



ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΕΙΡΑΙΩΣ
UNIVERSITY OF PIRAEUS

Department of Maritime Studies

Master in Maritime Studies

**‘POLAR REGIONS, HIGH SEAS AND THE
DEEP SEA BED (GLOBAL COMMONS):**

**INTERNATIONAL REGULATIONS AND
POLICIES FOR THEIR MANAGEMENT AND
PROTECTION UNDER THE CONCEPT OF THE
COMMON HERITAGE OF MANKIND’**

Varela P. Theodora

MN15013, 15th circle

Post-graduate thesis that was submitted to the department of Maritime Studies of the University of Piraeus as a part of the obligations for the acquisition of the Master's Diploma with specialization in Shipping

Piraeus,

October 2017

[2]

The author bears total responsibility for the determination of the fair use of the material, which is defined on the basis of the factors below: of the purpose and characteristics of the use (commercial, non-profitable or educational), of the nature of the material he uses (part of the text, tables, images or maps), of the percentage and the significance of the text under copyright, as well as of the repercussions of its use in the market or the general value of the text under copyright.

Copyright © 2017, Theodora P. Varela

University of Piraeus

«The present dissertation was unanimously approved by the Supervising Committee as declared by the ISES of the Department of Maritime Studies of the University of Piraeus according to the Regulation for the Function of the Postgraduate Programme in Maritime Studies.

The Members of the Supervising Committee were Professor G. Samiotis (Supervisor) - Professor G. Vlachos - Professor S. Theodoropoulos.

The approval of the Dissertation from the Department of Maritime Studies does not indicate acceptance of the author's views. »

Abstract

This study examines how proprietary rights have evolved and how they nowadays co-exist in the common goods and, following, how they could be better regulated as to serve the Common Heritage of Mankind concept. The most common phenomenon nowadays, as demonstrated by the United Nations Convention on the Law of the Sea (UNCLOS), is that of the technologically advanced nations taking over the management and exploitation of the commons, reaping solely unilateral benefits. Conclusively, it is argued that sustainable economic development in the commons can be maintained by the capital exporting nations being tied by an improved regime under the auspices of the International Authorities.

Keywords

Common Heritage of Mankind, Global Commons, International Seabed Authority, Deep Sea Bed, High Seas, Arctic Circle, The Antarctica, The Antarctic Treaty, International Law, Law of the Sea

Table of Contents

1. Introduction	7
2. The Common Heritage of Mankind	12
2.1. Evolution of the Concept	12
2.2. The International Seabed Authority	20
3. The High Seas	30
4. The Polar Regions	39
4.1. The Arctic Circle	39
4.1.1. Territorial claims and ownership status	
4.1.2. Recent developments and consequences	53
4.2. The Antarctica	
4.2.1. Territorial claims and ownership status	
4.2.2. Recent developments and consequences	
5. Conclusions	62
Bibliography	

1. Introduction

As matters and seasons progress, peoples and nations are more so often faced with terms and situations that contradict previously commonly held beliefs and the very social and legal structure of both national and the international community. *De facto* standards and treatments are deemed necessary as to cope with cases that are difficult to gain a *de jure* status, a fact that mirrors the international community's inability to undertake prompt and coordinated action.

The UN and more specifically, the 'Division for Ocean Affairs and the Law of the Sea' clearly demonstrate that the steps taken as far as the legal status of the oceans is concerned are rather conservative. In July 2016 the first report concerning the High Seas as an object under the auspices of the World Heritage institution was published. 'World Heritage in the High Seas: An Idea Whose Time Has Come' illustrates the regime under which the high seas and, according to this study, the Polar Regions, are managed should progress. The U.N. Conference on Trade and Development (UNCTAD) has also held a study for the use of deep seabed food and mineral resources for international development.

"The High Seas have outstanding value on the global scale, yet they have little protection," said Dan Laffoley, Principal Advisor on Marine Science and Conservation for IUCN and co-author of the report. "These areas are exposed to threats such as pollution and over-fishing, it is therefore crucial to mobilize the international community to ensure their long-term conservation".

At first, the main legal maxims that depicted the ownership status of the areas at stake were those of 'res nullius' and 'res communis'. *Res nullius* is a Latin term referring to objects that have no master, that are considered as ownerless property and are open to be acquired by the first taker. It is also used for abandoned animals or something that is completely lost. *Res communis*, on the other hand, is used to describe an object that is commonly owned by the whole, and is used mainly as far as the seas, the natural resources and the underground water are concerned. The Institutes of Justinian codified the relevant

Roman law as: “By the law of nature these things are common to mankind - the air, running water, the sea, and consequently the shores of the sea.”

The ‘Corpus Juris Civilis’—the codifying legislation of the emperor Justinian I- and as is commonly known, The Roman Law, has extracted a full set of property laws that are as follows:

- *res divini juris* – objects or spaces that belong to the gods (a concept that at the present finds great effect in space law)
- *res privatae*– any object that was formerly considered as ownerless and that is taken into possession by one or more individuals, corporations or entities
- *res publicae* - government-run and owned navigable rivers, territorial seas or highways
- *res communis* - light and air
- *res nullius* – objects or spaces with no property rights attached either because they are abandoned, like stray animals, or due to the fact that they are not yet acquired.

A common characteristic of both terms is that of the absence of territorial control and sovereignty, be it by a particular state or an entity. The grand difference between them, on the contrary, is, of course, that while in *res nullius* the absence of such ownership is total, in the case of *res communis*, the ownership of the object is held as common in the entirety of peoples. *Res nullius* refers to property belonging to no-one and exploitable by those who wish to and are capable of doing so. The original state of the world is thus synonymous with “unclaimed territory,” allowing states to possess and exercise control over them, should they wish to. The territory involved must be *res nullius* prior to any occupation.

For example, the living and mineral resources of the high seas are *res nullius* and can freely become the property of those who exploit them., while navigation or the laying of submarine cables or pipelines does not imply an appropriation, belonging to everybody and not able to be appropriated and therefore, constitute *res communis*.

From the twentieth century onwards, the sculpture of proprietary law has had a mainly Western stigma. Privatized rights, of both individuals and the States, are being considered as inevitable in the present state of things. In the context of national laws, the state holds solely the role of the supervisor of the economic activities of its citizens in the national level, while,

in the international domain, the established principle clause of national sovereignty allows it to exploit and assume total control of the areas under its authority.

As per the definition of sovereignty by Alan James (1984) as ‘‘the right of jurisdiction in a territory to the exclusion of any other state, determines the ground rules for international relations and international law in general and for the delimitation of boundaries in particular’’, we can clearly see to what extent a nation’s authority lies. A state may acquire territory in five recognized ways. These are, by the occupation of *res nullius*, prescription, conquest, accretion and cession.

The international treaties and other bilateral or multilateral agreements of course pose a certain constraint on the way a State may act and on the activities it itself or the corporations under its jurisdiction may undertake. In the present, property rights have transcended into the concept of the public domain and the common heritage of mankind, a concept that has contributed majorly in the field of space law, the status quo of Antarctica and the contemporary maritime law.

The ‘‘common heritage of mankind’’, often also known as the common heritage of humankind or humanity, on the contrary, is of relatively recent origin and it has thus been expanded to other domains, such as outer space and the Moon, human rights, the Antarctic, human genomes, and plant genetic resources, while, initially, the concept was associated solely with the law of the sea.

The realization that the elements of the planet are finite meant that a simple regime of non-appropriation and common use of those resources - which could be freely appropriated - was not sufficient. Other considerations had to be integrated into the law governing the international system: the need to manage natural resources in a rational way so that they could be transmitted to future generations for their survival and that their benefits are shared equitably among nations.

The international community now views the deep seabed as ‘‘res communis usus’’, ‘‘res communes humanitatus’’ or ‘‘Common Heritage of Mankind’’, stating that the areas of interest are more than not of unilateral use and exploitation rather than just unilateral ownership of the object. Once ownership has been vested in ‘‘mankind’’, no State can assert sovereignty in derogation of that right.

As the right to the exploitation of the global commons could be translated into the reaping of such benefits solely for the good of one nation, it had to be guaranteed that such benefits should be transmitted to the community as a whole and, especially, the nations in need and the Third World countries. It incorporates the doctrines of the ‘res communis usus’ principles while focusing on the equal distribution of benefits.

It is an ethical concept that represents the notion that certain elements regarded as beneficial to humanity as a whole should not be unilaterally exploited by individual states or their nationals, nor by corporations or other entities, but should rather be used under some sort of international arrangement or regime for the benefit of mankind as a whole. They are therefore regarded as 'Global Commons'.

Previously considered as ‘open-access regimes’, they are now viewed as ‘common pool resource regimes’. As George Kent in his work *The Global Predicament: Ecological Perspectives on World Order* put it, the Common Heritage of Mankind principle is a ‘wholly new concept of property rights, a modern alternative to the traditional ideas of exclusive ownership or of free and unlimited access’. It is a fact that, nowadays, the Western legal way of thinking which was based on individualism has shifted towards more egalitarian behaviors. Issues like pollution - and mitigation of its effects - and, in our case, trans-boundary resources and the depletion of the world’s energy sources have deemed the international cooperation as absolutely necessary.

“Special sovereignty areas” (SSAs) and in particular the communal property principle of the CHM are put under pressure by the need for greater private economic development. CHM regimes are being challenged by private sector representatives, a subset of developed nations and emerging markets alike.

The negotiating histories of the Moon, Antarctica, and Law of the Sea Treaties reveal the principle of the "common heritage of mankind" in three distinct phases of implementation. Two multilateral treaties have incorporated the common heritage principle: the 1979 Moon Treaty and the evolving Law of the Sea Treaty. This principle is conspicuously absent, however, from the 1959 Antarctic Treaty, which was supposed to embody similar goals, and also from the Arctic Council and the discussions concerning the Arctic in general.

The special legal nature of the deep seabed, the Arctic, and Antarctica creates complex intersections of law, politics, economics, and technology, whereas the resource exploitation issue has been especially controversial.

Political analysts and international organizations have also proposed that a range of other, non-common space resources that are essential to humans and of widely shared interest should be governed under a Common Heritage of Mankind regime. Such resources include, for example, cultural heritage, rain forests, genetic resources (even when found within national boundaries), and food. However, the idea of applying the CHM principle to resources within the territorial jurisdiction of states has proved controversial, and the principle has gained ground only with respect to some common space resources.

For the concept to become established as law and to be regarded as binding, it needs to be conceptually and legally defined, as well as incorporated in bodies of law, and, in our case, international treaties. International law is premised on the presumption that binding rules are expressions of the free will of States. The corollary rule is that restrictions on their independence cannot be presumed binding on them.

The research at hand will proceed to the analysis of the CHM principle, its evolution to this day and the scope of the principle as international law. It will then describe the current trends in the ownership status of the high seas and the Polar Regions, with an analysis of the numerous political problems which must be overcome while it will examine whether these two domains are able of being governed by the CHM regime as a tool for global resource management in realistic terms. Finally, prospects for future application of the principle will be presented in which the common heritage principle can be applied meaningfully.

2. The Common Heritage of Mankind Principle

2.1. Evolution of the Concept

The concept of the Common Heritage of Mankind is a rather ambiguous one and a great mass of scholarship has been devoted to the subject, especially to the heated debate of whether it constitutes a legal or an ethical notion. The first ever entry of the concept of the, else known as, ‘common heritage of humanity’ can be found after the Second World War and the need of the new powerful, sovereign states to declare their territory and their boundaries of authority, mainly through the declaration of their territorial waters and their continental shelf. It calls for communal sovereignty and management of areas designated as Global Commons.

The beginning of the narrative started when the Commission of International Law was called by the UN’s General Assembly to convene on the legal status of the sea and its codification. After it concluded its workings in 1956 and after it had completed a code on the law of the sea, it requested from the GA to summon an International Convention in order to work on a Treaty for the Law of the Sea.

In 1958, this convention turned into a reality. 86 states and 16 international organizations met in Geneva and signed five treaties for the law of the sea, the most prominent one being that for the continental shelf at the extent of 200 nautical miles. The nations would have the right of exploitation to the point where the sea depth would allow it. This created a de facto advantage for the industrialized and technologically advanced nations, as they were given the opportunity to reap profits from the greater seabed and the ocean floor. The US, for instance, proceeded to issue mining permits along the shores of California in depths that surpassed the 1300 meters.

No mention was made at that point for the status quo of the sea and ocean bed. What succeeded was an unreasonable and avid over-exploitation of the natural resources underlying in the oceans' depths by the developed countries. As a result, the underdeveloped countries grew worrisome as they forecast that the area at stake would eventually be appropriated by the wealthy nations and that they themselves would be left at the margin of the events. As their number was growing – due to the racing de-colonization rates - so was their power and their gravity and power in the international community. They were, actually the voice of conscience that established the principle under study.

There is some debate to the actual origins of the concept. Some maintain that a similar notion was actually suggested ten years before the notorious *Pardo Declaration* in 1957, by the industrialized nations themselves under the auspices of the 'Commission to Study the Organization of Peace'. The suggestion was that the sea and ocean bed that exists beyond any national sovereignty should be put under the control of the UN. The motives behind the proposal were that of the fair distribution of the marine wealth, the need for cooperation and avoidance of any new competitiveness and, finally, the discovery of new economical resources for the financing of the Organization.

A year later, the President of the United States Lyndon Johnson proceeded to state that: "We believe that, under no circumstances shall we allow the prospect of the abundance of the minerals and the resources contribute to the birth of a new colonial competition among the maritime states. We are obliged to be vigilant, in order to deter a, literal, charge on the grounds and subsoils that exist below the open seas. We ought to react in a way that the depths of the sea are proclaimed and maintained as a 'Common Heritage of Mankind'."

The principle was motivated by reports that demonstrated the abundant resources that existed in the part of the sea under study, as well as the fear that the wealthy countries that possessed the technology needed would unilaterally exploit them against the interests of the poorer ones. It actually gained prominence over the proposal of Arvid Pardo, the Maltese ambassador to the United Nations, as was delivered in his speech at the United Nations General Assembly meeting in November 1967. This speech, which provided the most comprehensive and complete proposal for this notion, called for the deep seas and the greater seabed and the resources therein, which exist beyond any jurisdiction, to be declared common heritage of humanity.

The Maltese Ambassador, one of the founders of the concept under international law, has claimed that it challenges the "structural relationship between rich and poor countries" and amounts to a "revolution not merely in the law of the sea, but also in international relations". His infamous thesis has even been named as the *Pardo Declaration*. It was the very proposal that set the discussion for the deep sea-bed on a global, rather than national, basis.

His proposal in the General Assembly was the following: "The bed of the sea and the oceans, along with their underground at the open sea, is destined for exclusively peaceful purposes, exists beyond the realm of today's national jurisdictions and their sources are open to exploitation for the sake of all humankind". This groundbreaking innovation tried to reconcile the benefits of all nations and merit, of course, mainly the Third World countries, that were in whatsoever no position to develop mining facilities and activities by themselves.

Already in 1966 the Economic and Social Council had asked the Secretary-General of the United Nations "... to attempt to identify those resources now considered applicable for economic exploitation, especially for the benefit of the developing countries ...". This idea, however, found its initial expression in Resolution 15 of the World Peace through Law Conference in July 1967, which was phrased as follows: "Whereas, new technology and oceanography have revealed the possibility of exploitation of untold resources of the High seas, and the bed thereof beyond the continental shelf; and, more than half of mankind find itself underprivileged, underfed and underdeveloped; and, that the high seas are the common heritage of all mankind [the Conference] resolved that the World Peace through Law Center recommends to the General Assembly of the United Nations the issuance of a proclamation declaring that the bed of the sea appertain to the United Nations and are subject to its jurisdiction and control".

Pardo more clearly summed up his position before the Parliamentary Assembly of the Council of Europe on 3 December 1970: "Traditionally, international law has been essentially concerned with the regulation of relations between states. In ocean space, however, the time has come to recognize as a basic principle of international law the overriding common interest of mankind in the preservation of the quality of marine environment and in the rational and equitable development of its resources lying beyond national jurisdiction. This does not imply disregard of the interest of individual states, but rather the recognition of

the fact that in the long term these interests can be protected only within the framework of a stable international regime of close co-operation between states.’’

The 1967 Maltese proposal led to a number of important developments, including the 1970 U.N. General Assembly Declaration of Principles Governing the Sea-Bed and the Ocean Floor and the Subsoil Thereof, Beyond the Limits of National Jurisdiction. This declaration set out the legal principles needed to implement the notion that the seabed and its resources are the CHM, and it helped create consensus for the negotiation of the new law of the sea convention: UNCLOS III.

Pardo's innovation was that the global commons, apart from being openly accessible to all (in reality, such case does not exist as not all states have the same ability to access and exploit far off existing resources), would also be governed by an internationally agreed body of law which would manage and fairly distribute the revenue coming from these resources, with special focus to the financial assistance to Third World countries. At the time, it was the first instance that a comprehensive proposal was addressed, as far as not only the surface, but also the seabed and the water column, were concerned, while it was, generally, the first codification of a property rights regime that transcended national sovereignty.

There have been debates on whether this concept is a legal one or merely a political or moral idea. Further, there have been disputes as to whether it connotes communal ownership or merely joint management of global commons that are considered to be parts of the Common Heritage. Based on the corpus of international law as it currently stands, it promotes that resources cannot legally be appropriated by one individual nation or the other but rather be commonly owned and managed by all States, while the regime's most important characteristics being that of peaceful use, rational management and conservation. However, let us not forget that the enforcement of the provisions is arguably impossible if all States are not parties to the treaties implementing the principle.

Initially, the ‘‘Group of 77’’, the advocates of the developing countries, supported an international exploitation regime that would be mandated by the common heritage principle, while the developed countries would only accept a limited registry system with States controlling their own operations. The US promoted the idea that the area extending to the edge of the continental margin held in trust by each adjacent coastal State. Revenues from the trusteeship area would be apportioned between the trustee State and an international seabed

resource authority, which would utilize its portion for "mankind", particularly in the developing countries.

In 1970, United Nations General Assembly Resolution 2749, the Declaration of Principles Governing the Seabed and Ocean Floor, was adopted by 108 nation states and stated that the deep seabed should be preserved for peaceful purposes and is the "Common Heritage of Mankind." The principles of the CHM concept were embodied in this Resolution, which provided that: All exploration and exploitation would be governed by an international regime and would be "carried out for the benefit of mankind as a whole.., taking into particular consideration the interests and needs of the developing countries." The regime itself would ensure "orderly and safe development and rational management of the area and its resources... and... equitable sharing by States in the benefits therefrom." Furthermore, the Resolution guaranteed from the beginning that the appropriation of the sea-bed area, as well as the exercise of sovereignty or of sovereign rights over any part thereof was prohibited.

In 1982, the Common Heritage of Mankind concept was stated to relate to "the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction" under Article 136 of the United Nations Law of the Sea Treaty (UNCLOS). From the initial and rather wide-ranging formulation of the concept in relation to the deep seabed beyond national jurisdiction (the Area), under the Law of the Sea Convention (LOSC, 1982) the Common Heritage doctrine gained a more complete and solid form. Part XI of UNCLOS embodies the deep seabed provisions. The "Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea" was signed in 1994, amending the original Convention.

It refers to the seabed as the 'Area', which is defined in art 1 paragraph 1 as 'the seabed, ocean floor and subsoil thereof, beyond the limits of national jurisdiction'. Article 133 establishes that part XI relates to polymetallic nodules. The Area is governed by the common heritage of mankind notion. This deters states from setting claims or exercising 'sovereignty or sovereign rights' and natural or juridical persons 'appropriating any part thereof.' Article 140 paragraph 1 states that all activities must be undertaken for the benefit of mankind as a whole, without regard to whether states are coastal or landlocked, taking into 'particular consideration the interests and needs of developing States'. The Area should be used by the States solely for peaceful purposes. The International Seabed Authority (ISA) is given

authority to act on behalf of ‘mankind as a whole’, in whom the resources of the Area are vested.

As per Article 136: ‘‘The Area and its resources are the common heritage of mankind.’’ Following to Article 137 that concerns the Legal status of the Area and its resources sets the basis for the principle of the prohibition on the acquisition of the deep seabed which, along with Article 1 of Annex III that clearly provides that title to the minerals depends upon whether the recovery was undertaken in accordance with the Convention:

1. 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.

2. All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act. These resources are not subject to alienation. The minerals recovered from the Area, however, may only be alienated in accordance with this Part and the rules, regulations and procedures of the Authority.

3. 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.

Paragraph 3 has to be read not only as a confirmation of existing international law but as a State obligation which excludes any use of the sea-bed area except when carried out in accordance with Part XI of the Convention. It should be emphasized that the establishment of an international organization empowered with a resource-orientated jurisdiction was most noteworthy.

The use of the Seabed for peaceful purposes principle is included in the phrase ‘peaceful purposes’ as used in article 141 of UNCLOS where it is stated 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’.

Just as a point of interest it should be mentioned that according to the original common heritage concept there was no room for the establishment of exclusive economic rights of

coastal States and for the enlargement of the continental shelf area as enshrined in the Convention on the Law of the Sea. As the Treaty was voted upon as a ‘package deal’, compromises needed to be made as to achieve a common ground for negotiations.

At that time, the developed states were in favor of the approach of the US, which sought an international agreement prohibiting the emplacement of weapons of mass destruction on the seabed and ocean floor, beyond a three nautical mile band. The US thought that complete demilitarization was not verifiable. The developing states favored the view of the Soviet Union, which proposed a complete demilitarization of the seabed, beyond the 12 nautical mile limit.

The result was article 1(1) of the *Emplacement Treaty*, which provides that:

‘The States parties to this Treaty undertake not to implant or emplace on the seabed and the ocean floor and in the subsoil thereof beyond the outer limit of the seabed zone, any nuclear weapons or any other types of weapons of mass destruction as well as structures, launching installations or any other facilities specifically designed for storing, testing or using such weapons.’

It is important to bear in mind the distinction between the definitions of Area and High Sea. The Area is defined as the sea bed and ocean floor beyond the limits of national jurisdiction (deep seabed, the water column and the subsoils). The water surface above the Area is High Sea. While the latter is governed by principles of the freedom of seas, the Area has been declared as the common heritage of mankind.

It is vital at this point that we highlight the social dimension of this policy. Although it commenced as though the exploitation of the seabed was a ‘common responsibility’ –and, therefore, a common right- concept, in the end, it clearly favored a part of the states. Payoyo, in his classic book on the law of the sea ‘*Cries of the Sea: World Inequality, Sustainable Development and the Common Heritage of Humanity*’, maintains that the principle, as stated in Part XI of the Law of the Sea Treaty, should favor the developing nations substantially, and not in some ‘affirmative action’ manner.

The ‘Common But Differentiated Responsibilities principle’, as stated in UNFCCC article 3 paragraph 1 and article 4 paragraph 1¹, actually evolved and gained substantial

ground through the provision for the Common Heritage of Mankind. Let us repeat that one of CHM's main provisions is that of the distribution of benefits gained to all states, regardless of each state's participation in resource extraction, as to avoid phenomena such as the first-come-first-served rule, as countries with superior technological capacity claimed a 'right of access' to resources over developing countries.

The original provisions relating to the Equitable Sharing of Benefits of deep seabed activities were contained in article 160(2)(f)(i) of UNCLOS: It obliges the Assembly to issue rules on the equitable sharing of benefits, taking into particular consideration the interests and needs of the developing States and peoples who have not attained full independence. The principles are also contained in Article 140 of the Convention on the Law of the Sea - the activities in the seabed area should be carried out for the benefit of mankind as a whole taking into particular consideration the interests and needs of developing States. The limits of these principles will only become clear when distribution commences on a case-by-case basis. As for now, there has been no juridical consideration of the guidelines for the distribution of benefits.

The developing countries, on the other hand, held that the structure of the regime to be elaborated was to be dominated by the element of distribution. They wanted to make sure that all States had actual and direct equal benefit from the use of the sea-bed which was the common heritage of mankind, regardless of their participation in the operations themselves.

The industrialized countries, principally the United States of America, concentrated on the preferential treatment aspect. They accepted the idea that royalties should be levied upon deep sea-bed activities and revenues paid to developing countries. However, they regarded those revenues as being part of development aid. They vehemently supported a liberal deep sea-bed mining regime which provided for a loose framework and contained only those restrictions necessary to incorporate deep sea-bed mining into the traditional freedoms of the

1."United Nations Framework Convention on Climate Change" (PDF, UNFCCC. 1992, p. 4, retrieved 24 September 2016: 'The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof'.

high sea. They apparently argued on the basis of Article 2 of the Geneva High Seas Convention.

We should also strike out one last item regarding the status of the sea-bed area: It is noteworthy that instead of "all States", "mankind" has been named the beneficiary. It therefore declares as potential beneficiaries of the utilization of the sea - and this should be regarded as a logical conclusion to be drawn from the term "mankind" - also Peoples who have not attained full independence or other self-governing status.

However, the replacement of States by mankind would necessitate the establishment of an international organization vested with the legitimacy to represent mankind as such without the interposition of States. According to the Convention on the Law of the Sea such a conclusion cannot be drawn. Article 157 paragraph I definitely sorts this assumption out: "the Authority is the organization through which States Parties shall organize and control activities in the Area".

Let us at this point highlight that despite support from the majority of states, Canada has signed both *UNCLOS* and the *1994 Agreement* but has not ratified either. The US has not signed or ratified *UNCLOS* and has signed but not ratified the *1994 Agreement*. Let us also point out that the *1994 Agreement* has not resolved the fundamental differences between the interpretation of the developed states and that of the developing states, but has solely set the management regime. As such, the elements of the common heritage of mankind principle have not yet been affirmatively established.

2.2. The International Seabed Authority

In effect, the sea-bed, which under the Geneva law of the sea is an area beyond national jurisdiction, was placed by the Convention on the Law of the Sea under the jurisdiction, though limited, of an international organization.

When Malta submitted its Draft Ocean Space Treaty, the Authority preferred held only regulatory and supervisory functions. Its purpose was to ensure that deep sea-bed mining was carried out in accordance with the new regime, and the Draft therefore proposed the establishment of an Authority which fitted into the normal framework of international organizations.

On the contrary, the developing countries generally preferred a strong Authority with wide jurisdiction and sweeping management powers. On the other hand, the developed countries envisioned, at most, a licensing and registry agency with minimal control over States' activities in the seabed area. This stance disturbed the Group of 77, whose mining operations were largely controlled by large industrial corporations.

The United States, the country with the most significant technological level in the field of mining, stated it would accept an arrangement whereby the Enterprise would commence mining operations concurrently with those of States and private parties, but only on the condition that the States and the private entities would operate on equal footing with the Enterprise.

Compromise was achieved with the amendment of article 151 that ensured participation of States in all seabed activities while leaving organization and control largely to the Authority. This provision struck the needed balance between guaranteed access and strong international control, and outlined a detailed procedure for the transfer of technology to the developing countries.

The Eighth Session of UNCLOS assured the following crucial elements: i) cooperation between the Authority and States Parties in transfer of technology to the Enterprise and to the

developing countries, ii) effective participation by the developing countries, iii) safe development and rational management policies, and iv) technological assistance from the industrial States.

The establishment of the International Seabed Authority actually concluded in 1994, when the agreement concerning the part XI of UNCLOS was reached. The 1994 Implementation Agreement and part XI are to be interpreted and applied as a single core, with the 1994 Agreement prevailing where inconsistencies arise. Any subsequent ratification of UNCLOS also binds a state to the 1994 Agreement. Further, states cannot accede to the 1994 Agreement without also adopting UNCLOS.

The 1994 Agreement had the effect of modifying the provisions of UNCLOS to which the developed states objected. These included the mandatory transfer of technology, training of personnel and the decision-making process of the Authority.

As per its own definition: “The International Seabed Authority is an autonomous international organization established under the 1982 United Nations Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea. The Authority is the organization through which States Parties to the Convention shall, in accordance with the regime for the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction (the Area) established in Part XI and the Agreement², organize and control activities in the Area, particularly with a view to administering the resources of the Area. ”Its headquarters are located in Kingston, Jamaica, at the former United Nations Kingston Office for the Law of the Sea.

Articles 143–145 of part XI of UNCLOS III provide that “The ISA must ensure the equitable sharing of financial and other benefits arising from activities in the Area, taking into particular account the needs and interests of developing states and others. Promotion of research, transfer of technology to developing states and protection of the marine environment’s ecological balance are all important functions of the ISA.

2. 1994 Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982.

The Authority's mandate, general provisions and instruments can be found in articles 156-158 of Part XI. The organization's main responsibility as stated in those articles is that of the management and control of the activities taking place in the Area, in order to better regulate and exploit its resources. All of the member States that signed the Treaty become *ipso facto* members of the Authority, while they are all held as equal in their rights and responsibilities towards it. The International Seabed Authority in its final form would select mining applicants and exercise broad administrative powers.

The Authority is comprised of the Assembly, the Council, the Finance Committee, and the Secretariat, while two assistive instruments - the Legal and Technical Commission - were created. The *Enterprise* is the means by which the Authority executes the projects undertaken in the Area.

The Assembly consists of the entirety of the members of the Authority; each one of them has a representative who can be accompanied by his counselors. It convenes in regular basis but also on irregular conventions when it chooses to do so or when it is called upon by the Secretary General after an application by the majority of the Council. It has adopted its own mandate, while at the beginning of each regular Convention, it elects its President and the Board Members that remain in place until the next one. Every Member State deserves one vote and the consensus is considered by the majority of the parties.

The Assembly is the superior instrument of the Authority. It defines its general policy lines regarding the entirety of the subjects under its domain. It shall, among others:, examine and approve regulations a procedures regarding the unbiased participation of all Members to the economic benefits gained from the exploitation of the Area, to examine and approve the yearly budget of the Authority as submitted by the Council, to examine the periodical reports submitted by the Council and the assistive organs, to define the financial contribution of each Member in the administrative budget of the Authority – until it accumulates its own revenues as to cover its own expenses. It has the right to elect the Board Members, elect the Secretary General between the candidates proposed by the Council, elect the Board Members of the Enterprise along with each Director, and establish assistive instruments that are considered as necessary for the facilitation of its function.

Furthermore, it is in the Assembly's hand to provide with research projects and recommendations for the promotion of the international cooperation as far as the activities

held in the Area and the further codification of the international law are concerned, to decide which of its instruments shall entertain a certain subject or motion, to establish a compensatory system or other means of financial assistance and, finally, to decide upon the rights and the privileges granted to its Members.

The Council is the executive organ of the Authority; it defines the specific directions on every subject under the Authority's jurisdiction in the Area according to the dictates of the Assembly. It consists of 36 members, who are elected on the basis of two criteria: an economical and a geographical one.

The side authorities of the Council (as defined in article 162, paragraph 2) are those of the proposal of a candidacy list regarding the Secretary General to be, the Board members and the Director of the Enterprise, while also electing its own President. It drafts recommendations on every subject, be it the draft of the budget or the withdrawal of membership. Furthermore, it gathers all payment towards the Authority; while it also takes actions should a matter needs to be addressed to the Court. Finally, it issues regulations and decisions on urgent matters, while also controls and supervises the activities taking place in the Area.

The Secretariat consists of the Secretary General and the staff and is divided into four offices: the Office of the Secretary General, the Office of Legal Affairs, the Office of Administrative Services, and the Office of Environmental Management and Mineral Resources.

The Secretary General is elected every four years from the Assembly and has the right to reelection. He is the superior administrative officer of the Authority and acts with this jurisdiction in all the conferences of the assembly, the Council and the assistive instruments. He submits to the Council a yearly report regarding the activities of the Authority. Among others, he comes into further contact with the other international organizations and officially acknowledged Non-Governmental Organizations, whose representatives have the possibility to gain observer status in the meetings of the instruments of the Authority. Their reports regarding certain issues of interest shall be handed to the Members, under the Secretary's disposal.

The Enterprise is the actual direct undertaker of the activities taking place in the Area, activities that include the transport, the management and the commercialization of the mineral

resources. The Enterprise, according to article 170 and the Appendix IV, operates under the directives of the Authority and under the policy that has been defined by the Assembly. Nonetheless, its operation is autonomous, as no provision of the Treaty deems her responsible for the obligations of the Authority, as well as the Authority is not held responsible for the actions of the Enterprise.

Her Board consists of 15 members elected by the Assembly every four years, under the criterion of the fair geographical allocation. They have complete autonomy and jurisdiction over their domain. They hold one vote, with the majority being that of 2/3 for the decision procedure via consensus. Her main responsibility is that of the drafting of working plans and projects that are later submitted to the Council. Moreover, it submits production authorization applications, while also determining the terms and conditions for the cooperation agreements. Finally, it approves the yearly budget of the Enterprise. The Director of the Enterprise is her legal representative, is elected for five years and is responsible for her organization and managements, while also participating in her and the Council's meetings without the right to vote.

It functions under the "Mining Code" which is the whole of the comprehensive set of rules, regulations and procedures issued by the Authority to regulate prospecting, exploration and exploitation of marine minerals in the international seabed Area. These regulations include the forms necessary to apply for exploration rights as well as standard terms of exploration contracts. The complete set of these regulations will form part of the Mining Code together with recommendations by the Authority's Legal and Technical Commission for the guidance of contractors on the assessment of the environmental impacts of exploration for polymetallic nodules.

National or private enterprises may also obtain, in accordance with a rather complicated procedure and under strict conditions, the right to explore and to exploit the resources of the Area. The main principle is that the revenues from exploitation of the Area should be shared inside the international community with special emphasis given to the needs of the developing countries. Since July 2011, a total of 17 exploration contracts have been signed with the Authority, 3 approved plans of work are to be signed in the form of contracts and 1 new application was approved in July 2016.

A common point of criticism of the Authority is that, through the Implementation Agreement of 1994, it passed under the control of the industrialized nations, with the entry of the private sector to the resources of the seabed, the ocean floor and its subsoil, inhibiting also dialogue as far as the sustainable development is concerned. It was debated as to if an institution like the Enterprise contradicts the very essence of the Common Goods, while promoting the concepts of the industrialization and privatization. Operation-wise, nevertheless, the existence of the Enterprise shall not impede the proceedings and lead the operations to a standstill, even with the prior authorization and the bureaucratic procedures that must ensue.

On the other hand, the US was opposed to the original system of decision-making as it 'unfairly and unnecessarily granted a disproportionate voice to developing countries that have little or no investment in seabed mining operations'. Other developed states shared this view. The resulting shift in the managerial regime set out by the 1994 Agreement was the result of this opposition, as it altered the relationship between the Assembly and the Council, by providing that 'general policies shall be established by the Assembly in collaboration with the Council'. Let us not forget that the US is the sole country with adequate expertise and say in the field.

Furthermore, though it purports to encourage rational exploitation, the common heritage doctrine severely restricts mineral-gathering activity. Some industrial States have argued that such exploitation will not occur unless there is incentive to mine in the face of tight international regulation and forced sharing of benefits, which they fear will render mining unprofitable. Also, "resources" are limited to "solid, liquid or gaseous mineral resources in situ in the Area at or beneath the seabed, including polymetallic nodules, which, however, are exceptionally rich in metals including iron, zinc, copper, silver, and gold.

Developed states and commercial interests favored exploitation by private enterprise conducted under licensing arrangements. They view the element of equitable sharing of benefits as a potential impediment to investment and the use of market incentives, e.g., property rights, to achieve economic and environmental benefits.

Finally, as a means the interests of all parties, Article 153 paragraph 2 states that deep sea-bed mining may be carried out only by the Enterprise of the Sea-Bed Authority and by States Parties or entities - the latter only in association with the Authority. In other words,

deep seabed mining has not been reserved entirely, as proposed during the negotiations, to the Enterprise, creating a, so-called, parallel system.

As to protect trade, the Sea-Bed Authority is bound to enter commodity agreements which are used as to stabilize the trade on commodities. Secondly, the Convention provides for the limitation of production of minerals derived from the sea-bed so that sea-bed mining may only produce a part of the increase in world demand in nickel. Thirdly, those States which suffer adverse effects in their export earning or economies caused by activities in the Area will receive compensation.

Furthermore, Article 6 Annex III provides for an antimonopoly clause as to ensure that deep sea-bed mining should not be dominated by some States. The idea receives even better expression in Article 7 paragraph 5 of Annex III according to which: ‘‘the selection with respect to the production authorization shall be made taking into account the need to enhance opportunities for all States Parties, irrespective of their social and economic systems or geographical locations so as to avoid discrimination against any State or system, to participate in activities in the Area and to prevent monopolization of such activities’’. Contractors with the Authority have a legal obligation to provide and fund training opportunities (Contractor Training) for trainees from developing States and the Authority.

One of the most basic provisions for the protection of the equality of the Parties is also that of the transfer of technology is Article 144 paragraph 3 as it obliges the Authority and States Parties to cooperate in promoting the transfer of technology so that all States Parties may benefit therefrom. Moreover, according to subparagraph (a) the Authority is supposed to develop programmes for the transfer of technology to the Enterprise and to developing States - and not all technologically less developed States - and it shall under subparagraph (b) foster measures directed towards the advancement of the technology of the Enterprise and the domestic technology of developing States.

The Sea-Bed Authority holds also the right to request the transfer of technology to the Enterprise from those States or entities engaged in deep sea-bed mining according to Article 5 Annex III. In the event of the Enterprise being unable to obtain appropriate technology to commence the recovery and the processing of minerals - in all other cases only technology on the exploration and exploitation is covered - those States involved in deep sea-bed activities or having access to relevant technology are obliged to consult and to take effective measures

so as to ensure that such technology is made available to the Enterprise (Article 5 paragraph 5 Annex III). Apart from that, Article 144 creates a general State obligation to cooperate with the Authority in order, to develop programmes for the transfer of technology to the Enterprise.

Apart from these clauses that guarantee the provision of the mining technology required for the undertaking of operations, the Enterprise enjoys immunities and privileges in the territories of the States Parties and may even be exempted from direct and indirect taxation. This again constitutes a valuable privilege against the States or corporations involved in deep sea-bed activities. That deep sea-bed mining carried out by the Enterprise will not fall behind activities undertaken by States and entities is also guaranteed by Article 151 paragraph 2(c) and Article 7 paragraph 6 Annex III which both provide for a preferential treatment of the Enterprise with respect to the production authorization.

Another point of criticism is that, although the Assembly is the only organ in which all states can participate (and in which the voting system allows for equality of power), when and where both organs have competence, the Council initiates policies. The Assembly is left with only a residual power to return decisions to the Council. The imbalance of power between the Council and the Assembly results in states not being able to advocate interpretations of provisions that are likely to benefit them. An additional provision, that the state with the largest economy in terms of GDP is always on the Council, guarantees that the US has an input on the Council.

Either way, the elements that mostly characterize all CHM regimes are those of the clearly defined boundaries (as to be able to define the Areas to enter into the status of the CHM regime), the existence of operational rules that are congruent with local conditions, the share of such operational knowledge to all parties, the representation of all users, the creation of nested enterprises, the monitoring of the activities undertaken and the imposition of graduated sanctions (as used in all internationally agreed regimes as to ensure adherence).

In conclusion, even if there is no concise definition of CHM, the core principles of the common heritage principle as initially reflected in the deliberations of the Sea-Bed Committee and the Third UN Law of the Sea-Conference are those of:

- The principle of non-appropriation: No state or person can own common heritage spaces or resources. They can be used but not owned, as they are a part of the

international heritage (patrimony) and therefore belonging to all humankind. This protects the international commons from expanding jurisdictional claims. When CHM applies to areas and resources within national jurisdiction, exercise of sovereignty is subject to certain responsibilities to protect the common good.

- The active and equitable sharing of benefits (including financial, technological, and scientific) derived from the CHM. This provides a basis for limiting public or private commercial benefits and prioritizing distribution to others, including and emphasizing on developing states (intra-generational equity between present generations of humans).
- The reservation of CHM for peaceful purposes
- The use of common heritage shall be carried out in accordance with a system of cooperative management for the benefit of all humankind, i.e., for the common, global good. This has been interpreted as creating a type of trustee relationship for explicit protection of the interests of humanity, rather than the interests of particular states or private entities.
- The transmission of CHM to future generations in substantially unimpaired condition (protection of ecological integrity and inter-generational equity between present and future generations of humans).

Our study will further analyze whether these elements are met in the regions under examination.

3. The High Seas

When we refer to *the sea*, then we are speaking of the “inseparable superficial mass of salt water that covers the 2/3 of our planet”. “The notion of the sea is a general one, that is divided in smaller categories as to conform to the implementation sources of the national law”³. The global waters are generally divided into a number of principal oceanic areas that are delimited by the continents and various oceanographic features.

It is essential that we first define and differentiate the meaning of the ocean and a sea. The oceans are characterized by their communication with the other oceans – both on the surface but also on the underground-, their expanded territory, by their high average depth of waters and, finally, from their shores, that are actually the continents themselves, the one far away from the other as they are. Namely, we have the Pacific Ocean (stretching to a surface of 180 millions square kilometers), the Atlantic Ocean (160 millions) and the Indian ocean (75 millions).

At this point, we shall point out that the above mentioned ocean characteristics could also be used as far as the Arctic sea is concerned. In the past, it was in fact known as the Arctic ocean, however, despite the grand depth of its waters (circa 4300metres), the fact that it is in contact with three continents and that its surface stretches to 14 millions square kilometers, is does not communicate vastly with the Atlantic and more so, with the Pacific ocean and, consequently, it is not considered an ocean. As for the sea of the Antarctic, it is the point where all the other three oceans meet and so is it not considered an ocean on its own accord.

Moving onto the seas, their surface is understandably a lot smaller than that of the oceans, and they by no means demonstrate the characteristics that we marked above. They, on

3. Definition by the French George Gidel in his classic book ‘*Le Droit International Public de la Mer: Le Temps de Paix*’.

their own behalf, are divided in four categories: the enclosed seas – that were part of the greater open ocean in the antiquity and that are now isolated within the continents-, the internal seas –that are also linked to the seas through straits-, the Mediterranean seas –that are located between a continent and a block of islands and that communicate with the oceans via canals-, and, finally, the coastal seas –that are found at the shores of the big oceans.

The high seas in maritime law are, by definition, “all parts of the mass of saltwater surrounding the globe that are not part of the territorial sea or internal waters of a state” and where "no State may validly purport to subject any part of them to its sovereignty." They are an area of territory that is not subject to legal title of any state, as stated in Article 2 of the Geneva Convention on the High Seas and Article 89 of the 1982 Convention on the Law of the Sea.

Freedom in the high seas creates an open access regime allowing for its laissez-faire use. The few restrictions that exist serve only to protect the interests of other states and their exercise of free use. In that sense, this principle is identified in the law of the sea as *res communis*, which allows for the general exploitation of resources that are available in such abundance or are so remote that no significant conflicts among current or future exploiters are expected.

The global or world ocean, as the interconnected system of the Earth's oceanic (or marine) waters that comprise the bulk of the hydrosphere, is a classic global commons. They also referred to as international waters or trans-boundary waters. Freedom of the high seas is secured through the UNCLOS in Article 89 stating the invalidity of claims of sovereignty over the high seas:

“No State may validly purport to subject any part of the high seas to its sovereignty.”

The Law of the Sea is a body of public international law governing relationships between national entities in respect to navigational rights, mineral rights, and jurisdiction over coastal waters. Maritime law, also known as Admiralty law, is a body of both domestic law governing maritime activities and private international law governing the relationships between private entities which operate vessels on the oceans. It deals with matters including shipping, marine navigation, marine commerce, sailors, and the transportation of passengers and goods by sea.

At first, a long debate ensued between those who believed that the high seas did not belong to anyone, and thus constituted a *res nullius*, and those who believed them to be a *res communis*, belonging to all nations. In practice, however, there was general agreement that the high seas could not be appropriated by any nation and that they could be freely used by all nations.

The doctrine for the freedom of the seas was one of U.S. President Woodrow Wilson's Fourteen Points proposed during the First World War. Its creation goes back in 1609 to the Dutch jurist Hugo Grotius himself. The *mare liberum* doctrine declares that the high seas are not subject to any national sovereignty and that they may only be used for peaceful purposes. It did not, however, become a commonly accepted principle of the international law until the 1900's. It was then when the great maritime and commercial powers of the era promoted it for their own ends, under the context of the laissez-faire economic theory. The doctrine nowadays includes freedom of submarine cables and pipelines, overflight of aircrafts, navigation and fishing.

By the second half of the 20th century, serious conflicts among the nations were caused, as the demands for increased security and customs zones, for conservation and exploitation rights of maritime resources, existing in continental shelves, for exclusive off-shore fishing right, grew.

Confusion as to what constituted a "free good" further complicated the distinction between the seas themselves and some of their resources. While navigation or the laying of submarine cables or pipelines does not imply an appropriation, derivative goods from fishing and related activities belong from the moment of capture to the fisherman.

The first United Nations Conference on the Law of the Sea, convening in 1958 at Geneva, attempted to codify laws regarding the high seas but failed to do so and resolve issues as the maximum permissible breadth of the territorial sea that is subject to national sovereignty. This brought about the summoning of a second conference in 1960 at Geneva and a third one beginning in Caracas (1973) and later convening in Geneva and New York City.

The most vital breakthrough on the matter of the ownership status and status quo of the high seas was PART VII of the United Nations Convention of the Law of the Sea (UNCLOS),

drafted on December 10th 1982 in Montego Bay, Jamaica and ratified by 168 parties. It entered into force in 1994 upon deposition of the 60th instrument of ratification and after the “Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea” as an amendment to the original Convention of 1982 (see chapter 1 for the Part XI provisions as far as the deep seabed is concerned). The Convention was rendered open for signature in 1982 and in force since 1994. As of September 2016, 168 countries and the European Union (in 1998) have joined the convention.

Some of the crucial elements that the 'constitution for the oceans' codified under a legal context were the following:

- a) Coastal States exercise sovereignty over their territorial sea which they have the right to establish its breadth up to a limit not to exceed 12 nautical miles; foreign vessels are allowed "innocent passage" through those waters;
- b) Ships and aircraft of all countries are allowed "transit passage" through straits used for international navigation; States bordering the straits can regulate navigational and other aspects of passage;
- c) Archipelagic States, made up of a group or groups of closely related islands and interconnecting waters, have sovereignty over a sea area enclosed by straight lines drawn between the outermost points of the islands; the waters between the islands are declared archipelagic waters where States may establish sea lanes and air routes in which all other States enjoy the right of archipelagic passage through such designated sea lanes;
- d) Coastal States have sovereign rights in a 200-nautical mile exclusive economic zone (EEZ) with respect to natural resources and certain economic activities, and exercise jurisdiction over marine science research and environmental protection;
- e) All other States have freedom of navigation and overflight in the EEZ, as well as freedom to lay submarine cables and pipelines;
- f) Land-locked and geographically disadvantaged States have the right to participate on an equitable basis in exploitation of an appropriate part of the surplus of the living resources of the EEZ's of coastal States of the same region or sub-region; highly migratory species of fish and marine mammals are accorded special protection;

- g) Coastal States have sovereign rights over the continental shelf (the national area of the seabed) for exploring and exploiting it; the shelf can extend at least 200 nautical miles from the shore, and more under specified circumstances;
- h) Coastal States share with the international community part of the revenue derived from exploiting resources from any part of their shelf beyond 200 miles;
- i) The Commission on the Limits of the Continental Shelf shall make recommendations to States on the shelf's outer boundaries when it extends beyond 200 miles;
- j) All States enjoy the traditional freedoms of navigation, overflight, scientific research and fishing on the high seas; they are obliged to adopt, or cooperate with other States in adopting, measures to manage and conserve living resources;
- k) The limits of the territorial sea, the exclusive economic zone and continental shelf of islands are determined in accordance with rules applicable to land territory, but rocks which could not sustain human habitation or economic life of their own would have no economic zone or continental shelf;

States have the right of exploring, exploiting, and managing all natural resources within their Exclusive Economic Zone. Having claimed its EEZ, a state can enforce its fishing rights within the zone and can even build artificial islands, such as offshore oil platforms. Yet, the EEZ does not prevent the passage of foreign vessels through its waters, and foreign states may lay submarine cables and pipes within the zone, but outside territorial waters.

Freedom to navigate and operate on high seas is defined in article 87 stating that:

‘1. The high seas are open to all States, whether coastal or land-locked. Freedom of the high seas is exercised under the conditions laid down by this Convention and by other rules of international law. It comprises, *inter alia*, both for coastal and land-locked States:

- (a) freedom of navigation;
- (b) freedom of overflight;
- (c) freedom to lay submarine cables and pipelines, subject to Part VI;

(d) freedom to construct artificial islands and other installations permitted under international law, subject to Part VI;

(e) freedom of fishing, subject to the conditions laid down in section 2;

(f) freedom of scientific research, subject to Parts VI and XIII.

2. These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas, and also with due regard for the rights under this Convention with respect to activities in the Area.’’

A major point of debate and different interpretations has been that of the continental shelf of a State and its extensions. The definition of the continental shelf as declared by Paragraphs 1 and 3 of Article 76 of the UNCLOS is as follows:

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

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

As we can clearly extract, UNCLOS set the very basis of the legal frame work of the sea, setting the limits and also providing the legal rights of national sovereignty of the waters. However, the ownership and legal status of the high seas has yet to be reaffirmed by all states. It is a fact also nowadays that 14 UN member states have signed but not ratified the Convention, one of them being the United States of America. It is now geographically and legally considered as the area beyond the territorial waters of all states, generally the seas beyond the different maritime zones, that is the internal waters of states expanding at 12 nautical miles the most, the waters of archipelagic states and the exclusive economic zone that has been established by many states and that covers a distance of 200 nautical miles from their baseline.

UNCLOS allows states to extend their limits beyond 200 miles if they can provide scientific evidence that the continental shelf beyond their coastline extends that far. Upon ratification of UNCLOS, a country has a ten-year period to make claims to an extended continental shelf, by collecting and analysing data on the depth, shape, and geophysical characteristics of the seabed and sub-sea floor. If validated, the country receives exclusive rights to resources on or below the seabed of the relevant area.

Norway, Russia, Canada, and Denmark have all conducted scientific projects to provide a basis for seabed claims on extended continental shelves beyond their exclusive economic zones, and have subsequently submitted claims to the UN Commission on the Limits of the Continental Shelf (CLCS), created by the UNCLOS. The CLCS review of the claims is expected to be a lengthy procedure. The US has not ratified UNCLOS and, therefore, cannot submit claims to the CLCS.

Figure 1. CLCS procedure



Source: 'The Right Arctic' website.

What is very important to specify is that, when it comes to the exclusive economic zone of a state, it refers only to the area below the surface to the sea, to which the states have the *sovereign right* of exploitation. The surface waters of the area are considered as international waters⁴. Consequently, the context is rather nebulous, with no clear restriction placed upon the coastal states for the exploitation of the seabed. The notion of the Common Heritage of

4. "In the exclusive economic zone, the coastal State has: (a) sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds;" (Article 56, Paragraph 1.a of UNCLOS).

Mankind, however, brought about a change in the field.

As a matter of fact, a Canadian mining company named *Nautilus Minerals*, has put forward the project of using robotic tracked vehicles, equipped with 3D sonars and cameras, as to excavate the seafloor and extract iron ore amounts. As its website declares: ‘‘Nautilus Minerals Inc (referred to on this website as "Nautilus", "Nautilus Minerals" or the "Company") is the first company to commercially explore the seafloor for massive sulphide systems, a potential source of high grade copper, gold, zinc and silver. Nautilus is developing a production system using existing technologies adapted from the offshore oil and gas industry, dredging and mining industries to enable the extraction of these high grade Seafloor Massive Sulphide ("SMS") systems on a commercial scale.’’ It has already undertaken a relevant project of mining the territorial waters of Papua New Guinea for gold and copper.

Environmental advocacy groups like the Deep Sea Mining Campaign and Greenpeace argue that seabed mining should not be permitted in most of the world's oceans because of the potential for pollution by heavy metal laden plumes and damage to deepsea ecosystems. Moreover, under the concept of the Common Heritage of Mankind, no private company should exploit the sea floor for each own means and purposes, while the CHM principle could partially counterbalance navigational and other privileges owned by maritime powers.

Flag states have traditionally been held responsible for any action their vessel undertakes in the high seas, although in recent years it has become clear that no forceful enough legal regiment that can enforce the rule of law over them exists. Governments are, in this way, obliged to better regulate activities when the law holds them accountable. However, in the area of the high seas, the operators of the vessels are themselves responsible and liable for any incident. For example, when a ship is involved in certain criminal acts, such as piracy, any nation can exercise jurisdiction under the doctrine of universal jurisdiction.

It should be mentioned that the CHM principle only gained legal significance in connection with the establishment of an international administration for areas open to the use of all nations and for the high seas in particular. The significance that the common heritage principle received within the legal regime governing sea-bed activities should not be underrated. It is worth mentioning that attempts were made to declare it to be part of *jus cogens*.

Current unresolved disputes over whether particular waters are "International waters" include: the South China Sea, the Area around Okinotorishima (Japan), the Southern Ocean and finally, the Arctic Ocean, as we will examine further.

The latest bold move came from People's Republic of China who in 2015 went on to construct "islands" in the South China Sea to bolster its position against several other East Asian countries and the United States. Incidents such as this accentuate the need for the placement of the Common Heritage of Mankind as a stricter regime that will legally bind its parties.

4. The Polar Regions

4.1. The Arctic Circle

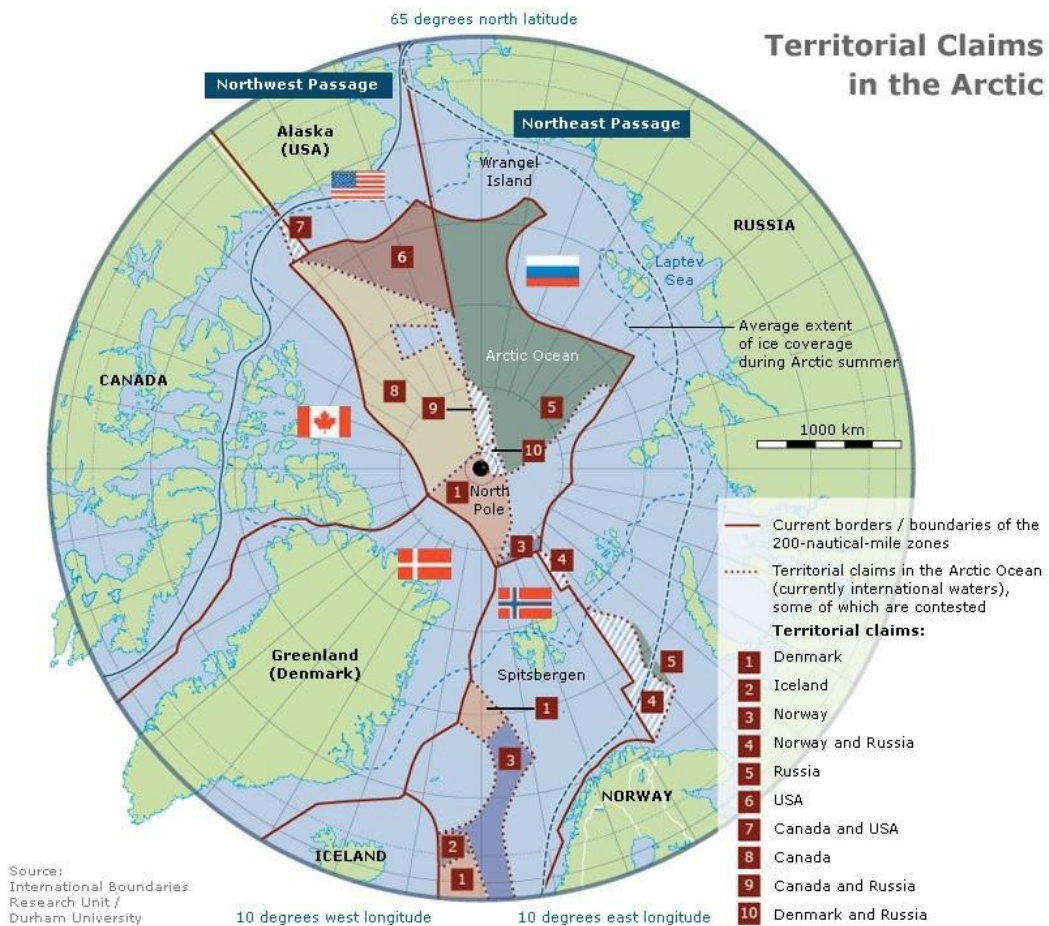
4.1.1. Territorial claims and ownership status

The Arctic is located in the north polar ocean and shares borders with the United States (through Alaska), the Russian Federation, Canada, Norway and the Kingdom of Denmark through its several large islands such as Greenland, Spitzbergen, Franz Josef Land, Severnaya Zemlya, Wrangel Island, Bank Island, Victoria Island, Ellesmere Island and various others. It stretches from the North Pole to roughly the 66th parallel north, an area of about 20 million square kilometers of freezing seas and barren lands.

The commonly asked question is: "Who owns the Arctic?". The five surrounding Arctic countries are limited to an exclusive economic zone of 200 nautical miles adjacent to their coasts. The waters beyond these zones of the coastal states are considered as "high seas" (i.e. international waters). Regardless, all of the countries involved have made claims and have moved to establish an extended continental shelf. They all consider certain parts of the North Pole as their territorial domain and as their "internal waters". As ratified by the 1982 United Nations Convention on the Law of the Sea (UNCLOS): "In order to claim maritime zones in the Arctic Ocean, a state must have coastal frontage in the region".

Whereas the Antarctic is not populated, the Arctic bears home to about 4 million people living in small cities and settlements⁵. They were founded generations ago by some small minorities (about 40 ethnic groups are estimated to inhabit the area), which were generally left to their own devices by the governments of the territories they settled into. The situation, however, has changed dramatically during recent years, as the governments are more vehemently seeking to establish their authority in the region, even in isolated arctic areas.

In 1991, eight sovereign states –namely, the United States, Canada, Denmark, Finland, Sweden, Norway, Iceland and the Russian Federation⁶- along with six groups of indigenous peoples⁷ signed the Arctic Environmental Protection Strategy. This non-binding agreement was formulated as to guide conservation efforts in the region and several years later led to the formation of the Arctic Council, comprised of the same eight states, as well as the indigenous communities. The main concerns that the Council sought to resolve were those of oil drilling, shipping and climate change issues. Moreover, it urges nations to adopt an international outlook to the Arctic region, and to abstain from pursuits of their national interests.



The council's working groups include the Arctic Monitoring and Assessment Programme, the Sustainable Development Working Group and Conservation of Arctic Flora and Fauna, while it works on a consensus basis.

As we can see, the Council mostly deals with environmental treaties and not addressing boundary or resource disputes."Under the UN Convention on the Law of the Sea (UNCLOS) the five states surrounding the North Pole (Russia, the United States, Canada, Norway and Denmark (via Greenland)), are able to submit bids for Arctic territory. This process is set to begin in spring 2012 and ends in 2014 and will result in successful applicants gaining resource rights" (HOC, Environmental Audit Committee, 2012).

The region abounds in natural resources and especially in fuels (oil and natural gas) so, consequently, has become a field of constant territorial claims and exercise of power. According to a 2008 U.S. Geological Survey, an estimated 22% of the world's undiscovered oil and natural gas lies underneath the Arctic seabed (90 billion barrels of oil and 1,670 trillion cubic feet of natural gas). The Russian part of the Arctic is the source for about 80 percent of the oil and virtually all of the natural gas; Arctic Canada, Alaska and Norway are the other leading producers. The largest gas fields of the region are found in Alaska and Siberia. North of the Arctic Circle, more than 400 onshore oil and fuel fields have been discovered. Those deposits of fossil fuels and natural gas could be worth a staggering \$17.2 trillion, a figure that could definitely provoke extended competitions.

What can also be excavated from this naturally wealthy area is large quantities of minerals. Gold, Iron, copper, nickel, coal, uranium, tungsten and diamonds can be found in abundance. The richest areas in ores are that of Siberia and the North American Arctic. The Sakha Republic ('Yakutia') in Russian Arctic creates approximately 25 percent of the world's rough diamond supply. The Baffinland mine, part-owned by a local company and ArcelorMittal, one of the world's biggest steel producers, is believed to hold enough ore to provide for smelters for decades on end.

5. A figure given by according to the AHDR (Arctic Human Development Report).

6. Canada, Denmark (Greenland), Norway, the Russian Federation and the United States have coastal frontage on the Arctic Ocean and thus are considered as coastal states which can exert legislative and enforcement control over foreign ships in offshore waters'. Loukacheva, Polar Law Textbook, Nordic Council of Ministers, 10, p. 49.

7. These groups include the peoples of the Aleut, the Athabaskan, Gwich'in, Inuit, Russians, and the Saami.

According to Morten Smelror, director of the Geological Survey of Norway, “The Arctic is certainly among the last frontiers with respect to undiscovered mineral resources, along with the deep oceans”. And the growing need for sophisticated batteries to power electric cars and hand-held devices likely will drive demand for rare earth elements, lithium and cobalt found in significant amounts in the Arctic regions of Russia, the Nordic countries and Greenland, he said. Let us highlight that based on current political realities, offshore drilling has gained increased popularity as a partial stopgap to bring down energy prices.

Russia, which is the only non-NATO Arctic Ocean coastal state, was the first nation to submit its extended continental shelf claim to nearly half of the Arctic Ocean, including the Lomonosov and Mendeleev Ridges, in 2001. While Russia’s petition was rejected in 2002, they continue on their claim of a 463,000-square-miles area in the Arctic. The Russian Federation claims to have new scientific evidence that the Eurasian continental shelf extends out far enough from Russia's northern shoreline to give Russia economic control of those waters under international law.

Arktika 2007 in August 7th of the mentioned year caused a massive turbulence in bilateral relations between the Russian Federation and the rest Arctic states. Russia proceeded to place a Russian flag on the Arctic ocean bottom under the context of a research programme that sought to reinforce Russian claims in the area, while the leaders of the expedition were awarded the title of the ‘Hero of the Russian Federation’.

Former Canadian Foreign Minister’s Peter MacKay statement on the incident was: "This isn't the 15th century. You can't go around the world and just plant flags and say 'We're claiming this territory'. In reply, the Russian Foreign Minister Sergey Lavrov told the press: "The aim of this expedition is not to stake Russia's claim but to show that our shelf reaches to the North Pole." In mid-September 2007, Russia's Natural Resources Ministry issued a statement saying that: “ Preliminary results of an analysis of the earth crust model examined by the *Arktika 2007* expedition, obtained on September 20, have confirmed that the crust structure of the Lomonosov Ridge corresponds to the world analogues of the continental crust, and it is therefore part of the Russian Federation's adjacent continental shelf.”

Canada, meanwhile, contends that the waters of the Arctic Archipelago, an area of 1.424.000 square kilometers, are its internal waters. To support its claim, Canada has been expanding its activities in the region, which include developing autonomous submarines to

improve underwater charts and creating a new Arctic research centre. It has also been conducting search and rescue exercises in anticipation of growing ship traffic in the Northwest Passage.

Transit from the area includes registering with Canadian authorities, who closely monitor traffic in the Northwest Passage to ensure compliance with environmental rules. Fewer than 500 ships have sailed through the passage since the first transit in 1906. Canada's also planning on employing more ice-breakers open for hire by any vessel that wishes to come across as to establish their sovereignty in the region. Canada's claim to the waters of the Arctic Archipelago and the Beaufort Sea is contradicted by the United States, mainly due to concerns that it could set a precedent other, less amicable nations might pursue.

Hans Island has been disputed since the early 1970s, when both Canada and Denmark claimed that the island – which is located in the middle of an international strait – is part of their respective territory.

With Denmark posing overlaying claims over the same territories, Canada plans to submit its Arctic continental shelf claim in 2018 overlapping with the Russian and Danish submissions for the ownership of the northernmost point of the Earth, as it is expected to include the North Pole, according to Canadian officials. There are circumstances where a coastal state can claim even further than the extended 350 nautical miles of continental shelf⁸, said Mary-Lynn Dickson, head of Canada's UNCLOS Program: "For instance in the case of submarine elevations, if a coastal state can prove that submarine elevation is part of its continental landmass, and if that feature extended beyond 350 nautical miles from their baselines, the coastal state could delineate an outer limit past 350 nautical miles".

As far as Greenland⁹ is concerned, in 2008, her citizens voted in favor of the Self-Government Act, which transferred more power to the local Greenlandic government as

8. 200 nautical miles from coastal baselines plus 15 nm if the shelf is a natural prolongation of their landmass, as defined by UNCLOS.

9. Greenland is the world's largest island with self-government and is considered an autonomous region of Denmark as part of the Danish Realm.

opposed to the Danish royal government. Under the new structure, in effect since June 21st 2009, Greenland can gradually assume responsibility for autonomy and, consequently, over the part of the North Pole that she claims for her own.

The Kingdom of Denmark's Arctic Strategy 2011-2020 promotes the 'equal partnership between the three parts of the Danish Realm': Denmark, the Faroe Islands and Greenland. On December 2014, Greenland filed a joint submission with Denmark to define the outer limits of its continental shelf in the Arctic Ocean within the CLCS. The area consists of approximately 895 541 square kilometers beyond 200 nautical miles from the coast of Greenland. The first discussions are not expected until 2020, and a resolution not until 2027.

Greenland has raised its claim to the Lomonosov Ridge -a massive underwater feature expanding hundreds of miles beneath the Arctic Sea that would greatly extend Greenland's sea bed continental shelf for possible use in future undersea mining. Russia contradicts this claim, making it one of the several disputes before the UN Commission on the Limits of the Continental Shelf. In September 2016, Denmark rejected Russia's calls for direct bilateral negotiations over the overlapping territorial claims, citing the need to 'apply the international rules'. Canada also contests the above claims of the two former claimants, creating a trilateral mid-ocean overlap. Canada's other standing dispute with Greenland is that in Lincoln Sea.

In response to Russia's 2001 claim, the US argued that the Lomonosov Ridge 'is a freestanding feature in the deep, oceanic part of the Arctic Ocean Basin, and not a natural component of the continental shelf of either Russia or any other State'. According to the US National Petroleum Council (2015), the Russian Federation holds 58% of the Arctic's undiscovered petroleum resources, and the US Geological Survey estimates that the Lomonosov Ridge could hold an additional 1.1 billion barrels of technically recoverable undiscovered oil and 7.16 trillion cubic feet of natural gas. The estimated amounts are deemed relatively modest, however, when compared with the existing resources in Russia's Arctic zone.

The North Pole itself is located in four thousand meters off to the side of the Lomonosov Ridge and as it is most probably not going to constitute the natural prolongation to any of the States involved, it will more likely fall into the category of the CHM regime territories (that are beyond national jurisdictions and are administered by the UN).

Nevertheless, until this fact is indeed established, it is open to the agenda of each state's political endeavours and narratives.

Apart from that, Russia in 2015 also established the Motor Rifle Arctic Brigade, whose soldiers are specifically trained to operate under severe climate circumstances where temperatures can reach minus 40 C degrees, using specialized military hardware, tanks and even reindeers to pave way through the hard terrain. This military build-up includes the creation of new military bases, along with the reopening of older abandoned Soviet ones, while also increasing her fleet of nuclear-fueled icebreakers. Colonel Ilya Pavlovsky, Commander of 80th Motor Rifle Arctic Brigade stated that: "The aim behind the creation of the brigade was to defend the interests and security of the Russian State in the Arctic".

Interestingly, a boundary treaty, called the Treaty on Maritime Delimitation in the Barents Sea was made between Russia and Norway in relation to Spitsbergen and the Russian Novaya Zemlya archipelago in 2010, because of increasing interest in petroleum exploration, which did not use the sector principal, but their relative position. This Arctic border pact between Russia and Norway ended the 40 year dispute over the Barents Sea and the Arctic coastline. There are, however, still unresolved issues concerning the Arctic archipelago of Svalbard; Norway and Russia disagree on whether equal treatment rights guaranteed by the 1920 Svalbard Treaty apply to maritime zones. The maritime boundaries between the outer continental shelves of Svalbard and Greenland also remain undefined.

In May 2008, ministers from Canada, Denmark/Greenland, Norway, Russia and the US met in Ilulissat, Greenland to sign a declaration that reaffirmed their sovereign rights and their commitment to 'the orderly settlement of any possible overlapping claims' on the basis of 'an extensive international legal framework' that applies to the Arctic Ocean, notably UNCLOS. In a pre-emptive strike against growing global interest in the Arctic, the 'Arctic Five' also noted that there is 'no need to develop a new comprehensive international legal regime to govern the Arctic Ocean.

However, the Ilulissat meeting and a later 'Arctic Five' ministerial meeting held in 2010 led to tensions with the other Arctic Council Member States (Finland, Sweden and Iceland,) and the indigenous groups, who felt as if they were being excluded from discussions of relevance to their interests and were discontent that the Declaration 'appeared to relegate them to the status of "other users" in the context of the Arctic Ocean'. It also challenged the role of

the Arctic Council, a circumpolar body whose role as a coordinating Arctic structure has grown over recent years

A troubling institutional hole is that although Annex II of UNCLOS, Article 4, provides that coastal states must make submissions to the UN Commission on the Limits of the Continental Shelf (CLCS) within 10 years of ratification, there is no sanctions mechanism in place for failure of meeting the deadline. Furthermore, the arctic states have not agreed upon the means of arbitration, be it through an international court or a arbitral tribunal.

There is also no common NATO position on its role in the Arctic region. The alliance's 2010 Strategic Concept did not mention the word Arctic. Neither did the 2014 Wales Summit Declaration nor the 2016 Warsaw Summit Communiqué.

4.1.2. Recent developments and consequences

It was, nevertheless, not until the climate change brought about some serious developments regarding the Northern Passages and the ability to navigate through the Arctic that the status of the region was again hotly debated. A record ice retreat in 2007, a phenomenon that was exacerbated in 2016, the warmest year ever in the Arctic resulted in the rapid melting of the sea ice and, consequently, the drastic change of the Arctic geomorphy.

Many parts of the region have thus far been inaccessible and economically difficult to exploit. That is due to be changed. The climate change phenomenon and, therefore, the melting of the ice, has, since 2009, permitted vessels to proceed to regular marine shipping in the region. Sea ice, which completely covers the Arctic Ocean in winter, gradually melts in the spring and reaches its minimum extent in September. That minimum has declined by about 13 per cent per decade compared with the 1981 to 2010 average, according to NASA. Scientists say global warming is largely to blame, as its consequences are most directly and in a more rapid way affecting the Arctic than any other region.

As conversion between the Baltic and the Arctic system¹⁰ is not casually undergone, companies are all the more investing on the construction of vessels with ice class standards, as defined in the IMO Guidelines for Ships Operating in Arctic Ice Covered Waters. Russia has

20 nuclear powered ice breakers, Canada 12 and the United States one. It takes 8 to 10 years to build one at a cost of about \$1 billion. South Korea is the major builder of ice- capable ships.

The concept of double-acting tankers (which can steam bow first through open water and then turn around and proceed stern first to smash through ice) is a major recent development. These new ships can sail unhindered to the Arctic's burgeoning oil and gas fields without the assistance of ice breakers.

A new Polar Code, developed by the International Maritime Organization, sets some safety standards through better training and certification of mariners, and safety requirements for ships. However, critics say it does not dwell in great depths enough and includes almost no environmental protection provisions.

"As the world demand for raw materials is ever increasing, and (with) a realization that a large part of the unexplored deposits are in the Arctic, there is a natural shift to focus on that area," said Mads Boye Peterson, head of Denmark's Nordic Bulk Carriers Shipping.

Peterson's company sent a freighter through the Northwest Passage four years ago in 2013 to demonstrate the feasibility of using the route to haul cargo during summer months, when melting sea ice opens up these frigid waters. But he also noted that rising temperatures render operations more difficult because moving floes are less predictable than unbroken sheets of ice. "On the surface it might look like a slam dunk," he said. "But it's actually a lot more complicated than just something you decide to do overnight."

The ever shrinking of the ice surface in the Arctic is an undeniable reality. In the years to come, two geopolitical events are to ensue. The first is a new recoverable source of vast amounts of oil and gas. The second one is a new, shorter strategic sea route that will change the pattern of energy flows on sea lanes of communications (SLOCs) with new security and environmental implications.

10. The definition of the two different class systems has been extracted by the International Association of Classification Societies (IACS) and the International Maritime Organization (IMO).

The main line will be via the Arctic to the east coast of Asia and the west coast of North America. There are three new sea routes that will be created: firstly, the northeast passage over Eurasia (also known as the northern passage), which shortens shipping routes between Europe and North East Asia by 40 per cent, compared to the Suez or the Panama canals; the northwest passage which shortens the shipping route between Asia and the US east coast by 5,000 miles; and the direct north polar passage that cuts straight across - when all the ice will have melted.

The Northwest Passage, in particular, is the sea route connecting the northern Atlantic and Pacific Oceans through the Arctic Ocean, along the northern coast of North America via waterways through the Canadian Arctic Archipelago. The various islands of the archipelago are separated from one another and from the Canadian mainland by a series of Arctic waterways collectively known as the Northwest Passages or Northwestern Passages. The fields of drilling, mining and shipping, as also mentioned above, are bound to demonstrate extensive developments as technology advances.

The Northwest Passage could potentially limit the distance from East Asia to Western Europe by more than ten thousand kilometers, in comparison with the traditional route through the Panama Canal, offering huge fuel savings for shipping companies.

As for the Northeast Passage, the route is claimed to be about 15 per cent cheaper than the Suez Canal route and twice as fast. For instance, the distance from the Russian port of Murmansk to Shanghai through the Arctic route is 10,600 km while it is 17,700 km via the Suez Canal.

The Russian Federation pursued with the Strategy for the Development of the Arctic Zone, adopted in 2013 and emphasizing on improving geological prospection of the continental shelf, implementing large-scale resource projects as well as upgrading infrastructure related to transport and resource development. Also, as of recently, the President of the Russian Federation Vladimir Putin clearly declared his ongoing commitment to exploiting the Arctic at all lengths possible, most recently at a conference on the future of the Arctic region in March. "Climate change brings in more favorable conditions and improves the economic potential of this region," Putin commented to CNBC while attending the International Arctic Forum in Arkhangelsk, Russia in March 29-30. "Today, Russia's GDP is the result of the economic activity of this region."

Further in September, Russia is due to start shipping liquefied natural gas to Europe and Asia from Siberia, using ice-strengthened 1,000-foot tankers that, by turning around and moving stern-first, can cut through ice up to two meters thick.

What seems to be bolstering Russia's assertiveness are President's Trump declarations of intent to withdraw from the Paris Agreement of 2015 combating climate change. The President himself has formerly maintained that he does not believe in the concept of climate change and the greenhouse effect. Under President Barack Obama and Prime Minister Justin Trudeau, a new partnership in the changing Arctic, 'with Indigenous and Northern partnerships, and responsible, science-based leadership', was launched in March 2016. In December 2016, Trudeau and Obama jointly announced a freeze on new oil and gas drilling in their Arctic waters. Under the Trump administration, the US President signed in April an executive order to reverse the Obama-era restrictions on oil drilling.

Let us not forget that Washington has yet to ratify the UN Convention on the Law of the Sea that would regulate territorial disputes, due to Senate concerns that submitting to international treaties would impinge on U.S. sovereignty. In its September 2016 Report on Arctic Policy, the State Department's International Security Advisory Board (ISAB) called for a continuing US leadership role on Arctic issues in the face of concerns about 'Russian interests, policies and activities' in the regions. ISAB also urged the US government to pay more attention to the impact of its trade rivals investments and activities in the Arctic, notably China's investments in Iceland and Greenland, on regional security.

Exxon Mobil, notwithstanding its official support for the Paris accord, and Russia have laid extensive plans of drilling the Arctic. Some smaller firms are starting to go ahead with business in the Arctic. The Alaska-based company Quintillion is laying a fiber optic cable through the Northwest Passage to provide high-speed internet traffic to local communities. It could also establish an additional link between London and Tokyo, where two of the world's main stock markets are located.

The lengthening summer season and the growth in adventure tourism have led to a surge of traffic over the past decade. In 2016, the cruise ship *Crystal Serenity* with 500 crew and 1,100 passengers paying at least \$27,600 each for a four-week journey sailed through the passage. Such tours require years of planning and the approval of almost 30 Canadian agencies, including the authorities in the Indigenous territory of Nunavut. Part of the revenues

are intended for the local communities whose hunting grounds and travel routes might be disrupted by large vessels. Let us note here that the specific cruise could not have been undertaken without the presence and assistance of a British supply ship, the Ernest Shackleton.

Another field of growing financial interest is that of fishing. The environmental group Greenpeace said it was important to ensure that the Inuit people control their own fisheries, rather than let outside corporations with no link to the Arctic harvest its rich waters. “The fisheries are abundant in the Arctic,” said Charles Latimer of Greenpeace. “But we don’t want to make the same mistakes that we’ve done in other parts of the world where fisheries are collapsing.”

The search for fossil fuels above North America has slowed in recent years. One relevant reason is low oil prices, whose drop has hit Alaska’s budget hard, because it relies heavily on oil and gas revenue. For the time being, Shell relinquished most of its federal offshore leases in Alaska’s Chukchi Sea last year, after investing billions of dollars into exploration efforts over the past decade. Former Shell leases in the neighboring Beaufort Sea have been taken over by an Alaska Native-owned company. Let us not forget that the extraction of these fossil fuel sources is rather expensive and difficult to maintain longterm.

While Norway and the Russian Federation are pressing ahead with new oil and gas projects along their coastlines, the seas off Alaska and northern Canada are much less accessible and any major spill would be difficult and expensive to contain. “There are a lot of hydrocarbons in the Arctic, but for them to be economically viable the cost per barrel has to be higher,” said David Barber, an expert on the Arctic environment at the University of Manitoba. “Of course it will go higher, and thus the Arctic issue will come to the foreground again.”

The wild nature of the Arctic, however, hinders development. Only 10 per cent of the Northwest Passage is surveyed to the highest modern standards, meaning uncharted shallows could pose a serious risk to shipping. Ocean currents are predicted to push polar pack ice into the passage for decades, limiting the route to sturdy, sophisticated vessels with accordingly experienced navigators and, as a result, keeping insurance costs high. “Think about a high mountain pass that is closed for half the year, has no gas stations, convenience stores or repair

facilities,” said Andrew Kinsey, a senior marine risk consultant at insurance giant Allianz. “Is this the route that you want to use for your daily commute?”

Although nations with Arctic boundaries, including the United States, have agreed to assist each other in the event of disaster, there is very little emergency infrastructure in either U.S. or Canadian Arctic waters, or in Russia along what is known as the Northern Sea Route. An extensive search-and-rescue operation would likely be feasible, as there are relatively few governmental icebreakers or cutters in the region, and a long-range airlift by helicopters would be extremely difficult.

Environmental concerns along with growing acceptance of the rights of the region’s Indigenous population also have held back some plans for Arctic exploration, while public pressure have made the Arctic shortcut less attractive to shipping firms. Daria Gritsenko, a public policy researcher very wisely cautioned that any economic excitement about global warming opening up new opportunities in the Arctic needs to be tempered by an understanding of the risks. Melting permafrost already poses a problem for Russia’s Arctic infrastructure, from ports to pipelines, from roads to residential buildings.

“We need to rethink how we build things in the Arctic,” said Gritsenko, who is based at the University of Helsinki. “Even if we develop a tremendous system of Arctic ports, how would the goods get there? That’s the irony of climate change.”

How does this race for occupation and natural resources exploitation stand with the concept of the Common Heritage of Mankind? First of all, the principles forming the concept are the following: Firstly, the areas should be internationally governed. Finally, if resources are derived from the area, then there should be an active and equitable sharing of common heritage area benefits. It is evident that the resources that were, up to now, not navigable and therefore, considered as global commons, have fallen under the spectrum of several national claims for their ownership.

“Only a mere 5.9 percent of national waters and just 0.5 percent of international waters are set aside as off-limits to destructive fishing, energy exploration and other industrial threats” (Greenpeace, 2012). However, as we already saw, under the Third United Nations Conference on the Law of the Sea Treaty in force from 1994, all mineral and exploration rights extend 200 nautical miles off a coastline, or more if it is continental shelf. If this were

to apply, the status of ownership in the Arctic would be in question as the sector principle is convention, not law.

While Canada, Denmark, Russia and Norway all regard parts of the Arctic seas as national waters or internal waters as we saw, most European Union countries and the United States officially regard the whole region as international waters. The Northwest Passage through the Canadian Arctic Archipelago is one of the more prominent examples, with Canada claiming it as internal waters, while the United States and the European Union consider it an international strait.

4.2. The Antarctica.

4.2.1. Territorial claims and ownership status

A similar situation of many contested claims existed in terms of the Antarctic before the Antarctic Treaty of 1961 came into force, but a provision of this Treaty made them non actionable, in order to avoid future conflicts.

Another difference between the Arctic and the Antarctica is that the later constitutes a continent, which is covered by an immense ice shelf. Its size alters depending on the season, as the ice expansion in winter nearly doubles it. It is classified as a desert, as little to non moisture exists, under the form of precipitation and mainly snow that is not absorbed into the soil. No indigenous peoples inhabit the continent and the area is mainly used for research purposes. Antarctica is characterized as the most coherent global common for reasons that we examine below.

The United Kingdom was the first to lay territorial claims to Antarctica. Their first ship berthed in the region in the early 1800s, and land was claimed by the explorers and crew members who placed British flags into the ice. Due to the harsh climate, Antarctica was not colonized and, since no settlements were established, Antarctica remained free from land claim disputes. This unclaimed status was maintained until the early 1900s, when the United Kingdom claimed segments of the continent.

Belgium, Britain, France, Germany, Norway, Spain, the United States, and what was the U.S.S.R. all sent explorers to Antarctica between the 16th and 19th centuries. Although some expeditions were more substantial than others, they all generally conveyed a sense of control over this region by the sponsoring nation, in direct contrast to the *mare liberum* principle.

The regulatory system of Antarctica is governed internationally by the Antarctic Treaty System (ATS). The Treaty was signed in Washington, DC in 1959 by the twelve states whose scientists were actively involved in research projects and especially, the International

Geophysical Year, 1957-1958 (Argentina, Australia, Belgium, Chile, France, Great Britain, Japan, New Zealand, Norway, South Africa, the Russian Federation and the United States). Seven of them –namely, Argentina, Australia, Chile, New Zealand, France, the United Kingdom and Norway- have expressed territorial claims of the region, while others –Russia and the US- maintain a “basis of claim”¹¹. All claim areas, except Peter I Island, are sectors, the borders of which are defined by degrees of longitude.

The Antarctic Treaty establishes a hierarchy to govern Antarctica. Article IX creates three different groups of state parties, only two of which are entitled to attend Antarctic Treaty Consultative Meetings. These are the 12 states that negotiated the Antarctic Treaty, and those states that have acceded to the Antarctic Treaty and fulfilled the requirements outlined in article IX (2). Both of these groups comprise the Antarctic Treaty Consultative Parties (‘ATCPs’). The third group consists of those states that have acceded to the Antarctic Treaty but have not fulfilled the requirements of article IX (2).

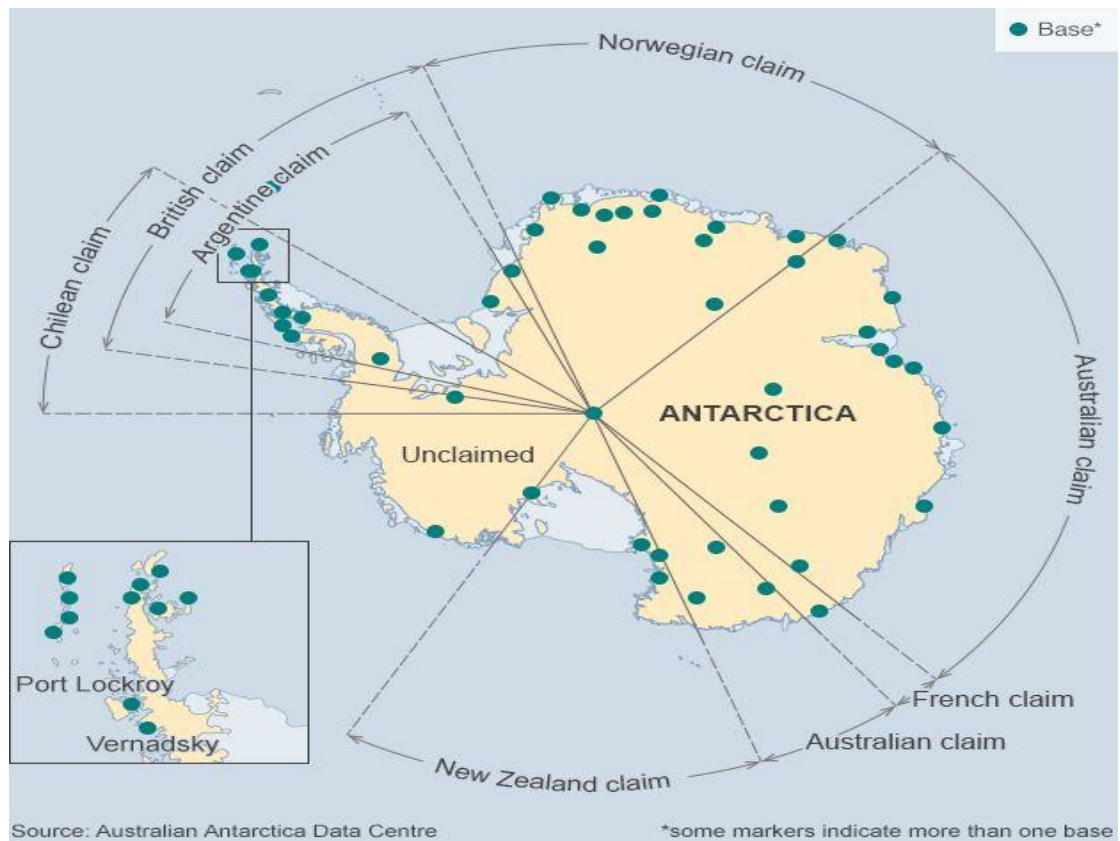
Overlapping claims are those of Argentina and the United Kingdom for the sector of 25°W–53°W, that of Argentina, Chile and the United Kingdom for the sector 53°W–74°W and that of Chile and the UK for sector 74°W–80°W. This is often reflected by the territorial lines presented on maps, outlining different segments as belonging to one of the initial treaty-signing countries.

These states founded their claims on factors including discovery, proclamations of sovereignty, geographical proximity and occupation through the establishment of scientific bases.

However contradictory these territorial claims are, it is secured that all positions are explicitly protected in Article IV of the Treaty, which preserves the status quo:

’No acts or activities taking place while the present Treaty is in force shall constitute a basis for asserting, supporting or denying a claim to territorial sovereignty in Antarctica or create any rights of sovereignty in Antarctica. No new claim or enlargement of an existing claim to territorial sovereignty in Antarctica shall be asserted while the present Treaty is in force.’

11. The reserved right to make a claim.



The most vital provisions of the Treaty are the following:

- Antarctica shall be used for peaceful purposes only (Article I).
- Freedom of scientific investigation in Antarctica and cooperation toward that end ... shall continue (Article II).
- Scientific observations and results from Antarctica shall be exchanged and made freely available (Article III).
- To promote the objectives and ensure the observance of the provisions of the Treaty, "All areas of Antarctica, including all stations, installations and equipment within those areas...shall be open at all times to inspection" (Article VII).

The 1959 Treaty stated that no state held ownership of any land on Antarctica, but there remained a loophole: none of the countries involved in creating and signing the treaty had to resign from their territorial claims and try to reinforce them in terms of ‘effective occupation’. As the treaty states in Article IV, paragraph 1:

“Nothing contained in the Treaty shall be interpreted as: (a) a renunciation by any Contracting Party of previously asserted rights of or claims to territorial sovereignty in Antarctica.”

A key to the convention's approval was that, like all the Antarctic treaties, it sidesteps the issue of whether the seven nations who assert sovereignty over different regions of Antarctica have a rightful claim. One of the philosophies that underlies within the convention is that claimant and non-claimant nations cannot out-vote each other.

The Antarctic Treaty by these means minimizes the potential for conflict over sovereignty. It entered into force in 1961 and has since been acceded to by 53 nations. Although the current regime may not be perfect, the previous status quo in place in the region was that of constant conflicts over sovereignty and international tensions.

Scientists exploring Antarctica were the first to acknowledge the ozone hole, while their contribution to our information on the formation of continents, the climate change and rising sea levels has been invaluable. What leads research and investigation today in the South Pole, however, apart from the marine resources, is mainly the financial drive as to what lies under the ice and the most common assumption is this: mineral wealth, especially hydrocarbons and oil. It is predicted that the amount lying in the region could be approximately 200 billion barrels, surpassing the amount yielded by Abu Dhabi or even Kuwait.

By thinking in terms of contemporary technology, this oil would be prohibitory difficult and expensive to extract. Article 7 of the Protocol on Environmental Protection to the Antarctic Treaty states that:

“Any activity relating to mineral resources, other than scientific research, shall be prohibited.”

However, given that in 2048 the Treaty will be open for renewal, one cannot totally exclude the idea that the area will be open for exploitation, taking in mind to what heights the energy needs of the society will have risen to by that time.

Article 1 of the Antarctic Treaty outlines that “Antarctica shall be used for peaceful purposes only.” It then prohibits ‘inter alia, any measures of a military nature, such as the establishment of military bases and fortifications, the carrying out of military maneuvers, as

well as the testing of any type of weapons'. According to the Treaty military activities are allowed neither on the continent nor in adjacent areas.

The Treaty has indeed stalled all territorial claims but surely, there has been some rule-bending, as is evident in the continuous creation of new bases in every national sector. Chile and Argentina both maintain a permanent army presence in the mainland while others may just not report their military deployment or even be recruiting civilian security contractors for military tasks.

The disobedience to the ban on militarization is a common phenomenon. Many of the 68 bases serve a dual purpose – they are, as an Australian government representative put it: ‘‘increasingly used for 'dual-use' scientific research that's useful for military purposes.’’ The Australian government recently identified China's newest base as a threat, specifically because of the surveillance potential. The area is free from radio interference and, as a result, ideal for the remote control of offensive weapons systems and the establishment of covert surveillance networks.

4.2.2. Recent developments and consequences

The current state of affairs may last indefinitely, allowing this legally loose *Modus Vivendi* to perpetuate its existence. The terms ‘‘freeze’’, ‘‘moratorium’’ and ‘‘suspension’’ are those that best describe the current status quo. The Treaty froze all existing claims, disallowed new ones, and forbade the assertion of sovereignty by virtue of activities taking place while the Treaty was in force.

However, there is certain discontent as non-ATPs (Antarctic Treaty Parties) and NGOs alike do not recognize either existing claims or the rights of the ATPs to manage Antarctica, considering the continent a Global Commons and calling for the creation of an International Authority.

Many states view the ATPs as a ‘self-designated exclusive club without any clear legal authority to manage Antarctica for the rest of mankind’(Joyner). Malaysia introduced a

resolution requesting the ATCPs to make information regarding Antarctica generally available to the UN.

Speculation on further claims on behalf of ATPs , such as Brazil, Uruguay and Peru which have declared their territorial 'rights' within the sector already disputed by Britain, Argentina and Chile are also to be considered.

Pakistan recently approved Antarctic involvement and expansion, while India has long been interfering in the area. Iran, with the sanctions lifted, has the intention of building also in the South Pole, with Turkey following. The intelligence gathering potential along with the competition over the control of the natural resources has posed a threat to the already existing status quo, emphasizing the need for the transition from a regime of self-regulation to that of the Common Heritage of Mankind.

So, is the South Pole a case region where the legal framework of the Common heritage of Mankind can be enforced? Are the Global resources indeed exploited on a multilateral level? The answer is yes, but to some certain extent. As we saw above, the continent is mainly exploited for research purposes, including the research on the biodiversity. The lack of documentary evidence backing the territorial claims of the parties involved, as well as the lack in occupation of the areas under dispute, creates flimsy bases of claims.

Burton suggested a system based on the idea of an "Antarctic Community" emphasizing the common interests underlying the diverse claims. Interested Parties would bargain for benefits including mining opportunities and profit-sharing. While this plan benefits Parties, it rejects any suggestion of benefit-sharing with non-Parties, save voluntary contributions to world development organizations. Therefore, this proposal is not likely to find agreement with the developing countries who are not Parties.

However, the main trends that have emerged in the light of the current environmental developments are those of our research topic at hand, that is, the Common Heritage of Mankind management structure and that of an international Convention on the Antarctic regime, which would follow the institutional procedures of the UN and that would require a consensus of the parties.

As for the first option, it is held that the status quo in the Antarctic, despite the national claims, set the very precedent for the establishment of a Common Heritage of mankind settlement which was first specified tightly in the 1967 Outer Space Treaty, which declared outer space to be the common heritage of mankind (sic). In similar terms the ‘Moon Treaty’ followed. The Antarctic Treaty, provides for no military presence, no minerals exploitation (and therefore, no risk of despoilation), and no more land claims.

Indeed, while the twelve contracting parties did not renounce previously asserted rights or claims to territorial sovereignty in Antarctica, they did accept the prohibition on any non-peaceful use, while at the same time allowing inspection by other states to see that this provision was honored.

Activities in the Antarctic, as we saw, are now governed by the Antarctic Treaty System (ATS) rules, which are constituted from the original Treaty and three international agreements made under it: the Protocol on Environmental Protection to the Antarctic Treaty (1991), Convention on the conservation of Antarctic Marine Living Resources (1980), and Convention for conservation of Antarctic Seals (1972). The question of resources was avoided in 1959, but these two additional treaties protect marine living resources and regulate possible minerals development.

In particular, as far as possible marine exploitation is concerned, once an area is approved, the chief oversight responsibility for protecting the environment rests with the regulatory committees, which are responsible for the issuing of licenses. Each committee shall have ten members, four of which are claimant nations and six non-claimant nations. The approval of seven nations is required for a license. The United States, the Russian Federation, and the claimant nation or nations where exploration or mining is proposed have standing membership on each committee. The committees will rely on a scientific advisory body to review information about the environmental impact of the proposed activities.

What that means is that the Antarctic is permanently committed to solely peaceful purposes and research, to ensure " in the interest of all mankind that Antarctica shall continue forever to be used exclusively for peaceful purposes and shall not become the scene or object of international discord" (Antarctic Treaty, 1959). However, whereas agreement shall quite easily be reached for the areas that have not been claimed and the sea bed south of 60 degrees

latitude¹², the areas located within the continental shelves of the different states, where the exploitation of mineral resources is also easier, will be the subject of confrontation.

Thus, although the term 'common heritage of mankind' is not used, the characteristics of the Antarctic system, as it has been established by the relevant treaties and by the rules adopted inside the system, correspond to the criteria and the principles of the CHM concept.

However, the element missing is that of the fair distribution of benefits. More than a hundred developing nations have challenged the Antarctic Treaty as unfair. They claim that, as membership in the ATS is open only to nations who support active research stations, whose cost is prohibitive to most Third World Nations they are actually excluded from having a say in Antarctica. In 1983, they raised the 'Antarctic question' in the United Nations, calling for the establishment of the South Pole as an Area of the CHM regime.

The prototype of the International Seabed Committee could indeed be adapted to the specific demands that the Antarctic poses. As the extraction of the continent's resources seems far-fetched, now would be the time to set the ground-rules for their exploitation. The CHM regime could assure that all benefits and revenues would be fairly distributed among the parties, that the profit-sharing is just. The bodies of such regime would be the responsible instruments that would evaluate and grant the licenses for the exploration and exploitation of the Area, as defined in the structure analysis of the International Seabed Authority laid in chapter 2.

Of course, an unresolved issue of the institutional structure of the Common Heritage of Mankind regime is that of the penalties that are to ensue regarding incidents of non-compliance. In the Polar regions, the unique conditions of the terrain forbid operational mistakes as the consequences could be severe. Major oil spills may be impossible to contain and may affect the environment irreversibly.

In such cases, the international coordination of instruments and task forces are of utmost importance, one of the more reasons to include the environmental sustainability factor in the discussions to take place. The possible suspension and, even, the termination of operations are

12. *'The so-called 'Unclaimed Sector', located within 90 degrees to 150 degrees West Latitude, remains the largest unclaimed piece of territory on Earth'*, Joyner, 1991.

pre-emptive prohibitive measures that could substantially minimize the possibility of error. The implementation and control of the substantial adherence to the new regime are another troubled issue, as its effectiveness depends on the regulated penalties.

Detailed regulations and exhaustive set of arrangements is more time consuming and difficult to be unanimously agreed upon. International Conventions take years of preparation and negotiations, while they are subject to political games and the enforcement of the will of the more powerful states, while more commonly neglecting the needs of the developing countries. The proposed "Antarctic tax" is also regarded as a measure that perpetuates the problematic of the system in place rather than solving it.

Thanks to modern technology, it is now possible to build structures that can be populated all year round on Antarctica. The 1959 treaty regarding land use states that there would be no mining on Antarctica, but this could potentially become a point of conflict. The continent also contains 70% of the world's fresh water, which is another increasingly valuable resource, maybe the most invaluable in the years to come.

The field of scientific research will of course stay free and open to all, as ATS provided all nations freedom of scientific inquiry but obligated them to share the results (one of the main principles of the CHM regime). Researches concerning the resource management and the environment shall surely be endowed upon the Authority that will be created and shall be under its regulatory competence, an activity that could be undertaken in cooperation with all the parties that are already involved.

5. Conclusions

The Common Heritage of Mankind concept is obviously faced with tremendous challenges. The ever depleting energy sources and the lack of investment in the alternative ones, the notion of territorial sovereignty and need for expansion, the tendency for investment in new military fields and generally, the dominant capitalist financial system that calls for the survival of the fittest, deem the undertaking of projects like the establishment of the Common Heritage of Mankind in the commons as utopian.

Furthermore, the most hotted debate on the issue regards the principle of equitable sharing of benefits. Developed and more technologically advanced countries contest that they are those burdened with the investment of funds for the extraction of the common pool resources and, however, it is requested that the countries not partaking in such operations and activities of drilling etc. are the ones who gain the lion's share. While the definition of the CHM principle is declared, it cannot be said that there is uniformity as to how states interpret the principle.

Developed countries interpret the CHM principle narrowly as allowing the common use of designated areas. Developing nations interpret the CHM principle broadly, seeking to direct participation in the international management of resource extraction. This is not an argument for environmental protection, only representative exploitation

In the second chapter of the study, we examined how the CHM regime actually works and how it can be effected in realistic terms. In other words, it is not only an ethical concept but can be a legal one also, one that can be equally fair to all the parties involved, both the developed and the developing countries.

We should also point out the gravity placed in the word *heritage*. It means that the contracting parties will recognize their duty to ensure the identification, protection, conservation, presentation, and transmission to future generations of that heritage and that such a heritage constitutes a common heritage and that it is the duty of the international

community as a whole to co-operate for their protection. As a consequence, concrete measures must be provided for ensuring the achievement of the aims of the regime that shall be put into place.

The high seas and the Antarctica are already considered as ‘‘global commons’’, that is a global common-pool of resources or else, a common property resource, that has a supranational character. The propriety status of North Pole is the most pressing issue that needs to be confronted as the Arctic sea ice has receded by about 40 per cent since 1979. ‘‘We are confronted by a new ocean’’ was the comment made by the US Navy in the Arctic Environmental Assessment they released in August 2011.

The Arctic must be treated as a global common and, afterwards, a common heritage of mankind. As we saw, the current discourse on the Arctic is dominated by the Arctic Five countries and the Arctic Council. These countries are militarizing the Arctic in pursuit of their narrow national interests, while their focus is limited to issues such as claiming Exclusive Economic Zones for the exploitation of resources, the proprietary rights for the resources and the sea passage etc.

‘‘The tragedy of the commons’’¹³ economic theory suggests that such plurality of different, public and private, interests, is due to end in the over-exploitation of the common access resources and eventually, to the damage of the whole community, if one should act on his own accords and according to his rational self-interest (the type of this person is also known as a ‘‘free rider’’ in economic theory). The ‘‘commons dilemma’’ occurs when a person short-term individual interests contrasts with the long-term interest of the whole and the common good.

Political economist Elinor Ostrom (who was awarded 2009's Nobel Memorial Prize in Economic Sciences for her work on the issue), argues that, apart from the solution of government regulation and private ownership, there have been examples of cases where Prudent users of a common resource have cooperated effectively and have achieved

13. The concept and name originate in an essay written in 1833 by the Victorian economist William Forster Lloyd, a fellow of the Royal Society, and was later popularized by Garrett Hardin.

sustainability by effective enough private rights conferring benefits and costs that constrain use.

In our case, where the amount of users surpasses that of a small community and a thick social network is not enough for the management of the common, national and, rather, international and supranational networks must ensue. The management of global commons must take into account and coordinate the interests and costs of several nations and entities at the same time. Planning for operations, monitoring, mechanisms for conflict resolution and sanctions emerges as vital for the collective management mechanism (in particular, the Sea Bed Authority).

On top of that, we are referring to long-term benefits, without immediate advantages to the parties that shall participate. The short-fetched state mentalities must somehow be sacrificed, a feat that has historically proven not to be the common case but rather an exceptional one only witnessed after the two World Wars. The United States have historically argued that the CHM principle is simply another verbal formulation of a freedoms regime, under which no country has sovereignty over a common space but may acquire exclusive property rights in its resources.

In order to reach a universally agreed application of the common heritage principle that respects both the interests of developing nations and the economic practicalities of resource use, realistic solutions must address the issues particular to each commons area. A viable solution would provide an incentive for investment for the exploitation of resources in common regions along with some form of limited property rights in exchange for equitable economic benefit-sharing, which, however, will most likely not take the form of technology transfer.

Moreover, there is the question that has long troubled the international law as a whole: To what extent does the authority of an international organization go? Also, “who will guard the guards themselves?” (*Quis custodiet ipsos custodes?*). It is a fact that countries seem to all the more act with a more remote concern: a benefit for all mankind which can be obtained only by international co-operation and the acceptance of obligations by all governments, even if they receive no immediate return. It certainly means however, that they accept to suspend or do not assert rights or claims to territorial jurisdiction, or in some cases exercise such jurisdiction only within set limits.

The elements of the principle do establish a framework for its future operation, however. This framework does assist states when undertaking activities on the deep seabed, such as scientific research or intelligence gathering, but fails to provide adequate guidance regarding the legal limitations governing these activities.

In certain respects there is a strong sense that a common heritage exists, even if all its implications have not been clearly established. Therefore, the course of action the author would propose is, firstly, to articulate and promote the idea of including the Arctic in the discourse on global commons and, secondly, for the United Nations should undertake a comprehensive study of the subject of the Antarctica being included in the Common Heritage of Mankind regime. In that way, the common heritage of mankind principle could evolve into a juridical standard.

States could reach compromises on each element of the principle, and by convening regular sessions in which to discuss the principle, resolutions and other 'soft law' could develop. Even if states could not initially reach a compromise, this process would establish a body of 'soft law' allowing the CHM regime to obtain workable standards. The common heritage principle has to be regarded as a part of customary international law, regardless of its incorporation and the set limits it was established onto the Convention on the Law of the Sea. Even as soft law, political concept, or "emerging customary international law," a principle may be used to influence debates and shape legal developments.

This leads to the question of whether with respect to the common heritage principle a general practice amounting to custom exists. Practice has a norm-creating effect so that the particular conduct is obligatory if it is accompanied by statements on the part of States that this particular conduct is mandatory¹⁴. As for a principle to be considered as international

14. Amato, Anthony A. D (1971), *The Concept of Custom in International Law*, p. 75, Ithaca and London.

customary law, some prerequisites exist: the content of the principle must be distinct enough so as to enable it to be part of the general corpus of international law, and custom must finally be so widespread that it can be considered as having been generally accepted respective.

The International Law Association's 1986 Seoul Declaration, for example, provides that "the concept of the common heritage of mankind as a general legal principle has entered into the corpus of public international law." Wolfrum (2009) also finds that "the common heritage principle, as far as the use of common spaces is concerned, is a part of customary international law," constituting "a distinct basic principle providing general . . . legal obligations with respect to the utilization of areas beyond national jurisdiction." However, not general acceptance has been achieved.

Finally, State practice accompanied by evidence of *opinio juris* must exist. Such practice can be deduced from numerous statements made at the Third UN Law of the Sea Conference, in UNCTAD, and in the United Nations General Assembly, as well as in the national legislation of the potential deep sea-bed mining States.

Hence, the common heritage principle insofar does not contain a moratorium prohibiting unilateral national deep sea-bed activities. The CHM regime at its current form constitutes a basic principle providing general but not specific legal obligations with respect to the utilization of areas beyond national jurisdiction. And it is common knowledge that the present structure of international law is such that even when numerous important international instruments are adopted which set out the interest of mankind, their implementation is not necessarily guaranteed. Indeed, in the absence of an international executive or even compulsory jurisdiction, the main guarantee of a contracting party's compliance with international legal rules has been reciprocity.

Exploitation regulations must be in place so that Contractors which have already invested significant amounts of time and money on exploration related activities in the Area can proceed to exploitation. Consequently, more frequent Legal and Technical Commission (LTC) meetings will result to finalize the exploitation regulations, environmental regulations, and associated guidelines/recommendations within an acceptable time frame. There are currently no time periods in the regulations for the relevant ISA organs to review and decide on an application and these must be included to provide more certainty for contractors. Additionally, a legally binding mechanism should also be included to compensate them in the event of changes in the regulatory regime which have a material adverse impact on contractors.

We would also propose to install a more rigid monitoring mechanism in the context of the International Seabed Authority (being the jurisdiction of the Legal and Technical Commission to recommend on proposed monitoring programmes) and, if that should fail, sanctions must be regulated and imposed on the parties who fail to adhere to their responsibilities, as is, for example, the sanction of contract termination.

Bibliography

Books & Articles

- Adamson, David (1990), *Defending the World: The Politics and Diplomacy of the Environment*, I.B.Tauris, London.

- Anand, Ram Prakash (1976), *Legal Regime of the Sea-Bed and the Developing Countries*, Thomson Press (India) Limited for A.W. Sijthoff International Publishing Company, New Delhi.

- Annoni Alessandra, Forlati Serena (2013), *The Changing Role of Nationality in International Law*, Routledge, Oxford.

- Baslar, Kemal (1997), *The Concept of the Common Heritage of Mankind in International Law*, Martinus Nijhoff Publishers, The Hague.

- Beck, Peter J. (1994), 'Who Owns Antarctica?: Governing and Managing the Last Continent', IBRU Centre for Borders Research of Durham University.

- Berrisch, Georg Matthias (1990), *The application of the concept of "common heritage of humankind" to the protection of the global environment: one response of public international law to global environmental threats*, McGill University, Montreal.

- Bracking Sarah (2012), 'Why is establishing the Arctic as common heritage so important?', *The Africa Report*.

- Brown, Edward Duncan (2001), *Sea-bed Energy and Minerals: Sea-bed mining*, Martinus Nijhoff Publishers, The Hague.

- Buck, Susan J. (1998), *The Global Commons: An Introduction*, Island Press, Washington, D.C.

- Byers, Michael (2010), *Who Owns the Arctic?: Understanding Sovereignty Disputes in the North*, D & M Publishers, Vancouver.
- Casado, Carmen (2005), 'Vessels on the high seas: Using a model flag state compliance agreement to control marine pollution', *California Western International Law Journal*, Volume 35, No. 2, Art. 3.
- Copeland Baden and Watkins Derek (2013), 'Who Owns the Arctic', *The New York Times*.
- Craven, Matthew C. R., Malgosia Fitzmaurice and Vogiatzi Maria (2007), *Time, History and International Law*, Martinus Nijhoff Publishers, The Hague.
- Currie, John H. (2008), *Public International Law 2/e*, Irwin Law, Toronto.
- De Feyter, Koen (2013), *Globalization and Common Responsibilities of States*, Routledge, Oxford.
- Dupuy, Rene Jean and Vignes, Daniel (1991), *A Handbook on the New Law of the Sea*, Vol. 1, Martinus Nijhoff Publishers, Dordrecht, The Netherlands.
- Fineman, Howard (2017), 'Trump Buys Into Putin Plan To Melt The Arctic', *Huffpost*.
- Francioni Francesco and Scovazzi Tullio (1987), *International law for Antarctica*, Giuffrè, Milan.
- Friedheim, Robert L. (1993), *Negotiating the New Ocean Regime*, University of South Carolina, Columbia.
- Guntrip, Edward (2003), 'The Common Heritage of Mankind: An adequate regime for managing the deep seabed?', *Melbourne Journal of International Law*, No 4. pp. 376-405.
- Hardin, Garrett (1968), 'The Tragedy of the Commons', *Science, New Series*, Vol. 162, No. 3859 pp. 1243-1248, American Association for the Advancement of Science.
- Joyner, Christopher (1990), 'Antarctica and the Indian ocean states: The interplay of law, interests, and geopolitics', *Ocean Development & International Law Journal*, Volume 21, Issue 1.

- Joyner, Christopher (1998), *Governing the Frozen Commons: The Antarctic Regime and Environmental Protection*, University of South Carolina Press, Columbia (South Carolina).
- Kafanov, Lucy (2017), 'Russia's military buildup in Arctic has US watching closely', NBC News.
- Kiger, Patrick (2015), 'Plans for Warming Arctic Could Tap Massive Wealth', *The Seeker*.
- Maluwa Tiyanjana, du Plessis Max, TladiDire (2017), *The Pursuit of a Brave New World in International Law: Essays in Honour of John Dugard*, Brill / Nijhoff, Leiden / Boston.
- McCown, Brigham A. (2014), 'Who Really Owns The North Pole?', *Forbes*.
- Milun, Kathryn (2010), *The Political Uncommons: The Cross-Cultural Logic of the Global Commons*, Routledge, Oxford.
- Noyes, John (2012), 'The Common Heritage of Mankind: Past, Present, and Future.', *Denver Journal of International Law & Policy*, San Diego.
- Oda, Shigeru (1977), 'The law of the sea in our time: The United Nations seabed committee, 1968 – 1973', vol.2 of *The Law of the Sea in Our Time*, Sijthoff publications on ocean development, Leyden.
- Oda, Shigeru (1972), *The International Law of the Ocean Development: Basic Documents, Volume 1*, Brill / Nijhoff, Leiden.
- Ogley, Roderik (1984), *Internationalizing the seabed*, Gower, Aldershot, UK.
- Orrego-Vicuna, Francisco (1983), *Antarctic Resources Policy: Scientific, Legal and Political Issues*, Cambridge University Press, Cambridge.
- Ostrom, Elinor (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, Cambridge.
- Pardo, Arvid (1967), Address to the 22nd session of the General Assembly of the United Nations, U.N. GAOR, 22nd sess., U.N. Doc. A/6695.

- Pardo, Arvid (1984), 'Ocean, Space and Mankind', Third World Quarterly, Vol. 6, No. 3 pp. 559-575, Taylor & Francis, Ltd., Oxford.
- Park Yonk-Ok (1976), 'Res Communis versus Res Nullius: The International Legal, Political and Strategic Context', Journal of East and West studies, Volume 5, Issue 1.
- Payoyo, PB (1997), Cries of the Sea: World Inequality, Sustainable Development and the Common Heritage of Humanity, Martinus Nijhoff Publishers, The Hague.
- Peterson, M. J. (2012), International Regimes for the Final Frontier, SUNY Press, New York.
- Powell, Richard C. and Dodds, Klaus (2014), Polar geopolitics? : Knowledges, resources and legal regimes, Edward Elgar Publishing, Cheltenham.
- Proelss, Alexander (2017), United Nations Convention on the Law of the Sea: A Commentary, Verlag C. H. Beck oHG, Munich.
- Quigg, Philip W. (1983), A Pole Apart: The Emerging Issues of Antarctica, New Press, New York.
- Ramlogan, Rajendra(2004), The Developing World and the Environment: Making the Case for Effective Protection of the Global Environment, University Press of America, Lanham (Maryland).
- Ross, David A. (2012), Opportunities and Uses of the Ocean, Springer Science & Business Media, New York.
- Roukounas, Emmanuel (2010), International Public Law, Legal Library, Athens.
- Sand, Peter H. (2004), 'Sovereignty bounded: Public trusteeship for common pool resources?', Global Environmental Politics, (4)1, 47-71.
- Secretariat of the Convention on Biological Diversity (2005), 'The international legal regime of the high seas and the seabed beyond the limits of national jurisdiction and options for cooperation for the establishment of marine protected areas (MPAS) in marine areas beyond the limits of national jurisdiction ', First meeting of the Convention's Ad Hoc Open-Ended Working Group on Protected Areas, CBD Technical Series No. 19.

- Shackelford, Scott J. (2008), 'The Tragedy of the Common Heritage of Mankind', *Stanford Environmental Law Journal*, Vol. 27, pp. 101 – 120.
- Stang, Gerald (2016), *EU Arctic policy in regional context*, European Parliament, Directorate-General for External Policies, Policy Department.
- Steinberg, Philip E. et al (2015), *Contesting the Arctic: politics and imaginaries in the circumpolar North*, I.B. Tauris, London.
- Taverne, Bernard (2008), *Petroleum, Industry and Governments: A Study of the Involvement of Industry and Governments in the Production and Use of Petroleum*, Kluwer Law International, Alphen aan den Rijn, The Netherlands.
- Taylor, Prue (1998), *An Ecological Approach to International Law: Responding to Challenges of Climate Change*, Routledge, London.
- Teller, Matthew (2014), 'Why do so many nations want a piece of Antarctica?', *BBC News*.
- Trindade Cancado, Augusto Antonio (2005), *International Law for Humankind towards a New Jus Gentium*, General Course on Public International Law delivered at the Hague Academy of International Law summer program, *Recueil Des Cours* 316 pp. 365–396.
- Tsaltas, Gregory (1984), *International Law of the Sea Common Heritage of Mankind*, Volume 2, Papazisis Publications, Athens.
- Tsaltas, Gregory (2003), *The international regime of the seas and the oceans*, Volume 2, Sideris Publications, Athens.
- Tuerk, Helmut (2012), *Reflections on the Contemporary Law of the Sea*, Martinus Nijhoff Publishers, The Hague.
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2016), 'World Heritage in the High Seas: An idea whose time has come', *World Heritage reports* 44, Paris.

- van Dyke Jon M., Broder Sherry P., Lee Seokwoo, Paik Jin-Hyun (2008), *Governing Ocean Resources: New Challenges and Emerging Regimes: A Tribute to Judge Choon-Ho Park*, Martinus Nijhoff Publishers, The Hague.

- Weiss, Edith Brown (1989), *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, United Nations University, Tokyo / Transnational Publishers, NY.

- Whiteman, Hilary (2010), 'Russia presents vision for Arctic wealth', CNN.

International Treaties & Bodies

- Convention for the Protection of the World Cultural and Natural Heritage (adopted November 16, 1972, entered into force December 17, 1975) 1037 UNTS 151.

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

- International Seabed Authority, <https://www.isa.org.jm/>

- United Nations Convention on the Law of the Sea (concluded December 10, 1982, entered into force November 16, 1994) 1833 UNTS 397.

- United Nations Convention on the Law of the Sea art. 1, paragraph 1, Dec. 10, 1982, 1833 U.N.T.S. 397

- United Nations General Assembly Resolution 2749 (XXV) Declaration of Principles Governing the Seabed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, U.N. GAOR, 25th Sess., Supp. No. 28, 24. U.N. Doc. A/8028 (1970).

- Secretariat of the Antarctic Treaty, <http://www.ats.aq/e/ats.htm>