percentage. This would be projected on the basis of an annual increase in the world's demand for nickel, equivalent to a previous five years prior to the commencement of commercial production from the deep sea bed.

The projections are derived from "trend lines" based on the most recent 15 years period for which actual nickel consumption data are available.[164] The Authority's Enterprise would be entitled to produce up to 38.000 tons of nickel a year from the total seabed production ceiling to be established by the Authority itself in each year.

The formula uses nickel as the specified limit for the production of the four metals nickel, cobalt, copper and manganese. In other words, the overall production control system relates mineral

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[163] The production limitations scheme was strongly objected by the United States, and was one of its reasons not to sign the Convention. J. Breaux explains the Reagan administration's position on production limitation. He stated: "production limitations are something that we consider unprecedented in any international commodity arrangements. We feel that they are inappropriate. It is not sufficient to say that the U.S. should not worry about production ceilings...[t]he fact that they exist will cause market distortions and affect investment patterns, and they discriminate against developed countries in the Area of sea bed mining." See J. Breaux, The Case Against the Convention, in A. Koers & H. Oxman, The 1982 Convention on the Law of the Sea, (1983) 10 L.Sea.Inst. Proc., pp.12-13. Generally, the United States protected any production control which impede the ability of American mining companies to produce at profit maximizing levels. See M. Banks, Protection of Investment in Deep seabed Mining: Does the U.S. have a Viable Alternative to Participation in UNCLOS III, (1983) 2 Boston.U.l.L.J., p.282.

[164] LOSC, art. 151 (4) (b).

production to the world annual increase in nickel consumption. However, the puzzling question which might be asked is, why was nickel chosen as a standard of limitation?. Many answers were provided in this respect. However, the main reason of selecting nickel was just for the sake of convenience.[165] It has been argued that nickel was chosen simply because nickel has been considered the most commercially important product.[166] In illustrating why the limit is based on the nickel metal, Mr Langevad stated that the source of revenue for sea bed mining will come from nickel, so naturally the production of this metal will be maximized; and for this reason, therefore, the control of sea bed mining imposes a limit on the amount of nickel to be produced rather than on any of the other metals (copper, cobalt and manganese).[167] In explaining the importance of the nickel, Mr Hauser said that, nickel was chosen as the standard because nickel will account for at least half to two thirds of the proceeds from the sales of processed metals and the recoverable quantity of nickel thus appears to be decisive for the economic success of a project.[168]

The objectives of the production limitation formula is firstly; to protect "the developing countries from adverse effects on their economies or on their export earnings resulting from a reduction in the price of an affected mineral, or in the volume of exports of that mineral, to the extent that such reduction is caused by activities in the Area."[169] Secondly, to

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165 Effects of the Production Limitation Formula under Certain Specified Assumptions: Report of the Secretary General Doc. A.Conf.62.L.66, 24 February 1981, UNCLOS III, Off. Rec., Vol.XV, p.121(15).

166 Cameroon & Georgehiou, Production Limits-Who Benefits?, (1981) 5 Marine Policy., p.267.

167 G. Langevad, Production Policy For the Deep Sea Mineral Resources, (1981) 5 Marine Policy., p.265.

168 W. Hauser, The Legal Regime for Deep Seabed Mining under the Law of the Sea Convention, (1983) p.118.

promote "the growth, efficiency and stability of markets for these commodities produced from the minerals derived from the Area, at prices remunerative to producers and fair to consumers."[170] Indeed, the formula was schemed to strike a balance between two different interest groups, namely, the industrialised consumer countries, and land-based producers.[171]

Land-based producers will be affected by deep sea bed production, the price they receive will be lower, the quantity they can sell will be smaller and consequently, their income will decrease.[172] During the Third Conference on the Law of the Sea, it was pointed out that, the developing countries fears were based on the fact that if their customers become sea bed mineral producers and therefore suppliers of their own domestic market, it will deprive them of their traditional markets.[173]

Mr Arsenis, the representative of UNCTAD at UNCLOS III admitted that, because of sea bed production, the total export earnings of the land-based producers would grow less rapidly or might even decline. Also "the impact of sea bed production would probably be particularly adverse for developing producer countries because they dependent more

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169 LOSC, art. 150 (h).

170 Ibid, art. 151 (1) (a).

171 Within the group of land-based producers, there are advanced countries, such as (Canada, Australia), and developing countries, but many are developing countries which are much more dependent on their meniral industries and whose economics depend heavily on the export revenues earned from menirals. It has been reported that "the production limitation formula has evolved during a number of discussions and various factors were introduced in order to balance, as far as possible, different interests and to take account of imponderable and erratic events." Doc. A.Conf.62.L.66, supra note 165, p.121.

172 See the statement of the Brazilian representative, UNCLOS III, Off. Rec., Vol.II, p.29 (64).

173 Report of the Co-ordinators of the Working Group of 21 to the First Committee. A.Conf. 62.C.1.L .28, UNCLOS III, Off. Rec., Vol.XIV, p.164.

on the minerals concerned for export earnings and government revenue than did the developed producer countries."[174] Ogley put it clearly that the closure of land-based mines can leave communities devastated and resources-labour, social capital and infrastructure unused.[175]

The contribution of the developing producers was shown to be quite bulky, since 42 percent of 1968 world production value of manganese, 14 percent of nickel, 43 percent of copper, and 70 percent of cobalt were produced in developing countries.[176] Moreover, in 1975 Chile contributed 14 percent of the non-communist copper supply of 6.533 tons, while Zambia supplied 11 percent. The two countries and Mauritania form a Copper Association known as CIPEC which controls about 38 percent of the world mine production and 72 percent of the export trade of mine and smelter products.[177] With regard to cobalt, Zaire alone produced about 59 percent of the 1975 non-communist production, and together with Zambia and Morocco accounted for 76 percent.[178]

Several studies have been carried out to demonstrate the impact of deep sea bed mining on land-based producers and metal markets.[179] The impact on the markets may be substantial resulting in the fall of prices. It

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[174] UNCLOS III, Off. Rec., Vol.II, p.27 (45).

[175] Ogley, op.cit., p.181.

[176] R. Akesson, The Law of the Sea Conference, (1974) 8 J.W.T.L., pp.291-92.

[177] L. Antrim, The Role of Deep Seabed Mining in the Future Supply of Metals, in T. Kildow, Deep Sea bed Mining, (1980) p.90.

[178] Ibid, p.91.

[179] For example, see Reddy & Clark, Effects of Deep sea Mining on International Markets for Copper, Nickel, Cobalt, and Manganese, pp.107-123; L. LaQue, Impact of Deep Ocean Mining on Developing Countries, pp.93-95, in T. Kildow, op.cit.; L. LaQue, Prospects for and from Deep Ocean Mining of Ferro-manganese Nodules, (1981) A.D.I., pp.86-90.

was illustrated that four ocean mining projects by 1990 would diminish the nickel price by about 7 percent and would yield an annual benefit to U.S. consumers of about 130 million dollars.[180] The table below also illustrates how the four ocean mining projects reduces the price of cobalt by 25 percent, and at the same time leading to an annual economic benefit to U.S. consumers of 70 million dollars.[181]

Table:[182] Market impact of Deep Ocean Mining 1990 and 2000.

	price without ocean mining 1 (1)	price with ocean mining 1 (2)	price effect of ocean mining 1 (3)	consu-mption without ocean mining (4)	consu-mption with ocean 2 mining 2 (5)	consu-mption effect of ocean mining 2 (6)	net benefits to U.S. consumers from ocean mining 3 (7)
Nickel 1990 U.S.	2.84	2.63	0.21	311	315	4	131
Total non-communist	2.84	2.63	0.21	839	1021	182	391
2000 U.S.	3.04	2.93	0.11	431	439	8	96
Total non-communist	3.04	2.93	0.11	1129	1240	121	262
Cobalt 1990 U.S	10.00	7.56	-2.44	14.5	15.0	0.5	72
Total non-communist	10.00	7.56	-2.44	46.4	48.9	2.5	233
2000 U.S.	10.00	8.14	-1.96	21.3	23.7	2.4	88
Total non-communist	10.00	8.14	-1.96	64.0	76.0	12.0	275

180 C. Burrows, The Net Value of Manganese Nodules to U.S. Interests with Special Reference to Market Effects and National Security, p.132, in T. Kildow, op.cit.

181 Burrows, op.cit., p.132.

182 Quoted in Burrows, op.cit., p.131.

Column (3)= (2) - (1); Column (6)= (5) - (4); Column (7)= (3) x [(4) + 0.5 x (6)] x 2.000.

1. 1978 Dollars per pound. 2. Thousands of short tons. 3. Millions of 1978 dollars.

A further introduction of two more ocean mining operations in 1995 would cause a decrease of the price by another 10 percent. Thus, 6.50 dollars will be realized from one pound instead of 10.00 dollars. Pertaining to the nickel metal, four ocean mining operations in 1990 can cause a price drop of 6 percent and two additional mining operations in 1995 would cause another decline in the price of 2 percent.[183]

It can be deduced from the impact of sea bed production on land-based producers that the developing countries loses a considerable share of foreign exchange earnings and their concern about the effects of sea bed production is justified.

Deep sea bed mineral production has been considered as a supplement to land-based sources of nickel, copper, cobalt and manganese.[184] Surely, in the future, when the land ore reserves will be nearly depleted, the deep sea bed mineral source will be of great value as an alternative.[185]

The establishment of a production formula[186] will possibly at least

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183 Reddy & Clark, op.cit., p.110.

184 Antrim, op.cit., p.84.

185 L. LaQue, Prospects for and from Deep Ocean Mining of Ferro-manganese Nodules, (1981) A.D.I., p.88.

186 It has been said that the free market forces approach is in theory contradictory with the provisions on production control policy. See I. Charney, The Law of the Deep Seabed Post UNCLOS III, (1984) 63 Oreg.L.Rev., p.28. The incompatibility which exists between the production control formula and the free market approach, it is because the free market approach is regarded-the approach was supported by developed

protect the land-based producers from substantial effects on the markets by limiting production levels of metals from deep sea bed.

The problem of effects of deep sea bed mining was raised even before the UNCLOS III was convened. In the second session of the Ad-Hoc Sea-Bed Committee on June 21, 1968, Argentina requested the question of the exploitation of the deep ocean floor to be considered,as it should not have adverse effects on the exploitation of the land resources by the developing nations.[187] Furthermore, it was mentioned in the preamble of the Declaration of Principles that the duty to "minimize the adverse economic effects caused by fluctuation of prices of raw materials resulting from such activities."

During the Third United Nations Conference on the Law of the Sea, efforts were made to design a production policy scheme for deep sea bed mining which will reflect the interests of land-based producers and industrialised consumers. At the Caracas Session (second session) of UNCLOS III , the issue had been enhanced through reports and studies undertaken and completed by UNCTAD. It was reported by the UNCTAD that land-based producers will be affected by sea bed production and the consequence would be that their total export earnings from those minerals would grow less rapidly than they would have done otherwise.[188] In a study case related to three minerals, UNCTAD reported that with a very modest volume of sea bed output in 1980, the export earnings of the developing countries in that year would be lower by 360 million dollars.[189]

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countries during the Third United Nations Conference on the Law of the Sea-to be an instrument to make decisions on production and prices of menirals. See, M. Marcoux, Seabed Meniral Resource Production and the Free Market, (1973) 6 N.R.L., p.218.

[187] S. ODA, The Law of the Sea in our Time- II the United Nations Seabed Committee 1968-1973, (1977) p.20.

[188] UNCLOS III, Off. Rec., Vol.I, p.183.

At the fourth session 1976, the RSNT[190] embodied three elements of the production policy. These are: production limitation, commodity agreements and compensation system. The RSNT permitted operators to produce a fixed rate equivalent to the increase in world demand for nickel. The RSNT also allowed the Authority to negotiate and participate in such agreements on behalf of all production in the Area, not only on the reserved part under its direct control. The production limit which was to last for at most twenty five years, had to be derived from the growth segment of nickel market provided that, this should be at least 6 percent per annum.[191] The Authority was given the power to prescribe a system of compensation as a measure to protect against adverse economic effects of sea bed production.[192]

At the fifth session, Zambia delegation wanted to introduce certain amendments to Article 9 of the RSNT on production policy. Zambia suggested that the interim period should be renewed from time to time, and more effective measures of protection against adverse economic effects on developing countries which produce or export minerals to be set.[193]

In trying to reach an agreement in the 1978 negotiations, Richardson and Beesley, representatives of the United States and Canada respectively, tried to establish a production ceiling policy acceptable to all delegations. The agreement was known as the "Can-Am formula."[194] The formula

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189 Ibid. See also the statement made by Mr Arsenis, special representative of UNCTAD's Secretary General before the First Committee, summarized in UNCLOS III, Off. Rec., Vol.II, pp.26-30.

190 Doc. A.Conf.62.WP.8.Rev.1, UNCLOS III, Off. Rec., Vol.V, p.125.

191 RSNT, Part I, Annex I, para. 21.

192 RSNT, Part I, art. 28, para. 2 (xi).

193 UNCLOS III, Off. Rec., Vol.VI, p.77 (44).

194 L. Filardi, Canadian Perspectives on Seabed Mining: The Case of the

specified calculations of a logarithmic regression line on nickel demand based on the last fifteen years of available data. The trend line define two figures: 1) the growth segment of five years prior to commercial production; and 2) 60 percent of the growth segment beginning at the first year of commercial production. The respective annual sums of items 1 and 2 constituted the production limit available to seabed miners for each year of the interim period.[195]

According to Ogley, the "Can-Am formula" had three advantages for the miners. First, a time limit beginning five years before commercial production commences and lasting twenty five years was set to the interim period, unless superseded by a commodity agreement before then. Second, the method of deriving the limit was precisely drawn. finally, it was made clear that the Authority could regulate mining other than nodule mining only by amendment of the Convention.[196]

Unfortunately, the formula was objected to by other industrialised countries, such as the United Kingdom, which generally refused the production limitation scheme and specifically, the "Can-Am formula." The United Kingdom argued that the production limitation policy would freeze economic activity, increase prices and prevent the necessary investment for sea bed mining.[197] At the resumed eighth session, the United Kingdom maintained its position stating that the policies set forth in Article 150 and Article 151, Paragraphs 1 and 2, required improvement in order to produce a text that would be generally acceptable to delegations.[198] The United Kingdom representative came at

Production Limitation Formula, (1984) 13 O.D.I.L.A., p.470.

195 Ibid.

196 Ogley, op.cit., pp.187-188.

197 Filardi, op.cit., p.470.

198 UNCLOS III, Off. Rec., Vol.XII, p.33 (88).

the ninth session to confirm that the "formulation of article 151 in the RSNT was unacceptable to his delegation."[199]

Another progress took place in Negotiating Group One, led by Mr Nandan of Fiji. Mr Nandan conducted intensive consultations in order to ensure a production limitation policy,[200] involving the interested parties, that is, the land-based producers and the consumers. However, Nandan could not reach a consensus on setting up an acceptable production formula.[201]

The Chairman of the Group of 77 made it clear before the First Committee that, unless substantial changes were made in the floor figure contained in the Nandan proposal or in the percentage figure in the clause intended as a safeguard, the proposal would not be acceptable to the Group of 77.[202] The Canadian delegation agreed with the Group of 77 in principle that, unless both kinds of changes were made, the proposal would not be acceptable to his delegation.[203] However, the views of Columbia and Chile on the Nandan proposal were pessimistic. Columbia stated that, "the intelligent proposals by Mr Nandan with certain amendments would provide for more appropriate protection of land-based producers, and represented an acceptable basis for negotiation."The

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199 UNCLOS III, Off. Rec., Vol.XIII, p.25 (14).

200 Technical studies were conducted by Sub-Group of Technical Experts of Negotiating Group 1 of the First Committee on the production limitation formula, under the Chairmanship of Mr Archer who reformulate the production formula provision "in such a way as to reflect fairly faithfully a formula which proved acceptable to all the interest groups." See Explanatory Memorandum by the Chairman Concerning Doc. NG1.10.Rev.1 and Doc. NG1.12, UNCLOS III, Off. Rec., Vol.X, pp.19-20. Also Reports, Docs. NG1.7; NG1.9; and NG1.11, UNCLOS III, Off. Rec., Vol.X, pp.28-51.

201 Filardi, op.cit., p.472.

202 UNCLOS III, Off. Rec., Vol.XIII, p.8 (19).

203 Ibid.

Chilean delegation said that, "the text submitted by Nandan could form the basis for future negotiations, and that the proposals for financial arrangements and the settlement of sea bed disputes were acceptable."[204]

All in all, amendments were included in production limitation provisions. The industrialised states took into consideration the effect of the interim production limitation in periods of low growth. They maintained that, the production ceiling should not be permitted to fall under a certain minimum level which was called a "floor." Thus, in order to satisfy the demand of the industrialized countries, a new paragraph was embodied in Article 151 providing a minimum of 3 percent increase in nickel consumption in periods of low growth provided that the resulting ceiling did not for any given year exceed the total projected increase in nickel consumption.[205]

The final years of the negotiations on the production limitations reached a compromise after modifications were inserted in the ICNT. Revised.2 and the Draft Convention.[206] Therefore, the production limitation system was embodied in the Convention.

4.1. Calculation of the Production Quotas

Mr Nandan said:

> we all know that the production control scheme is a complicated

[204] Filardi, op.cit., p.473.

[205] H. Oxman, The Third United Nations Conference on the Law of the Sea: The Ninth Session (1980), (1981) 75 A.J.I.L., p.216.

[206] For more details see Doc. A.Conf.62.L.35, in Annex I, Mr Nandan's Report on Negotiations Relating to Production Policies, UNCLOS III, Off. Rec., Vol.XI, pp.86-90; A.Conf. 62.C.1.L.27, UNCLOS III, Off. Rec., Vol.XIII, p.113, pp.120-123; A.Conf.62.C.1.L.28 and Add.1, UNCLOS III, Off. Rec., Vol.XIV, p.161, pp.163-166.

> system involving mathematical and statistical principles and when these are translated into legal language they are even more puzzling.[207]

The production limitation formula or the "ceiling-floor-safeguard formula" as it was described,[208] is devised to guarantee that the nickel production will not exceed a certain rate of growth of nickel's world consumption. It was outlined in the Secretary General's report that the ceiling-floor-safeguard formula is an over-all formula for calculating the ceiling for commercial production of nickel from the polymetallic nodules under the various conditions that may arise.[209]

Hereinafter, an attempt is made to briefly describe the scheme as documented. An interim period is to be established, in which a production limitation is to be imposed, and it is designed to start five years prior to January 1 of the year in which the earliest commercial production was planned to commence under an approved plan of work. The interim period should last 25 years or until the end of the review conference or until the day when new agreements between interested parties enter into force, whichever is earliest.[210] As an example, presume that the year of earliest commercial production is 2000. The interim period begin five years prior to January 1, 2000, that is, January 1, 1995, and should last for 25 years, in this case December 31, 2020, or until the end of the review conference or until the day new agreements are entered into force, whichever is earliest.

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207 Doc. A.Conf.62.C.1.L.28 and Add. 1, UNCLOS III, Off. Rec., Vol.XIV, p.164.

208 Doc. A.Conf.62.L.66, supra note 165, p.121 (11).

209 Ibid, p.121 (14).

210 LOSC, art. 151 (3).

1. The Ceiling Component

It is calculated as the whole of the increase in world nickel consumption over five years prior to the first commercial mining, plus 60 percent of the increase of nickel consumption during the period between the year before the earliest commercial production and the year for which authorisation is sought.[211] In other words, the ceiling is defined as the sum of: first, the difference between the trend line values for the year prior to the year of first commercial production and the year immediately before the interim period. Second, plus 60 percent of the difference between the trend line values for the year for which the production authorisation is being applied for and that for the year immediately before the year of commercial production.

Example.

Assuming that world consumption of nickel data is given by company (A), based on the assumed 3.0 percent increase in world nickel consumption from 1979 to 2000 as follows:

211 Ibid, art. 151 (4) (a) [i] [ii].

Year	World consumption of nickel (thousa-nd metric tons)	Year	World consumption of nickel (thous-nd metric tons)
1979	435	1990	820
1980	488	1991	880
1981	510	1992	910
1982	543	1993	968
1983	590	1994	977
1984	670	1995	1001
1985	689	1996	1067
1986	710	1997	1099
1987	730	1998	2010
1988	753	1999	2020
1989	794	2000	2070

Assuming that a contractor applies in 1995 for authorisation to mine in 2000. In order to determine the production ceiling for the year 2000, a method is to be followed. First, to establish in 1995 a trend line for nickel consumption on the basis of the most recent available data covering a 15 year period, from 1979 to 1994, using an original trend line derived from that data. Second, to determine the trend line values for the following years:

1. The year prior to the commencement of the interim period (1994).

2. The year prior to the year of earliest commercial production (1999).

3· The year of earliest commercial production (the year for which a production authorization is being sought), in this case year 2000. Therefore, according to the above table, the trend line values for the:

1. Year 1994 is = 521 thousand metric tons.

2. Year 1999 is = 664 thousand metric tons.

3. Year 2000 is = 714 thousand metric tons.

The nickel production ceiling for the year 2000 would be: (664-521) + 60% of (714-664)=173 thousand metric tons.

This calculation of ceiling is applicable as long as the rate of increase of the trend line does not fall below 3 percent.[212]

2. The "Floor" Component

Is designed to prevent and secure during a period of low growth in nickel world consumption that the producers enjoy a protection of a minimum allocation of tonnage. Hence, if the annual rate of increase in the original trend-line is less than three 3 percent, the ceiling is to be calculated on the basis of a new trend line passing through the original trend-line value for the first of the fifteen years period, whose data is used and increasing at a rate of 3 percent.[213] The Secretary General illustrated in his report that, if the annual rate of increase of the trend-line is less than three percent, then the ceiling is calculated on the basis of a trend-line

[212] The method of determination of the production ceiling is prescribed in details in Article 151 (4) of the LOSC.

[213] LOSC, art. 151 (4) (b) [ii]. The new trend-line is a "trend line starting from the same base amount as the original trend line but increasing at a rate of 3.0 percent annually, Doc. A.Conf.62.L.66, supra note 165, p.123 (31) .

which increases at a notional 3.0 percent annually. This is the so-called floor clause and it does not indicate a minimum below which commercial production of nickel from the polymetallic nodules can not fall; rather it specifies a minimum annual rate of increase of the trend-line on the basis of whose values the ceiling is calculated.[214] This new trend line increasing at 3.0 percent annually is then used in a similar calculation to that specified in the ceiling clause. The difference between the values trend line for the year prior to earliest commercial production and the year prior to the commencement of the interim period is added to 60 percent of the difference between the value for the year for which the production ceiling is calculated and that for the year prior to the earliest commercial production.[215]

However, the calculation made according to the floor clause is subject to a safeguard clause.

3. The Safeguard Component

It seeks to guarantee that the nickel production ceiling calculated under the floor clause for any year of the interim period should not exceed the difference between the original trend line values for that year in question, and the original trend line value for the year immediately prior to the commencement of the interim period[216] so as not to harm the profits of the land-based producers of sea bed metals. In other words, under the safeguard clause the amount calculated under the floor clause must be compared with the amount of the difference between the value on the original trend line for the year for which the production ceiling is

214 See supra note 165, p.121 (13).

215 See supra note 165, p.123 (32).

216 LOSC, art. 151 (4) (b) [ii].

calculated and the value on the original trend line for the year prior to the commencement of the interim period and the lesser of these two amounts is the production ceiling.[217]

Example

Presuming that, the ceiling calculation is made under the floor clause and that, the production ceiling on the basis of this new trend line is 260 thousand metric tons. According to the safeguard clause, this amount must be compared with the amount of the difference on the original trend line between the values for the year prior to the beginning of the interim period (year 1994) and the year for which the production ceiling is calculated (year 1999), and which is 143 thousand metric tons. Therefore, the amount which would constitute the production ceiling is the lesser amount, and in this case is 143 thousand metric tons.

Mr Nandan said that the safeguard,as a mechanism ;'would protect the land-based producers from any possible distortion of their existing market because of the minimum production ceiling. The safeguard mechanism will ensure that irrespective of the guaranteed tonnage sea bed production under the minimum ceiling will not be allowed to exceed 100 percent of the growth segment for that year as calculated under the original provisions of Article 151.[218]

4.2. Production Authorisation[219]

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217 See supra note 193, p.123 (33).

218 Doc.A.Conf.62.C.1.L.27 and Add.1. Report of the Co-ordinators of the Working Group of 21 to the First Committee, UNCLOS III, Off. Rec., Vol.XIII , p.122 (15).

219 Article 7 of Annex III and Article 151 (2-7) of the Convention deal with the procedures of granting production authorisation. Thus, according to Article 7 (1) of Annex III, six months after the entry into force of the Convention and thereafter each

The miner who has an approved plan of work may not commence commercial production unless he has applied and received a production authorisation.[220] Production authorisation will not be issued before the start of a five-year period to the planned commencement of commercial production under the plan of work concerned. In other words, they have to be applied for within five years of the foreseen start of commercial production. For example, if commercial production is expected to start in January 2000, a production authorisation will not be issued before January 1995.

The operator shall stipulate in his application the annual quantity of nickel he intends to recover under the approved plan of work, and the production authorisation for that quantity shall automatically be granted by the Authority provided that, the quantity of the tonnage already authorised in earlier rounds does not:

1) Exceed the "nickel production ceiling", as calculated in the year of issuance of the authorisation, during any year of planned production falling within the interim period, or 2) contravene the obligations of the Authority under a commodity agreement or arrangement.[221]

Nevertheless, a degree of flexibility is authorised in the level of annual production. On that account, a miner may in any year produce up to 8 percent more than the level of annual production indicated in his production authorisation provided that, the over-all amount of production does not exceed that designated in the authorisation. Though, any excess over 8 percent and up to 20 percent in any year, or any excess in the first

fourth month, the Authority considers all applications submitted during the immediately preceding.

[220] LOSC, art. 151 (2) (a).

[221] Ibid, Annex III, art. 7 (1); art. 151 (2) (d).

and subsequent years following two consecutive years in which excess occurs, must be negotiated with the Authority, which may require the miner to obtain a supplementary production authorisation to cover the additional production.[222]

It is provided that the Authority will not grant such a supplementary authorisation until it has proceeded on other pending production applications and has taken into consideration other likely applications, so as not to discriminate other applicants.[223]

In granting such production authorisations, the Authority must be guided by the principle of not exceeding the total production allowed under the production ceiling in any year, that is 20 percent of the original allocation.[224] Moreover, the Authority must not allow any miner to produce a quantity in excess of 46.500 tons of nickel per year.[225]

It can happen that, the authorisations sought in a round of applications could not comply with the ceiling i.e., exceed the total production tonnage permitted. In this case, a process of selection would be applicable between applicants. That is to say, if production had to be allocated to certain producers, the Authority has the power to make such a selection. The Authority shall make the selection on the basis of objective and non-discriminatory standards set forth in its rules, regulations and procedures.[226] The Authority shall give priority to those applicants who:

a) give better assurance of performance, taking into account their financial and technical qualifications and their performance, if any, under previously approved plans of work,

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222 Ibid, art. 151 (6) (a).

223 Ibid, art. 151 (6) (b).

224 Ibid, art. 151 (6) (a).

225 Ibid, art. 151 (6) (b).

226 Ibid, Annex III, art. 7 (2).

b) provide earlier prospective financial benefits to the Authority, taking into account when commercial production is scheduled to begin,

c) have already invested the most resources and effort in prospecting or exploration.[227]

It is interesting to note that the industrialised countries feared that such selection could be biased if controlled by developing nations, even though the Convention has specific provisions intended to prevent such favouritism.[228]

Applicants who were refused to be given production authorisations in previous rounds, would be given a priority in subsequent rounds over other applicants.[229]

It is also provided that "whenever fewer reserved areas than non-reserved areas are under exploitation, applications for production authorisations with respect to reserved areas shall have priority."[230]

4.3. Commodity Agreements

The Authority is entrusted with a right to participate in any commodity conference including all interested parties, that is producers and consumers, in order "to promote the growth, efficiency and stability of markets for those commodities produced from the minerals derived from the area, at prices remunerative to producers and fair to consumers."[231]

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227 Ibid, Annex III, art. 7 (3).

228 C. Brewer, Deep Seabed Mining: Can an Acceptable Regime Ever be Found, (1982) 11 O.D.I.L.A., p.49.

229 LOSC, Annex III, art. 7 (4).

230 Ibid, Annex III, art. 7 (6).

231 Ibid , art. 151 (1) (a) (b).

Participation of the Authority in such commodity agreements shall be in respect of all production in the Area and not only that part relating to the Enterprise. Nonetheless, some delegations considered that it was not for the Conference to decide the precise nature of the Authority's participation, and that the Authority should participate in such commodity conferences only in respect of the production of the Enterprise.[232] Whereas, other delegations felt that the Authority should participate in respect of all production derived from the Area.[233]

However, Mr Nandan tried to accommodate these different opinions by removing the article "the" referring to "the production in the Area." Nandan's intention was to leave as much freedom of action in this matter as possible. He believes that "these commodity conferences will establish their own rules of representation, and it would be unfortunate if the Authority was constrained in its role because of some inflexibility in this provision."[234] Accordingly, the Authority would have wide powers to act effectively in these commodity arrangements, and therefore, maintain prices at an equitable and remunerative level for the benefit of all producers and consumers.

Regarding such commodity agreements as the most effective long-term and satisfactory solution to secure stable prices, the industrialized countries came to view such agreements as economically unacceptable. Thus, during the eleventh session of UNCLOS III, the United States delegation referred to these provisions of the Draft Convention as an obstacle in the development of sea bed resources "by denying the play of basic economic forces in the market place."[235]

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[232] Doc. A.Conf.62.C.1.L.28 and Add.1, UNCLOS III, Off. Rec., Vol.XIV, p.165.

[233] Ibid.

[234] Ibid.

4.4. Compensation System

This system is designed to assist the developing countries which suffer from adverse effects caused by sea bed production. Moreover, other measures than the financial compensation are to be taken, such as economic adjustment assistance as well as co-operation with international organizations.[236]

The objective of the compensatory system is to ensure protection for developing countries against the adverse effects of deep sea bed minerals exploitation on their economies. In other words, to protect against reduction in the price or in the volume of export of minerals exported, as long as the reduction is caused by activities in the Area.[237]

Mr Langevad thought that financial compensation is not a practical solution, as it would be quite difficult to evaluate a figure for financial losses objectively, including potential and future losses of land-based producers due to sea bed mining separately from normal market changes.[238]

To sum up, it can be said that, the production control scheme is an effective device to secure and maintain an appropriate and legitimate balance between the economic interests of land-based producers and the sea bed producers with due account to the interests of consumers.

Section 5. Protection of Pioneer Investment

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235 UN Monthly chron., (June 1982) XIX (6), p.16.

236 LOSC, art.151 (10).

237 Ibid.

238 Langevad, op.cit., p.264.

During the Third United Nations Conference on the Law of the Sea, developed countries insisted on calling for the protection of investment made by their private consortia on exploration of the deep sea bed.

The issue of protection of investment was first raised by the United States during the eighth session (1979). The aim of the United States in bringing up this matter was to create a priority for the pre-Convention investors in parallel with a similar priority for the Enterprise.[239] However, during the tenth session, the United States paper was withdrawn by its sponsor at the time the country began its review of the entire Draft Convention.

The issue was raised again during the eleventh session by many western states including the United States. Negotiations on this subject took place first in informal meetings of the Working Group of 21 on sea bed matters, then in private negotiations chaired by President Koh and the Chairman of the First Committee Mr Engo.[240] The negotiations which took place in the Group of 21 were based on four informal working papers submitted by the Group of 77 and western industrialised states. The United States and the rest of industrialised countries contended that their consortia would not enter the next phase of exploration which required huge investments, unless they are secured access by obtaining production authorisation to exploit seabed minerals. The Group of 77 objected and argued that, PIP regime should not limit the competence of the Authority after the entry into force of the Convention and that, the parallel system should be maintained by requiring each pioneer to submit two mine sites. In addition, they maintained that the benefits of PIP should be preserved only for entities whose sponsoring states became parties to the

239 P. Bruckner, Preparatory Investment under the Convention and the PIP Resolution, in 17 L.Sea.Inst. Proc., (1984) p.181.

240 UN Monthly Chron., (June 1982) 19 (6), p.9.

Convention.[241]

On March 29, 1982, Messrs Koh and Engo, Coordinators of the Group 21, recommended Resolution II in a report and explained the rationale for the proposal as follows:

> It is a demonstrable reality that six consortia and one state have been investing funds in the development of sea bed mining technology, equipment and expertise. The programme of their research and development has arrived at a point when they must invest substantial amounts of funds in site-specific activities. The industrialised countries representing these consortia have been demanding that the Conference and the Convention on the Law of the Sea should recognize these preparatory investments. We feel that this is a legitimate request provided that the preparatory investments of these pioneers will be brought within the framework of the Convention and provided that the interim arrangement is transitory in character.[242]

Accordingly, the protection of investment requested by the western countries is a legitimate demand provided these pioneers investment will be brought within the framework of the Convention and provided that, the interim arrangement is transitory in character. The Conference reached a compromise at the eleventh session and adopted Resolution II, which would guarantee a protection of investments made by the consortia of western countries.

The scheme devised by the Conference is set out in Resolution II, which is not part of the Convention.[243] However, the Convention had to

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241 Bruckner, op.cit., p.182.

242 See supra note 240. Also Doc. A.Conf.62.C.1.L.30, 29 March 1982, UNCLOS III, Off. Rec., Vol.XVI, p.272 (15).

243 Resolution II was not incorporated into the Convention, because it was intended to take effect before the Convention enters into force.

be adjusted to the scheme, since many of the guarantees it affords will extend into the first generation of sea bed mining operations.[244]

The Soviet Union strongly disagreed and expressed dissatisfaction with the PIP resolution scheme, because it discriminated against her. The soviet Union went on to consider the scheme as an unfair system for the granting of the status of pioneer investor to juridical persons listed in Sub-paragraph 1 (a) (i) (ii). Moreover, the Soviet Union disputed the privileged position accorded to the companies of the western countries.[245]

The PIP resolution gives the existing sea bed mining consortia significant advantages. Actually, the scheme is designed to insure the protection of pioneer investments made by the companies, and enable them to qualify for registration by the Preparatory Commission as a pioneer investor.

States registered as pioneer investors would be entitled to explore without commercially exploiting a selected area of the deep sea bed until the Convention comes into force. Over and above, the scheme would guarantee pioneer investors priority over all others, except for the Authority's Enterprise.[246]

Resolution II which established a regime to govern preparatory investment, aims "to ensure that the Enterprise will be provided with the funds, technology and expertise necessary to enable it to keep pace with the states and other entities... with respect to activities in the Area",[247] and also legitimate the investments made by companies and states in

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[244] See supra note 241, pp.10-11, or Doc. A.Conf.62.C.1.L.30, UNCLOS III, Off. Rec., Vol.XVI , p.272 (15).

[245] Doc. A.Conf.62.L.133, UNCLOS III, Off. Rec., Vol.XVI, p.240.

[246] UN Monthly Chron., (June 1982) 19 (6), p.9.

[247] The last Paragraph of the Preamble of Res. II.

pioneer activities.

Nevertheless, so that any pioneer investor would be able to engage in sea bed mining production, it has got to pass through three stages. These stages are:

1. Registration as a pioneer investor. 2. Approval of plans of work in the form of a contract. 3. A production authorisation.

5.1. Registration as Pioneer Investor

Under the extended final version of the scheme Resolution II, Paragraph 1 (a) identifies the number of those who could qualify for pioneer investors status. Those who qualified as pioneer investors are limited to eight states or entities, plus an unspecified number from developing countries under the form of three categories as follows:

Category (1) consists of:[248] a) France, Japan,[249] India and the USSR; or

b) a state enterprise of each state; or

c) one natural or juridical person possessing the nationality of, or effectively controlled by, each state or its nationals.

Category (2) consists of: four entities, whose components companies have the nationality of, or are controlled by one or more of the eight nations currently involved in multinational consortia: Belgium, Canada,

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[248] Res. II, para. 1 (a) (i).

[249] The French and Japanese consortia which could qualify under the scheme of Resolution II are: (1) Deep Ocean Minerals Association (DOMA) (registered in Japan as a public corporation): composed of 38 Japanese companies in trading, mining and metallurgy, shipbuilding and heavy industries, steel, shipping, cables, electric appliances and fisheries. (2) Association Francaise pour l'Etude et la Recherche des Nodules (AFERNOD) (registered in France): Centre National pour l'Exploitation des Oceans, Commissariat a l'Energie Atomique, Societe Metallurgique le Nickel, Chantiers de France-Dunkerque. See UN Monthly Chron., (1982) XIX (6), p.11.

Federal Republic of Germany, Italy, Japan, Netherlands, United Kingdom and the United States.[250] The four consortia are as follows:

1. Kennecott consortia (uncorporated): Sohio (USA); Rio Tinto-Zinc (United Kingdom); British Petroleum (United Kingdom); Noranda Mines (Canada); Mitsubishi (Japan).

2. Ocean Mining Associates (registered in United States): United States Steel (United States of America), Union Miniere (Belgium), Sun (United States), Ente Nazionale Idrocarburi (Italy).

3. Ocean Management Incorporated (incorporated in United States): Inco (Canada), Metallgesellschaft (Federal Republic of Germany), Preusag (Federal Republic of Germany), Salzgitter (Federal Republic of Germany), SEDCO (United States), Deep Ocean Mining (Japan).

4. Ocean Minerals Company (OMCO) (United States partnership): Standard Oil of Indiana (United States), Lockheed Aircraft (United States), Billiton (Netherlands, Subsidiary of Royal Dutch Shell), BKW Ocean Minerals (Netherlands, Subsidiary of Royal Bos Kalis Westminster).[251]

Category (3) consists of:[252] a) any developing states; or

b) any state enterprise of such state; or

c) any natural or juridical person possessing the nationality of, or effectively controlled by, such state or its nationals; or d) any group of the foregoing.

Registration with the Preparatory Commission as a pioneer investor

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[250] The reason for not notifying the names of the consortia in Resolution II, is the opposition of the Soviet Union on the ground that "it was improper for the Conference to name companies and give them the status of pioneer investors." See Ogley, op.cit., p.232.

[251] UN Monthly Chron., (1982) XIX (6), p.10.

[252] Res. II, para. 1 (a) (iii).

would entitle a state or entity to explore but not exploit a selected area of the international sea bed and enable it priority over others when applying to the Authority for commercial production. Nonetheless, requirements should be fulfilled before entities may qualify for registration as pioneer investors.

With regard to the first two categories, entities are qualified under the following requirements:

1. every state must sign the Convention before it or its enterprise or national or juridical person may qualify. The purpose of this requirement is to preclude any state from the privileges acquired under the scheme if the state intend not to sign the Convention.

2. To qualify as registered pioneer investor; an applicant must have spent at least 30 million US dollars by January 1, 1983, and 10 percent of that on a specific site.

3. The "certifying state" which has signed the Convention and of which the applicant is a national, shall issue a certificate certifying the level of expenditure made in pioneer activities. Though, where the prospective pioneer investor is a state, the evidence will take the form of a statement by that state certifying the level of expenditure.[253]

One of the important aspects of the PIP system, is the link between pioneer status and signature of the Convention. This issue represents a legal controversy, as regards to the first requirement, that is certifying states must, in order to obtain registration of a pioneer investor, be signatories to the Convention. If for example, a consortium consisted of four companies from four states; in compliance with Resolution II, the compromise is that, only one of these companies have to come from a state which has signed the Convention.[254] But in order to obtain a contract, that

[253] Ibid, para. 2 (a).

is to have the plan of work approved, and production authorisations after the Convention enters into force, it is necessary for the certifying states to become parties to the Convention, including all those to which component entities of a consortium belong.[255] Resolution II however, provides for the devolution of pioneer status to successors that may belong to a state signatory to the Convention and for the changing of nationality of pioneer investors whose certifying states fail to ratify the Convention or to accede to it.[256]

Pertaining to the foregoing discussion, the Soviet Union objected to what they described as the discriminatory nature of the scheme for the different categories of investors. They stated that, whereas the Soviet Union or India would have to sign the Convention in order to qualify for pioneer status, a country such as the United States or the Federal Republic of Germany could benefit from the scheme without signing, since, their firms would merely have to be associated in a consortium with companies from a signatory state. The Soviet Union said that, "it would be unable to support the president's draft resolution on pioneer investments in the form in which it stood", and accordingly it will be unable to become a party to the Convention if the resolution... still contains provisions which place the USSR in an unfavourable position vis-a-vis several other states." Consequently, the USSR abstained from voting on the adoption of the Convention.[257]

Responding to the complaint of the USSR, President Koh said that, the resolution also favoured the Soviet Union. He explained that, despite the Soviet Union being a relatively new comer in the development of sea

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254 Ibid, paras. 1 (a) (ii), 1 (c), and 2 (a). Signature is required by all four states.

255 Ibid, para. 8 (c) and 10 (a).

256 Ibid, para.10 (b).

257 UN Monthly Chron., (1982) 19 (6), p.11.

bed mining technology it had, however, been guaranteed one mine site compared to the four sites which would have to be shared by seven western states.[258] He also pointed out that, the developing countries had been able to extract from the industrialised countries an even greater concession as no plan of work for mining the sea bed could be approved unless all of the states whose companies made up the consortium were parties to the Convention.[259]

According to the third category, entities must, in order to qualify for registration as pioneer investors, perform two requirements:

1. The developing state concerned must be a signatory of the Convention.

2. Evidence must be produced by the state concerned of the same level of expenditure as required for category (1) entities. The deadline for such expenditure is January 1, 1985.

Many countries in the Conference expressed concern that the scheme is a major concession to the demands of the industrialised countries. China viewed the scheme resolution on preparatory investment as having accommodated "too much the demands of a few industrialised powers and provided privileges and priority status to those countries and their companies."[260] Albania stated that the pioneer investment scheme would make it possible for imperialists and transnational corporations to seize the resources of the ocean floor.[261]

If the requirements of the applicant are brought to completion, the Commission is required to register the applicant after applying to it for

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258 Doc. A.Conf.62.L.141, 29 April 1982 , UNCLOS III, Off. Rec., Vol.XVI, p.247 (9).

259 Ibid, p.247 (8); see also UN Monthly Chron., (June 1982) 19 (6), p.11.

260 UN Monthly Chron., (June 1982) 19 (6), p.20.

261 UN Monthly Chron., (1983) XX (2), p.16.

registration as a pioneer investor, provided such application is to be accompanied by a certification of expenditure as stated above. Such applicant shall ensure before making an application that, his application does not overlap an area for which another application is made or is already allocated as pioneer area.[262]

In applying for such registration a "banking-system" similar to that set forth in the Convention is set up. Each pioneer area registered with the Preparatory Commission under the PIP resolution must be large enough for two mining operations. The Commission shall, within fourthy five days of receiving the application for registration, allocate half of the total area to the pioneer investor, and the other half shall be banked for either the Enterprise or developing state.[263] In the site allocated to the pioneer investor, the applicant has exclusive rights to conduct exploratory activities but not commercial production.[264] Each investor is registered in respect to only one area,[265] which shall not exceed 150.000 square kilometers.[266] Furthermore, at least a 50 percent portion of this area, must be gradually relinquished to the international area after a period of eight years.[267]

Pioneer investors are required to perform certain responsibilities. Financially they have to undertake certain charges, that is each pioneer investor would be required to pay a $250.000 fee to the Commission for registration plus $250.000 when he applies for a plan of work of a mining contract.[268] Besides, there would be an additional fee of $1 million per

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262 Res. II, paras. 2 (a); 5 (a).

263 Ibid, para. 3 (a) (b).

264 Ibid, para. 3 (b).

265 Ibid, para. 4.

266 Ibid, para 1 (e).

267 Ibid, para. 1 (e) (i) (ii) (iii).

268 Ibid, para. 7 (a).

year, from the time the pioneer area is allocated, payable to the Authority after the investor's plan of work has been approved.[269] Each pioneer would also be expected to spend at least a certain amount on their sites, the amount of expenditure is to be determined by the Preparatory Commission.[270]

Registered pioneer investors and their certifying states are recommended to guarantee that, the Enterprise will have the funds, technology and the expertise necessary for it to begin viable and competitive operation.[271] Pioneer investors would be demanded to entrust themselves to ensure that the Enterprise of the Authority is able to conduct activities in deep sea bed "in such a manner as to remain in step with states and other entities."[272] Likewise, pioneer investors would be bound to explore areas of the deep sea bed for the Authority's Enterprise at the request of the Preparatory Commission on a cost-reimbursable basis plus 10 percent interest (per anum); to provide personnel training designated by the Preparatory Commission; and to undertake to perform the transfer of technology to the Authority's Enterprise before the entry into force of the Convention.[273] Finally, the certifying states would be required to provide periodic reports on the activities of individual pioneer investors or on those of their own deep sea bed mining entities to the Preparatory Commission.[274]

Overlapping Claims.

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269 Ibid, para. 7 (b).

270 Ibid, para. 7 (c).

271 Ibid, para. 12.

272 UN Monthly Chron., (1982) XIX (6), p.12.

273 Ibid, para. 12 (a).

274 Ibid, para. 12 (b) (ii).

Another issue which is crucial to the commencement of deep sea bed exploitation is the resolution process over overlapping claims. Without resolving disputes over overlapping claims, investors will not have the security of mining sites to prevent claims from other parties and make enormous investments. Investors may not invest huge capital until there exists an effective mechanism for resolving overlapping claims.[275] Undoubtedly, successful resolution of conflicts claims will therefore, ensure the security of mine sites and guarantee a profitable return on an investment.[276]

To overcome this problem, Paragraph 5 (a) of Resolution II provides that, "any state which has signed the Convention and which is a prospective certifying state shall ensure, before making applications to the Commission under Paragraph 2, that areas in respect of which applications are made do not overlap one another or areas previously allocated as pioneer areas. The states concerned shall keep the Commission currently and fully informed of any efforts to resolve conflicts with respect to overlapping claims and of the results thereof."[277]

This provision requires that, all overlap conflicts be resolved before any applications for registration as a pioneer investor can be made to the Preparatory Commission. Resolution II also includes a primary timetable for all prospective certifying states, including all potential claimants, to resolve their conflicts by negotiations prior to March 1, 1983. Hence, if

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275 H. Breen, The 1982 Dispute Resolving Agreement: The First Step Toward Unilateral Mining Outside the Law of the Sea Convention, (1984) 14 O.D.I.L.A., pp.205-06.

276 Ibid.

277 Paragraph 5 was based on proposals made by a group of five western states (Belgium, Federal Republic of Germany, Italy, United Kingdom and the United States). A.Conf.62.L.122, UNCLOS III, Off. Rec., Vol.XVI, pp.231-32.

conflicts are not resolved through negotiations, the prospective certifying states shall submit such conflicts claims to binding arbitration not later than May 1, 1983, to be completed by December 1, 1984.[278]

If conflicts eventually reach binding arbitration, an arbitral tribunal would base its decisions on the following factors in determining priority among pioneer investors applicants:

1. The continuity and extent of past activities relevant to each area in conflict and to the application area.

2. The date on which the pioneer investor (or its predecessor or component organization) began activities at sea in the application area.

3. The financial cost of activities measured in constant United States dollars in the overlapped area and in the application area.

4. The date when those activities were carried out and the quality of those activities.[279]

Since 1982, there have been several attempts to design a method to resolve conflicts concerning overlapping claims.

The first attempt was initiated by Canada in 1982. Canada as a prospective certifying state brought to discussions in July 1982 a Memorandum of Understanding on the settlement of conflicts with respect to sea bed areas [hereinafter referred to as Canadian MOU]. Participation in the MOU was limited to prospective certifying states or pioneer investor states, hence, leaving out those that did not sign the 1982 Convention.[280]

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278 Res. II, para. 5 (c).

279 Ibid, para. 5 (d).

280 M. Hoagland, Conflict Resolution in the Assignment of Area Entitlements for Seabed Mining, (1984) 21 San Diego L.Rev., p.547. States that were excluded are the United States, West Germany, United Kingdom, Belgium and Italy. The MOU was attached to Resolution II, that"the parties including all potential claimants will seek to resolve their conflicts by means of negotiations or other procedures of their choice in

However, the negotiations on the MOU proved unsuccessful and failed to produce an agreement. Among the reasons of the failure were: first, the MOU failed to cater for non-signatories of the United Nations Convention, because it was envisaged in the MOU that only signatories of the Convention would be parties to it. Second, was the perspective of the Soviet Unionon the negotiations. The Soviet Union censured that certain participants in the Canadian MOU negotiations "insistently advocated the setting of time limits for the exchange of co-ordinates which were considerably later than the time limits established in Resolution II, an arrangement which would be to the advantage only of countries which have not signed the Convention and are not interested in its application."[281]

The Soviet Union went on later to condemn in a letter addressed to the Chairman of the Preparatory Commission affirming that such,

> countries were endeavouring to ensure that the formal resolution of conflicts in line with the procedure being elaborated at the initiative of Canada could begin only after they had in practice completed among themselves the above division [of the most promising sea bed areas] by means of a separate agreement.[282]

The second attempt to negotiate agreements on mechanisms of resolving overlaps claims was initiated by four western states. On September 2, 1982, the United States of America, United Kingdom, West Germany and France concluded an agreement for resolving disputes on

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accordance with Paragraph 5 (c) of the resolution governing preparatory investment." See ibid.

281 Brown, op.cit., p.II.721.

282 Ibid, pp. II.721-22.

conflicts mining claims known as "Agreement Concerning Interim Arrangements Relating to Polymetallic Nodules of the Deep Sea Bed."[283]

The 1982 Agreement was a mechanism to resolve overlapping claims of areas by applicants, and it provides that every state party to the Agreement must first resolve domestic conflicts in compliance with its own domestic rules.[284] The Agreement aims to promote the identification and resolution of conflicts arising from applications made by pioneer investors on or before March 12, 1983.[285]

Signatory governments can assist license applicants to resolve conflicts claims voluntarily. If conflicts have not been resolved six months after the effective date of the interim Agreement, and the applicants are not "parties to a written agreement submitting the conflict to a specified binding conflict resolution procedure", conflicts must be resolved through binding arbitration.[286]

The 1982 Agreement was seen as a potential and dependable mechanisms for identifying and resolving mining conflicts, in order to provide for the security of mine sites.[287]

Within the scope of mechanisms of resolving conflicts claims, it is

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283 1982 Agreement, in (1982) 21 I.L.M., p.950.

284 Ibid, art. 7. Most domestic legislation interdict to issue licenses to applicants that overlaps claims of reciprocating states. Therefore, such legislation respect claims by states with similar sea bed mining laws through reciprocity mechanism.

285 Ibid, para. 1. The interim agreement raised international criticism and was considered as a threat to the Convention, even though, the Resolution II postulates the existence of such mechanisms. The Agreement was criticized on the basis that first, it was not a global system by reason of failing to include potential sea bed miners such as Japan, USSR and India. Second, this arrangement assumes a further agreement which provides a mutual recognition of sea bed claims under national legislation. See Brucker, op.cit., p.187.

286 Ibid, Appendix 1. The Preamble of the Agreement affirmed that the Agreement was concluded without undermine to the decisions of the parties of the United Nations Convention.

287 Breen, op.cit., p.214.

clear that, the provisions of the Convention permit the parties of the conflict to choose any peaceful means for the settlement of disputes.[288] The Convention provides that, states concerned should before submitting applications, resolve conflicts with respect to overlapping claims.[289] Accordingly, the provisions of the Convention call for voluntary actions to resolve conflicts of overlapping claims.

The problem of conflict resolution was of great concern for the Preparatory Commission during its sessions and meetings. The solution to the problem has seen a significant progress during the work of the Preparatory Commission.

Preparatory Commission and Conflict Resolution Issue.

Before discussing the problem of conflict resolution through the sessions of the Commission, a word must be said about the Preparatory Commission.

Resolution I,[290] which was adopted with the Convention, provides for the establishment of a Preparatory Commission for the International Sea-Bed Authority and for the International Tribunal for the Law of the Sea. The Preparatory Commission will remain in existence until the conclusion of the first meeting of the Assembly of the International Sea-Bed Authority. It will consist of states which have signed or acceded to the

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288 LOSC, art. 280; art. 282.

289 Res. II, para. 5 (a).

290 Res. I is annexed to the Final Act of the Convention. UN. Doc.A.Conf.62.121 (21 October 1982). Reprinted in (1982) 21 I.L.M., p.1254. Those states which signed the Convention and the Final Act have the right to participate fully in the decision-making process of the Preparatory Commission. However, those which signed only the Final Act have the right to be present only as observers during the Commission debates.

Convention. However, Final Act signatories could only participate in the Commission as observers with full rights of deliberation but not of participation in decision making.

The Preparatory Commission consists of: 1. General Committee. 2. The Plenary. 3. Special Commissions: 1) Special Commission 1 deals with the issue of adverse effects of sea bed mining on developing land-based producer states, 2) Special Commission 2 on the Enterprise, 3) Special Commission 3 entrusted with the task of preparation of the drafts of the regulations for deep sea bed mining (the mining code), 4) Special Commission 4 assigned with the establishment of the International Tribunal for the Law of the Sea. 4. Officers. It is interesting to note that the most important function of the Preparatory Commission is with respect to the PIP provisions of Resolution II.

After having briefly illustrated the structure of the Preparatory Commission, it is now important to go through the sessions of the Commission where the matter of overlaps and conflict resolution was a controversial issue.

During the second session, held between March 19 to April 13, 1984 in Kingston (Jamaica), it was stressed that resolution of conflicts was not the duty of the Preparatory Commission but that of the applicant. However, this should not hamper the Chairman of the Preparatory Commission to use his good offices in order to complete procedures for conflict resolution.[291]

Many attempts were made by prospective certifying states so as to resolve conflicts among the claimants. Canadian government disputed any registration of application which overlapped with other pioneer sites. It

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291 R. Mostapha, A study on the Progress of Work in the Preparatory Commission for the International Seabed Authority and for the International Tribunal for the Law of the Sea, (January-June 1986) 26 Indian J.I.L., p.128.

asserted that any registration of application for a mine site "would be incompatible with the requirements of Resolution II unless prior to registration, the applicant could demonstrate that the area in respect of which the application is made does not overlap with any other pioneer site. It is the Canadian position that "the resolution of such conflicts among prospective pioneer states, including all potential claimants, is essential in the interest of a successful implementation of the Convention ...."[292]

At the Geneva Meeting, held between August 13 to September 5, 1984, prospective states continued their efforts to resolve overlaps and proceeds for registration. Nevertheless, disagreement raised between pioneers of the first group with regard to the cut-off dates and procedures to be followed in conflict resolution. On cut-off dates, while the USSR proposed September 1, 1984 as the deadline for submission of applications, France and Japan had proposed dates in and after December 1984. With respect to the procedures which should guide conflicts resolution, the USSR favoured negotiations as a means for a conflict resolution; whereas, Japan preferred binding arbitration. As a solution to this dispute, the Chairman announced that, the applicants should resolve overlaps by negotiations. Since negotiations could involve a third party, the Chairman of the Preparatory Commission called on the first group to meet on December 17, 1984, to resolve overlaps conflicts.[293]

The Chairman of the Preparatory Commission declared on August 31, 1984, during the Geneva Session August 13 – September 5, 1984 that the parties concerned had reached an agreement on an "Understanding on the Procedure for Conflict Resolution Among the First Group of

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[292] UN. LOS.PCN.40, 11 April 1984.

[293] Mostapha, op.cit., p.128.

Applicants."[294] This Agreement, which was conceded by the parties concerned (France, Japan, India, USSR) aimed at resolving overlapping claims on mining sites. During the Geneva Meeting, the first group met to interchange lists of co-ordinates of the areas claimed by them. While it was possible to resolve provisionally the conflict between Japan and the Soviet Union, the overlap between the Soviet Union and France did not get a solution.[295] The Chairman of the Preparatory Commission reported, during Geneva Session August 12 – September 4, 1985, that intensive efforts will be made "to resolve the issues that still remain" before the next spring 1986 session of the Commission.[296] If the efforts were successful and an understanding has been reached, then the Commission will proceed with "examination of the rules for registration, adopt them and proceed to the next stage."[297]

Paragraph (9) of the Understanding declares that the Understanding "will apply to all applicants who will have submitted their applications to the Preparatory Commission by 9 December 1984."[298] However, the Understanding was criticized by many delegations. The Netherlands views were that, the issue of conflict resolution can only be solved by agreements encompassing "all parties which may be affected by

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294 Statement of the Chairman of the Preparatory Commission regarding the Understanding on Resolution of Conflicts among Applicants for Registration as Pioneer Investors, UN. LOS.PCN.L.8, 31 August 1984. The Understanding achieved by the parties concerned is in two parts. The first part is an Understanding on the Resolution of Conflicts among Applicants for Registration as Pioneer Investors and the second part is an Understanding on the Procedure for Conflict Resolution among the First Group of Applicants. See ibid.

295 Mostapha, op.cit., p.130.

296 Report of the Chairman of the Preparatory Commission, UN. LOS.PCN.L.27, 3 September 1985, p.4.

297 Ibid.

298 UN. LOS.PCN.L.8, 31 August 1984, p.2, Part I.

overlapping on any particular site."[299] It has also been insisted that, the main objective of Resolution II must be preserved with regard to "all identified pioneers as long as Resolution II is valid and may not be given up because of the expiration of the date of 9 December 1984. It is the sovereign right of a state to become party to a Convention by signature followed by ratification or by accession."[300]

The parties of the Understanding responded to those attacks. Accordingly, the French delegation stated that the Understanding "is merely in necessary implementation of the mandatory provisions of Resolution II."[301]

The Commission focussed its attention during the Geneva Meeting on the so-called "Provisional Understanding Regarding Deep Sea Bed Matters",[302] which was adopted and signed on August 3, 1984 by eight states; the Federal Republic of Germany, Italy, France, Belgium, Japan, Netherlands, United Kingdom and the United States.

The parties of the Provisional Understanding affirmed in a letter addressed to the Preparatory Commission that the objective of the Agreement is "to ensure the minimum need of avoiding possible future conflicts due to overlapping claims for mine sites, and as such, fulfills in part the requirements of Resolution II to resolve overlapping claims."[303]

The Group of 77 opposed such agreement based on national legislation and reciprocal agreements which purport to regulate and authorize deep sea bed activities. The Group of 77 strongly affirmed that

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299 UN. LOS.PCN.60, 26 April 1985, p.1.

300 Ibid, p.2.

301 UN. LOS.PCN.67, 16 August 1985, p.2, see also LOS.PCN.68, 69, and 70, 16 August 1985.

302 Reprinted in (1984) 23 I.L.M., p.1354.

303 UN. LOS.PCN.45, 16 August 1984, p.2, see also LOS.PCN.46 and LOS.PCN.48, 16 August 1984.

any activities based on such Agreements outside the Law of the Sea Convention were illegal. In the words of the Group of 77 "such Agreements are contrary to the letter and the spirit of the Law of the Sea Convention and have no legal validity."[304] Consequently, an important declaration was adoptedwichalleged that any claims incompatible with the Law of the Sea Convention shall not be recognized and are wholly illegal.[305]

On 3 and 21 August, Japan and France submitted applications to the Commission for the registration as pioneer investors of the Japanese enterprise, Deep Ocean Resources Development Co., Ltd (DORD),[306] and the French enterprise, Association Francaise pour l'Etude et la Recherche de Nodules (AFERNOD).[307]

Further to the signing of the Provisional Understanding, the United States issued on August 29, 1984 exploration licenses for three of the four consortia, Ocean Mining Associates (OMA) 156.000 square kilometers, Ocean Management Inc (OMI) 135.000 square kilometers, and Ocean Minerals Company (OMC) 165.000 square kilometers. The fourth consortium, Kennecott (KCON), which had applied for two licenses totalling 191.000 square kilometers requested a delay in issuing of the license in waiting for acquiring a license from the United Kingdom.[308] The granting of these licenses were for sites in the Clarion-Cliperton

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304 Statement by the Chairman of the Group of 77 delivered on 13 August 1984, UN. LOS.PCN.48, 16 August 1984, p.1 (4).

305 Mostapha, op.cit., p.132.

306 UN. LOS.PCN.50, 22 August 1984, Annex, p.1.

307 UN. LOS.PCN.51, 23 August 1984, Annex, p.1. The USSR also submitted on July 20, 1983 an application for registration as a pioneer investor of the Soviet enterprise (Souther Production Association for Marine Geological Operations) (Yuzhmorgeologiya). See UN. LOS.PCN.31, 24 October 1983.

308 L. Kimball, Short-term Dilemmas and Long-term Prospects at PrepCom, (January 1985) 9 Marine Policy., p.73.

Zone in the Pacific Ocean. However, the licenses were likely overlapped by the areas applied for by the Soviet Union, but they were not in conflict with the areas claimed by France, Japan and India.

The Ocean Mining Associates (OMA) consortia wrote a letter to the Soviet enterprise, Yuzhmargeologiya, on November 2, 1984 notifying it of the issuance on August 29, 1984 of a license numbered USA-3 for exploration in part of the international sea bed area of the Pacific Ocean.[309] Responding to it, the General Director of the Soviet enterprise, Yuzhmorgeologiya, informed (OMA) that the enterprise did not recognise that it possessed "any of the rights described in the license."[310] Seven exploration licenses were granted to the consortia between the summer 1984 and the end of 1986, under the national legislation by the United States, the United Kingdom and the Federal Republic of Germany.[311]

During the third session, held between March 11 to April 4, 1985 in Kingston (Jamaica), no real breakthrough was achieved among the prospective pioneer investors on overlaps conflict and therefore, the adoption of rules and regulations for registration. While the overlaps between the Soviet Union and Japan was provisionally resolved, the overlaps between France and the Soviet Union remained without any solution. The factor which enforced that impasse was the declaration of Belgium, Canada, Italy and the Netherlands that they might refuse the registration of a Soviet site that conflicted with the sites claimed by the consortia of which their national companies form part. Moreover, the

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309 Letter dated 10 June 1985 addressed to the Chairman of the Preparatory Commission, UN. LOS.PCN.64, 1 July 1985.

310 Letter is reproduced in UN. LOS.PCN.64, 1 July 1985, Annexes I and II, at Annex II, p.6.

311 S. Mahmoudi, The Law of Deep Seabed Mining, (1987) p.321.

four states maintained that an acceptable overlaps resolution process must include all potential pioneers identified in Resolution II.[312]

Because of the impasse in finding a solution to the overlaps conflicts, the Chairman of the Preparatory Commission asserted that after all efforts were exhausted with regard to the issue of overlapping claims and according to the mandate of the Chairman to use his good offices, the Commission will look after the issue and deal with the practical problems arising as a result of the Geneva Understanding and proceed with the rules for the registration of pioneers.[313]

At the Geneva Meeting, held between August 12 to September 4, 1985 in spite of efforts made by the Chairman to make progress in solving the problem with the prospective pioneer investors, the Geneva Meeting did not come out with any progress in finding a solution or agreement for the issue and as a result, the implementation of Resolution II was delayed.[314]

The problem of conflict resolution on overlaps continued to be of great responsibility of the Preparatory Commission. In using his good offices to find a solution to the problem, the Chairman launched in February 1986 some talks with the first group (France, Soviet Union, Japan and India) at Arusha (United Republic of Tanzania). The result was fruitful in that the first group reached an agreement on resolving overlapping claims through equal sharing of overlapping areas known as "Arusha Understanding."[315] The scheme was a successful result of considerable efforts and comprehensive consultations made by the

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312 L. Kimball, Holding Pattern or Forward Motion?, (October 1985) 9 Marine Policy., p.341.

313 Mostapha, op.cit., p.130.

314 L. Kimball, Heated Exchange in Geneva, (January 1986) 10 Marine Policy., p.60.

315 UN Monthly Chron., (August 1986) XXIII (4), p.108.

Chairman of the Preparatory Commission Mr Warioba (Tanzania), and acting Chairman Mr I.G. Jhingran (India). The objective was to resolve the conflicts and then to continue to adopt rules for registration of pioneer investors and registration of first group of applicants.[316] According to the Arusha Agreement, specific portions of the North East Pacific Ocean would be preserved upon registration for the first group, except India which would be given exclusive rights to an area in the Indian Ocean since it had no conflicting claims.[317]

The aim of the formula was to provide an agreeable solution to the first group of investors as well as to the Commission on behalf of the Authority without harming the profits of the consortia. Thus, in order to effectuate and achieve this purpose, the overlapping areas were to be equally shared between all applicants, and even between the applicants and the related consortia ..[318]

France, Japan, and the Soviet Union agreed that, upon registering as pioneer investors, parts of their application areas which overlap with potential applicants would be relinquished for possible future applications by four consortia.[319]

Mr Jhingran told the Commission on September 5, 1986 that by recognizing the rights of pioneer investors, the Agreement would give "practical effect" to the new regime for deep sea bed mining under the Convention. The Preparatory Commission was of the view that "there can only be one regime for deep sea bed mining and that is the regime

316 UN Monthly Chron., (November 1986) XXIII (5), p.89.

317 Ibid.

318 Mahmoudi, op.cit., p.319.

319 See supra note 316, p.89. The Arusha Understanding included time tables and procedures for registration of the group of pioneers, and provided for a similar treatment to be given other potential applicants.

contained in the Convention." He added by saying that, "it is the hope and expectation of all of us here that every one will eventually work within that regime for the sake of peace and good order in the oceans and the security of the rights of all those who are interested in deep sea bed mining."[320]

The German Democratic Republic, on behalf of the Eastern European states called on the Commission to approve the scheme of "Arusha Understanding" at the subsequent session and then proceed with the registration of pioneer investors.[321] However, France regarded the scheme as imperfect but well balanced, and if all members of the Commission supported the scheme, it could enter into force.[322] The Assembly was satisfied with the important decision of the Preparatory Commission on September 5, 1986 establishing a mechanism for registering potential applicants for pioneer investors status, and resolving overlapping claims to portions of the sea bed area in the North-East Pacific Ocean by France, Japan and the Soviet Union.[323]

At the fourth session, held between March 17 to April 11, 1986 in Kingston (Jamaica), comprehensive debate were conducted with regard to the enforcement of "Arusha Understanding." During this session, a declaration was adopted condemning the granting of mining licenses by the Federal Republic of Germany and the United Kingdom.[324]

The negotiations on the scheme "Arusha Understanding" continued at the resumed fourth session, New York August 11 – September 5 in summer 1986, and a modified version of the "Arusha Understanding" was

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320 See supra note 316, p.89.

321 UN Monthly Chron., (August 1986) XXIII (4), p.108.

322 Ibid.

323 UN Monthly Chron., (February 1987) XXIV (1), p.82.

324 UN. LOS.PCN.78, 21 April 1986.

proposed as an annex to the statement made by the acting Chairman of the Preparatory Commission.[325]

Later at the fifth session, Mr Rabah Kenouaze (Algeria) acting as Chairman conceded that a significant progress had been made and more time is needed so as to accomplish the discussions.[326]

As a result of the delay in submission of the revised applications of the first group of investors by March 25, 1987, an extension was granted by the Commission for the submission of revised applications based on intersessional discussions by the first group, not later than one week before the Commission's summer session.[327] In a letter dated August 3, 1984, the first group (France, India, Japan and the Soviet Union) indicated that a comprehensive settlement of practical problems has been reached between those delegations, and the USSR estimated that it would be in a position to submit a revised application to the Preparatory Commission towards the end of November 1987.[328]

As a way to enforce the efforts in finding a solution to the problem, the Commission decided to establish a group of technical experts which would examine the revised applications of the first group.[329] Acting as a Chairman, Mr Rabah stated that, the procedures adopted "will not affect the priority and equal treatment of all the applicants of the first group and are without prejudice to the interests of the potential applicants."[330]

The Preparatory Commission faced serious difficulties for the

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325 Statement on the Implementation of Resolution II, UN. LOS.PCN.L.41. Rev.1, 11 September 1986, pp.9-13.

326 UN Monthly Chron., (August 1987) XXIV (3), p.40.

327 Ibid.

328 UN. LOS.PCN.91, 3 August 1987.

329 The Technical Group was intended to convene in August 1987 and make a report to the General Committee which would then decide on registration. See supra note 326, p.40.

330 See supra note 326, p.40.

implementation of Resolution II, in particular, the problem of conflict resolution of overlapping claims. Despite the significant progress and the considerable efforts made by the chairman of the Preparatory Commission together with the prospective pioneer investors in finding a solution, the Commission was and will still be in need of more time to achieve a final solution to this problem.

5.2. Approval of Plans of Work

Within six months after the Convention on the Law of the Sea enters into force, the pioneer investor must submit a plan of work so as to proceed pioneer activities in the Area. The plan of work must be approved by the Authority if the applicant met the requirements laid down in the provisions of the Convention and the rules, regulations and procedures of the Authority.

However, the Authority may not accept a proposed plan of work that overlaps with a previously approved plan.[331] Priority is to be given to pioneer investors in respect of approval of plan of work over any other applicant apart from the Enterprise of the Authority. So as to approve the plan of work, the states whose companies are involved in the pioneer consortia must be parties to the Convention.[332]

It is worth pointing out here the situation of not being party or signatory to the Convention by giving an example of one of the four consortia, Kennecott consortium. This consortium include participation of three countries, United Kingdom, Canada and Japan. Let us presume that the Kennecott consortia has been registered as a pioneer investor after

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331 LOSC, Annex III, art. 6 (3) (a).

332 Res. II, para. 8 (c).

certification from Japan government. The question here is what is going to happen when the consortia apply for approval of a plan of work, without United Kingdom being party to the Convention. Surely, according to Paragraph 8 (c), if Kennecott consortia remained with one non-signatory of the Convention (United Kingdom), the plan of work cannot be approved. Nevertheless, as a solution, consortia of category (2) are permitted to change their nationality and sponsorship to that of any state party to the Convention provided that, the state to which it transfers has effective control.[333]

5.3. Production Authorisations

Before the commencement of commercial production, each pioneer investor must apply so as to obtain a production authorisation allowing him to produce up to a specified amount of minerals.[334] The right of the pioneer investor to obtain a production authorisation is limited despite his privileges and priorities over all applicants apart from the Enterprise of the Authority. Correspondingly, production authorisations are to be issued in relation to Article 151 and Annex III, Article 7 of the Convention.[335] In other words, production limitation system embodied in Article 151 of the Convention has to be applied. Thus, applicants whose production if authorized would exceed the production ceiling, will only get a priority for the granting of the next production authorisation allowed by the production ceiling.[336]

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[333] Ibid, para. 10 (b). This Paragraph was designed to collaborate the registered pioneer investor which found itself unqualified to acquire approval of a plan of work because its sponsoring state failed to sign the Convention.

[334] Ibid, para. 9 (a).

[335] Ibid, para. 9.

If two or more pioneer investors can not accommodated within the ceiling, they may agree among themselves upon either the apportionment of the allowable production or the establishment of an order of priorities.[337] But, if the parties failed to reach an agreement in three months, the dispute must be submitted to a binding arbitration under the UNCITRAL arbitration rules.[338]

In conclusion, it can be said the PIP resolution system acts as an induce mechanism to meet the basic objectives of the prospective sea bed miners by protecting the mining investments made by the consortia of the western countries. The Deputy Chairman of the U.S. Delegation, Mr Leigh Ratiner reported:

> Under the resolution, four existing mining consortia (each of which includes or is controlled by U.S.companies) plus projects sponsored by the government of Japan, France, the USSR and India, would have guaranteed automatic access to the strategic raw materials of the seabed for the first generation of seabed mining. Altogether, ten seabed mining entities are entitled to all of the mineral production likely or possible from the seabed for the next 30 to 50 years: metal market projections indicate that demand for manganese, copper, cobalt, and nickel from the seabed is unlikely to reach, much less exceed, the production capacity of these grandfathered miners during that period. Thus, with the notable exceptions of mandatory technology transfer and the procedure for amending the treaty, the offensive ideological provisions of the treaty would not effectively apply before the middle of the twenty first century. By that time there would have been a through treaty review and an opportunity to renegotiate.[339]

336 Ibid, para. 9 (c).

337 Ibid, para 9 (d) (f).

338 Ibid, para 9 (g).

339 S. Ratiner, The Law of the Sea: A Crossroads for American Foreign Policy, (1982) 60 For.Aff., pp.1014-15.

At the end of the Spring Session of the Preparatory Commission in Kingston (Jamaica), the Chairman of the Commission recognised the implementation of Resolution II as one of the matters to be dealt with by the Special Commission and the Plenary and that the Preparatory Commission will adopt by consensus rules and procedures for the implementation of Resolution II and therefore, protect the pioneer investors.[340]

Section 6. Review Conference[341]

At the contention of many developing countries, which did not want to commit themselves endlessly to the contemplated deep sea bed mining system (parallel system) in its initial form, a procedure for a fundamental review of the deep sea bed mining system fifteen years after the start of the earliest commercial production, was embodied into the Convention.[342] The option of fifteen years is owing to the presumption that the first generation of exploitation of minerals of deep sea bed shall be accomplished during that limit period and thereafter, the Convention

340 Bruckner, op.cit., p.192.

341 Article 155 of the Convention considers the review procedure of the system of exploitation of deep sea bed. Moreover, Article 154 provides for a periodic review. According to Article 154, every five years from the entry into force of the Convention, the Assembly shall undertake a general and systematic review of the manner in which the international regime has operated in practice and if necessary, the Assembly may take measures in accordance with the provisions of Part XI and related Annexes to improve the operation of the regime.

342 See, Sea Law: A Rendez Vous With History , UN Monthly Chron., (June 1982) 19 (6), p.8.

requires a conference to be held to assess the envisaged "parallel system" of deep sea bed.

The review of the system of exploitation which was subject of Article 155 went through some changes during the negotiations on the law of the sea. These changes however, were gradually in favour of the industrialised countries which objected to Article 153 of the ICNT concerning a review conference on the system. This Article has been revised to omit many of the difficulties facing the industrialised states objectives, including the said "moratorium" on the approval of new contracts and plans of work in case no agreement could be reached within five years after the start of the review conference and moreover, to exclude the idea of an automatic change to a unitary system of exploitation by the Authority if the review conference fails to reach agreement within five years.[343] Indeed, Article 155 (6) (the moratorium) was identified by the United States delegation on the resumed eight session as one of the outstanding issues remaining in the deep sea bed negotiations[344] which would endanger their fundamental economic interests.

Provisions of Article 153 of the ICNT; which envisaged a review of the system of exploitation after twenty years from the entry into force of the Convention in order to establish whether during that period "a balance has been maintained between the areas reserved for the Authority and developing countries and the contract areas exploited by states, states entities, natural or juridical persons in association with the Authority",[345]

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343 H. Oxman, The Third United Nations Conference on the Law of the Sea: The Seventh Session 1978, (1979) 73 A.J.I.L., pp.9-10.

344 H. Oxman, The Third United Nations Conference on the Law of the Sea: The Eight Session 1979, (1980) 74 A.J.I.L., p.6.

345 ICNT, art. 153 (2). This Article provides that if no agreement has been reached within five years to improve the provisions concerning the system of exploitation, "activities in the Area shall be carried out by the Authority through the

were strongly criticized by the developed countries. Industrialised countries strongly objected such provisionson the basis that they could deeply jeopardize the likely long-term character of the international regime as it requires that if agreement to the contrary is not reached within twenty five years, the regime shall automatically be changed into a "unitary system" ruling out direct access by contractors. In addition, the developed countries feared an ultimate evanescence of the parallel system as a result of a review conference in favour of joint arrangements under the control of the Authority.[346]

On the suggestion of the Chairman of the Negotiating Group One, Mr F. Nejenga and many developing countries, the ICNT. Revised.1 provided that, if no agreement could be reached within five years, the Assembly of the Authority might decide that "no new contracts or plans of work for activities in the Area shall be approved"awaiting such agreement.[347] In this way Mr Nejenga hoped to exert some pressure on all parties concerned to work towards agreement of some kind to continue the system either unchanged or with such amendments as were adopted.[348] The industrialised states renounced the idea that a moratorium was an appropriate alternative to agreement.[349] Undoubtedly, Richardson for the United States warned that, his country "could not agree to the possible termination of its right to access to deep sea bed minerals at the time the need for them may become more

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Enterprise and through the joint venture...provided however that the Authority shall exercise effective control over such activities." Ibid, art. 153 (6).

346 Mahmoudi, op.cit., p.191.

347 ICNT.Rev.1, art. 155 (6). UN. Doc. A.Conf.62.WP.10.Rev.1.

348 Ogley , op.cit., p.169.

349 H. Oxman, The Third United Nations Conference on the Law of the Sea: The Ninth Session 1980, (1981) 75 A.J.I.L., p.217.

acute."[350]

A compromise was incorporated in the second and third revisions of the ICNT by eliminating the said "moratorium." As an alternative to the said "moratorium", in the event of failure to accomplish an agreement on the system of exploration and exploitation within 5 years, the review conference might adopt by a two-thirds majority vote, amendments to the system. These amendments should enter into force for all states parties one year after being ratified or accepted by two-thirds of them.[351] It was made clear, that such amendments would not affect the contracts approved.[352]

According to the Convention, the decisions concerning modifications in the provisions related to the system of exploitation shall be taken by consensus and recourse to voting should not be made unless all efforts to reach agreement on any amendments by way of consensus have been exhausted.[353] In the situation where agreement on changes was not reached by a review conference on the system of exploitation within five years after the start of this review, the conference could approve amendments within the ensuing twelve months by a three-fourths majority. These amendments will enter into force and would take effect for all states parties twelve months after the ratification or accession of three-fourths of states parties.[354] Thus, it would be easier to modify the Convention under this review procedure than it would be under the regular procedure for amendment. The regular procedure for the amendment of the Convention would have required consensus in the

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350 Ogley, op.cit., p.169.

351 UN. Doc.A.Conf.62.WP.10.Rev.3, art. 155 (6).

352 Ibid. See also Ogley, op.cit., p.169.

353 LOSC, art. 155 (3).

354 Ibid, art. 155 (4).

Council as well as, a two-thirds vote in the Assembly of the Authority followed by acceptance by three-fourths of the states parties to such Convention.[355] It has been observed that through such review procedure "a real legislative power is entrusted to the review conference by means of a majority vote machinery which should bestow on developing countries the power of the last word."[356]

The review conference will take its decisions according to the rules used by the Third United Nations Conference on the Law of the Sea, unless it decides otherwise, including not voting before all efforts at consensus have been exhausted. Furthermore, the majority required in adopting the amendments and the number of ratifications and accession for the amendements to enter into force for all states parties to the Convention have been raised from two-thirds to three-fourths majority. The three-fourths majority was a change added at the end of the session on the president's proposal.[357] When all efforts at consensus were exhausted, then the review conference would take a two-thirds majority vote decisions on substantive matters, including a simple majority of all delegations participating in the session.[358]

Whatever the amendements might be, the Convention guarantees that, as long as a contract is signed between the entry into force of the Convention and the end of the review conference, the rights acquired under existing contracts will remain unaffected by actions of the review.[359] Moreover, not only the rights of the contractor but also the terms and conditions of the contract shall not be affected because any

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355 See supra note 342, p.8.

356 J. Dupuy, The Notion of Common Heritage of Mankind Applied to the Seabed, in Rozakis, p.207.

357 See supra note 342, p.8.

358 Ibid.

359 LOSC, art. 155 (5).

modifications in the contract may be brought about only with the consent of the parties.[360] This security of tenure is ensured in Article 153 (6) of the Convention. Consequently, any investment decisions made as a result of contracts granted before the end of the review conference are protected from any effect of future changes.

The special objectives laid down for the review conference are to secure, inter alia, whether the envisaged system of exploitation has achieved its purposes in all respects, including the development and use of the Area and its resources so as to foster a healthy development of the world economy and a balanced growth of international trade for the benefit of mankind as a whole. Also, among the objectives outlined for the review conference, is to secure whether the system has resulted in the equitable sharing of benefits derived from activities in the Area.[361]

Whatever necessary changes and amendements on the system, few provisions regarding the activities in the Area are to be maintained and ensured regardless of the result of the work of the review conference. First, the review conference shall protect the maintenance of the principle of the common heritage of mankind. Second, the international regime for the equitable exploitation of the resources of the Area for the benefit of mankind, in particular, the interests of the developing countries by an Authority which will organize, conduct, and control activities in the Area.[362] Last but not least, the review conference shall ensure the maintenance of the rights of states and their general conduct in relation to the Area, and their participation in activities in the Area in conformity with this Convention.[363] As regard the right of access of the states to the

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360 Ibid, Annex III, art. 19 (2).

361 Ibid, art. 155 (1).

362 Ibid, art. 155 (2).

363 Ibid.

Area, no clear and specific reference is made in Article 155 (2). One may interpret it as referring to the right of participation of states in the activities in the Area according to Article 153 (2)(b), but it may be construed as referring to the rights of states under Article 11 of Annex III of the Convention concerning joint arrangements with the Enterprise where the activities are totally controlled by the Authority.[364]

The result of the review conference is quite arduous to anticipate. However, it would be based on the level of eminence of the parallel system during the first mining generation. As far as this system is concerned, it can be pointed out that, the developing countries are in a better position to amend the system through their own majority according to the decision-making procedure. This privilege to the developing countries can be the only component of the parallel system which can be employed to modify the envisaged system.

It is nevertheless likely that, an essentially different sea bed regime could enter into force for all parties with the approval of only three-fourths of the states parties.[365]

The conclusion which can be drawn from the foregoing discussion is that The system of exploitation embodied in the Convention, based on the so-called the parallel system, favours an international regime whereby exploitation is conducted by states parties and their enterprises on the one hand, and by the Enterprise of the Authority on the other in accordance with the rules laid down in the Convention and the rules, regulations and measures adopted by the Authority.

The system of the Convention seems very attractive and favorable

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364 Mahmoudi, op.cit., p.191.

365 I. Charney, The Law of the Deep Seabed Post UNCLOS III, (1984) 63 Oreg.L.Rev., p.41.

for the majority of states especially, developing countries. It contains many positive and significant accomplishment for the general interests. It ensure substantial benefits to the international community especially developing states from revenues acquired from mining the deep sea bed. The Enterprise of the Authority and developing countries will profit from the transfer of the advanced technology of the developed states. By virtue of the production control, Land-based producers will be secured from any adverse effects caused by the production of minerals from deep sea bed.

The financial terms imposed on contractors including application fee, an annual fixed fee and either a production charge only or a mixed system of production charge and share of net proceeds, are for the purpose of guaranteeing optimum revenues for the Authority and to enable the Enterprise to commence exploitation competitively with other private entities. The financial terms imposed on miners are regarded by developed states as burdensome.

Potential investors in deep sea bed mining will be guaranteed a protection of their huge amounts of capital invested in carrying out activities of exploration and exploitation of deep sea bed and its resources made before the Convention enters into force. The protection of pioneer investment was of great concern for the developed states and their industries. Resolution II adopted by the Third United Conference On the Law of the Sea provides such security.

The system of exploitation of the Convention may be changed by a three fourths vote. This review mechanism is laid down in the Convention and provides for a revision of the parallel system. The review may permit modifications in the system if it does not properly work. However, developed states fear that the access guaranteed to the private entities by

the parallel system could be eliminated by the review conference.

CHAPTER THREE

THE INTERNATIONAL SEA-BED AUTHORITY (ISA)

Fundamental differences in points of view relating to the establishment of the International Sea-Bed Authority existed between the participants at the Third Conference on the Law of the Sea. The disputes were centred on the functions of the Authority; the distribution of powers between the Assembly and the Council; the decision-making system of the organs, the composition of the Council.

Certain countries, especially developed states, favoured an international Authority that was charged only with issuing licenses and taking of measures for the safety of the marine environment. Other countries, especially developing countries, supported a strong Authority with powers to exercise complete control to regulate the activities of exploration and exploitation of the Area and its resources.

The Authority will be composed of an Assembly as the supreme policy making organ where members are represented on the basis of sovereign equality; a Council as the executive organ implementing the general policies of the Authority where members are represented on the basis of equitable geographical distribution and special interests; a Secretariat and an Enterprise as the operational organ of the Authority. This Enterprise will enjoy direct access to the exploitation of the resources of the Area as well as transportation, processing and marketing of the recovered metals. The Authority is also supported by a system of settlement of deep sea bed disputes. The disputes might arise between the Authority and contractors because of the regulations and rules adopted by the Authority to regulate deep sea bed activities.

This chapter will discuss, in three sections, the functions of the Authority, the principal organs of the Authority, and finally the system of settlement of deep sea bed disputes.

Section 1. Functions of the Authority

The most important contribution of the Third United Nations Conference on the Law of the Sea and the Convention is the creation of the International Sea-Bed Authority which was a consequence of having announced the Area and its resources as the "common heritage of mankind." This new international organization will be responsible for the implementation of the regime set up in Part XI of the Convention. Thus, in performing its duty, it has been endowed with exclusive powers mainly through enacting rules, recommendations, procedures and measures. These powers are to be exercised by two organs, namely a Council and an Assembly.

The Authority is the institution through which the general policies in relation to the administration of the Area based on the principle of "common heritage" should be implemented. It is authorised to undertake directly commercial and industrial activities in the Area including transport, processing and marketing of minerals recovered from the Area either on its own or participating in joint ventures and entering into contracts with state parties, natural and juridical persons provided it retains an effective supervision over the conduct of activities. The Authority has the responsibility to put into effect and constrain international law in the Area by means of its legislative power through adopting rules and regulations enacted by the Council and the Assembly. To that end, its jurisdiction would encompass all the necessary activities

including supervision, regulation and control for the purpose of establishing the appropriate legal regime set forth in the Convention.

During the negotiations, the main issues which dominated the debates were the structure of the Authority and its functions. Each group of participants sought to impose its own concept on how the structure would be and what role the Authority should play. In fact, the long complex negotiations on the mechanism of the International Sea-Bed Authority was a political rather than a legal struggle between developing and developed countries.

The draft articles and proposals introduced to the Sea-Bed Committee reflected the divergent positions and views of both developing and developed states. In the light of their statements, the industrialised countries insisted and wanted a weak Authority by which its role will be limited to a licensing Authority having no significant powers to get involved in sea bed mining.[1] Industrialised states were opposed to the creation of a powerful body enjoying wide discretion in regulating the exploitation of the sea bed. Their attempts were to minimize and limit the Authority's powers and restrict the scope of its functions by excluding, for example, scientific research; protection of marine environment; and commercial activities (processing, transporting and marketing), in order to avoid any effective Authority in the Area which might interfere in states' freedom to exploit the deep sea bed.

It can be said that the aim of developed countries was to create an international licensing system under which the International Sea-Bed Authority would grant only mining contracts to states and their nationals.

On the other hand, the developing states favoured and sustained a

[1] See e.g., Doc. A.Conf.62.C.1.L.6. Made by U.S.A.; Doc. A.Conf.62.C.1.L.8, made by the EEC, UNCLOS III, Off. Rec., Vol.III, pp.169, 173.

strong Authority trusted with adequate powers so as to be able to conduct activities in the Area with exclusive jurisdictions and effective control. They wanted a highly effective body in charge of promoting the production of minerals and undertaking directly commercial operations through the Authority's Enterprise. They thought that a strong Authority would guarantee to the developing states a full participation in mining sea bed and ensure what General Assembly had repeatedly declared the Area and its resources as "common heritage of mankind." On behalf of developing countries, the Group of 77 called for a powerful Authority with wide discretion and exclusive right to mine the deep sea bed.[2]

In spite of the divergent views between the developed and developing countries about the role and functions of the Authority, all participants agreed on the need to create an international organization which would be in charge of implementing the regime.

Because of the wide functions which are alloted to the Authority, it is necessary to proceed only with examining the most important ones.

In the Convention, there are no specific Articles defining the Authority's purposes and its duties. However, provisions dealing with its functions are disseminated right through several headings outlined in Part XI of the Convention. For instance, "Use of the Area Exclusively for Peaceful Purposes"; "Protection of Marine Environment"; "Participation of Developing States in Activities in the Area"; "Legal Status of the Area and its Resources."[3]

1-Development and Co-operative Research

The Authority may carry out marine scientific research concerning

[2] Doc. A.Conf.6.C.1.L.7. UNCLOS III, Off. Rec., Vol.III, p.172.

[3] LOSC, arts. 141, 145, 148, 137.

the Area and its resources, and may enter into contracts for that purpose. The Authority shall promote and encourage the conduct of marine scientific research in the Area, and shall coordinate the results of such research and analysis when available.[4]

Accordingly, the first assignment of the Authority for research and development should be the achievement of joint venture with state parties and other entities. Joint venture will probably provide both the Authority and the mining contractor with several potential interests. For the Authority, joint venture seems to be an ineluctable option by reason of the considerable benefits which can be gained, in particular in the initial period of ten years. Therefore, the Authority will acquire access to technological resources and that will be an advantage and an opportunity for the developing countries to be assisted to explore their sea bed mining infrastructure in their Continental Shelves and Economic Zones. Moreover the Authority will gain a financial profit by diminishing the investment risks by virtue of sharing costs; and the possibility for an efficient training for personnel of the Authority.

The mining contractor in the joint arrangement could also obtain worthwhile benefits. The contractor will improve and develop his technology in order to be prepared for commercial production ; to have access in reserved area and the mine site of the Authority; and to elicit a prodigious security for their investments by sharing transactions and ventures risks.

Thus, it can be said that the completion of joint ventures between the Authority and any entity may be deemed in action the most common favourable workable approach for the undertaking of sea bed exploitation.

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[4] Ibid, art. 143 (2).

2-Peaceful Uses of the Sea Bed

The Area "shall be open to use exclusively for peaceful purposes by all states,whether coastal or landlocked,...."[5]

In 1970, a Treaty was concluded prohibiting the emplacements of atomic weapons and other weapons of mass destruction in the sea bed and ocean floor and the subsoil thereof.[6] This Treaty suffers from weaknesses outlined in the inadequate provisions for surveillance and enforcement. The International Sea-Bed Authority will be equipped with organizational mechanism for guidance and surveillance and therefore, it will be effectively prepared to take over this task if the Convention comes into force. This function is the responsibility of the Legal and Technical Commission provided with a staff of high standards in the field. To fulfill this duty, the Commission is endowed with powers to conduct inspections in the Area so as to determine whether the sea bed is exempt from the arms race and preserved for peaceful purposes. Hence, the Commission shall make recommendations to the council in relation to the establishment of a monitoring programmes. This programmes shall observe, measure, evaluate and analyse, by recognized scientific methods, the risks and effects of activities in the Area with respect to pollution of the marine environment in order to ensure that "existing regulations are adequate and complied with and co-ordinate the implementation of the monitoring programmes approved by the council."[7]

The Commission shall also make recommendations to the Council regarding the direction and supervision of a staff of inspectors "who shall

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5 Ibid, art. 141.

6 Treaty on the Prohibition of the Emplacement of Seabed and the Ocean Floor and in the Subsoil Thereof, (1971) 10 I.L.M., pp.145-51.

7 LOSC, art. 165 (2) (h).

inspect activities in the Area to determine whether the provisions of this part, the rules, regulations and procedures prescribed thereunder, and the terms and conditions of any contact with the Authority are being complied with."[8]

Finally, the members of the Commission shall upon request by any state party or other party concerned "be accompanied by a representative of such state party or other party concerned when carrying out their function of supervision and inspection."[9]

Therefore, it is meaningful to extend the scope of the monitoring and surveillance activities of the Authority in the sea bed to include authentication of conformity not only with the provisions of the Convention on the reservation of the Area exclusively for peaceful purposes, but also with the sea bed disarmament treaty as part of international law.

3-Organisation, Control and Conduct Activities in the Area

According to Article 153 (1) of the Convention, activities in the Area shall be organised, carried out and controlled by the Authority on behalf of mankind as a whole.

The Authority is responsible for organising the activities by implementing the general and the specific policies set forth in Part XI of the Convention and that can be achieved through adopting rules, regulations and procedures in its day-to-day management of the Area to establish the international regime on sea bed exploitation. The Council plays a significant role in organising the Area. It adopts rules and

8 Ibid, art. 162 (2) (m).

9 Ibid, art. 165 (3).

decisions in connection with different matters (contracts, financial arrangements, commercial operations, protection of marine environment...etc.).

As far as the Council's role in implementing the regime of the Convention is concerned, one of its Commissions, the Legal and Technical Commission, is in charge of controlling and supervising the activities conducted in the Area. The Council will provide a body of inspectors to inspect the activities of the contractors and their compliance with the provisions of the Convention.[10]

The Authority shall also have the right to take measures against any entity alleged to have violated the rules and regulations adopted by its organs, like termination or suspension of contracts to guarantee the complaisance with the Convention's provisions concerning the controlling functions.[11]

As far as the conduct of activities is concerned, the Authority will be engaged in carrying out such activities under an arrangement called the "parallel system." According to this system, the Authority may conduct activities directly through the Enterprise and in association with state parties, natural and juridical persons by entering into contracts[12] on the condition that, the Authority retains an effective control over such activities conducted by the entities. Thus, this system eliminates the notion that the Area shall be exploited exclusively either by the Authority or by entity.

4-The Authority performs another significant task in the world economy. The role of the Authority in this context is to serve and protect the land-based mineral producers, countries which are highly dependent

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[10] Ibid, art. 165 (2) (m).

[11] Ibid, Annex III, art. 18; art. 153 (5).

[12] Ibid, art. 153 (2).

upon export of minerals as a gainful source to their balance of international trade. Therefore, to protect these countries, the Authority shall have adequate powers to prevent unlimited utilization of the minerals derived from the Area, in order to avoid any economic collapse in the producing countries. Accordingly, the Authority will be alloted the power of controlling the production quotas; avoiding the alternation in the prices by fixing them in the market for the relevant minerals and participating in any commodity conferences and arrangements.[13]

5- Last function, but not least, of the Authority's functions is the protection of the marine environment. The International Authority is empowered to adopt rules and regulations for an effective prevention of natural resources, flaura and fauna of the marine environment from damage and harmful effects caused by the conduct of activities in the Area.[14] It has the responsibility to issue emergency orders for the suspension or adjustment of operations or disapprove the contracts for exploitation where serious harm to the marine environment might happen.

It can be concluded that the Authority will act on behalf of mankind to regulate, supervise, organize and control the sea bed activities for the benefit of all mankind including state parties to the Convention, states not parties to the Convention, peoples who have not yet attained full independence and other self governing status recognized by the United Nations. Besides, the Authority has an enormous duty to establish the international regime governing the sea bed area set forth in the Convention.

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[13] Ibid, art. 151(b).

[14] Ibid, art. 145.

Section 2. Principal Organs of the Authority

The International Sea-Bed Authority discharge its functions through various organs. It consists of: first, administrative organs including a plenary organ, that is the Assembly; an executive organ, that is the Council; and a Secretariat.[15] The Council is composed of two specialised subsidiary organs, the Economic Planning Commission and the Legal and Technical Commission. Second, an operational organ, that is the Enterprise, which is charged with the conduct of activities in the Area. However, with respect to the administrative structure of the Authority, this section focuses only on the Council and the Assembly because of the significant role they play in the decision-making and their huge responsibility to implement the international regime.

In this section, an evaluation of the these organs and their institutional structure, functions, powers and voting system will be discussed. It is important to note that one of the most controversial issues in the Sea-Bed Committee negotiations was the relationship between the Assembly and the Council. In other words, the character of supremacy of one over the other.

Almost all participants in the debates of the First Committee supported the supremacy of the Assembly except a few industrialised states which opposed this position. According to the developed states, the great number of developing states represented in the Assembly present a

[15] The Secretariat comprises a Secretary General and his staff. The Secretary General would be elected by the Assembly upon recommendation by the Council. The Secretary General would be the chief administrative officer of the Authority. Ibid, arts. 166, 167, 168.

huge power to control the policy making of decisions that can easily affect their interests in sea bed exploitation. Hence, the industrialised states considered the Council as the supreme organ which will play the most important role in sea bed exploitation.

At the Caracas Sessions, different proposals were submitted to the Sea-Bed Committee reflecting the supremacy of the Assembly. The delegation of Romania proposed that,

> The Assembly, in which all states would be represented, should have wide powers, but the Council and other executive organs should have only limited powers which they would exercise under the control of the plenary organ.[16]

The delegation of Kuwait stated that,

> The Assembly should be the main legislative body and supreme policy-making organ" and that, "the Council would be the executive body and would act under the control and guidance of the Assembly.[17]

Following the same pattern, the delegation of Portugal suggested that,

> ...it should consist of an Assembly comprising representatives of all the contracting states, which would be the supreme organ", and a "Council with a more restricted membership which should formulate policies and submit them to the Assembly.[18]

The issue of the supremacy between the Council and the Assembly was a battlefield of dissension between developing and developed countries. The developed countries maintained that the Council should be

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16 UNCLOS III, Off. Rec., Vol.II, p.30 (7).

17 Ibid, p.32 (31).

18 Ibid, p.30 (7).

endowed with the discretionary power, since the Assembly will be totally controlled by developing countries because of their great number in contrast with the small number of developed states represented in the Assembly. On the other hand, developing countries insisted that the Assembly should be the supreme policy-making organ. The stand of the developing countries was contemplated in the ISNT[19] of which the Assembly would be "the supreme policy-making organ of the Authority",[20] but the Council would "act in a manner consistent with the general guidelines and policy directions laid down by the Assembly."[21]

However, a significant change was made in the RSNT[22] giving more power to the Council. Accordingly, instead of acting "in a manner consistent with the general guidelines and policy directions laid down by the Assembly", the Council was vested with the right "to prescribe the specific policies to be pursued by the Authority."[23] Further, the RSNT stipulated that the Assembly must "avoid taking any actions which may impede the exercise of specific powers and functions entrusted to another organ."[24]

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19 Doc. A.Conf.62.WP.8. Part 1, 2, 3, 1975 [hereinafter cited as "ISNT"], UNCLOS III, Off. Rec., Vol.IV, pp.137-181.

20 Ibid, part 1, art. 26 (1).

21 Ibid, art. 28.

22 UN. Doc.A.Conf.62.WP.8.Rev.1. Part 1, 2, 3, 1976 [hereinafter cited as "RSNT"], UNCLOS III, Off. Rec., Vol.V, pp.125-185.

23 Ibid, art. 28 (1).

24 Ibid, art. 24 (4); and art. 26 (3). These modifications were incorporated in the subsequent texts, Informal Composite Negotiating Text [ICNT], UN. Doc. 62.WP.10, 1977, art. 156 (4); Informal Composite Negotiating Text. Rev.1, [ICNT. Rev.1]. UN. Doc. A.Conf.62.WP.10.Rev.1, 1979, art. 158 (4); Informal Composite Negotiating Text. Rev.2, [ICNT. Rev.2]. UN. Doc. A. Conf.62.WP.10.Rev.2, 1980, art. 158 (4); Draft Convention, UN. Doc. A. Conf.62.WP.10.Rev.3, 1980, [hereinafter cited as " DCLOS/ST"].

2.1. The Assembly (Plenary Organ)

The Authority's plenary organ consists of all state parties to the Convention on the basis of sovereign equality of states. The Assembly as a supreme organ has a broad scope of powers and functions which are almost based on the Council's recommendations. It is authorised to exercise exclusive jurisdiction over various issues. It establishes the general policies; elects the members of the Council, the Secretary General and the members of the Governing Board and Director General of the Enterprise; establishes subsidiary organs; assesses the member contributions and approves the budget of the Authority; approves the rules and regulations of operations governing the exploration and exploitation of the Area; adopts decisions upon the equitable sharing of benefits derived from the activities in the Area and establishes a system of compensation for land-based mineral producers whose export earnings suffer as a result of sea bed mineral production.[25] In addition, the Assembly is assigned other functions, such as the general systematic review of the application of the international regime which must be undertaken every five years from the entry into force of the Convention;[26] and the approval of amendments proposed by states parties to the same provision.[27]

As far as the voting system is concerned, it is not as complicated as the one in the Council. The system of the decision-making is based on one state one vote.[28] Decisions on questions of substance demand a two thirds

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[25] LOSC, art. 160.

[26] Ibid, art. 154.

[27] Ibid, art. 314 (1).

[28] Ibid, art. 159 (6).

majority of the members participating in the session of the Assembly, and questions are supposed to be of substance unless a two thirds majority resolves otherwise.[29] However, decisions on procedural questions require only a simple majority of the members present and voting.[30] Decision-making includes another type of vote, that is "consensus." It is required only when the contributions of state parties for financing the initial operation of the Enterprise were insufficient.

2.2. The Council (Executive Organ)

Since the Council is an executive body and a powerful organ which makes decisions[31] and adopts rules on most important matters, considerable concern has been given to its composition, jurisdiction and in particular to its voting system during the negotiations of the Third Conference on the Law of the Sea.

As far as the crucial issue of voting system is concerned, several kinds of votes were proposed by the negotiators reflecting their objectives to safeguard their interests. Among the votes which were discussed are: veto, consensus, simple majority, two thirds majority, quarters majority, weighted vote, three-fourths majority.[32] During the Conference, the developed states advocated the veto system in order to protect their interests and the interests of their consortia, which have invested billions of dollars in sea bed mining. In order to achieve this aim, developed countries must use such blocking power against Council's decisions affecting their interests.[33]

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[29] Ibid, art. 159 (7).

[30] Ibid, art. 159 (8).

[31] It has been said that even though, the Assembly is still described as the "supreme organ" of the Authority, the functions of the Council would disprove this in practice. See C. Ogley, (July 1981) Marine Policy., p.248.

[32] UNCLOS III, Off. Rec., Vol.XIII, p.133.

The composition, jurisdiction, voting system of the Council and its subsidiary organs will be examined below.

Composition of the Council[34]

Several proposals and working papers were submitted to the Sea-Bed Committee suggesting the number of members of which the Council should be composed. The proposals varied between twenty four to thirty six throwing back a disagreement on a fixed number which will form the Council. Moreover, their incompatibility extended to the question of which principle shall be applicable to the representation in the Council, since the membership of the Council was an eminently significant component with respect to its effective role in the functioning of the Authority. Shall the representation be based on the equitable geographical representation or on the special interests. The developing countries pressed for the principle of equitable geographical representation.[35] In order to avoid the dominance of the developing states in the Council, the developed countries sustained the criterion of special interests.[36] Developed states protested against the geographical basis as an unacceptable norm because of the fear of being a small number in the Council as in the Assembly. In other words, under the special interests

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33 UNCLOS III, Off. Rec., Vol.XIV, p.170.

34 For a discussion on the composition and competence of the Council, see the Report on Negotiations held by the Chairnman and the Coordinators of the Working Group of 21 to the First Committee. Doc. A.Conf.62.C.1.L.27, part. IV, pp.132-135, UNCLOS III, Off. Rec., Vol.XIII, 28 March 1980; Report of the Co-ordinators of the Working Group of 21 to the First Committee , Doc. A.Conf.62.C.1.L.28, part.IV, pp.169-172, UNCLOS III, Off. Rec., Vol.XIV, 23 August 1980.

35 UN. Doc. A.AC. 138.49, art. 27, 4 August 1971, working paper on the regime for the sea bed and ocean floor and its subsoil beyond the limits of national jurisdiction submitted by Chili, Columbia, Ecuador, Elsalvador, Guatemala, Guyana, Jamaica, Panama, Mexico, Peru, Trinidad and Tobago, Uruguay and Venezuela.

36 See e.g., (UK) proposal, Doc. A.AC.138.46, para.19.

criterion, the industrialised states will be sufficiently represented and therefore offer adequate protection for their interests.

However, a compromise formula has been reached since 1977[37] bringing together both criteria, special interests and equitable geographical representation and the number of members was fixed at thirty six.

The Council will be composed of thirty six members after being elected by the Assembly for four years and is eligible for re-election.[38]

Eighteen members elected by geographical representation from different regions and eighteen representing special interests. these are considered in turn.

1. Four from eight states which have the largest investments in the area, including at least one state from the Eastern Europe.

2. Four from states which during the last five years have either consumed more than 2 percent of world consumption or imported more than 2 percent of total world imports of the commodities produced from the categories found in the Area, but at least one from Eastern Europe.

3. Four from states which are major exporters of the categories of minerals found in the Area, including at least two developing countries which are exporters of such minerals.

4. Six members from developing nations with "special interests", the states with special interests are Land Locked and states which are major importers of the minerals derived from the Area.

5. Eighteen members elected on the basis of equitable geographical distribution, the geographical regions shall be Africa, Eastern Europe, Latin American, Western Europe and others.[39]

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[37] ICNT, art. 159.

[38] LOSC, art. 161 (3).

[39] Ibid, art. 161 (1). The number of seats alloted to each region will be

In order to give an opportunity to those who are not members in the Council to be represented during the adoption of rules and regulations, due regard was paid to the rotation of membership.[40] Moreover, any party of the Authority may send a representative to be present, but not eligible for voting in a meeting of the Council when a matter which affects it is under consideration.[41]

The industrialised states were displeased with the representation in the Council. Because under the procedure of seats distributions, the industrialised states will be able to control only eight seats of the thirty six seats, the Eastern bloc countries between three to four seats, and developing countries between twenty four to twenty five seats.[42]

Jurisdiction of the Council

In the light of Part XI of the Convention, the Council has significant functions towards implementing the international regime of sea bed exploitation. It supervises and co-ordinates the implementation of rules, regulations of the Authority and provisions of the Convention; recommends to the Assembly the candidates of the Secretary General, Governing Board of the Enterprise and its Director General; endorses recommendations for economic adjustments to benefit competing land-based producers; directs and controls the activities of the Enterprise; approves plans of work submitted by the Enterprise or other applicants; negotiates and enters into agreements with the United Nations or other international organizations on behalf of the Authority; disapproves parts of the Area for exploitation activities in order to ensure that the marine

contingent on how the principle of equitable geographical distribution is determined.

40 Ibid, art. 161 (4).

41 Ibid, art. 161 (9).

42 W. Hauser, The Legal Regime for Deep Sea bed Mining under the Law of the Sea Convention, (1982) p.41.

environment is not damaged; takes appropriate measures for the protection of the developing countries from adverse economic effects caused by activities in the Area and submits the annual budget of the Authority to the Assembly for its approval.[43]

Although the Convention states that the Assembly is the supreme organ of the Authority because of its broad policy-making functions, however. In practice, it seems that the Council is the most powerful organ in which the real weight and power of the Authority resides. Owing to its responsibility to implement the policies laid down in Part XI of the Convention and its significant role in the regulatory functions of the Authority, the supremacy assigned to the Assembly by the Convention is in reality a formal one. The Chairman of the First Committee believed that the term "supremacy" is "employed merely to describe the organ most representative of the membership of mankind" and that a "system based on the supremacy of one or another organ, or on the strict division of the functions and powers of the two principal organs, could not constitute a compromise solution."[44]

However, almost all functions accorded to the Assembly are shared with the Council. For example, the adoption of rules, regulations and procedures for the Authority; elections of the Secretary General, the members of the Governing Board and the Director General of the Enterprise; approval of the annual budget of the Authority; the suspension of rights and privileges of members; the establishment of a compensation system and the adoption of other measures of economic adjustment assistance to protect the developing countries.

The Convention makes it clear that each organ in exercising its powers and functions shall avoid taking any action which may derogate

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[43] LOSC, art. 162.

[44] UNCLOS III, Off. Rec., Vol.V, p.127.

from or impede the exercise of specific powers and functions conferred upon another organ.[45]

Voting System in the Council

A compromise to the impasse with regard to decision-making in the Council was reached at the Geneva Session in 1980. The formula reached specified four different categories of issues.

In the manner of Article 161 (8) (a),(b),(c),(d), four primary categories are differentiated and classified depending on their degree of importance. Questions of procedure are decided by a simple majority of members present and voting; questions of substance are decided by a two-thirds majority, a three-fourths majority and a consensus.

The questions of substance which require a vote of two-thirds are:

1. Approval of plans of work submitted either by entities or Authority's Enterprise; the procedure of approval is the same, *mutatis mutandis* , as for other applicants.

2. Agreements concluded with the United Nations or other international organizations.

3. Reports and observations on the Enterprise for transmission to the Assembly.

4. The recommendations to the Assembly, on the basis of advice from the Economic Planning Commission of a system of compensation to stifle developing land-based mineral producing states against adverse economic effects of sea bed mining.

5. The request of advisory opinions from the Sea-Bed Disputes Chamber.

6. And the issue of specific instructions and regulations to the

[45] LOSC, art. 158 (4).

Enterprise within the "core" of the Convention and rules adopted by the Council and the Assembly.[46]

The matters of substance which require a three-quarters majority of members present and voting are:

1. The establishment of specific policies for the Authority in conformity with the general policies lay down by the Assembly.

2. The supervision and co-ordination of the implementation of provisions of Part XI of the Convention.

3. The election of members of both the Legal and Technical and the Economic Planning Commissions.

4. The exercise of control over activities in the Area.

5. The selection from among applicants for production authorisations.

6. Arrangements concerning the budget of the Authority.

7. Institution of proceedings before the Sea-Bed Disputes Chamber for non-compliance with the rules of the Authority by contractors.[47]

Questions of great importance would be adopted by consensus, defined as the absence of formal objection. Accordingly, any member of the Council is permitted to exercise a formal objection on matters requiring approval by consensus. These matters are:

1. Adoption, upon the recommendation of the Economic Planning Commission of measures to cushion the economies of developing countries from adverse effects of sea bed mining.

2. Recommendations to the Assembly on the equitable sharing of benefits extracted from the Area.

3. Adoption of rules and regulations for the Authority pending approval by the Assembly relate to prospecting, exploration and

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46 Ibid, art. 162 (2) (f), (g), (h), (i), (j), (n), (p), (v).

47 Ibid, art. (2) (a), (b), (c), (d), (e), (i), (q), (r), (s), (t), (u).

exploitation in the Area, and financial arrangement of the Authority.[48]

The consensus *sine qua non* looks to admit all aspirations and interests of all Council members. Under the consensus formula, any member can overthrow any decision which is contrary to its interests.

Subsidiary Organs of the Council

The Council is empowered to establish an Economic Planning and a Legal and Technical Commissions. Both have the responsibility to assist the Council with advice and recommendations. In addition they have a considerable task in the enforcement and implementation of the regulations and decisions of the Authority. Each Commission shall have fifteen members elected by the Council[49] for a five year-term and eligible for re-election.[50] Members are required to be of the highest standards of competence and to have appropriate qualifications in the appropriate field of the Commission so as to safeguard the effective exercise of the functions within the framework of the Commission.[51] The Council's aim is to secure that the Commissions encompass all necessary skills. Due regard shall be paid to the need for equitable geographical distribution and representation of special interests during the elections of the members of the Commissions.

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48 Ibid, art. 162 (2) (m), (o).

49 Ibid, art. 163 (3).

50 Ibid, art. 163 (6). The five year term and requirement of the abscence of conflicting financial interests of the members (art. 163 (7),(8)) offers or assist to insure the independence of the Commission. These provisions represent a strengthening of the status of Commission members in comparison with what was included in the previous texts. In the ICNT.Rev.2 (1979), the term was only three years (art. 163 (7)). The entire paragraph was newly added in order to ensure the neutrality and the independence of the Commission members. See, Report of the Co-ordinators of the Working Group of 21. Doc.A.Conf.62.C.1.L.28, 23 August 1980, p.6.

51 LOSC, art. 163 (3).

The task of the Economic Planning Commission is to advise the Council on the review of trends and factors affecting supply; demands and prices of raw materials; and to examine any situation likely to lead to adverse effects on the economies of developing states. It also makes recommendations to the Council on sea bed exploitation and on land-based producers; proposes a system of compensation for developing states producers. The most important function is to propose to the Council measures to implement decisions relating to activities in the Area.[52]

On the other hand, the Legal and Technical Commission is alloted with an extensive competence. It is required to make recommendations to the Council on plans of work for sea bed activities; to supervise upon the request of the Council activities in the Area and prepares assessment of the environmental impact of activities in the Area; to calculate the production ceiling and recommends production authorisations for contracts, to make recommendations with regard to emergency orders like the suspension or adjustment of operations to prevent marine environment from harmful activities carried out in the Area.[53]

2.3. The Enterprise (Operational Organ)

The first proposal concerning the creation of an operative organ came from the Group of Latin American states in a working paper of forty five Articles on the "Regime for the Seabed and Ocean Floor and the Subsoil Thereof Beyond the Limits of National Jurisdiction" submitted to the Sea-Bed Committee in 1971 by Chile, Columbia, Ecuador,

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[52] Ibid, art. 164.

[53] Ibid, art. 165. Because of the Commission's significant responsibility, members are required to perform qualifications in relation with the technical aspects of deep sea bed mining oceanology, protection of the marine environment and relevant economic and legal issues. art. 165 (1).

Elsalvador, Guatemala, Guyana, Jamaica, Mexico, Panama, Peru, Trinidad and Tobago, Uruguay and Venezuela. According to this working paper, it was proposed that the Enterprise is empowered to undertake all technical, industrial and commercial activities connected with the exploration of the Area and exploitation of its resources. In addition, the Enterprise shall have an independent legal personality and such legal capacity as may be necessary to fulfil its purposes.[54]

Few years later, in 1976 the American Secretary of State, Henry Kissinger declared that his government would support the creation of such Enterprise and would be prepared to assist it financially so as it could begin mining operations.[55] Since then, the participants have agreed to consider the Enterprise as an organ of the Authority through which activities of exploration and exploitation of deep sea bed and its resources are carried out.

Operationnally, the Enterprise might be deemed as the first foundation of an international commercial organization. It is an operational arm of the Authority,[56] responsible for developing the resources of sea bed and for carrying out activities in the Area, either directly or through joint arrangements with other entities on behalf of mankind. During the initial period of ten years, the Enterprise is exempted from taxes in order to secure its self-sufficiency and to be able to compete with the other entities.[57] During the negotiations, industrialised states opposed the privilege given to the Enterprise. they affirmed that their private companies will suffer a competitive disadvantage, because the Enterprise would have to operate free of taxes in the initial period. They thought that since the Enterprise is regarded as

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54 Doc. A.AC. 138.49, arts. 33-34.

55 UNCLOS III, Off. Rec., Vol.VI, p.132.

56 LOSC, arts. 158 (2); 170 (1); Annex IV, art. 1 (1).

57 Ibid, Annex III, art. 13.

a competitor for other companies, it should not be privileged or enjoy more special advantages than the other entities. Therefore, the Enterprise should be placed on an equal footing with consortia.

The Enterprise performs functions similar to those of the private mining companies including: transport, processing and marketing of the minerals nodules recovered from the Area.[58]

Being an organ of the Authority, the Enterprise is granted a fundamental autonomy[59] to perform its functions. But this autonomy is limited and subject to the rules, regulations and general policy of the Assembly and to the directives of the Council.[60] In other words, the Enterprise's acts must be exercised in compliance with the provisions of the Convention.

The Enterprise will get access to conduct activities in the Area after the Council approves its plans of work, which will cover either reserved areas or non-reserved areas provided that these non-reserved areas are not covered by plans of work previously approved by the Authority.[61] As far as the reserved site is concerned, the Enterprise has to decide whether it intends to carry out activities in each reserved site. It may adjudicate to exploit such site on its own or may enter into joint ventures with other entities. However, if the Enterprise choose not to exploit the reserved site, it might be given to state parties, in particular developing countries and their nationals.[62]

The Enterprise will be composed of a Governing Board and a Director General elected by the Assembly[63] on the recommendation of

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58 Ibid, Annex IV, art. 1 (1); art. 170.

59 Ibid, Annex IV, art. 2 (2).

60 Ibid, art. 170; Annex IV, arts. 1 (2), 2 (1).

61 Ibid, Annex III, arts. 3, 8.

62 Ibid, Annex III, art. 9 (1), (2); and art. 2.

63 Ibid, Annex IV, art. 5 (1).

the Council.[64] The members of the Governing Board would be elected for four years and the Director General for a five-year term with the possiblity of re-election so as to ensure membership stability.

The Governing Board is to be composed of fifteen members elected by the Assembly on the basis of equitable geographical distribution. It is required that the members should be among those of the highest standards of competence and qualifications in the relevant fields. The members shall act in their personal capacity without receiving any instructions from any government in order to enable the Enterprise to operate with a high degree of autonomy and to ensure its viability. Therefore, state parties are required to respect the independence of the members and to refrain from any attempt to influence them in performing their duties.[65] The independence of the members is reinforced by getting their remuneration outside the Enterprise's funds, that is they are paid out of the funds of the Enterprise.

The Governing Board is empowered to exercise all the necessary powers in order to conduct commercial operations of the Enterprise.[66] It fulfils many functions. It submits formal written plans of work to the Council, develops specific programmes and plans of work for sea bed exploitation; authorises negotiations on the acquisition of technology; establishes terms for joint ventures; borrows funds after being approved by the Council; approves the annual budget of the Enterprise and submits to the Council applications for production authorisations.[67]

The Director General and the Governing Board are elected by the Assembly upon recommendation from the Council with the possiblity of

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[64] Ibid, art. 162 (2) (i).

[65] Ibid, Annex IV, art. 5.

[66] Ibid, Annex IV, art. 6.

[67] Ibid, Annex IV, art. 6 (c), (d), (f), (g), (m), (i), (e).

re-election.[68] He and his staff shall act independently without any interference by any government, and state parties shall refrain from any attempt to influence him.[69]

As chief executive and legal representative of the Enterprise, the Director General will be engaged in a heavy responsibility with regard to the success or the collapse of the Enterprise. He is responsible for the organization and management of the Enterprise, appointment and dismissal of the staff in compliance with the rules and regulations approved by the Authority.[70]

The Enterprise is designed to become financially and technologically viable so as to enable it to compete with the private mining consortia in sea bed exploitation. Hence, to ensure its success and efficiency, two fundamental elements should necessarily be available to the Enterprise, that is the transfer of technology and availability of funds. These two means are very important, especially in the initial period of ten years in order to enable it to begin operations with competitiveness and feasibility at about the same time as the private entities. These innovative characteristics are considered in turn.

Transfer of Technology:[71]

The transfer of technology is a significant factor for the development of the sea bed industry, and an effective element for the success or failure of the Enterprise in mining the sea bed competitively with the other entities.

The provisions of the Convention concerning the transfer of technology are regarded as an important insurance for a viable role and

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68 Ibid, Annex IV, art. 7 (1).

69 Ibid, Annex IV, art. 7 (4).

70 Ibid, Annex IV, art. 7 (2).

71 For more details on transfer of technology see Section 3 of Chapter 2.

sufficient preparation to accomplish mining operations by the Enterprise. According to the Convention, an applicant for a mining contract is required upon request to provide the Authority with a general description of the equipment and methods to be used.[72] Furthermore, the applicant will supply to the Authority information about the source from which such technology is available; and any substantial technological changes must also be communicated to the Authority by the contractor.[73]

Transfer of technology is not a *sine qua non* to acquire a contract for the following reasons. Firstly because the applicant is required to make the technology available to the Enterprise only when requested. Secondly, if the requested technology is not available on the open market, for fair and reasonable commercial terms and conditions. Accordingly, the transfer of technology is however, subject to certain conditions:

1. If it is not available on the open market. 2. The transfer is to be made on fair and reasonable commercial terms. 3. If requested by the Authority. 4. The technology transfer is subject to a limit time of ten years after starting the commercial production of the Enterprise.

The acquisition of technology is to be done by licenses or other arrangements. And negotiations would be between the Enterprise and the contractor set forth in a specific agreements supplementary to the contracts.[74] These agreements will, however, cease ten years after the Enterprise begins commercial production of minerals.[75]

If it happen the contractor is not legally entitled to transfer the technology and which is not available on the market, he will gain a possible and at reasonable cost from the owner a legally binding right to

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[72] LOSC, Annex IV, art. 5 (1).

[73] Ibid, Annex III, art. 5 (1), (2).

[74] Ibid, Annex III, art. 5 (3) (a).

[75] Ibid, Annex III, art. 5 (7).

transfer technology to the Enterprise.[76] He is also recommended to assist the Enterprise in its negotiations with the owner, if the Enterprise chooses to negotiate directly with the owner for the acquisition of the relevant technology.[77]

It is clear that the Enterprise will always have access to the technology available.

Financial Arrangements

The problem of financing the Enterprise was one of the most complex issues which faced the Third Conference on the Law of the Sea. However, a compromise formula ultimately included in the Convention.

The Enterprise needs to be provided with the necessary funds so that, first, it can begin operations through different stages of mining including: transport, processing and marketing the minerals recovered from the Area. Second to meet its initial administrative expenses.[78]

Financing the Enterprise to conduct its first mining operations or its initial mine site will be in the form of loans. Half of these loans take the form of long-term interest-free funds provided by the members of the Authority proportioned according to their scale of assessments for the United Nations budget. The rest half would be borrowed from different lending institutions with loans guaranteed by the members of the Authority.[79] The interest-free loans will be made available immediately either within sixty days after the entry into force of the Convention, or within thirty days after the deposit of state party instrument of ratification or accession.[80]

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76 Ibid, Annex III, art. 5 (3) (c).

77 Ibid, Annex III, art. 5 (3) (d).

78 Ibid, Annex IV, art. 11 (3).

79 Ibid, Annex IV, art. 11(3) (b).

80 Ibid, Annex IV, art. 11 (3) (d) (i).

There are many sources from where the Enterprise can finance itself.

Initially, the main source is the amounts received from the Authority's funds after the Authority's administrative expenses have been recovered; voluntary contributions made by state parties; amounts borrowed by the Enterprise and incomes of the Enterprise through its operations.[81]

In the event that the financial contributions by state parties do not cover the necessary bestowal to the Enterprise for carrying out activities, however. The Assembly will adopt by consensus at its first session, measures to meet the short fall.[82] In other words, if sufficient funds is not raised through states obligations, the Assembly may adopt measures to deal with the short fall.

The Enterprise is required to act in conformity with rules, regulations of the Assembly and the directives of the Council. The Enterprise is placed in an advantageous position with regard access to mine sites, financial arrangements and acquisition of mining technology in particular, during the initial period. Thus, if these factors are adequately employed, this will participate eloquently to the success of the Enterprise.

Section 3.The Settlement System of Deep Sea Bed Disputes.

Sea-Bed Disputes Chamber as a Special Chamber of the International Tribunal on the Law of the Sea is no longer an organ of the Authority. However, it is of concern to note that there is a relationship between the

81 Ibid, Annex IV, art. 11 (1).

82 Ibid, Annex IV, art. 11 (3) (c).

Sea-Bed Chamber and the Authority. This relationship lies in the field of legal norms by which the Sea-Bed Chamber will have to base its verdicts and advisory opinions. Therefore, the Sea-Bed Chamber is bound to apply when settling disputes the rules and regulations adopted by the Authority.[83] Moreover, the Sea-Bed Disputes Chamber gives advisory opinions at the request of the Assembly or the Council on legal questions arising out of activities.

The Sea-Bed Disputes Chamber will be the first judicial body originated from a larger one, the International Tribunal on the Law of the Sea. The Chamber will have a competence of higher judicial status than the mother institution. It is a competent and a principal forum by which disputes between the International Sea-Bed Authority, state parties, natural and juridical persons concerning the interpretation of Part XI of the Convention should be settled. The Chamber is designed to have exclusive jurisdictions over all disputes in relation to the sea bed mining. These disputes which will emerge in connection with the implementation of Part XI of the Convention are varied in nature. For example, disputes concerning acts or omissions of the Authority and disputes concerning conditions of contracts, plans of work and transfer of technology.

Since the Convention devotes and provides a special system for the settlement procedures of various disputes in relation to activities in the Area;[84] the general system of disputes settlement set up in Part XV of the Convention need not to be considered in this section.

The provisions of the Convention establish a comprehensive compulsory dispute settlement system for matters arising out of activities in the Area, in particular acts of violations of the regime of the deep sea bed. However, before citing the various disputes and their means of

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[83] Ibid, Annex VI, art. 38.

[84] Ibid, Part XI, Sec. 5, arts. 186-191.

settlement, it will be somewhat necessary to look at some aspects of the system in relation to the composition of the Sea-Bed Disputes Chamber and its jurisdictions.

The Chamber will be composed of eleven members, selected by a majority of the members of the Tribunal from among them, for a three-year term. The equitable legal participation and geographical distribution should be assured in selecting the members.[85] An Ad-Hoc Chamber of three members might be formed with the approval of the parties[86] by the Sea-Bed Disputes Chamber to deal with particular disputes, that is disputes between state parties on the interpretation or application of provisions of Part XI.

As far as the verdicts of the Sea-Bed Disputes Chamber are concerned, the Chamber is required when settling a case of dispute to apply legal norms of different sources. these sources are:

1) The Convention; 2) rules of international law not incompatible with this Convention;[87] 3) rules, regulations and procedures adopted by the organs of the Authority, that is the Council and the Assembly, in compliance with this Convention; 4) terms of any contract in relation to activities in the Area.[88] Accordingly, it is evident that the legal position of the Sea-Bed Disputes Chamber differs from the one of the Tribunal. The jurisdiction of the Tribunal is limited to apply in the settlement of disputes, the Convention and international law not incompatible with this Convention. In contrast, the Sea-Bed Disputes Chamber is allowed to implement, in addition, the rules and regulations of the Authority as well as the provisions of contracts.

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85 Ibid, Annex III, art. 35 (1), (2), (3).

86 Ibid, Annex VI, art. 36 (1).

87 Ibid, art. 293.

88 Ibid, Annex VI, art. 38.

Equally important is to consider the jurisdiction and competence of the Sea-Bed Disputes Chamber. The Chamber enjoys a mandatory jurisdiction over all disputes arising in connection with activities in the Area. Nevertheless, this jurisdiction is not exclusive, because there are disputes such as disputes between states parties regarding the interpretation of provisions of Part XI, which might be transmitted either to a special chamber of the Tribunal or to an Ad-Hoc Chamber of the Sea-Bed Disputes Chamber, at the request of any party. In addition, disputes of technical character might be submitted to a binding commercial arbitration at the request of any party to the dispute.[89] The commercial arbitral tribunal should conduct its arbitration in accordance with the UNCITRAL arbitration rules, and would not have the competence to determine any issue of the interpretation of the Convention. On the contrary, it would be obliged to refer the question of the interpretation of the Convention to the Sea-Bed Disputes Chamber for a ruling, and the award of the Tribunal would be rendered in conformity with the ruling of the Chamber.

The Sea-Bed Disputes Chamber has jurisdiction over the following disputes:

Disputes between states parties concerning the interpretation or application of Part XI and Annexes III and IV; disputes between a state party and the Authority concerning acts or omissions which are alleged to be in violation of Part XI of the Convention and the Annexes related thereto, or of rules and regulations and procedures of the Authority; disputes between parties to a contract concerning: (i) the interpretation or application of a relevant contract or a plan of work, or (ii) acts or omissions of a party to the contract; disputes between the Authority and a prospective contractor concerning the rejection of a contract or a legal

89 Ibid, art. 188.

issue arising in the negotiation of the contract; And disputes between the Authority and a state party, a state enterprise, or a natural and juridical person sponsored by a state party where it is alleged that the Authority has incurred liability.[90] Therefore, access to the Sea-Bed Disputes Chamber is guaranteed to states, states entities, the Authority and natural or juridical persons.

It is argued that Article 189 of the Convention limits the efficacy of the dispute settlement system. This Article confines the Chamber to refrain from questioning the manner by which the Authority has exercised its discretionary powers. Thus, it should not pronounce such rules and regulations of the Authority as invalid or illegal. Notwithstanding, the jurisdiction of the Chamber on the discretionary powers of the Authority shall be imprisoned in three claims. First, the Chamber is entitled to determine whether the application of any rules, regulations, and procedures to individual cases would be in conflict with the contractual and conventional obligations of the parties to the dispute. Second, claims concerning excess of damages to be paid or other remedy to be given to the party concerned for the failure of the other party to comply with its contractual or conventional obligations.[91]

It is important to note that it is quite difficult to define the exact meaning of the term "discretionary powers" which was a controversial issue during the negotiations on the Third Conference on the Law of the Sea, especially the question of judicial reassessment of actions of the Authority, that is the competence of the Chamber to declare rules and regulations of the Authority as invalid.[92] Even the Convention does not

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[90] Ibid, Part XI, art. 187.

[91] Ibid, Part XI, art. 189.

[92] The question of whether the Chamber be qualified to review the rules regulations and procedures issued by the Authority for compliance with the Convention has seen long disputed. The industrialised states beheld that such juridical review is

provide any definition of the said term or define its scope.

The conclusion which can be drawn from the foregoing discussion, it is very complicated to evaluate a dispute settlement system which has not been examined in application. Nonetheless, in the light of the framework of the disputes settlement system being examined, it appears that disputes arising out of activities in the Area pertain to the category of disputes with regard to which mandatory procedures are established. With regard to disputes of technical nature such as contracts and transfer of technology, they might be submitted to a binding commercial arbitration at the request of any party to the dispute.

The different kinds of disputes covered by Part XI of the Convention have got divers means for their settlement. These disputes are classified as follow:[93]

Type of the dispute	Forum	U.N. Convention
Disputes between states parties concerning the interpretation or application of Part XI.	SBDC	Art 187 (a).
	Special Chamber of Tribunal	Art 188 (1) (b).
	Ad-Hoc Chamber of SBDC	Art 188 (1) (b).

necessary if the decisions adopted by the Authority surpass the power or defeat the Convention.

93 Chart adapted from E.D. Brown, Seabed Energy and Minerals Resources and the Law of the Sea, Vol.II: The Area Beyond the Limits of National Jurisdiction, (1986) p.II.68.

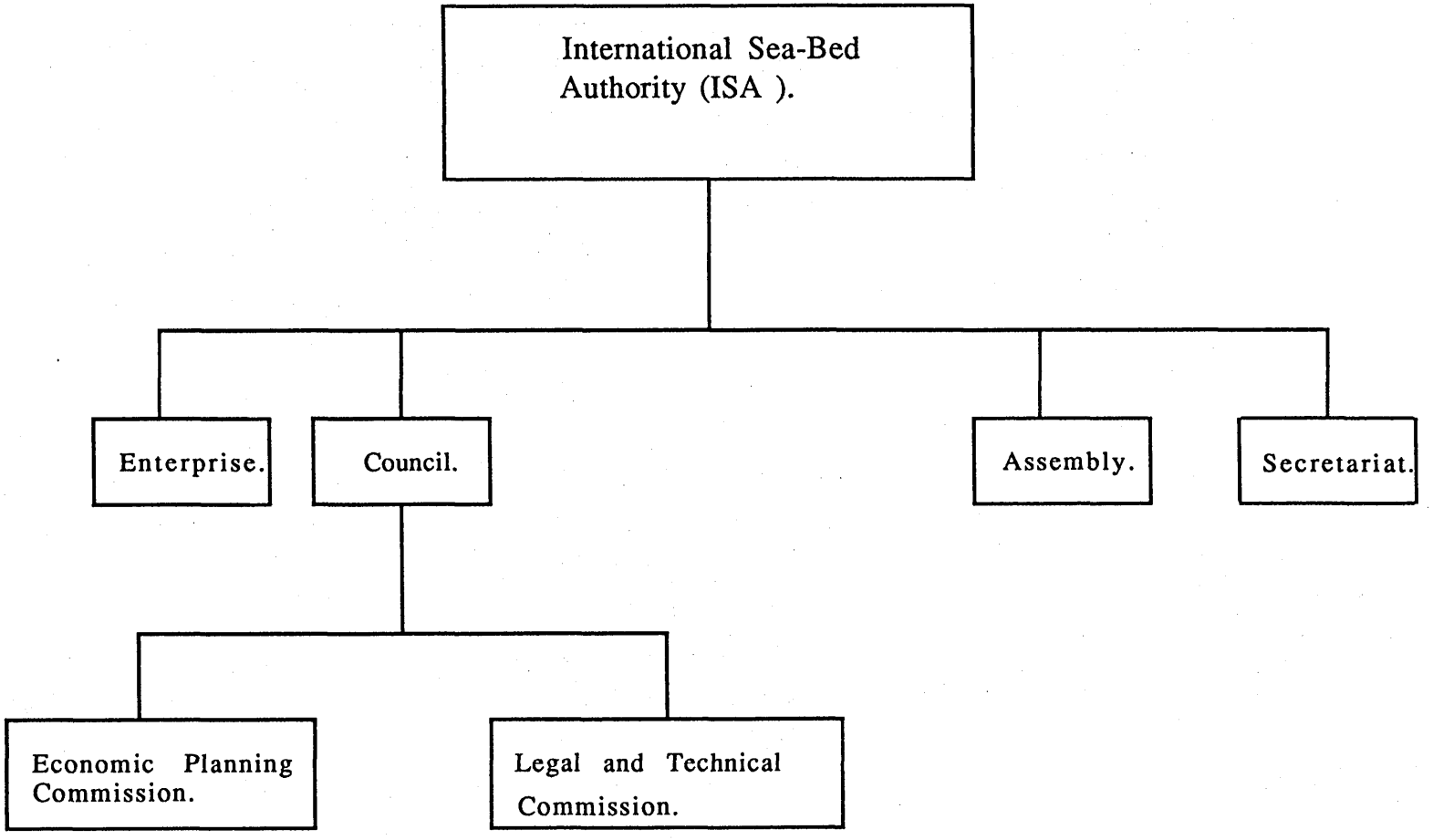
Disputes between a state party and the Authority concerning acts or omissions of a state party alleged to be in violation of Part XI or related Annexes or rules, regulations and procedures of the Authority	SBDC	Art 187 (b).
Disputes between parties to a contract concerning the interpretation or application of a relevant contract or a plan of work	SBDC	Art 187 (c) (i).
	Commercial Arbitral unless the parties otherwise agree	Art 188 (2).
Disputes between parties to a contract concerning acts or omissions of a party to the contract relevant to activities in the Area and directed to the other party or directly affecting its legitimate interests	SBDC	Art 187 (c) (ii).
Disputes between Authority and a prospective contractor concerning the refusal of a contract or a legal issue arising in the negotiation of the contract	SBDC	Art 187 (d).
Disputes concerning contractual obligations on transfer of technology including fairness and reasonableness of contractor's offer	SBDC	Art 187 (c) (i), and 188 (2).
	Commercial Arbitral Tribunal	Annex III, Art 5 (4).
Disputes between the Authority and a state party, state enterprise or natural or juridical person where alleged that Authority is liable for damage arising out of wrongful acts including disclosure of industrial secrets etc.	SBDC	Art 187 (e) and (c)?, Annex III, Art 22, and Art 168 (2).
Disputes over allegations that a state party		

has grossly and persistently violated Part XI	SBDC	Art 185 (2).
Disputes between a state party and the Authority concerning conformity with Convention of proposal before Assembly	SBDC	Art 159 (10).

The International Sea-Bed Authority appears to have broad discretionary powers of organizing, controlling and conducting activities of deep sea bed mining. As the only entity acting on behalf of mankind, it shall have exclusive rights to control and manage the resources of the Area. The Authority will not only adopt rules and regulations to regulate mining in the Area, but will also effectively takes part in carrying out commercial activity in exploiting the resources of the deep sea bed, processing and marketing the minerals recovered on behalf and for the benefit of mankind as a whole irrespective of the geographical location of states.

The International Authority plays a significant role in implementing the general policy of activities of exploration and exploitation of deep sea bed and its resources.

Different kinds of disputes will surely rise because of the conduct of deep sea bed mining activities by the Enterprise and private entities. Therefore, a flexible and workable system of disputes settlement, which covers all kinds of sea bed disputes is embodied in the Convention.


International Sea-Bed Authority (ISA).
Enterprise.
Council.
Assembly.
Secretariat.
Economic Planning Commission.
Legal and Technical Commission.

CHAPTER FOUR

THE UNILATERAL LEGISLATION SYSTEM

Because of the commercial importance of manganese nodules for the economy of the developed states and as result of not being pleased[1] with the provisions of Part XI of the Convention, namely the provisions on production control, transfer of technology, banking-system...etc; many of the industrialised states promulgated domestic legislation in order to satisfy their interests by guaranteeing a free access to the resources of the deep sea bed.

After the United States had enacted its Act (1980),[2] many developed countries followed suit. These countries are: the Federal Republic of

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[1] On 29 April 1981, James L. Malone, assistant secretary of state outlined some features of the Draft Convention which were objected by the Reagan administration, among these features, were:

– Through its transfer of technology provisions, the Draft Convention compels the sale of proprietary information and technology now largely in U.S. hands....

– The Draft Convention limits the annual production of manganese nodules from the deep seabed, as well as the amount which any one company can mine for the first twenty years of production....

– The Draft Convention imposes revenue-sharing obligations on seabed mining corporations which would significantly increase the costs of seabed mining.

– The Draft Convention lacks any provisions for protecting investments made prior to entry into force of the Convention. Quoted in D. Larson, The Reagan Administration and the Law of the Sea, (1982) 11 O.D.I.L.A., pp.04-05.

[2] U.S. Deep Seabed Hard Mineral Resources Act, 28 June 1980, in (1980) 19 I.L.M., pp.1003-20. For a discussion of the development of the United States Act, see E. Goldie, A General International Law Doctrine for Seabed Regimes, 7 Int'l.Law., pp.804-08, and pp.812-15; see also D. Caron, Municipal Legislation for Exploitation of the Deep Seabed, (1980) 8 O.D.I.L.A., pp.259-96.

Germany (1980),[3] United Kingdom (1981),[4] France (1981),[5] Soviet Union (1982),[6] Japan (1982)[7] and Italy (1985).[8] It has been said that Belgium and Netherlands are considering the matter of enacting legislation.[9]

In spite of differences in the detailed provisions, the municipal legislation have the same regulatory method. Accordingly, the legislation declared that the enacting states disclaim any sovereignty or sovereign rights or ownership or individual rights on any part of the Area and its resources.[10] They assert that exploitation of deep sea bed is the freedom of high seas.[11] They affirmed that their legislation are of interim nature to be superseded by entering into force of the Convention.[12]

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3 West German Act of Interim Regulation of Deep Seabed Mining, in (1981) 20 I.L.M., 393-398. The Act was amended 12 February 1982, in (1982) 21 I.L.M., pp.832-33.

4 Deep Seabed Mining (Temporary Provisions) Act 1981, in (1981) 20 I.L.M., pp.1217-27.

5 Law on the exploration and exploitation of mineral resources on the Deep Seabed, 23 December 1981, in (1982) 21 I.L.M., pp.808-14.

6 Edict on Provisional Measures to regulate the activity of Soviet Enterprises relating to the exploration and exploitation of mineral resources of Seabed areas beyond the limits of the Continental Shelf, in (1982) 21 I.L.M., pp.551-53.

7 Law on Interim Measures for Deep Seabed Mining enacted July 20, 1982, in (1983) 22 I.L.M., pp.102-22.

8 Regulations on the exploration and exploitation of the mineral resources of the Deep Seabed, in (1985) 24 I.L.M., pp.983-96.

9 E. D. Brown, Sea-bed Energy and Mineral Resources and the Law of the Sea, Vol.II, The Area Beyond the Limits of National Jurisdiction, (1986) pp.83-84.

10 See e.g., Soviet Edict, art. 2; American Act, sec. 3 (2); French Act, art. 1.

11 See e.g., British Act, sec. 7; American Act, sec. 2 (12); German Act, sec. 1 (1); French Act, art. 1.

12 See e.g., French Act, art. 1; British Act, sec. 18 (3), Soviet Edict, art. 20; Japanese Act, art. 43; American Act, sec. 2 (b); German Act, arts. 1-5. However, it is worth noting that these legislation may become in the future permanent alternative to the Convention regime, in case the Convention will not enter into force or if it enters into force only in respect to other states than the enacting states. See Guy de Lacharriere, La Loi Francaise sur l'Exploration et l'Exploitation des Resources Minerals des Grands Fonds Marins, (1981) XXII A.F.D.I., p.670.

Moreover, in order to give sufficient time for the Convention to enter into force, these legislation prohibited the issuance of licenses before the January 1, 1988.[13] All legislation provide for reciprocity system through reciprocal recognition of claims and licenses so as to assure the exclusivity of the permit and to protect the permittee from competing claims.[14]

To enforce the reciprocating regime, the enacting states concluded two Agreements in 1982 and 1984.[15] The 1982 Agreement was designed to facilitate the identification and resolution of conflicts as to overlapping sea bed claims which may occur over areas for which Pre-Enactment Explorers filled applications for sea bed mining authorisations on or before 12 March 1982.[16] The aim of the 1984 Agreement was to co-ordinate the granting of authorisations in respect of applications for deep sea bed activities among all potential deep sea mining states, and to guarantee the recognition of the agreements reached by the major consortia in 1983 concerning the coordinates of the areas claimed by each of them.[17]

The potential mineral resources of nickel, manganese, copper and cobalt are vital for the industry and have an economic and strategic

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[13] See e.g., German Act, sec. 4 (3); French Act, art. 7; British Act, sec. 2 (4); Soviet Edict, art. 6.

[14] American Act, sec. 118; German Act, sec. 14 (2); Britich Act, sec. 3 (1); French Act, art. 13; Soviet Edict, art. 3; Japanese Act, art. 29; Italian Act, art. 16. According to Mr Bergman, "the object of reciprocity is to restrain states from issuing licences and prmits that conflict with authorisation that have already been granted or are under consideration by another state." See S. Bergman, The Regulation of Seabed Mining under the Reciprocating States Regime, (1981) 30 Am.U.L.Rev., p.495.

[15] The 1982 Agreement Concerning Interim Arrangements to Polymetallic Nodules of the Deep Sea Bed. This Agreement was signed by U.S.A.; F.R.G.; U.K.; and France on 2 September, 1982, in (1982) 20 I.L.M., pp.950-62. The 1984 Provisional Understanding Regarding Deep Sea Bed Matters, 3 August 1984, in (1984) 23 I.L.M., pp.1354-65. For further details see Section 5 of Chapter 4.

[16] The 1982 Agreement, para. 1.

[17] The 1984 Provisional Understanding, para . 1.

significance to the industrialised countries. Moreover, metals extracted from the deep sea bed represent a viable alternative source to the land-based minerals. Therefore, their necessity for the economic progress of the industry of the developed countries are of great concern.

The potential value of manganese nodules is very considerable. As estimated, there are 22 billion tons of the nodules which contain fine-grained oxides of copper, nickel, cobalt and manganese.[18] Indeed, a single mining site recovering 3 million tons of nodules could produce 750.000 tons of manganese, 4.000 tons of cobalt, 37.000 tons of copper and 42.000 tons of nickel.[19] It has been estimated that the cumulative economic value of the nodules is at $3 to 4 trillion.[20]

Manganese is used in the production of steel; nickel is a vital ingredient in the production of stainless steel and high performance alloys; cobalt is used in the production of sophisticated electromagnetic devices that are used in communications and control systems[21] and copper is used in electrical and military goods.[22]

Developed states regard the manganese nodules as economically important to their industry in the long-term. For example, the United States is heavily dependent on foreign supplies of the mineral resources (manganese, nickel, copper and cobalt). The United States imports 98 percent to satisfy its needs from cobalt and manganese, 77 percent of nickel and 19 percent of copper.[23] Therefore, the potentially vast resources of

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18 "A Rendez Vous With History, UN. Monthly Chron., (June 1982) 19, p.6.

19 W. Arrow, The Proposed Regime for the Unilateral Exploitation of Deep Seabed Mineral Resources by the United States, (1980) 21 Harvard I.L.J., p.343.

20 Ibid, pp.337-38 at note (4).

21 Bergman, op.cit., p.484.

22 Arrow, op.cit., p.343.

23 H. Oxman, La Legislation Americane sur les Resources Minerals Solides des Fonds Oceaniques, (1980) A.F.D.I., p.702.

the sea bed will enable the United States to reduce its dependence on foreign minerals imports, and diminish its vulnerability to OPEC-Type Cartels.[24] The United States considers that the availability of minerals will be ensured by unilateral legislation when needed.[25]

This chapter analyses and discusses the municipal legislation in a comparative study. Thus, the essential common characteristic of the legislation are examined as well as the area of the application and liabilities. Before turning to consider the Reciprocating States Agreements as important steps to enforce unilateral legislation, the question of the compatibility of the legislation with the Convention and international law is discussed.

Section 1. Common Characteristics of the Domestic Legislation

1.1 Definitions of the Deep Sea-Bed and its Resources

Each legislation stipulates its own definition of the deep sea bed and its resources.

In the light of the American Act, deep sea bed area is defined as the sea bed and the subsoil thereof to a "depth of ten meters, lying seaward of and outside, the Continental Shelf any nation, and any area of national resource jurisdiction of any nation, if such area extends beyond the Continental Shelf of such nation and such jurisdiction is recognized by the

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[24] B. Ott, An Analysis of Deep Seabed Mining Legislation, (1977) 10 N.R.L., p.593.

[25] D. Caron, Municipal Legislation for Exploitation of the Deep Seabed, (1980) 8 O.D.I.L.A., p.282. He believes that the key aspect that led to enactment of the Deep Seabed Hard Minerals Act was the perception of the U.S. congress that the sea bed proposals of UNCLOS III set a precedent regarding systems of governance that is contrary to basic American interests and beliefs. Ibid, p.286.

United States."[26] With regard to the resources, the American Act determines them as nodules which include one or more minerals "at least one of which contains manganese, nickel, cobalt, or copper."[27]

In relation to the British Act, deep sea bed is defined as that part of the bed of the high seas in respect of which sovereign rights "in relation to the natural resources of the sea bed are neither exercisable by the United Kingdom nor by any other sovereign power."[28] In like manner to American Act, the British Act defines the resources as nodules contained at least one of the following elements: manganese, nickel, cobalt and copper.[29]

Unlike the British and American Acts, the German Act stipulates a different definition. Accordingly, deep sea bed is the sea bed and its subsoil outside areas over which the Federal Republic of Germany claims sovereign rights or recognizes the sovereign rights of other states.[30] Similar to the American and British Acts, the German Act defines the resources as nodules comprising manganese, nickel, cobalt and copper.[31]

Like the American Act, the Soviet Edict specifies the same definition of the deep sea bed as sea bed areas beyond the limits of the Continental Shelf.[32] However, the Soviet Edict does not provide any definition of the resources.

Corresponding to the British Act, the Japanese Act defines the deep sea bed as the sea bed and subsoil of the high seas of which no state has jurisdiction for exploration or recovery of mineral resources.[33] Much

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[26] American Act, sec. 4 (4).

[27] Ibid, sec. 4 (6).

[28] British Act, sec. 1 (6).

[29] Ibid. However, the British Act adds two other minerals which are phosphorus and molybdenum. See ibid.

[30] German Act, sec. 2 (4).

[31] Ibid, sec. 2 (5).

[32] Soviet Edict, art. 1.

the same as the German, British and American Acts, the Japanese Act specifies that the deep sea bed mineral resources are nodules including one or more minerals of copper, manganese, nickel and cobalt.[34]

According to the French Act, deep sea bed is the soil and subsoil beyond the areas of national jurisdiction of the coastal states in accordance with international law.[35] Like the Soviet Edict, the French Act does not include any definition of the resources.[36]

The Italian Act, like the French Act, provides the same definition of the deep sea bed as the sea bed and the subsoil beyond the areas which are subject to the national jurisdiction of coastal state according to international law.[37] Uniformly with the Soviet Edict and French Act, the Italian Act does not contain any statement of meaning of the resources.

1.2. Purposes of the Domestic Legislation

The announced purposes in the legislation are entirely different from each other.

As set forth in the American Act's findings and purposes clause, the purposes are: 1) to encourage the successful completion of a comprehensive law of the sea treaty; 2) to provide for the establishment of an international revenue-sharing fund to be used for sharing with the international community; 3) to establish an interim program to regulate

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33 Japanese Act, Chapter 1, art 2 (2).

34 Ibid, art. 2.

35 French Act, art. 2.

36 The French Minister of the Sea stated in the senatorial debate, that mineral resources is to include Hydrocarbons too. T. Luoma, A Comparative Study of National Legislation Concerning the Deep Sea Mining of Manganese Nodules, (April 1983) 14 J.Mar.Law & Com., p.261.

37 Italian Act, art. 2.

the exploration for and exploitation of mineral resources of the deep sea bed by United States citizens pending the entry into force of the law of the sea treaty for the United States; 4) to protect the environment by virtue of assuring that such exploration and exploitation activities are conducted in a manner which will encourage the conservation of the resources, protect the quality of the environment and promote the safety of life and property at sea and 5) to encourage the continued development technology of deep sea bed mining.[38]

Like the American Act, the purposes of the German Act are expressly declared. Correspondingly, the purposes of the German Act are: 1) to regulate provisionally and to promote the exploration for and the recovery of the deep sea bed mineral resources until the entry into force of an international agreement for the Federal Republic of Germany; 2) to assure regard for the interests of others engaged in the exploration activity; 3) to protect the marine environment; 4) to protect life, health and property against dangers arising from deep sea bed mining; and lastly to contribute to the development of the deep sea bed mineral resources.[39]

Although the British Act does not expressly state the purpose, it would appear that the objective of the Act is to interdict persons subject to the provisions of the Act from exploring for and exploiting the hard mineral resources of any part of the deep sea bed, unless they hold licenses of exploration or permits of exploitation granted according to the provisions

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[38] American Act, art. 2 (b) (1-5). It is argued that the United States was intended "to assure American access on reasonable terms to the manganese nodules; to provide a reasonable stable legal framework pending the Conclusion and senate ratification of the UNCLOS III treaty; to assure the protection of the marine environment; to preserve American interests in the maintenance of the traditional freedom of the high seas; and to enable the United States to gain some measure of mineral independence from its current politically unstable suppliers of crucial strategic minerals. See Wilson, Mining the Deep Seabed: Domestic Regulation, International Law and UNCLOS III, (1982) 18 Tulsa L.J., p.231.

[39] German Act, sec. 1 (1), (2), (3).

of the Act.[40]

Brown believes that the common objective of the American, British and German Acts is to guarantee non-discriminatory access "for their nationals to sea bed resources, thus providing secure access to supplies of minerals in the national interest."[41]

The Soviet Union felt obliged to take measures to protect its interests with respect to the exploration and exploitation of the resources.[42] The reason was that many western countries have promulgated municipal legislation to explore and exploit deep sea bed resources.

The Japanese Act declares its purpose as setting up interim measures to regulate business activity in deep sea bed mining in order to contribute to the promotion of the public welfare by virtue of the rational development of "deep sea bed mineral resources and in keeping with the recent rapid strides of international society toward a new order of the sea and other significant changes in the international environment surrounding deep sea bed mining."[43]

The French Act does not explicitly assert its purpose. However, it would be apparent that the objective of the Act is to set out conditions under which, the French Republic grants authorisations for the exploration and exploitation of deep sea bed resources to natural persons and corporate bodies of French nationality, pending the entry into force of the Law of the Sea Treaty to which the French Republic would be a party.[44]

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[40] British Act, sec. 1 (1), (2). According to Luoma, the objectives of the British Act is: 1) to encourage the development of an international regime governing seabed mining, and 2) to protect British mining interests in the event UNCLOS III fails to develop a comprehensive regime therefore. Luoma, op.cit., p.259.

[41] E. D. Brown, The Impact of Unilateral Legislation on the Future Legal Regime of Deep-Sea Mining, (1982) 20 ARCHIV DES VLKERRECHTS., p.149.

[42] Soviet Edict, Preambular Paragraph.

[43] Japanese Act, Chapter. 1, art. 1.

[44] French Act, art. 1.

The objective of the Italian Act, is to regulate the exploration and exploitation of the mineral resources of the deep sea bed by Italian nationals and assure the rational utilization of the deep sea bed mineral resources.[45]

Regardless of what was stipulated as purposes in these legislation, the objectives of the six legislation of United States, Federal Republic of Germany, United Kingdom, Italy, Japan and France were intended mainly "to guarantee non-discriminatory access to supplies of minerals in the national interests, to foster and strengthen research and development, and lastly, to assure that their nationals should not be placed at a competitive disadvantage in relation to nationals of other countries which had adopted interim legislation."[46]

1.3. Legal Basis of the Domestic Legislation.

The enacting states contended that their unilateral legislation are committed to the "common heritage of mankind" principle. The enacting states maintain that the conduct of exploration and exploitation activities will be carried out under the "freedom of high seas" principle with due regard to the interests of other states, and they do not claim sovereignty or sovereign rights over the deep sea bed and its mineral resources. The enacting states assert that their legislation are of interim nature pending the entry into force of the Convention for these states. Moreover, they insist that their legislation are consistent with the United Nations Convention regime and international law.

The interim nature[47] of the legislation is designed to regulate deep sea

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[45] Italian Act, art. 1.

[46] E. D. Brown, supra note 9, p.II.86.

[47] British Act, sec. 18 (3); Soviet Edict, art. 20; American Act, sec. 2 (b); French Act, art. 1; German Act, sec. 5 (1); Japanese Act, Chapter. 5, art. 43.

bed exploration and exploitation of the mineral resources and to promote the technology of deep sea bed mining, until the entry into force of the Law of the Sea Treaty in respect to the state concerned and therefore, to avoid any version that the national legislation are of permanent nature.[48]

The enacting states affirmed that their legislation are compatible with the United Nations Convention. They argue that their legislation do not contain any provisions which claim sovereignty or sovereign rights over the deep sea bed and its resources, and that is consistent with Article 137 (1) of the Law of the Sea Convention.

The American Act contains provision which asserts that the United States does not claim sovereignty or sovereign or exclusive rights or jurisdiction over, or the ownership of any areas or resources in the deep sea bed.[49] In line with the American Act, the Soviet Edict provides that the Soviet Union does not claim sovereignty or sovereign or exclusive rights, or the ownership of deep sea bed areas and its resources.[50] The German Act followed the same expression as the American Act and the Soviet Edict in disclaiming sovereign rights over the deep sea bed and its mineral resources.[51]

French, Japanese and Italian Acts indicate that the enacting states do not claim sovereignty over any part of the deep sea bed. However, the British Act does not provide any indication about disclaiming sovereignty over deep sea bed areas and its resources.

All legislation, directly or indirectly, confirm that the deep sea bed activities of exploration and exploitation shall be conducted on the basis of

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[48] It is worth noting that these legislation do not include any sign of the precise time of the interim period. Therefore, it is likely that these legislation may in the future become permanent if the Convention does not enter into force.

[49] American Act, sec. 3 (2).

[50] Soviet Edict, art. 2.

[51] German Act, sec. 1 (1).

"freedom of high seas" principle. The American Act, specifically, states that "it is the legal opinion of the United States that exploration for and commercial recovery of hard mineral resources of the deep sea bed are freedoms of the high seas subject to a duty of reasonable regard to the interests of other states in their exercise of these and other freedoms recognized by general principles of international law."[52]

The Soviet Edict specifies that activities of exploration and exploitation of mineral resources of sea bed areas should not create unjustified obstacles "to the realization of the principle of freedom of the seas or lawful activity on the world ocean...."[53]

The French Act does implicitly provide reference to the freedom of the high seas by declaring that the activities of exploration and exploitation of deep sea bed resources do not prejudice the exercise of the freedoms of the high seas "in conformity with international law, in particular with regard to navigation, fisheries and scientific research."[54]

The Italian Act, almost states the same definition as the French Act. According to the Italian Act, deep sea bed mining activities shall be governed by the principles of "international law and conventions relating to the use of the high seas, particularly as regards the freedoms of navigation, scientific research, and fishing."[55]

Similar to the French, Italian and Soviet Acts, the British Act implicitly asserts the principle of the freedom of the high seas by stipulating that the licensee exercise his rights under the license "with

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[52] American Act, sec. 2 (12).

[53] Soviet Edict, art. 9. On the basis of the doctrine of "relativity" of the freedom of the seas, Mr McDade concludes that "the Soviet legislation might therefore be taken to imply that the USSR regards sea bed mining as a freedom of the high seas. McDade, The Interim Obligation Between Signature and Ratification of a Treaty, (1985) 32 Netherlands I.L.R., p.34.

[54] French Act, art. 1.

[55] Italian Act, art. 3.

reasonable regard to the interests of other persons in their exercise of the freedom of the high seas."[56]

The German Act, like the American Act, explicitly provides that the contribution to the development of the deep sea bed mineral resources should be on the basis of the "freedom of the high seas."[57] However, although the Japanese Act did not provide any specific provision referring to the freedom of the high seas, it would appear that Japan considers activities of exploration and exploitation of mineral resources in the deep sea bed as freedom of high seas. Appropriately, the Act states that none of the provisions of the Japanese Act are "meant to infringe upon the interests of other states in their exercise of the freedom of high seas."[58]

The freedom of high seas principle cannot resist and survive in line with the United Nations Convention, which was adopted by a majority of states participants in UNCLOS III, and the Declaration of Principles, adopted without any negative vote. Both contended that deep sea bed activities should be governed by the "common heritage of mankind" principle and not by the principle of freedom of high seas.

One can argue that the legislation are not compatible with the Convention. With reference to Article 137 (3) of the Convention, it is affirmed that "no state or natural or juridical person shall claim, acquire or exercise rights with respect to the minerals recovered from the Area except in accordance with this part. Otherwise, no such claim, acquisition or exercise of such rights shall be recognized."

Correspondingly, it is clear that the issuance of licenses and permits conferring exclusive rights to the holders to explore and exploit the deep sea bed resources is totally inconsistent with Article 137 (3), especially

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56 British Act, sec. 7.

57 German Act, sec. 1 (1).

58 Japanese Act, Chapter. 1 (2).

with regard to the aspect of disclaiming sovereignty and sovereign rights. As Brown said, "there is a nod rather than a bow to the common heritage regime. Because the reciprocating states regime include only a selection of features suggested by the Convention, chosen and substantially modified by the states concerned."[59]

1.4. Temporal Scope

Under the American and British Acts, exploration licensesshall not be issued before July 1, 1981.[60] Hence, French, German, Soviet and Italian Acts do not precise any time for the granting of exploration licenses.

With regard to exploitation permits, all legislation except the Japanese Act stipulate that permits shall not be granted before January 1, 1988.[61] The duration of the licenses and permits is much more expressed in the American and the German Acts than the rest of legislation. The American and the German Acts specify the same period of validity for licenses and permits, that is ten years time for exploration licenses, and twenty years for exploitation permits with the possibility of extension.[62]

According to the British Act, which does not specify any exact time, leaves the question of the duration of the licenses and permits to the discretion of the Secretary of State as he thinks fit.[63] The Italian Act does

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[59] E. D. Brown, supra note 9, p.II.88.

[60] British Act, sec. 2 (4); American Act, sec. 102 (c), (1), (d).

[61] British Act, sec. 2 (4); Soviet Edict, art. 6; American Act, sec. 102 (c) (1) (d); German Act, sec. 4 (3); French Act, art. 7; Italian Act, art. 20.

[62] German Act, sec. 10(1), "..., a license may be extended...for periods of up to five years, and a permit for periods of up to ten years." American Act, sec. 107 (a), (b) "...the administrator may extend the license for periods of not more than 5 years each." Each permit "for commercial recovery shall be issued for a term of 20 years and for so long thereafter ...."

[63] British Act, sec. 2 (3).

not provide any specific time for the permits. But, the Act states that the duration of the exploitation permit cannot exceed twenty five years.[64] Nonetheless, Japanese, French and Soviet Acts do not indicate any precise time for exploration licenses and exploitation permits.

Section 2. The Area of Application of Domestic Legislation

2.1. Personnel Scope

Each legislation lays down provisions to regulate its own nationals through assuring them exclusive rights to operate under permits granted not only by the state, but also by a reciprocating state.[65]

Under the American Act, exploration and exploitation activities are to be conducted and regulated by United States citizens. United States citizens are: A) any individual who is a citizen of the United States; B) any corporation, partnership, joint venture, association, or other entity (whether organized or existing under the laws of any of the United States or a foreign nation) if the controlling interests in such entity is held by an individual or entity described in sub-paragraph (A) or (B).[66]

Brown viewed that "sub-paragraph (c) enables the United States to pierce the corporate veil of any entity organized or existing under the laws of any other state, reciprocating or non-reciprocating in order to determine the existence of an American controlling interests...."[67]

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64 Italian Act, art. 9.

65 e.g., American Act, sec. 101 (a) (1) (A) (B), permits United States citizens to mine under authorisations granted by either the United States or a reciprocating state.

66 American Act, sec. 4 (14). The controlling interest is defined in section 4 (3) as "direct or indirect legal or beneficial interest in or influence over another person arising through ownership of capital stock, interlocking directorates or officers, contractual relations, or other similar means, which substantially affect the independent business behavior of such person."

67 E. D. Brown, supra note 41, p.154.

The British Act is applied to any person who is: A) a citizen of the United Kingdom and colonies, Scottish firm or a body incorporated under the law of any part of the United Kingdom, B) is resident in any part of the United Kingdom.[68] Moreover, the application of the Act may be extended, by order in Council, to A) all citizens of the United Kingdom and colonies, Scottish firms and bodies incorporated under the law of any part of the United Kingdom who are resident outside the United Kingdom or to such citizens, firms and bodies who are resident in any country specified in the order; B) to bodies incorporated under the law of any of the Channel Islands, the Isle of man, any colony or an associated state.[69]

Under the German Act, persons who may engage in deep sea bed activities are "residents" of the Federal Republic of Germany who have been granted authorisation either under the German Act or by a reciprocating state.[70] According to Japanese Act, which is confined only to the nationals or corporations of Japan, persons who are not nationals or corporations of Japan may not obtain permission to engage in deep sea mining.[71] Furthermore, the Act admits the rights of the Japanese nationals who have entered into a partnership relation by the Ministry of International Trade.[72] The French Act asserts that authorisations are granted to natural persons and corporate bodies of French nationality.[73]
The Act, further emphasizes that no natural person or corporate body of French nationality can undertake exploration and exploitation activities without authorisations.[74] In respect of the Italian Act, licenses of

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[68] British Act, sec. 1 (4).
[69] British Act, sec. 1 (5).
[70] German Act, sec. 3 (1).
[71] Japanese Act, art. 11 (1).
[72] Ibid, art. 40.
[73] French Act, art. 1.
[74] Ibid, art. 3.

exploration and permits of exploitation are to be issued to italian nationals.[75]

The Soviet Edict includes provisions regulating its own nationals in conducting exploration and exploitation activities. Thus, exploration license and exploitation permit may be issued to Soviet enterprises.[76] In addition, the Soviet Union exercises jurisdiction over Soviet legal and natural persons conducting deep sea bed mining operations.[77] Further, the Edict arranges for the Soviet Union to perform cooperation "in regard to questions of the exploration and exploitation of mineral resources of sea bed areas", on the basis of reciprocity, with those "states which recognize the permits issued to Soviet enterprises in accordance with the present Edict."[78] Such reciprocating states shall be informed about applications received from Soviet enterprises as well as about permits issued.[79] On the basis of treaties with states, foreign natural and legal persons will be able to participate in exploration and exploitation operations conducted by Soviet enterprises. Contrariwise, the Soviet enterprises, on the basis of a treaty between the Soviet Union and the interested foreign state, may engage in deep sea bed mining activities carried out by foreign entities which are subject to the jurisdiction of the interested foreign state.[80]

It can be said that the main objective of the legislation behind the regulation of their own nationals is to provide a convenient legal framework to ensure legal security for their own nationals.

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[75] Italian Act, sec. 3. "Italian nationals include, italian citizens or organizations, or by companies headquartered in Italy." Ibid, sec. 1.

[76] Soviet Edict, art. 1.

[77] Ibid, art. 2.

[78] Ibid, art. 3.

[79] Ibid.

[80] Ibid, art. 7.

2.2. Scope of Activities

Deep sea bed mining activities are regulated through two phases, exploration and exploitation.

The exploitation definition differs from one legislation to another. The American Act refers to "commercial recovery" instead of exploitation, and define "commercial recovery" as A) any activity which recover any hard mineral resource, B) processing such hard mineral resource at sea, C) and disposing any waste of such activity to recover any hard mineral resource or such processing.[81]

The French Act defines the term "exploitation" as extraction of mineral resources for commercial purposes.[82] The Italian Act, almost follows the same definition as the French Act. Accordingly, exploitation means "the recovery of mineral resources for economic purposes."[83]

The German Act uses the phrase "recovery" to exploitation, and the Act indicates that recovery means "the dislodging or removal of substantial quantities of mineral resources for commercial use, including the processing thereof, if carried out at sea."[84]

The British Act provides a different stipulation of the definition of exploitation. Accordingly, the Secretary of State may include, as he thinks fit, terms and conditions "a) relating to the processing or other treatment of any hard mineral resources..., b) and relating to the disposal of any waste material resulting from such processing and other treatment."[85]

Like the German and American Acts, the Japanese Act uses the term "recovery" to exploitation. The Act, generally, stipulates that deep sea bed

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81 American Act, sec. 4 (1).

82 French Act, art. 2.

83 Italian Act, art. 2.

84 German Act, sec. 2 (2).

85 British Act, sec. 2 (3) (b) (c).

mining means "the exploration and recovery activities [including sorting, refining, and other activities subsidiary to this...in the deep sea bed."[86]

Licenses and permits holders enjoy exclusive rights against any applicant subject to the legislation of the state concerned or subject to a legislation of reciprocating states. Therefore, according to the American Act, any license or permit issued "under this title shall be exclusive with respect to the holder thereof as against any other United States citizen or any citizen, national or governmental agency of, or any legal entity organized or existing under the laws of, any reciprocating state."[87] The German Act puts into words that any license or permit shall grant the exclusive right to conduct exploration and carry out recovery activities.[88]

The Italian Act specifies the same formulation, that the permit granted gives holder the exclusive right to carry out exploration or exploitation of a certain area of the deep sea bed.[89] Similarly, the French Act stipulates that the license and the permit confer the holder the exclusive right to undertake deep sea bed mining activities.[90] The Soviet Edict follows the same pattern of giving the permit holders exclusive right to the exploration and exploitation of deep sea bed mineral resources.[91] In like manner, the British Act provides that where the Secretary of State has granted an exploration license he shall not grants "an exploitation license in respect of any part of the licensed area otherwise than to the licensee except with the licensee's written consent."[92]

It is interesting to summaries the common features which the domestic legislation share.

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86 Japanese Act, Chapter. 1, art. 2 (2).

87 American Act, sec. 102 (b) (2).

88 German Act, sec. 4 (1), (2).

89 Italian Act, art. 3.

90 French Act, art. 5.

91 Soviet Edict, art. 5.

92 British Act, sec. 2 (5).

The Acts declare either explicitly or implicitly that deep sea bed exploitation is a freedom of high seas with due regard to the interests of other states in their exercise of the freedoms of the high seas; they affirm that the enacting states disclaim any sovereignty or sovereign rights over the deep sea bed and its resources; they do recognize the reciprocity regime. Accordingly, each Act provides for a mechanism of a reciprocity regime with other states that have a compatible, or similar, regulatory system of deep sea bed activities, through which mutual of licenses and permits is protected; they stipulate that the licensees and permittees have exclusive rights according to their licenses exploration and exploitation permits, vis-a-vis their own nationals and the nationals of the reciprocating states; they prohibit the granting of exploitation permits before January 1,1988.

Section 3. Liabilities under Domestic Legislation

3.1. Financial Terms and the Fund

The financial obligations imposed on miners under the domestic legislation differ radically from those prescribed in the United Nations Convention. While the Convention was designed to protect the interests of the whole mankind, municipal legislation was schemed exclusively to secure the national interests. Accordingly, the legislation charge miners with very low taxes, compared with taxes of the Convention, in order to attract investment capital and generate reasonable profit. It has been generally accepted that the levies under the Acts would generate approximately half of the revenue which would be produced under the Convention regime.[93]

One of the arguments of the enacting states about their commitment to the "common heritage of mankind" principle is that the legislation imposes levies on miners, and setsup a Revenue-Sharing Fund into which levies would be paid. The amounts of the fund will be transferred to the international sea bed authority when the Law of the Sea Treaty enters into force for the state concerned.

Although the levies are expressed in different forms, almost all the Acts adopt the same rate of levy.[94]

The American Act sets up a tax of 3.75 percent of the imputed value of mineral resources mined from the deep sea bed.[95]

The imputed value is defined as "20 percent of the fair market value of the commercially recoverable metals and minerals contained in such resource as of the date of the removal of hard mineral resources from the deep sea bed and as if the metals and minerals in such resource were separated from the resource and were in the most basic form for which there is a readily ascertainable market price."[96]

The permit holder may elect to have the application of the tax suspended with respect to the minerals which the permittee does not intend to process within one year of the date of extraction.[97] Liability of paying taxes will terminate after, first, an international deep sea bed treaty enters into force with respect to the United States or, second, ten years after the date of the enactment of the "Sub-chapter" on taxes.[98] As one of the purposes declared in the American Act is the establishment of a Revenue-

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93 E. D. Brown, supra note 41, p.165.

94 See e.g., French Act; British Act; American Act; German Act and Italian Act.

95 American Act, Title IV-Tax, " Subchapter F"-Tax on removal of Hard Mineral Resources from deep sea bed, sec. 4495 (b).

96 Ibid, sec. 4497 (a).

97 Ibid, sec. 4497 (c) (1).

98 Ibid, sec. 4498 (a).

Sharing Fund.[99] The American Act creates a Trust Fund in the Treasury to be known as the "Deep Seabed Revenue Sharing Trust Fund", into which the levies described above are to be paid.[100] Taxes are imposed on "any removal of a hard mineral resource from the deep sea bed pursuant to a deep sea bed permit."[101]

If an international deep sea bed treaty is ratified and entered in effect with respect to the United States within ten years (by 1990) after the date of the enactment of the Act, amounts of the Fund shall be available "for purposes of the sharing among nations of the revenues from deep sea bed mining."[102] However, if such international deep sea bed mining treaty does not enter into force for the United States within ten years (by 1990) after the date of the enactment of the Act, amounts of the Fund shall be available "for such purposes as Congress may hereafter provide by law."[103]

The Soviet Edict does not mention any specific form of levy. But, the Edict refers to the taxes indirectly as part of the assets received from the exploitation of mineral resources of sea bed areas by Soviet enterprises. Moreover, the Edict sets up a special fund in conformity with the procedure and amounts established by the Council of Ministers of the USSR.[104]

Under the Japanese Act, no such financial provisions are provided for. However, the Act leaves the determination of such financial terms to the Cabinet Order.[105] No reference is included in the Act for the creation of a fund or arrangement for sharing the revenue with the international

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[99] Ibid, sec. 2 (b) (2).

[100] Ibid, sec. 403 (a) (b).

[101] Ibid, sec. 4495 (a).

[102] Ibid, sec. 403 (d).

[103] Ibid, sec. 403 (e).

[104] Soviet Edict, art. 18.

[105] Japanese Act, Chapter. 5, art. 34.

community. Like the American Act, the French Act specifies the same rate of levy 3.75 percent.[106] Nevertheless, the Act does not contain any provision for the establishment of a fund. The reason of not including provisions for the establishment of such fund according to G. de Lacharriere is that, Article 18 of January 2, 1959 Order on Organic Law relative to Financial Laws interdict to proceed the allotment of the 3.75 percent tax to such Funds in an Ordinary Law, and the result was the formulation of Article 12.[107] This Article states that "the proceeds of the tax shall be utilized in accordance with the conditions defined in the financial laws." It has been maintained that the French government intended to create fund for aid purposes to developing countries.[108]

Similar to the American and French Acts, the Italian Act imposes a tax of 3.75 percent of the median market value of the minerals recovered from the deep sea bed.[109] Even though the Act does not provide for the establishment of a fund, it has been stated that the amounts of taxes received from the permit holder will be used for the purposes of italian aid to the developing states.[110]

Under the German Act, the permit holder pays fee of 0.75 percent of the average market price in that particular year for the metals and minerals in their simples commercial processing forms, which are recovered from the mineral resources mined.[111] It has been asserted that the German levy of 0.75 percent is of the same level of 3.75 percent prescribed in the

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106 French Act, art. 12.

107 Guy de Lacharriere, op.cit., p.669.

108 The French Minister of the Sea, Mr le Pensec declared that the adoption of the Act envisage the creation of a fund for aid purposes to the developing countries. See Report of Mr le Pensec, Ministre de la Mer in (24 September 1981) Journal de la Marine Marchande., p.2278.

109 Italian Act, art. 15.

110 Ibid.

111 German Act, art. 12 (2).

American, Italian and French Acts.[112] With respect to the Revenue-Sharing Fund, the German Act is more favourable than the rest of legislation. Because unlike the other legislation, the German Act provides for the turn-over of the fund to an international authority, and the interim use of the trust for foreign aid purposes.[113]

According to British Act, the miner is subject to a mining levy. If minerals recovered within a given period exceed a prescribed minimum amount, the licensee must pay to the Secretary of State a production charge equal to A) 3.75 percent of the value of the unprocessed nodules recovered under the license, or B) 0.75 percent of the value of the (recovered products) any manganese, nickel, cobalt, copper, phosphorus or molybdenum found in the nodules if the value of the unprocessed nodules cannot be ascertained under (a).[114] The Act also provides for the establishment of a "Deep Sea-Bed Mining Fund" in the Treasury under the control and management of the Treasury, to which the levies are to be

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[112] According to Mr Caron, the 3,75 percent of 20 percent of the fair market value "is equal to 0,75% of the market price, thus the only effective difference between the tax schemes of the Federal Republic of Germany and of the United States of America is that the United States utilizes the fair market price as of the day of removal whilst Germany uses the yearly average market price. See D. Caron, Deep Sea Mining: A Comparative Study of U.S and West Germany Mining Legislation, (January 1981) Marine Policy., p.11.

[113] German Act, sec. 13. The Act provides that "the Federal government shall be authorised to transfer the Trust Fund to the International Sea-Bed Authority after entry into force of an international agreement on deep sea bed mining for the Federal Republic of Germany. Up to that time the Trust Fund shall be invested for foreign aid purposes."

[114] British Act, sec. 9 (1). It has been stated that "clause 9 sets out two different ways under which a company can calculate the amount of levy it has to pay on its operations : one on the value, agreed or estimated or deemed value, of the nodules as such, and the other on the value of the actual minerals obtained by refinement of the nodules. ... there are all kinds of advantages of convenience and indeed of justice in having both systems available." Parl. Deb, H.L, Vol. 416 (5th ser), 1980-81, Jan 13 to Feb 5, p.254.

transferred.[115]

The Secretary of State, in his discretion, may turn the Fund over to the designated international organization, if within ten years of the date of the coming into force of the Act, an international deep sea bed treaty enters into force for the United Kingdom. However, if the international deep sea bed treaty does not enter into force within such period (ten years), the Secretary of State may order the winding up of the Fund and the payment into the Consolidated Fund of any sums standing to its credit.[116]

In conclusion, it can be said that the levies imposed on miners are merely for their benefit and for national interests.

3.2. Reservation of Sites

With the exception of the Soviet Edict, which expressly provides for site-banking, none of the Acts[117] include provisions for this requirement.

The Soviet Edict specifies that the applicant for permit shall identify two plots. One of the two plots shall be used by the enterprise which has granted a permit, and the other shall be reserved "for possible exploration and exploitation by a future international organization for the sea bed."[118]

Nevertheless, despite the fact that the French Act does not explicitly

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115 British Act, sec. 10 (1).

116 British Act, sec. 10 (7). The order of winding up the Fund is subject, however, to approval by resolution of the Commons House of Parliamnet. Ibid, sec. 10 (8).

117 It has been brought to light that the United States intends to limit the size under any one application to 80.000 square kilometers in the exploration phase and 40.000 square kilometers during commercial exploitation. See VanDyke & Yuen, "Common Heritage." V. "Freedom of the High Seas": Which Governs the Seabed?, (1982) 19 San Diego L.Rev., p.546.

118 Soviet Edict, art. 4.

state this requirement, it appears that the Act provides for two sites by referring to its provisions.The Act requires that the permit of exploitation shall be valid for an area which does not exceed "half of the area of the exploration permit if the holder has given proof that the exploitation is possible."[119]

With regard to the British Act, the issue of this requirement was thoroughly debated during the passage of the United Kingdom Bill. One of the reasons of not including this requirement in the Bill was the absence of such provision from the American and the German Acts. Therefore, the inclusion of such requirement in the British Act would place United Kingdom companies at a competitive disadvantage.[120]

3.3. Production Control

It should be noted that all Acts do not provide for provisions on production control.

3.4. Transfer of Technology

By reason of the substantial costs which may be represented by the inclusion of such requirement in the legislation, it is not surprising that none of the Acts provides for this requirement.[121]

With regard to the transfer of technology, Article 8 of the Soviet Edict provides that, competent agencies of the USSR shall effectuate cooperation on the basis of international treaties of the USSR with interested foreign

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119 French Act, art. 6.

120 E. D. Brown, supra note 41, pp.159-60.

121 The British Minister argued that the inclusion of transfer sea bed technology arrangement would place United Kingdom companies at a competitive disadvantage in respect of companies operating under American or German legislation which do not include such burdens. E. D. Brown, supra note 9, pp.II.829-30.

states. The purpose of such cooperation in the field of technology transfer is to render assistance to the foreign states "in the development of technology, in the production of equipment, in implementing measures to prevent pollution of the environment, the training of the cadre, and other questions connected with the exploration and exploitation of mineral resources of sea bed areas."

Accordingly, such assistance in the development of technology to foreign states is based on a treaty between the USSR and the state interested.

By virtue of exclusion of such requirements, transfer of technology, reservation of sites and production control, the operators will avoid a very considerable and weighty costs in conducting activities in deep sea bed.

3.5. Anti-monopoly and Diligence Requirements

1-Anti-monopoly Requirement

None of the Acts places any limitation upon the number of sites which a licensee may possess. It has been argued that the reason of not including such provision in the legislation is that such restriction may place miners of any state in a disadvantaged situation in comparison with the entities operating under other legislation.[122] However, in respect of the size of the area, all legislation containsprovisions on this issue except the British Act.

Commensurate with the Soviet Edict, sea bed plots to which permits are issued should not in the total area "exceed reasonable limits, taking into account the legal interest of other states."[123] According to the Italian Act,

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[122] According to E. D. Brown, this was one of the arguments evoked by the British government against the opposition in Parliament which wanted the insertion of the anti-monopoly provisions in the British Act. E. D. Brown, supra note 41, p.162.

[123] Soviet Edict, art. 4.

the areas of which permits are granted do not "exceed a reasonable area, taking the interests of the other states into account."[124] The French Act followed the same stipulation as the Soviet and Italian Acts. Thus, the French Act states that the permits issued shall not "exceed a reasonable size, taking into account the interests of the other states."[125]

In relation to the German Act, the size of a site should be large enough to assure the permit holder to carry out an economic recovery of minerals before the expiration of his permit.[126] The American Act specifies that the applicant shall "select the size and location of the area of the exploration plan or recovery plan.[127] Japanese Act asseverated that sizes of areas for exploration or recovery shall comply with the "standards provided in Ministry of International Trade and Industry Ordinance."[128]

2- Diligence Requirement

Almost all legislation include requirement to meet diligence standards. Accordingly, under the American Act, which is the more detail Act on this requirement, each licensee and permittee is required to pursue diligently the activities by making periodic reasonable expenditures for exploration, and to maintain commercial recovery throughout the period of the permit.[129]

British Act provides that, a license may include terms and conditions requiring "any exploration or exploitation of the hard mineral resources of the licensed area to be diligently carried out."[130] Like the American

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[124] Italian Act, art. 7.

[125] French Act, art. 4.

[126] German Act, sec. 10 (2).

[127] American Act, sec. 103 (a) (2) (D).

[128] Japanese Act, art. 12 (2).

[129] American Act, sec. 108.

Act, the German Act requires the licensee to make periodic and reasonable investments for exploration.[131] Moreover, the Act sets out that authorisations to explore and exploit mineral resources may be granted to the applicant if the applicant "as a result of his knowledge, experience and financial resources as well as his reliability, can guarantee an orderly development of mineral resources...."[132]

The French Act calls upon that the granting of "the title goes together with the obligations imposed on the holder, in particular a minimum production program."[133] Furthermore, the exploration license will lay down the obligations of the permit holder, especially the minimum financial commitment required of him.[134] With regard to the Japanese Act, granting permits to applicants will depend on the ability of any applicant to perform certain demands. Properly, his financial and technological capabilities "shall be sufficient for proper execution of deep sea bed mining." Additionally, the rational and smooth development of deep sea bed mineral resources "shall be able to be performed properly."[135]

According to the Italian Act, applicants for permits "must have the technical and financial capacity required for exploration or exploitation...."[136] Besides, the Act stipulates that the permit is declared terminated if the holder, 1) loses the required technical and financial capacity, 2) does not fulfill his obligations under the Act or the provisions of the permit, 3) or seriously falls behind in the observance of the time

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130 British Act, sec. 2 (3) (p).

131 German Act, sec. 10 (3).

132 Ibid, sec. 5 (1) 2.

133 French Act, art. 7.

134 Ibid, art. 6.

135 Japanese Act, art. 12 (3), (4).

136 Italian Act, art. 7.

schedules and conditions set out in the work program.[137]

With reference to the content of unilateral legislation, one can notice that some of the basic provisions on deep sea bed mining included in these legislation differ quite strikingly from those of the Convention such as the financial terms. While other burdensome requirements are omitted from these legislation like transfer of technology and production control.

Section 4. Unilateral Legislation and International Law

Unilateral legislation for deep sea bed mining, based on the principle of "freedom of high seas", has given rise to substantial controversy and contentions debate in respect of its compatibility with international law.

Developing countries have been claiming that any unilateral legislation is violative to international law. The developing countries' opinion is based on the irrevocable nature of the various resolutions of the United Nations General Assembly,[138] which have codified customary law, especially the Declaration of Principles adopted without any negative vote. These resolutions declared that the resources of the deep sea bed are the common heritage of mankind. The principle of common heritage of mankind has been uniformly recognized as the sole principle which regulate and govern the deep sea bed and its resources. Therefore, no other alternative regime can be legally admitted to regulate, inconsistently with the common heritage of mankind, the resources of the deep sea bed.

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137 Ibid, art. 11.

138 For example, the Moratorium Resolution, 2574 D (XXIV); Declaration of Principles, 2749 (XXV); Charter of the Economic Rights and Duties of States in 1974. Mr Biggs asserted that the common heritage principle has been endorsed as a legal principle in more than eighteen General Assembly resolutions and two resolutions of the United Nations Conference on Trade and Development. See G. Biggs, Deep Seabed Mining and Unilateral Legislation, (1980) 8 O.D.I.L.A., p.239.

Before turning to consider the position of the Group of 77 and their arguments of refusing any claim from the enacting states that unilateral legislation is compatible with international law, this section will briefly attempt to examine the legal position of non-parties (third states) to a treaty (Law of the Sea Convention).[139]

Article 34 of the 1969 Vienna Convention on the Law of Treaties,[140] reads: "A treaty does not create either obligations or rights for a third state without its consent." However, it appears that there is exception to Article 34. Accordingly, Article 38 indicates that a treaty which is declaratory of customary international law may bring about rights and obligations upon third states. To put it in another way, where a treaty provision embodies an existing customary law,[141] its binding impact is applied not only to the parties of the treaty but also to non-parties of the treaty. Article 38 provides: "Nothing in Articles 34 to 37 precludes a rule set forth in a treaty from becoming binding upon a third state as a customary rule of international law, recognized as such." On that account, a rule of international law may be conventional for some states and customary for others.[142]

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139 There are some countries are not parties to the Law of the Sea Convention such as, United Kingdom, United States and Federal Republic of Germany.

140 U.N.T.S. No 18, 232, UN. Doc. A.Conf.39.27 (1969), reprinted in (1969) 8 I.L.M. 679.

141 It has been stated that "customary international law consists of generally recognized limitations on state behavior which are applied by the states of the world because they are perceived as binding." See L. Brierly, The Law of Nations, (6th ed. H. Waldock 1963) p.60.

142 K. Gamble, The Treaty/ Custom Dishotomy: An Overview, (1981) 16 Texas I.L.J., p.312. Many legal writters have considered the relationship between the United Nations Convention on the Law of the Sea and customary law. See for example, Gamble & Frankowska, The 1982 Convention and Customary Law of the Sea: Observations, a Framework, and Warning, (1984) 21 San Diego L.Rev., pp.491-511; Howard, The Third United Nations on the Law of the Sea and the Treaty/ Custom Dishotomy, (1981) 16 Texas I.L.J., p.321; D. d'Amato, An Alternative to the Law of

The ILC concisely illustrated the relationship between conventional international law and customary international law; it stated:

> Perhaps the differentiation between conventional international law and customary international law ought not to be too rigidly insisted upon, however. A principle or rule of customary international law may be embodied in a bipartite or multipartite agreement so as to have, within the stated limits, conventional force for the states parties to the agreement so long as the agreement is in force; yet it would continue to be binding as a principle or rule of customary international law for other states.[143]

Although the general rule, according to Article 34 of Vienna Convention on Law of Treaties, treaties do not entail rights and obligations on non-parties without their consent; the international community admitted that certain treaties of legislative character are *erga omnes*. In other words, the so-called "law-making" treaties that intend to lay down a set of rights and obligations, e.g., to lay down law,[144] are valid *erga omnes*. The kind of such treaties include those creating permanent legal positive positions which protect the interests of the international community. For instance, conventions insuring free passage through international waterways, and the international regime of deep sea bed mining provisions embodied in the Convention are regarded valid *erga*

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the Sea Convention, (1983) 77 A.J.I.L., p.541; MacRae, Customary international law and the United Nations Law of the Sea Treaty, (1983) 13 Cal.W.I.L.J., p.181. MacRae said that "the United Nations Law of the Sea Treaty, despite protestations to the contrary, has codified with almost unanimous international consent, customary law of the sea." Ibid, pp.221-22.

143 I.L.C. Rep. to G.A. in (1950) 2 I.L.C.Yearbook, p.368, UN. Doc. A.CN. 4.SER. A.Add.1 (1950).

144 P. O'Connell, International Law (2nd ed., 1970), p.23. Among the examples of " law-making" treaties cited by O'Connel, there are: the Hague Conventions of 1899 and 1907, and the Red Cross Conventions. Ibid, p.23.

omnes because they reflect the interests of the international community and therefore, they are bound not only on the parties but also on the non-parties.

The most concrete example of treaty provision which is valid *erga omnes* is Article 2 (6) of the Charter of the United Nations:

"The organization shall ensure that states which are not members of the United Nations act in accordance with these principles (described in other paragraphs of the same article) so far as may be necessary for the maintenance of international peace and security."

Article 2 was regarded by Lauterpacht as a mandatory provision which "constitutes a claim to regulate the conduct of non-members to the extent required for the fulfillment of the object of that article."[145]

Mr O'Connell, in explaining the significance of the legislative treaty, stipulates that:

> It is not possible in this dynamic age to await the crystallization of customary law, for practice, and the evidence of practice, grows only with time. Common problems are therefore resolved by resort to multilateral convention, and since in matters of marcotics, white-slavery, etc., the minority which stands outside the treaty is so small the treaty rules are indeed almost general law.[146]

It is therefore clear that treaty provisions that have legislative character can reflect customary international law and thus, entail rights and obligations upon third states.

The Group of 77[147] claims that unilateral legislation has no validity or

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145 L. Oppenheim, International Law-A Treatise, Vol.I (Peace, 8 th ed. by Lauterpacht), (1955) p.929.

146 O' Connell, op.cit., p.24.

147 The name "Group of 77" refers to the original 77 developing countries which got together to pursue their interests within UNCTAD and now operates within the United Nations system as a whole. They are now 105 countries. See O. Adede, The

effectiveness in international law, and any rights acquired under such legislation would not be internationally recognized and therefore, would be considered as illegal. The Group of 77 asserts that the "common heritage of mankind" principle has become a binding international rule endorsed by many United Nations resolutions.

A firm response was expressed by the Group of Legal Experts in a letter dated April 23, 1979 addressed to the Chairman of the Group of 77 on the question of unilateral legislation.[148] It has been stated that, the Principles of the Declaration form the basis of the international regime of the deep sea bed and its resources. Therefore, any unilateral legislation or mini-treaty is illegal and violates the Principles of the Declaration. They also stipulate that the adoption of unilateral Acts and mini-treaty agreements are merely an event without international effect and thus, incapable to be invoked vis-a-vis the international community. The Group went on to argue that,

> The great majority of states would not admit the validity of such legislation nor could such legislation constitute valid grounds for any juridical claim to explore or exploit the area. Furthermore, if such unilateral legislation or mini-treaty should be put into operation, the international responsibility of the states concerned would be engaged in respect of damage caused by such activities incompatible with the Principles applicable in the area.[149]

Moreover, the letter affirmed that the customary principle of the freedom of the high seas does not apply to the exploitation of the deep sea bed since the exploitation was beyond the capacity of states at the time

Group of 77 and the Establishment of the International Sea-Bed Authority, (1979) 7 O.D.I.L.A., p.61.

148 UNCLOS III, Off. Rec., Vol.XI, pp.80-82.

149 Ibid, p.82.

when that principle came into being. The letter went on to stipulate that even if the customary principle would be applicable on the adoption of the Declaration of Principles of 1970.

The strongest reaction of objecting the unilateral legislation was formulated by Ambassador Nandan of Fiji, the Chairman of the Group of 77.[150] Mr Nandan contended that the Group of 77 rejected any claim that the right to engage in deep sea bed activities was a legal freedom of the high seas.[151] He further maintained that the Declaration of Principles was binding upon states, and that unilateral exploitation was incompatible with those Principles.[152] He also asserted that "unilateral exploitation would be a clear violation of international law, which entailed the corresponding legal responsibilities."[153]

The Group of 77 reiterated its strong opposition by the statement of Mr De Soto of Peru. On behalf of the Group of 77, Mr De Soto affirmed the illegality of all unilateral legislation after being informed that the Soviet Union had also enacted an Edict. He said:

> To the extent that such unilateral action violated the principle of the common heritage of mankind and the principle that there should be no expropriation of resources except as provided for in the Draft Convention, the Group believed that such legislation had no legal effect. The measure adopted by the Soviet Union, like the others, did not constitute a source of law. The Group would therefore not recognize any claim based upon such measures.[154]

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150 UNCLOS III, Off. Rec., Vol.IX, pp.103-04, Statement of the Ambassador Nandan of Fiji on Questions Concerning Unilateral Legislation on the Resources of the Sea Bed.

151 Ibid, p.103 (21).

152 Ibid, p.103 (22).

153 Ibid, p.103 (23).

154 UNCLOS III, Off. Rec., Vol.XVI, p.130 (53).

The western countries rejected the statements made by the Chairman of the Group of 77 and responded so as to defend the legality of the unilateral exploitation.[155] The French representative, Mr De Lacharriere, contemplated that the argument of the Group of 77 that unilateral exploitation of the resources of the deep sea bed was illegal was not valid. He argued that:

> No government could be bound under international law unless it agreed to be so bound in a treaty, and that in no case could a government be bound under international law unless it agreed to be bound in a treaty, and that in no case could a government be bound by a legal rule which others sought to impose on it. France had never agreed to any limitations on the freedoms of the sea in so far as they related to the exploitation of the sea-bed apart from those limitations which it might have accepted by treaty or within the framework of the development of international customary law. There were no provisions in existing international positive law which prohibited the reasonable exploitation of the sea-bed on an individual basis.[156]

De Lacharriere argued that a state is not bound, under international law, by a treaty unless it agreed to do so. Since there is no treaty which binds the enacting states, unilateral exploitation is internationally lawful. He went on to stipulate that there were no international law which prohibited such exploitation of deep sea bed. Therefore, the view of De Lacharriere could be interpreted as recognizing that the rule to be applied in the deep sea bed is what is not prohibited is permitted.

Any exploitation activity occurs under unilateral legislation, then its legality would probably be questioned before the ICJ. The President of UNCLOS III, Mr Tommy T. Koh declared that he will challenge such

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155 UNCLOS III, Off. Rec., Vol.IX, French statement, p.106 (43); Belgium, p.107 (53); Federal Republic of Germany, p.106 (45,46); Italy, p.107 (51,52); United Kingdom, pp.107-08 (60-61); United States of America, pp.104-05 (27-29).

156 Ibid, p.106 (43).

unilateral legislation before the United Nations General Assembly and the ICJ. As he put into words:

> I will take it upon myself to persuade the United Nations General Assembly to adopt a decision asking the International Court of Justice for an advisory opinion on whether such activities under unilateral national legislation are lawful, or are they illegal....[157]

The question of unilateral legislation might be challenged legally before the ICJ[158] under two possibilities. First, the General Assembly might request an advisory opinion on the legality of unilateral legislation of the type adopted by the reciprocating states. Second, there is the possibility of taking contentious proceedings against one or more of the states which have enacted legislation, by one or more members of the Group of 77 for depleting the common heritage of mankind illegally.[159] However, since the Court has held in an earlier case that the *actio popularis* is not known to international law, it would be necessary for the applicant state or states to demonstrate a legal interest. It seems unlikely that the Court could regard the interest of a state or states in preventing such a depletion of the common heritage of mankind as constituting a sufficient legal interest to found an action.[160]

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157 Quoted in L. Richardson, The U.S. Posture Toward the Law of the Sea Convention: Awkward but not Irreparable, (1983) 20 San Digo L.Rev., p.509 at note (14). See also S. Ratiner, The Law of the Sea: A Crossroads for..., (1982) 60 For.Aff., p.1017.

158 For an examination about the possibility of a legal proceedings before the ICJ, see R. S. Moss, Insuring Unilaterally Licensed Deep Seabed Mining Operations Against Adverse Rulings by the International Court of Justice: An Assessment of the Risk, (1984) 14 O.D.I.L.A., pp.161-91.

159 E. D. Brown, The Consequences of Failure to Agree at UNCLOS III, (1983) N.R.F., p.65.

160 Ibid.

While it is beyond the bounds of possibility to foresee how the ICJ will react on such matters, E. Richardson, the former Chairman of the United States delegation to UNCLOS III states that the industrialised countries would "face the ever-present risk-indeed, the likelihood- that the ICJ will eventually declare that any deep sea bed mining activity that does not conform to the Convention is illegal."[161]

Many western countries maintained that until the Convention is ratified and entered into force for them, exploitation of deep sea bed is not prohibited under existing customary international law on the basis of freedom of high seas. In a Memorandum submitted by Foreign and Commonwealth Office to the Special Standing Committee of the House of Commons, it stated:

> At the Law of the Sea Conference and elsewhere, HMG have made clear their position that deep sea mining and national legislation to regulate it are not contrary to existing international law. This has been HMG's position over many years and it is shared by other industrialized countries. There is no rule of international law prohibiting the mining of the resources of the deep sea-bed, and our proposed legislation is fully consistent with the status of the deep sea-bed and with the rules of international law concerning the freedom of the seas. States and their nationals may therefore mine the sea-bed provided that they have reasonable regard for the interests of other persons exercising their rights on the high seas.[162]

The representative of the United Kingdom, in supporting the freedom of the high seas principle, and the compatibility of the national legislation with international law, states:

> ...with regard to those provisions which seek to make new law,

161 L.Richardson, supra note 157.

162 Parl., Deb., H.C, Standing Committees, Welsh Grand, N.I., S.I.S Special STDG., 1st STDG, EEC DOCs, 2nd Reading, Session 1980-81, Vol.VII, p.58.

> the parties to the Convention will assume among themselves a new contractual relationship. This will not deprive others of existing rights nor, of course, can a conventional regime or obligation be imposed on them. Existing rights such as those which derive from the freedom of the high seas, as well as existing conventional law, will remain.[163]

Some of the recent commentators argued in favour of the unilateral legislation that they are compatible with international law. For example, Mr M. Mashayekhi, in his study, concludes that since none of the Acts of national legislation assigns exclusive rights to mine the deep sea bed, these Acts may be considered to be consistent with international law.[164] It has been considered that the American Act and unilateral appropriation of deep sea bed resources by the United States are neither inconsistent with existing international law nor an unreasonable interference with the high seas freedoms.[165]

In supporting the freedom of high seas and unilateral exploitation, T. Kronmiller stated that the unilateral appropriation of the resources of the deep sea bed is permissible under international law and that deep sea bed mining is a freedom of high seas and is consistent with customary international law and relevant conventional law. Thus, all states shall respect the lawful exercise of exploration and exploitation of the resources of the deep sea bed as a freedom of high seas. He further stipulated that,

> In international law, there is no reason why this activity may not be supported by domestic legislation which does not purport to claim sovereignty or sovereign rights over, or ownership of, areas of the deep sea bed and subsoil or otherwise to exclude

163 UN. Doc. A.Conf.62.PV.189.

164 M. Mashayekhi, The Present Legal Status of Deep Seabed Mining, (1985) 19 J.W.T.L., p.249.

165 Wilson, Mining the Deep Seabed: Domestic Regulation, International Law and UNCLOS III, (1982) 18 Tulsa L.J., p.243.

nationals of non consenting states.[166]

Having considered the arguments for and against the compatibility of unilateral legislation with international law, it is worth referring to one of the important characteristics of the Convention, and on which the whole negotiations of UNCLOS III stood up, that is the "package deal."

Accordingly, it has been maintained that the different parts of the Convention have different status. The developed countries alleged that Part XI is not part of customary international law and therefore, the Convention can be divided into different parts. Hence, the developed countries included in their legislation the provisions which satisfy their interests and exclude those which are burdensome and against their benefit . Indeed, some parts of the Convention were taken into account and entered into effect by many states, even before the Convention entered into force. For example, the 200 miles Exclusive Economic Zone.[167]

The United States and other developed countries rejected Part XI of the Convention as a disadvantageous part, and agreed pleasantly on other advantageous parts of the Convention on the basis of customary international law, such as innocent passage in territorial waters, transit passage in international straits. Nevertheless, the Convention is an undivided package, which does not accept to make selection on its parts. Ambassador Nandan of Fiji, in the final session of the Conference announced that,

> ... each chapter of the Convention is an integral part of the whole. To attempt to rationalize that parts of the Convention are simply customary international law, and thereby to separate them from others, is to ignore the fact that what was customary

166 T. Kronmiller, The Lawfulness of Deep Seabed Mining, (1980) p.521.

167 Guy de Lacharriere, La Zone Economique Francaise de 200 Milles, (1976) A.F.D.I., p.646.

> international law has been clarified or modified and that if such provisions were preserved, it was done as a *quid pro quo* for other provisions. Any selective use of the Convention, therefore, will be not only inappropriate but also unacceptable.[168]

Describing the significant feature of the "package deal", the representative of Cameroon, Mr Engo said:

> Individual states may not pick and choose to be bound by convenient aspects of its provisions. This is particularly true for any who may wish to reject one or more of its 17 parts, selecting only certain rights established under the rest of the convention....[169]

As the package is an important quality which has contributed to the striking successful completion of the Convention, it has been illustrated that,

> Its quality as a package is a result of the singular nature of the circumstances from which it emerged, which factors included the close interrelationship of the many different issues involved, the large number of participating states, and the vast number of often conflicting interests which frequently cut across the traditional lines of negotiation by region....(it) necessitated that every individual provision of the text be weighed within the context of the whole, producing an intricately balanced text to provide a basis for universality.[170]

With reference to the statements of the Ambassadors Evenson, Yankov, Engo and Beesley, Ambassador Igor Kolowski of the Soviet

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168 UN. Doc. A.Conf.62.PV.187.

169 UN. Doc. A.Conf.62.PV.185.

170 B. Zulta, Introduction to the United Nations Convention on the Law of the Sea, UN. Publications. Sales No, E. 83. V.5.

Union agreed that all parts of the Convention represent an indivisible package of compromise decisions and all are closely interrelated questions of the law of the sea. He added, that the Convention is a package deal and any attempts to recognize some of its parts and not recognize other parts would be unjustified.[171]

It has been explained that the Convention's parts are closely interrelated and form an integral package. Turning to the statements made by states at the signature session in Montego Bay, the President of UNCLOS III, Mr Tommy T. Koh declared:

> The second theme which emerged from the statements is that the provisions of the Convention are closely interrelated and form an integral package. Thus, it is not possible for a state to pick what it likes and to disregard what it does not like. It was also said that rights and obligations go hand in hand and it is not permissible to claim rights under the Convention without being willing to shoulder the corresponding obligations.[172]

He added that,

> Although the Convention consists of a series of compromises, they form an integral whole. This is why the Convention does not provide for reservations. It is therefore not possible for states to pick what they like and disregard what they do not like. In international law, as in domestic law rights duties go hand in hand. It is therefore legally impermissible to claim rights under the Convention without being willing to assume the correlative duties.[173]

Consequently, Part XI which deals with the international regime

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171 Koers & Oxman, The 1982 Convention on the Law of the Sea, (July 13-16, 1983) L.Sea.Inst. Proc., p.691.

172 Law of the sea: United Nations Convention on the Law of the Sea. UN. Publications. Sales No, E.83. V.5, [hereinafter cited as 1982 Convention], XXXIV.

173 Ibid, at XXXVI.

governing the deep seabed cannot be separated from the other parts of the Convention, because all parts form an integral package. On account of the active involvement in the negotiations of the Law of the Sea Convention on a good faith which allows the common heritage principle to acquire a factual legal signification, it is clearly unfortunate to see many of the participants countries enacting legislation and arguing that their legislation are consistent with the principle of "common heritage of mankind" and international law. In fact, these legislation are incompatible with the common heritage principle. There is no doubt, that the objective of the enacting states is not the exploitation of the deep sea bed resources for the benefit of mankind as a whole, but rather for individual benefits.

Since it appears that the Acts lack any concern in respect of the interests of mankind, it is therefore that any conduct of exploitation activity under such unilateral legislation will be incompatible with the Convention and will bring the international responsibility. Up to the time of the adoption of the Declaration of Principles, there were no rules governing the deep sea bed and its resources. However, after the adoption of the Declaration of Principles and the acceptance of the principles, the deep sea bed and its resources were declared "common heritage of mankind" and become a declaratory rule of customary international law.

It should be noted that the states signatories of the Convention like France, Japan, Soviet Union and Italy are bound by Article 18 of the Vienna Convention on Law of Treaties, which is considered as declaratory of customary international law and as binding on all states. Article 18 reads:

"A state is obliged to refrain from acts which would defeat the object and purpose of a treaty when:

a) it has signed the treaty or has exchanged instruments constituting the treaty subject to ratification acceptance or approval, until it shall have

made its intention clear not to become a party to the treaty;

b) it has expressed its consent to be bound by the treaty, pending the entry into force of the treaty and provided that such entry into force is not unduly delayed."

Accordingly, it appears that the signatories which enacted unilateral legislation and entered into agreements were in violation of the Law of the Sea Convention.[174]

Section 5. Reciprocating States Agreements (RSA)

Developed states moved towards negotiating the possibility of concluding agreements under a form of a "mini-treaty" as the best solution to co-ordinate their legislation and provide sufficient legal security to attract investment capital. The reciprocating states regime facilitate mutual recognition of exploration and commercial recovery of areas claims and foster similarity in deep sea bed activities.

Under Reciprocating States Agreements, all potential sea bed countries will respect each other's claims and preclude their own nationals from violating the claims of other recognized states. Hence, under this regime a reciprocating state will not grant exploration license or exploitation permit that conflicts with licenses and permits granted by another reciprocating state.

The regime was seen as an adequate basis to provide the necessary mine security, to insure access to the resources of the deep sea bed and attract huge investment capital.[175] Such Agreements purport to identify

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[174] For a discussion on Article 18 and its relation with Part XI of the United Nations Convention on the Law of the Sea, see Gamble & Frankowska, The Significance of Signature to the 1982 Montego Bay Convention on the Law of the Sea, (1984) 14 O.D.I.L.A., pp.126-29; and also McDade, The Interim Obligation Between Signature and Ratification of a Treaty, (1985) 32 Netherlands I.L.R., pp.25-28.

and solve the conflicting claims by providing an arrangement for the settlement of disputes and thereby provide the security of tenure. To do so, such arrangements require the states concerned to regulate their own nationals according to their municipal legislation, in order to co-ordinate globally the national rules and regulations laid down in the domestic legislation for mutual recognition on a reciprocal basis and therefore, establish a legal basis for reciprocating states regime.

This section, thus, will attempt to examine the two Reciprocating States Agreements.

5.1. The 1982 Agreement

On September 2, 1982, Federal Republic of Germany, United States, United Kingdom and France signed an Agreement[176] which was considered as an important step to enforce the reciprocating states regime.

The Agreement aims to facilitate the identification and resolution of conflicts arising from the filing and processing of applications for sea bed mining authorisations made by Pre-Enactment Explorers (PEEs)[177] on or before March 12, 1982, under any domestic legislation in respect of deep sea bed operations enacted by any of the parties.[178]

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175 Caron believes that interim arrangements under municipal law regimes will remain to some an attractive and even desirable option, since a Law of the Sea Treaty to emerge will take years to come into force. D. Caron, supra note 112, p.5.

176 Agreement Concerning Interim Arrangements Relating to Polymetallic Nodules of the Deep Sea-bed Matters, (1982) 21 I.L.M., p.950-62.

177 PEEs is defined as "an entity which was engaged, prior to the earliest date of enactment of domestic legislation by any party, in deep sea bed polymetallic nodule exploration by substantial surveying activity with respect to the area applied for." The Schedule, Part IV, para. 11 (d) of the Agreement.

178 The Agreement, para. 1.

Parties to the Agreement agreed to consult together "in regard to consideration of any arrangement to facilitate mutual recognition of authorisations",[179] and also agreed on the possibility to conclude agreements "for the mutual recognition of authorisations granted under their respective laws in respect of deep sea bed operations."[180]

With regard to the identification of conflicts, the parties to the Agreement shall consult together before granting any authorisation[181] or entering into any other bilateral or any multilateral arrangement between themselves or any arrangement with other states.[182] It is therefore, stipulated in the Agreement that no party shall issue any authorisation prior to January 3, 1983.[183]

Each party shall with all dispatch determine if the Pre-Enactment Explorers's application has complied with the domestic legislation requirements, and the area applied for is bounded by a continuous boundary, and such area is reasonably compact.[184] Furthermore, the parties have a collective duty to establish the final list of applications and inform each other of any overlapping conflict claims over the same area.[185]

As regards resolution of conflicts, the Agreement include a mechanism for resolving disputes over claimed areas of the deep sea bed. Each party has the duty to ensure that domestic conflicts are resolved in accordance to its domestic legislation requirements.[186] Parties are required to assist the applicants adequate opportunity in resolving conflicts in a "timely manner

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179 Ibid, para. 4 (c).

180 Ibid, para. 5.

181 Ibid, para. 4 (b).

182 Ibid, para. 4 (d).

183 The Schedule of the Agreement, Part 1, para. 5.

184 Ibid, para. 3.

185 Ibid, para. 4 (b) (c).

186 Ibid, para. 7.

by voluntary procedures."[187] If within six months of the entry into force of such Agreement between the parties, the applicants involved in the conflict have not resolved that conflict, the conflict shall be resolved by binding arbitration.[188] Within sixty days after the expiry of a ten days cooling-off period, the parties presenting the case of the conflict, shall agree in writing "on three arbitrators, or, if they agree to have only one arbitrator, on that one arbitrator."[189] The appointed arbitrator must not be citizen of a party and must be neutral with respect to the subject of the dispute, and shall also have international standards and expertise.[190] If, after a specified time period, these parties cannot agree, the Secretary General of the Permanent Court of Arbitration will, without delay, appoint the arbitrators.[191] In making the selection of arbitrators, the Secretary General is not confined by any list of arbitrators, and those arbitrators appointed shall not be open to challenge.[192]

With regard to the compatibility of the Agreement with the Convention, it should be noted that the Agreement was "without prejudice to the decision of the parties with respect to the Law of the Sea Convention."[193] Moreover, the parties express their desire "to insure that

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187 The Agreement, para. 2.

188 Ibid, part II, para. 9 (2). The Agreement regulate the resolution of international conflicts. Accordingly, Paragraph 9 (1) of Part II states that "where there is an international conflict, the parties shall use there good offices to assist the applicants to resolve the conflict by voluntary procedures." Also Paragraph 5 of the Agreement stipulates that "in the event that any of the parties with whom applications for authorisations have been made by PEEs on or before March 12, 1982 enter into an agreement for the mutual recognition of authorizations granted under their respective laws in respect of deep seabed operations, the parties concerned shall apply the procedures and impose the requirements set out in Part II of the Schedule hereto."

189 Ibid, part II, Appendix I, para. 2.

190 Ibid, para. 6.

191 Ibid, para. 4.

192 Ibid, para. 6.

193 The Preambular of the Agreement.

adequate areas containing polymetallic nodules remain available for operations by other states and entities in conformity with international law."[194]

Nonetheless, the Agreement looks incompatible with the Convention because it envisaged, for example, the granting of mutual recognition of authorisations, which completely disagreed with the provisions of the Convention, especially Article 137.

5.2. The 1984 Agreement

Belgium, France, Federal Republic of Germany, Italy, Japan, United Kingdom, Netherlands and the United States took an important step, away from the Convention regime regarding the enforcement of the reciprocating states regime, by signing on August 3, 1984 an Agreement known as the "Provisional Understanding Regarding Deep Sea Bed Matters."[195]

The Provisional Understanding is a further step with respect to the establishment of a unified legal framework for the deep sea bed mining activities to explore deep sea bed and exploit its resources outside the regime of the Convention. The Provisional Understanding seeks not only to avoid overlaps conflicts, but also to co-ordinate the domestic legislation of the parties to it. The Provisional Understanding is subject to denunciation on 180 day's notice. Thus, a party may denounce "this Agreement by written notice to all other parties,..., such denunciation shall

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194 Ibid.

195 In (1984) XXIII I.L.M., pp.1354-65. The Provisional Understanding was concluded with a related Memorandum on the Implementation of the Understanding. This Memorandum was signed by the same states except the Netherlands. Ibid, p.1358. Under Paragraph 13 a provision is laid down for additional states to accede to the Agreement after its entry into force.

become effective 180 days from the date of the latest receipt of such notice."[196] Denunciation is also permitted on the showing of good cause related to the implementation of this Agreement. However, such denunciation will not "affect the rights and obligations of the parties concerned towards other parties to the Agreement."[197]

The Agreement provides that the parties must refrain from granting authorisations to engage in deep sea bed activities for an area which overlaps, in whole or part, with another area falling into one or any other of the following three categories: (i) an area covered in another application filed under the consortia agreements[198] referred to above and still under consideration by another party; (ii) an area claimed in any other application filed in conformity with national law and the Provisional Understanding either prior to signature of the Provisional Understanding or earlier than the application in question, if still under consideration by another party in conformity with the Provisional Understanding.[199]

It is necessary to turn now to the provisions of the Understanding, which co-ordinate and harmonize the domestic legislation.

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196 Provisional Understanding, para. 14 (1).

197 Ibid, para. 14 (2).

198 Six of the pioneer consortia entered into Agreements for voluntary conflict resolution in 1983. For these Agreements see Paragraph 1 (1) (a) of the Understanding. The Agreements are" Final Settlement Agreement" and " Supplementary Settlement Agreement." The Final and Supplementary Settlements Agreements are hereinafter referred to jointly as "Industry Arbitration Agreements" (IAA). See M. Hoaghand, Conflict Resolution in the Assignment of Area Entitlements for Seabed Mining (Law of the Sea. XVI), (June 1984) 21 San Diego L.Rev., p.553 at note (63). The six consortia involved in the Agreements are: Association Francaise pour l'Etude et la Recherche des Nodules (AFERNOD); Deep Ocean Resources Development Co. ltd (DORD); Kennecott Consortium (KCON); Ocean Mining Associates (OMA); Ocean Minerals Company (OMCO); Ocean Management Inc. (OMI), or any of them. See ibid, Appendix I of the Provisional Understanding, p.1357.

199 The Agreement, para. 1. This paragraph aims to co-ordinate the domestic legislation by attempting to avoid overlaps conflicts on mine sites on which authorisations are issued under domestic legislation.

Initially, measures of eligibility must be regarded in issuing licenses to the applicants. Thus, each party shall issue or transfer an authorisation only to applicants: a) who are financially and technologically qualified to conduct the proposed deep sea bed operations; b) which comply with all requirements of the party's national law; and c) whose deep sea bed operations will be carried out in accordance with the standards prescribed below."[200] What is more, the parties have the duty to consult before the issuance or transfer of a license to an applicant who has previously been denied an authorisation or had an authorisation revoked for the same area by another party, or who has relinquished the same area under an authorisation of another party.[201]

States parties must "seek consistency in application requirements and operating standards."[202] The standards which the operator shall perform are stipulated, in general, in the Memorandum on the Implementation. Each party shall take all necessary measures so that deep sea bed operations under its control conform with the exercise of the freedom of the high seas, by taking reasonable regard to the interests of other states;[203] the protection of environment;[204] the protection of waste;[205] safety of life and property at sea[206] and diligence requirement.[207]

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200 Memorandum on the Implementation of the Provisional Understanding, para. 1 (1). However, before determining the eligibility of the applicant for the issuance of an authorisation, each party shall first "with reasonable dispatch, make an initial examination of each application to determine whether it complies with requirements for minimum content of applications under its national law." Provisional Understanding, para. 2.

201 The Memorandum, para. 1 (2).

202 Provisional Understanding, para. 8.

203 Memorandum..., para. 3 (1) (a).

204 Ibid, para. 3 (1) (b), (f).

205 Ibid, para. 3 (1) (c).

206 Ibid, para. 3 (1) (d).

207 Ibid, para. 3 (1) (e).

As a means to enforce effectively the standards, each party will employ, as appropriate, measures such as "imposing reasonable penalties for violation of requirements; placing observers on vessels to monitor compliance; suspending, revoking, or modifying authorisations; and issuing orders in an emergency to prevent a significant adverse effect on the environment or to preserve the safety of life and property at sea."[208]

With regard to the size of the area, applicants will be granted a particular size so as to guarantee that the deep sea bed operations authorised "can be conducted within the initial duration of the authorization in an efficient, economical and orderly manner with due regard for conservation and protection of the environment, taking into consideration, as appropriate, the resource data, other relevant physical and environmental characteristics and the state of the technology of the applicant, as set forth in the plan of operations."[209]

Provision is made to call upon the parties to maintain the confidentiality of the coordinates of application areas and other proprietary or confidential commercial information.[210] Each party is required to notify the other parties of each application for an authorisation which it accepts.[211] Further, and collectively, parties are required to consult each other, prior to the issuance of any authorisation, and with regard to relevant legal provisions and any modification thereof.[212]

In respect of the system of the dispute settlement, the Understanding provides that any dispute arising from the interpretation or application of the Agreement shall be settled by appropriate means.[213] This provision

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208 Ibid, para. 4.

209 Ibid, para. 2 (1).

210 Provisional Understanding, para. 6 (1).

211 Ibid, para. 3.

212 Ibid, para. 5 (a) (c).

213 Ibid, para. 10.

goes on to stipulate that "the parties to the dispute shall consider the possibility of resource to binding arbitration an, if they agree, shall have recourse to it."[214]

According to the provisions of the Understanding, it appears that they aimed not only to resolve the overlaps conflict, but also to co-ordinate the way in which parties of the Understanding grant authorisations to operate in the deep sea bed. Consequently, the operator may feel competent that he has security of tenure on his particular mine site with respect to the state parties.

Although Paragraph 15 of the Understanding states that "this agreement is without prejudice to, nor does it affect, the positions of the parties, or any obligations assumed by any of the parties, in respect of the United Nations Convention on the Law of the Sea." The Agreement has been seen as creating an alternative regime to the Convention by including stipulations and terms permitting exploration and exploitation of the mineral resources of the deep sea bed, and this is incompatible with Article 137 (3) of the Convention.

The Understanding faced a strong criticism from the Group of 77, which affirmed that any arrangement outside the Convention regime is illegal. Accordingly, it has been stated that The Provisional Understanding goes beyond the resolution of conflicts arising from overlapping claims, by including provisions regarding exploration and exploitation of the sea bed resources outside the Law of the Sea Convention. The Group of 77 rejects this Provisional Understanding as a basis for creating legal rights and regards it as wholly illegal.[215]

The mini-treaty is a further step towards the creation of a unified and

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214 Ibid.

215 Statement by the Chairman of the Group of 77 delivered on 13 August 1984, LOS.PCN.48, 16 August 1984, p.2, para. 5.

secure policy for the mining of the sea bed outside the Convention.

Certainly sea bed miners will profit if they conduct deep sea bed mining under the reciprocating regime. The regime omit the controversial provisions of the Convention such as the substantial financial terms, transfer of technology and production limitation control. Because of these potential benefits miners will have greater incentive to develop mining sites. It has been argued that the regime, which include all potential sea bed mining countries, will protect mining investments and provides sufficient legal security to attract huge investment capital. Sea bed miners will have security of tenure on their mine sites vis-a-vis all potential competitors from reciprocating states. However, recognition by a larger group of nations is very important to enhance the security of the miners' rights. If the system attract an additional number of states and accede to the mini-treaty, as Paragraph 13 of the Provisional Understanding invites states to do so, miners will enjoy sufficient security to continue investment in the deep sea bed.

However, profits gained from mining under this regime should be balanced with the costs which might incurred under it.

In the event the regime enters into operation and miners conduct deep sea bed mining under it, serious threats of company boycotts, seizure of assets, attachment of shipment and legal entanglement may be raised.[216]

Moreover, security of tenure of the mine site is not absolute. A permittee can only be guaranteed security of tenure against nationals from the reciprocating states, but he may not enjoy this security if any competing claims occur from any miner of a non-reciprocating state and therefore, an international conflict may be brought about.

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216 Anand, UN Convention on the Law of the Sea and the United States, (1984) 24 Indian J.I.L., p.182.

CONCLUSION

Having examined the legal system of deep sea bed exploitation under two different regimes, some conclusions may be drawn.

With regard to the legal status of the deep sea bed and its resources, the traditional concepts of *res nullius* and *res communis* as well as the rule of "what is not prohibited is not permitted" were rejected as legal principles to govern the deep sea bed. When the new concept of common heritage of mankind emerged as legal principle filling up what was a legal vacuum in the deep sea bed, the principle of the freedom of high seas was considered as improper and inadequate to govern the Area. Different interpretations were given by developed and developing states to the concept of common heritage of mankind. Developed states regarded the concept as a moral theory and a reflection of political aspirations having no legal content. By contrast, developing countries supported the concept as a legal principle forming the basis of any future international regime for the deep sea bed and its resources.

Until the adoption of the Declaration of Principles confirming that the area beyond national jurisdiction and its resources are the common heritage of mankind, there was no law applicable to the deep sea bed and its resources and no claims were expressed by countries for the applicability of other existing regimes or principles.

The vote in favour of the Declaration of Principles means in one way or another that the countries supported the common heritage of mankind and rejected the traditional concepts as legal status of the deep sea bed.

The principle received support in state practice and acquired the necessary *opinion juris* required for its applicability as customary international law. This new principle affirmed that the exclusive right to

the Area and its resources belong to mankind as a whole and not to any individual state or person, natural or juridical.

Since Pardo raised the issue of the concept until the convening of the Third United Nations Convention on the Law of the Sea in 1973, international community made enormous efforts to achieve an agreed international legal regime to regulate deep sea bed mining. Declarations of Principles and many other resolutions[1] contributed jointly to the establishment of the basic principles of the common heritage of mankind and confirmed the overwhelming practice of the international community as a rule of customary international law.

The adoption of the Declaration of Principles by one hundered eight votes to none providing binding guidelines for the elaboration of an international regime based on the common heritage of mankind; the good faith shown by developed states in actively participating in the negotiations of the Third Conference on the Law of the Sea; the inclusion of the principle in Article 29 of the Charter of Economic Rights and Duties of states adopted in 1974 by one hundered thirteen votes to none; the inclusion of certain aspects of the principle in several unilateral legislation such as (the benefits of mankind taking into consideration, particularly the interests of developing states, disclaiming any sovereignty or sovereign rights...etc), all give evidence to the fact that the common heritage of mankind received the necessary state practice and became a rule of customary international law removing the deep sea bed exploitation from the legal regime of freedom of high seas to the common heritage of mankind principle.

The 1982 Convention established an international regime for the deep sea bed whereby resources will be exploited on a common ground

[1] Although they are not legislation and have no legal binding effect, they do at least impose duties of respect and recognition by virtue of their moral force.

and not on an individual basis. It grants both the Authority and state parties to the Convention and private entities the right to exploit the resources of the Area in accordance with the provisions of the Convention. The system of exploitation generally known as the "parallel system" which was agreed to a great extent by developed and developing countries, became unacceptable when the Convention was adopted by some of the developed countries because it embodied some burdensome requirements such as transfer of technology and production limitation control. It embodies the possibilities of co-operation between all states taking into account the interests of developing states. It creates a strong regime of sea bed mining activities under the total control of an International Sea-Bed Authority which have broad discretionary powers to implement the system of exploitation embodied in the Convention.

While the system of exploitation embodied in the Convention was deemed by the majority of states as practical and workable on the one hand, it is considered as defective and deficient by some developed states on the other. Developed states regard the system of exploitation of the Convention as discriminatory and unfair in many aspects.It included an inequality of rights between the Authority' Enterprise and private entities with regard to the right of access to the resources of the Area. For example, the system imposes heavy financial terms for applications and contracts and substantial payments to the Authority to the detriment of developed states industries. However, by including provision in the Convention on the review conference, the situation of inequalities of rights may be changed if the system is found not practically workable. The system of exploitation may well be assessed during the first generation of commercial exploitation and the review conference may prove effective to insert changes in order to have a workable system

acceptable to all states.

The International Sea-Bed Authority will regulate and manage deep sea bed activities through different organs. The Assembly as a supreme organ of the Authority is formal rather than real. Because in practice the Council proved its supremacy as a powerful organ on account of the role it plays in implementing the system of deep sea bed mining. The Enterprise of the Authority enjoys competitive advantages. For instance it is guaranteed financial terms and it is exempted from anti-monopoly clause. However, the viability of the Enterprise as a commercial organ depends to a great extent on the financial and technological contribution of state parties to the Convention, especially developed states.

The system of seabed disputes settlement of the Convention seems workable because it reflects the aspirations of developing and developed countries. The system is so flexible that it does not confer the Sea-Bed Disputes Chamber absolute jurisdiction and competence on all kinds of disputes. The rules of commercial arbitration can be applicable in case any dispute relating to the interpretation and application of contracts where the Authority is one of the parties. Moreover, the workability of the system appears in the competence of the Sea-Bed Disputes Chamber to rule on the applicability of the decisions of the Authority in special cases.

Unilateral legislation justify their compatibility with the common heritage of mankind by including many aspects of the principle such as the benefits of mankind taking into account the needs of developing states. They also argued that they are not in contrast with the Convention because they are designed to be of interim nature to be superseded by the entry into force of the Convention on the Law of the Sea. However, by making reference to the provisions of the legislation one can notice that they incorporate a different system and therefore, are incompatible with the

Convention.

The regime incorporated in the unilateral legislation seems very attractive and favourable for the private industries to acquire great benefits. It excludes the burdensome requirements envisaged in the Convention system such as heavy financial terms, production control, anti monopoly clause and transfer of technology. Therefore, miners will have great opportunity to develop deep sea bed mining and may invest more capital. However, benefits gained from mining under this regime should be balanced with the costs which might be incurred on an international level.

Security of tenure of mine site under this regime is uncertain. A permittee may not have security on his mine site in case any competing claim is raised from a permittee of another state and therefore, an international conflict may occur. This possible situation is stipulated in the German Act in Section 5 (1) 3, which provides that licensees will not be granted in case there is a danger that the development of deep sea bed mining will either "substantially impair the rights of others in their exercise of the freedom of the high sea", or "considerably disturb the foreign relations of the Federal Republic of Germany."

Relying upon unilateral legislation in carrying out exploitation activity, companies would have no real security for their considerable amount of capital investment in deep sea bed mining. As the Group of 77 declared:

> It should be stressed that no investor would have guarantee for his investments in such activities, for the other states in defense of the common heritage of mankind, and no purported diplomatic protection would carry any legal weight whatsoever.[2]

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[2] UNCLOS III. Off. Rec., Vol.XI, p.82.

Moreover, a serious legal problem may confront the unilateral regime on international level. Unilateral exploitation of deep sea bed resources may be challenged before the ICJ. The United Nations General Assembly may request the ICJ to rule with an advisory opinion on the legality of this regime with international law. If the ICJ ruled against unilateral legislation, it is likely that the public opinion of the international community will be influenced and may create hostility.

The regulation of deep sea bed mining needs an agreed universal regime acceptable to all parties of the international community in order to establish an effective legal framework for deep sea bed mining. Therefore, it is of great importance to achieve a legal compromise so as to carry out mining activities in a fair and orderly manner and satisfy all interests of all states for the sake of international peace and public order in the world ocean. In strict sense, the Convention has not yet achieved the universal character, but according to the overwhelming support of the international community to the Convention by acquiring one hundered fifty nine signatures including some developed countries which possess the deep sea bed mining technology (e.g. France, Italy, Netherlands, Japan and Soviet Union), it can be said that the Convention has almost achieved something close to it. Even though the system of exploitation embodied in the Convention, which was accepted as the only compromise between the conflicting positions of the developed and developing states and which was worked out by developed countries, did not satisfy the interests of a few number of states. Efforts should be made to make the system universally acceptable to all states either through negotiations especially under the auspices of the Preparatory Commission on the International Sea-Bed Authority or through the review conference which provides for a review of the system in fifteen years after the earliest commercial production

under the Convention. It is important to preserve the international regime of the Convention which was the result of considerable efforts made by the international community, in order to achieve an effective regime to regulate deep sea bed mining in an orderly manner. Therefore, as Brown said:

> It would be unrealistic to expect the majority of states to abandon the regime painfully constructed in the UN Convention and to acquiesce in its replacement by a new order evolved from the reciprocating states regime.[3]

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[3] E.D. Brown, The Area Beyond the Limits of National Jurisdiction, Vol.2, p. II.851 (1984).

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