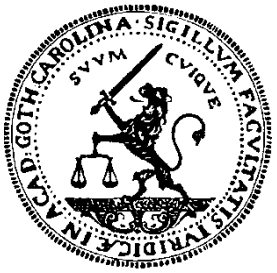

FACULTY OF LAW
Lund University

Tafsir Matin

Geographical and Environmental Impacts of Climate Change in the Arctic Legal Regime:

Towards a Comprehensive Legal Order for Balancing Environmental Governance and International Trade & Commence Interests

Master thesis
30 credits

Professor Proshanto K. Mukherjee

Master´s Programme in Maritime Law

Spring 2012

Contents

Summary

The thesis aims at supplementing a critique of the existing international instruments, regional responses and national legislation of the Arctic related to marine environmental protection. With this aim in view, the thesis satisfies its objective by proposing a Bipartite "Arctic Council" acting as a conglomeration of the Arctic States and the Flag States with a hybrid "Arctic treaty", which is an interplay of international and regional response. The "Arctic Council", apparently, has been highlighted and envisioned as a platform which can provide a significant solution, if modified accurately, to balance sustainable development (marine environment) and international navigation (trade and commerce) in the event of rapid climate change.

In an endeavor to examine the pertinent environmental legal regime of the Arctic, it seemed important to delve into the maritime boundary delimitation issues which involve three major Arctic States. These issues which subsist in two significant Arctic sea routes have a subtle connection with the subject of marine protection, which is revealed after a detailed analysis of the geographical issues. While the landscapes are shaping up as a result of global warming, certain Arctic States have risen to the occasion to extend their maritime boundaries in the offshore areas. They have not only resorted to contradicting theories to establish sovereign claims, but also adopted extreme standards and implemented them in national legislation. "Conflict of law" which in turn distorts the international legal regime, is evident from the comparative study between two significant Arctic national legislation. More significantly, this distortion leaves a question on the face of Arctic marine protection. Investigations lead to the fact that the boundary issues have distracted the Arctic States from promulgating a parallel system to safeguard the pristine environment and have left the entire Arctic environmental protection regime in disarray. Inevitable as it is, climate change will accelerate international navigation and break any resistance which operates against "due regard to navigation" as embedded in the *lex specialis* regime of UNCLOS. Moreover, areas beyond national jurisdiction have not received proper attention and till date none of the zones have been designated as MPA's. On the other hand, the international community which supports "freedom of navigation" only seeks commercial advantages of a shorter sea route. There is a vacuum of global concern. Moreover, the international instruments and regulatory conventions portray a lack of respect for the Arctic which is seen as the "last ecosystem on earth". Apart from dealing with inconsistent geographical claims, the Arctic States have responded via Arctic Council, which is an intergovernmental forum established for the purposes of addressing questions of sustainable development as well as environmental issues. With no specific mandates, the five working groups under the Council suffer from low funding.

The "soft law" character of the "Arctic Council" has been viewed as a major drawback and the Arctic legal regime is found to be

much less comprehensive when compared to the treaty-based regime that regulates the Antarctic, a region with a very similar environment. As such, discussions have proceeded as to whether the Arctic is in need of a new legal regime, and whether the Antarctic treaty should be a model. What is truly needed is structure, and regardless of which shape the future Arctic legal regime takes, the most important aspect is that the existing "Arctic Council" must take into consideration the geographical and environmental impacts of climate change and supplement a comprehensive legal order. It is not the single concern of the "Arctic Council" to consider and supplement a legal order, but it should be a global consideration to work hand in hand with the Council to implement this order. If the shipping industry is to provide support, the "Arctic Council" will need to provide further clarification concerning many questions, amongst of which one is, how this comprehensive legal order will correctly balance environmental governance and international trade.

Preface

This thesis is dedicated to *Joachim Johansson*, who has supported me in every step of the work. Support took all its forms in reality, even one day when he quit his work so that he could drop me off to my supervisor. Du plockade upp mig i en mycket känslig och svår tid i mitt liv. Du gav mig anledning att leva Trots att du var en främling har du gjort mer för mig än mina familjemedlemmar. Du är anledningen till att jag fortfarande känner mig levande. Du är orsaken bakom mitt logiska tänkande. Du är min lag.

However, I render my sincere acknowledgments to my supervisor, *Professor Proshanto K. Mukherjee* without whom this thesis would not be what it is today. From the first chapter to the very last, he has rendered his generous and patient guidance. He is a teacher of all teachers. I cannot possibly imagine what this thesis would be without him. At the same time, I would like to thank Professor *Olof Linden* (World Maritime University) for helping me come out with such a unique topic and seeing me even at his busiest hours. *Professor Olof* is a father figure who has given me his personal books without even questioning the date of return.

I acknowledge the mental support of my ex-roommates who believe Iam born to be an academician. Moreover, I feel blessed to have been in a class with friends who are like a family to me. Mental stability was an important factor before sitting down to type and talking to my classmates helped me build a source of determination. I would like to take this chance to thank Professor *Dr. M. Shah Alam,* who has nurtured me during my LL.B's and taught me to think with logic and reason. He was the reason of my 1st class results and till date he remains to be a silent inspiration for me. I sincerely recognise the efforts of *Anna Volkova* and *Chris Hoebeke* who has attended to my "resource needs" and has never felt bothered to get up a hundred times to get me the book I needed. I would like to render my heartfelt gratitude to the scholarly authors *Aldo Chircop* and *Donat Pharand*, who's works have been the core foundation of this thesis.

I thank my parents, especially my father Late *Dr. A. K. M. Abdul Matin,* who was a marine biologist and was an expert in the field of environmental law. I do not know if it was a coincidence that I ended up studying martime law and writing on a topic in the same field.

I didn't leave God behind, because all the names mentioned in this page, are the many faces of God.

Abbreviations

AEPS	Arctic Environmental Protection Strategy
AMAP	Arctic Monitoring and Assessment Programme
ASPPR	Arctic Shipping Pollution Prevention Regulations
AWPPA	Arctic Waters Pollution Prevention Act, 1970
CAFF	Conservation of Arctic Flora and Fauna
CDEM	Construction, Design, Equipment and Manning
CLC	Civil Liability for Oil Pollution Damage Convention of 1969
CSA	Canada Shipping Act, 2001
EEZ	Exclusive Economic Zone
EPPR	Emergency, Prevention, Preparedness and Response
FUND	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 1971
GAIRAS	Generally Accepted International Rules and Standards
GATT	General Agreement on Tariffs and Trade
GCTS	Geneva Convention on Territorial Sea and Contiguous Zone, 1958.
GEF	Global Environment Facility
ICJ	International Court of Justice

IMO	International Maritime Organization
IUCN	International Union for Conservation of Nature and Nature protection
LC72	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as Modified by the Protocol of 1978
MOU	Memorandum of Understanding
MPA	Marine Protected Area
NSR	Northern Sea Route
NWP	Northwest Passage
OPRC 1990	International Convention on Oil Pollution Preparedness, Response and Co-operation, 1990
OPRC-HNS Protocol	Protocol on the Preparedness, Response and Co-operation on Pollution incidents by Hazardous and Noxious Substances, 2000
OSPAR	Convention for the Protection of the Marine Environment of the North-East Environment of the North-East Atlantic, 1992
PAME	Preotection of Marine Environment
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea, 1982
UNDP	United Nations Development Programme

United Kingdom	Government of the United Kingdom of Great Britain and Northern Ireland
U.S.	United States of America
WTO	World Trade Organization
WWF	World Wide Fund

1 Introduction

1.1 Background

The concept of "Climate change", by now, has become a cliché when describing the catalyst behind geographical and environmental changes in the Arctic ocean. As is understood, the impact of this catalyst in the Arctic ocean will, over the next decades, ascertain its transformation from a permanently ice-covered and virtually untraversable area into a seasonal navigable sea.[1] Before investigating the complex commercial implications of the Arctic region, it is important to analyse the controversial geographical issues among the Arctic States. Overlapping claims have provoked some States to put into place domestic laws which contradict international law. The Arctic States relate to theories which proceed in favour of territorial sovereignty as regards to disputed offshore regions, criticized in substance by the international community. This is, to a great extent, distorting the international regime and leaving the shipping industry frustrated. These innovative theories defy the international regime and the prospects of international trade and commerce. A number of MOU's exist which the Arctic States denounce spontaneously on certain events to establish opposing claims in those disputed regions. This complex situation defeats the very purpose of diplomatic relationship and hence, instigates the Arctic States to act reluctantly towards the acceptance of innocent passage endorsed by international instruments.[2] On the other hand, the Arctic States have committed themselves to the regional soft-law "Arctic Council" approach, the participation of which is voluntary. Then again, international instruments corresponding to Arctic environmental protection against intentional or voluntary vessel-pollution are either based on voluntary approach or relate to only a part of the Arctic. Hence, the Arctic has been left disregarded by the international policy makers. Although the umbrella convention i.e. UNCLOS has a *lex specialis* provision for the Arctic, it has left a question mark on the face of this convention and other international regulatory regimes as to what extent it can relate to the future Arctic navigable routes which is predicted to be the result of this "climate change" phenomenon.

---

[1] P.A. Berkman and O.R. Young, "Science and Government: Governance and Environmental Change in the Arctic Ocean", *Science*, 324, 17 April 2009, pp. 339-340, *Note* that, as the northern ice-cap changes in response to our changing climate, the northern passage will increasingly experience conditions considered conductive to shipping and other maritime activities. The melting ice is thawing its way to offshore landscapes which provokes Arctic States to claim extended sovereign control, on the other hand, the international instruments or regulatory conventions do not give proper attention to this part of the globe as the melting ice is inviting international vessel-source pollution.

[2] Janet Pawlak, Gunnar Kullenberg and Chua Thia-Eng, "Securing the Oceans: Executive Summary" in *Securing the Oceans: Essays on Ocean Governance- Global and Regional Perspectives*, Chua Thia-Eng, Gunnar Kullenberg and Danilo Bonga (eds.), January 2008, Published by GEF, UNDP and IMO in association with the Nippon Foundation, p. 4.

The notion of climate change is, in fact, influencing geographical and environmental transformation. The push and pull factors of maritime boundary issues are on one side inhibiting international trade and commerce and on the other side, leaving the Arctic marine environment vulnerable. The increase of both intra- and trans-Arctic shipping, specifically poses great pressures and risks in terms of impacts to the Arctic marine environment, its living resources and its biodiversity, leaving the sea route susceptible. Climate change is not only bending the existing international regime, but also leaves the entire Arctic legal regime in obscurity and an undetermined position. Some scholars prefer stringent policies modeled after regimes which do not require balancing of interest and others support the existing voluntary approach which has not yet reached any success in dealing with safeguarding the sensitive Arctic marine eco-system. The nexus between geographical issues and the environmental issues needs to be analysed in order to comprehend the changes and gaps in the Arctic legal regime. In short, the existing ocean governance system of the Arctic i.e. international, regional and national legal regimes needs to be revised and examined to set aside stringency and complication and pave the way for international navigation. The existing legal regime needs to be replaced by an enforceable ocean governance strategy to combat the inevitable changes.

1.2 General Outline

The thesis has been divided into three parts with six main chapters comprising the main body. The main body starts (Chapter 2) with a detailed analysis of the existing Arctic international regime. Since the *lex specialis* provision of UNCLOS is significantly connected to the Arctic, the development and pragmatic applicability has been given detailed focus. The Flag State and Coastal State jurisdictions have been examined in a cursory manner since they constitute the general provisions of international marine environmental law and have been placed before the *lex specialis* analysis to maintain the numercial order of the UNCLOS provisions. The IMO regulatory regime follows this analysis with a study of operational discharges under MARPOL 73/78 coupled with a brief overview of the IMO Polar Shipping Guidelines related to the Arctic. The author has made an effort in this chapter to extract and incorporate the international regime of deliberate dumping and accidental pollution to embody all categories of existing marine pollution provisions that can be related to the Arctic. Following the contemporary international regime of the Arctic, a chapter on the pertinent national legislation embodies the first part. Chapter 3 is restricted to the historical development and a critical analysis of existing domestic legislation of three major Arctic States i.e. Canada, the Russian Federation and the U.S. since their conflicts constitute a major part of geographical issues in the Arctic. It is also important to comprehend these Arctic national legislation which regulate the NWP and NSR, prior to examining the changes that are taking place in those sea routes as a result of climate change. The second part of the thesis is designed to comprise two

chapters dedicated to the impact of climate change where the former relates to the geographical issues and the latter pertains to the environmental issues. The author is of the view that in order to understand the modifications on the Arctic due to the results of "climate change" followed by the distorting influence it has on the international regime; it is significant to research into the different theories of geographical issues and to delve into regional responses of the environmental aspect. The inherent reason for highlighting these two issues lies in the relative interconnections that they comprise which is essential to comprehend before discussing the recommendations for a completely new regime in the Arctic. The findings of this part also constitute a segment of the analytical part in the conclusion. Finally, the first half of the final part emphasizes on the "what", "why", "how" and "which" questions in dealing with Arctic ocean governance.[3] This chapter investigates significant reasons underlying the interest of international trade in the Arctic and the rationale behind balancing commercial interests with interests to safeguard the marine environment. This leads to the final chapter where alternatives are examined which can embody an interplay among international, regional and domestic facets and act as a new legal regime which can restrain further distortions due to climate change and at the same time protect the pristine environment of the Arctic.

1.3 Delimitation

This thesis does not include any quantitative statistics of different types of marine pollution followed by the effects of global warming based on scientific analysis, sustainable development related to the indigenous peoples of the Arctic or safety aspects of navigation; such an undertaking would venture beyond the scope of this work. The thesis, moreover, does not relate to land-based pollution of the Arctic and is limited to the discussion of vessel-source pollution. Although there is an effort to cover international instruments on operational discharges, accidental pollution and deliberate dumping, the analysis centers around the significant instruments which are internationally commendable, directly or technically applicable to the Arctic "ice-covered" areas, have been ratified by the Arctic States or prescribe bilateral or multilateral co-operation which has the possibility of being implemented via existing "soft law" approaches in the Arctic. With regards to the chapter on domestic legislation, the examples given are restricted only to three major Arctic States at an in-depth national level and consists of a detailed analysis with a comparative study among them.[4] Those in the authors' opinion are sufficient to understand the "conflict of laws" and the inconsistencies that persist in international law. The analysis

[3] The four questions are; what are the economic incentives in the Arctic? Why is there a need to strike a balance between commercial implications and environmental protection? How can this goal be achieved and is there any regime that is closely connected? Which approach is more pragmatic and can be undertaken to strike the desired balance?

[4] This is done to maintain consistency in the chapters to come and so that the analysis remains focused on the NWP and NSR, the commercial implications of which is later balanced with the envrionemental aspect.

of the national legal framework for marine environmental protection has been limited to the most coherent yet existing instruments of those three States. This is important to understand the existing legal regime of the NWP and NSR (comprising the Arctic sea route) which are the focal points of the thesis. Hence, in analyzing the geographical issues due to climate change, the author elaborately highlights the overlapping issues that exist in those two routes and the domestic theories propounded therein. Then again, there is a plethora of different organizations and institutions that are currently active in the Arctic region which will not be examined, rather mentioned when necessary. In this regard, the only focus is on the Arctic Council, although brief attention is given to the Arctic regional instrument OSPAR related to marine dumping, since it covers a part of the Arctic. In examining the economic incentives, the thesis does not provide a detailed list of benefits, rather adheres to the advantages of NWP and NSR as shorter sea routes, since it is an actual result of climate change.[5]

1.4 Method and Material

The thesis comprises a qualitative research method for comprehending and scrutinising various perspectives and issues relating to climate change and the Arctic legal regime. This is followed by a descriptive study, critical analysis and comparative studies of legal instruments. In brief, the author has resorted to the legal method which is the dogmatic approach pertaining to the legal analysis of available resources. The primary sources for the research analysis are coherent provisions of maritime law, both within the domestic and international areas of jurisdiction including but not limited to relevant international conventions, regulatory regimes, applicable treaties[6], interpretation of judicial decisions and the related jurisprudence. Secondary sources consist of book reviews[7], chapters in books, journals, compilation of articles, digests, official websites of international organizations, magazines, reports and newsletters.

1.5 Objective

The objective of this thesis is to propose a new and unique legal regime for the Arctic under the contemporary regional organization, which is to a certain extent modified, taking into account both the co-existing international and regional perspectives. However, emergence of a new legal system would have an adverse effect on other systems, making it important

[5] The perspective has been limited to climate change as the central element of discussion and its impact on the existing legal regimes.
[6] In order to achieve the main objective of the thesis, the author has focused on instruments and institutions that are active at a multilteral level.
[7] As the research topic is current and numerous related topics are still being reviewed and assessed, the research and collection of data is focused mainly on recent technical papers and specialized conferences.

to set a system of balance so that it could be in line with the emerging international trade and commerce. To propose a new set of rules, it was primarily essential to examine a series of *status quo* legal layers exclusively related to the Arctic or the ice-conditions that subsist today.[8] Although the tradition of commencing with an analysis of pertinent international law has been maintained, it was, eventually, important to observe how these provisions were implemented in the national layer.[9] Since, it is the Arctic that is in issue, it was impossible to proceed without revising and scrutinising the Canadian legislation, i.e., AWPPA which is the only legislation of its kind in the world. Understanding the fact that Canada is faced with opposing interests regarding jurisdictional claims, it was mandatory to focus on other national legislation and their development. An integral part of the main objective of this thesis is to review the impact of climate change, which is, in reality the catalyst behind those "opposing geographical issues".[10] In an endeavour to extract and understand the geographical issues and scholarly theories, this thesis reveals how the environmental issues are left undone at the hands of a Council, which has no specific mandate and will not be able to respond to the increasing ship-traffic no matter how stringent the Arctic states are at inhibiting international navigation.[11] In trying to fulfil the purpose, it was inevitable to create and comprehend the clear nexus between "geography and environment" of the Arctic. The environmental aspect is apparently connected to economic incentives,[12] the element of which needs to be exposed with a view to be balanced with a new legal regime under the domain of a slightly modified organisation with a global participation.[13] Finally, the new legal regime (which weighs the balance between interest groups) is explored and assessed and is followed by concluding remarks. In doing so, the objective of this thesis is met.

[8] Incorporated in Chapter 2; (Question) What is the existing international regime and regulatory regime of the arctic in respect of vessel-source pollution?

[9] Incorporated in Chapter 3; (Question 1) What are the pertinent national legislation of the Arctic zone? (Question 2) To what extent of the Arctic area are these legislative juristiictions applicable?

[10] Incorporated in Chapter 4; for the purpose of in-depth analysis, the Arctic sea route has been separately discussed in terms of NWP and NSR, (Question 1) What is the legal status of International Straits in the Arctic? (Question 2) Can NWP be termed as an International Strait? (Question 3) To what extent can Canada claim sovereignty in the NWP based on the Sector theory? (Question 4) How is this distorting the legal regime? (Question 5) How does MOU compromise equality in the NSR?

[11] Incorporated in Chapter 5; (Question 1) How does the regional response of the Arctic Council based on a "soft law" approach contribute as a catalyst of change in the Arctic legal regime? (Question 2) Will the Arctic Council be able to supplement a sufficient yet effective environmental protection management system in terms of the increasing ship-traffic?

[12] Incorporated in Chapter 6; (Question 1) Why is there a need to address a strict Arctic ocean governance? (Question 2) Will this ocean governance be properly addressed if the Arctic is modeled after the Antarctic treaty?

[13] Incorporated in Chapter 7; (Question 1) What are the different approaches through which the Arctic legal regime can be addressed? (Question 2) How can the existing approaches be modified and amalgamated into a unique system under the regional response?

2 *Status Quo* of Arctic International Instruments

International environmental law has augmented during the past few decades, and in consequence there has been an emersion of several quintessence principles that in turn provide for a framework of customary environmental law. These core principles though the list of responsibilites is not exhaustive, arising from state practice, has been incorporated in international environmental instruments. They comprise the underlying framwork for global marine environmental protection which extends to the Arctic as well.[14] International law in the Arctic has been inspired by areas beyond national jurisdiction and by Coastal States' rights in the offshore regions and other rights regarding resources and navigation. Hence, the forms in which Arctic states administer their territories have been increasingly influenced by international law principles relating to prescriptive coupled with enforcement jurisdiction and environmental protection.

2.1 UNCLOS Provisions

Although the suitability of the provisions incorporated in UNCLOS has been questioned in the past[15] and the Arctic itself has been delineated by the media as an area void of international regulations[16], under the contemporary legal pretext it is by now acknowledged that the Arctic Ocean and the maritime activities do fall within the wider dimension of UNCLOS. Indications have been made to the fact that the UNCLOS was to structure a

[14] Donald R. Rothwell and Christopher C. Joyner, "Global environmental protection instruments and the polar marine environment" in *Protecting the Polar Marine Environment*, Davor Vidas (ed.), 2000, Cambridge University Press, pp. 57-77, Note that, a major part of international environmental law is aimed at regulating environmental problems by setting common international standards and objectives for prevention or mitigation of harm. It also strives to provide a flexible rule-making process that can permits flexible and regular amendments, since technological and scientific developments require such an approach. However, the provisions on the protection of the marine environment in as enshrined in UNCLOS are vitally important. They express principles of international environmental law and provides a framework for establishing a broad and clear structure for the law. UNCLOS is viewed by some as the most significant and comprehensive international environmental agreement that exists today.

[15] *See* Budislav Vukas, *United Nations Convention on the Law of the Sea and the Polar Marine Environment*, Davor Vidas (ed.), *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention*, Cambridge University Press 2000, pp. 35-37, Note that, the question of whether or not the UNCLOS is applicable to the Arctic seas has been raised several times, due to the specific geographical, climatic, historical and political circumstances that characterize the Arctic region. It is also a fact that the UNCLOS does not indicate which sea or ocean it is or isn't applicable.

[16] *See* James Graff, Fight for the top of the World, *Time Magazine*, Vol. 170, No. 13, October 2007, and Mckenzie Funk, Arctic Landgrab, *National Geographic*, Vol. 215, No. 5, May 2005.

"Charter of the Ocean" that could act as an elementary framework convention giving insight to major issues of the entire ocean space.[17] With an objective to understanding the international regime of the Arctic, it is important to venture into the prescriptive and enforcement jurisdictions of the Flag State, Coastal State and Port State. More recently, the buzz on the Arctic is climate change and the doorway for international navigation it reveals as we speak. This legal jurisdictions aforementioned when analysed and extracted, lucidly communicates the basic understanding of the legal regime of international navigation in the Arctic. Hence, part XII is the part and parcel of the "Charter of the Ocean" with Article 234 as the heart of this integral part as regards to Arctic.

2.1.1 Reference to Part XII of UNCLOS on General Obligations

Article 192 and Article 194 as embodied in Part XII of UNCLOS provides a general obligation for every State to protect and preserve the marine environment (in accordance with a State's capabilities) from intentional vessel-source pollution balanced with the reaffirmation of the right of States to exploit their natural resources subject to adopting adequate measures to prevent, reduce and control such pollution.[18] Reference has been drawn to "fragile eco-system", a division to which Arctic maybe pertinent to has been comprised in Article 194 (3) (c) and 194 (5). The wordings "for preventing accidents" in Article 194 (3) (b) and 196 (1)[19] highlights the notion of accidental discharge as a part of vessel-source pollution. Then again, Article 194 itself is central to any analysis of State obligation under UNCLOS to alleviate climate change as it provides the basis of certain guidance on what a State is expected to do to protect the fragile eco-system. Moreover, Article 194 (5) which deals with vulnerable seas is of particular relevance to polar oceans.[20] Although the scope of Article 195 is obscure, it does to a certain extent broaden the concept of mitigation measures insofar as it must be designed as not to result in other environmental damage, a subject of considerable controversy in climate change.[21] Compliments maybe rendered

[17] *Supra* note 14, p. 36.
[18] *United Nations Convention on the Law of the Sea*, Montego Bay, 10 December 1982, available at:
<http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf > 9date accessed 2 February 2012).
[19] *Ibid. Note that,* Article 196 (1) read together with Article 1(4) gives an amalgamated understanding of accidental-discharge. Article 1 (4) reads thus, "...the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea and water and reduction of amenities".
[20] *Supra* note 14, p. 42, where it is stated that measures taken in accordance with Part XII "shall include those necessary protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life".
[21] Meinhard Doelle, *From Hot Air to Action? Climate Change, Compliance and the Future of International Environmental Law*, 2005, Thomson/Carswell, p. 23.

to UNCLOS for its farsightedness for providing a holistic approach to address environmental issues. These provisions although demanding further legal interpretation, substantiates the general foundation for the remainder of the provisions comprising the all-encompassing structure of prescriptive and enforcement jurisdictions.[22]

2.1.2 Flag State Jurisdiction

Flag State prescriptive jurisdiction consolidated in Article 211 (2) acts as a foundation of binding obligation for all Flag States to constitute laws and regulations to adequately safeguard the marine environment by restraining vessel-source pollution. Contained in this Article with reference to those set of laws and regulations so assumed, the Flag State must ascertain that they have the parallel effect of "generally accepted international rules and standards"[23] demonstrated via "competent international organization or general diplomatic conference"[24]. The notion behind this endorsement lies in the fact that this "rule of reference" does not only offer consistency, but also provides a sense of adaptability since IMO norms comprised in conventions maybe sporadically revised (for updating) through an implicit acceptance amendment procedure. Article 212 (which relates to "pollution from or through the atmosphere") is another provision, although not drafted with climate change in mind, can now reasonably be clarified to apply to the prescriptive jurisdiction of the Flag State.

The inevitable obligation to ensure enforcement of international-analogous laws and regulations is integral to the prescriptive jurisdiction of a Flag State. Self-explanatory by the title, Article 217 imposes an obligation on the Flag States to ensure the implementation of national and international laws and regulations and the compliance of such norms in whichever maritime zone they might be located. Then again, Flag States are charged with conformity to generally accepted international procedure, practices and enforcement (Article 94 (5)), investigating reports by States who believe that the Flag State jurisdiction and control is defective and deficient (Article 94 (6)) and investigating casualties to ships flying their flags (Article 94 (7)).[25] In this context, Article 222 empowers

[22] Alan E. Boyle, "Marine Pollution under the Law of the Sea Convention", *The American Journal of International Law*, 1985, Vol. 79, p. 350.
[23] *Supra* note 16, *Note that* UNCLOS does not contain technical requirements but by means of "rules of reference" requires Flag States to give effect to existing yet generally accepted international rules and standards i.e. GAIRAS.
[24] *See* Report of the United Nations Secretary General, "Impact of the entry into force of the 1982 United Nations Convention on the Law of the Sea on related, existing, and proposed instruments and programmes", UN Doc. A/52/491, Section J, paras. 8-9. *Note that* the main GAIRAS relating to vessel-source pollution are embodied in the global regulatory instrument adopted by IMO. Since the provision does not express the content of such laws and Regulations adopted by the Flag State, this part can discretionally apply to vessels registered in their territory or flying their flags higher standard than the GAIRAS i.e. the annexes of MARPOL 73/78 that have entered into force.
[25] John N.K. Mansell, *Flag State Responsibility: Historical Development and Contemporary Issues*, 2009, Springer, pp. 4-5.

the Flag States to take necessary measures and incorporate international regulations relating to the protection of the marine environment from pollution through the atmosphere. These flag State duties and responsibilities are tersely summarised in the Code for the Implementation of Mandatory IMO instruments (IMO Resolution A.973 (24)) that gives reference to UNCLOS provisions.[26]

2.1.3 Coastal State Jurisdiction

Within internal waters Coastal State enjoys, under its sovereignty, prescriptive jurisdiction for establishing particular requirements as a condition for the entry of foreign vessels subject to due publicity to such requirements and communication of the same to competent international organization (Article 2 (1) and 211 (3)).[27] An interest as between the Flag State and the Coastal State seems to be balanced by rendering Coastal State the jurisdiction to prescribe regulations concerning vessel-source pollution and by limiting the absolute freedom of navigation of Flag State(s). However, in exercising sovereignty within the territorial sea by establishing particular requirements corresponding to preservation of the environment of the Coast within that frame of jurisdiction, the Coastal State is under an obligation not to hamper innocent passage of foreign vessels (Article 21 (1) (f) and 211 (4)). In this regard a significant comparison with the Flag State jurisdiction maybe drawn from the fact that, the Coastal State is under no obligation to comply with GAIRAS or any minimum set of standards. On the other hand, the Coastal States' prescriptive jurisdiction is not so flexible in the innocent passage regime as regards to straits where transit passage is available. Those States bordering straits may adopt laws and regulations relating to transit passage by designating sea-lanes and traffic separation schemes (Article 42 (1) (a)), give effect to GAIRAS regarding discharge of oil, oily wastes and other noxious substances (Article 42 (1) (b)), not apply discriminatory rules (Article 42 (2)) and give due publicity to all such laws and regulations (Article 42 (3)).[28] But the Convention is silent as to the

[26] *Ibid.*, *Note that* in paragraph 1.5, it is indicated that the central hypothesis of Flag State responsibility is that the extant regulatory regime is adequate in law however, its enforcement does not deliver the intent of UNCLOS. A possible framework for national legislation to give effect to the relevant provisions of necessary IMO instruments is referred to in "Guidelines for Maritime Legislation", a United Nations' Publication, ST/ESCAP/1076.

[27] *Supra* note 16, *Note that* these provisions can be invoked to uphold both Canada's and Russian Federation's restraining laws and regulations for control of vessel-source pollution in some areas of NWP and NSR.

[28] Veronica Frank, *The European Community and the Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations in the Regional Level*, 2007, Martinus Nijhoff Publishers, pp. 198-199, where it is highlighted that the environmental jurisdiction of Coastal States diminishes to a considerable extent in straits used for international navigation such as, the English channel, the Dover and Gibraltar straits, where the foreign ships enjoy the right of innocent passage. This right, unlike the right of innocent passage in the territorial sea can never be suspended and shall not be impeded unless there is an alternative route of similar convenience. The author goes onto saying that, the regulatory powers of the Coastal States bordering the straits are limited to

consequences of lack of compliance with these standards.[29] This constrained jurisdiction accounts for, in part, both Canada's and Russian Federation's dynamic protest to the application of the straits regime in parts of their respective NWP and NSR.[30] The prescriptive jurisdiction of the Coastal State extends to EEZ where adoption of laws and regulations conforming to and giving due effect to GAIRAS is encouraged by UNCLOS (Article 211 (5)).[31] Then again, a distinct reference to Arctic maybe extracted from Article 211 (6) where the Coastal State is empowered to adopt additional norms in respect of EEZ if the rules and standards foreseen in Article 211 (1) are insufficient and gives rise to the need to incorporate special mandatory measures for vessel-source pollution. The reason for this reference lies in the precise wordings i.e. "oceanographical" and "ecological condition". Nevertheless, the spontaneity of the Coastal State in consolidating such "mandatory" rules has been limited by subjecting it to consultation with any other States concerned via competent international organization. This portrays the significant effort of UNCLOS in determining a balance (between Coastal State and Flag State) so that the mandatory rules do not hamper international navigation.

The enforcement jurisdiction of Coastal States as regards to territorial sea is embedded in Article 220 (2) where the Coastal State may take up enforcement measures i.e. physical inspection of the vessel, institute proceedings and detain the vessel subject to the condition that it has sufficient "clear grounds" which paves it to believe there is a certain violation of laws and Regulations adopted in accordance with UNCLOS or "applicable international rules and standards".[32] This enforcement jurisdiction must however, observe the restrictions imposed in Part II, section 3 (innocent passage in the territorial sea) and Part XII, section 7 (safeguards) which are intended to ensure in exercising power, States do not endanger the safety of navigation, expose the marine environment to unreasonable risk or affect the commercial interest of ships.[33] However, it is not clear what this broad provision entails in practice, more specifically with reference to the Arctic. In straits, the Coastal States may enforce appropriate measures when a vessel in transit has breached the applicable anti-pollution Rules and where such breach constitutes a threat to cause "major" damage (Article 233). Most of the enforcement mechanisms available to the Coastal State in the EEZ relate to the violation of discharge or navigational standards.[34] The availability of these enforcement mechanisms, moreover, is conditional upon the gravity of discharge and

---

the prescription of navigational rules which have to conform to "applicable" international rules and need to be approved by IMO. In the strait, therefore, navigational and discharge standards contained in instruments to which Coastal States are contracting parties, represent maximum standards.

[29] *Ibid.*

[30] *Supra* note 19.

[31] *Supra* note 16.

[32] *Ibid.*

[33] *Supra* note 25.

[34] E.J. Molenaar, Book Review of "Coastal State Regulation of International Shipping" by L.S. Johnson, 22 *International Journal of Marine and Coastal Law*, 2007, pp. 183-186.

little can be done before the pollution occurs.[35] Coastal States may physically inspect a foreign ship in transit pursuant to having "clear grounds for believing" that during the passage the ship has committed a breach of international anti-pollution standards resulting in "substantial discharge" causing or threatening "significant pollution" of the marine environment (Article 220 (5)). However, UNCLOS does not make any distinct differences between "significant pollution" justifying an inspection and "major damage" justifying proceedings.[36] Where there has been no such infraction or discharge, the Coastal State may only request for supplementing necessary information to determine whether an infraction has taken place (Article 220 (3)). Then again, Article 297 (1) (b) permits Coastal States to commence procedures against Flag States whereby in exercising the right of navigation, it has acted in contravention of UNCLOS or national and international standards espoused in conformity with this convention.

2.1.4 *Lex Specialis* Regime of UNCLOS

One of the deviations to Article 211 (5) as regards to Coastal State prescriptive jurisdiction is embodied in Article 234 where stringent legislation (stripped off the cliches of GAIRAS) are encouraged to be adopted in EEZ ice-covered waters. The provision reads thus;

> *Coastal States have the right to adopt and enforce non-discriminatory laws and regulations [...] in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice-covering such areas [...]. Such laws and regulations shall have due regard to the navigation and the protection and preservation of the marine environment based on the best available scientific evidence.*[37]

Arctic marine environment from an international perspective sparks from the singular yet unparallel jurisdiction that Coastal States bordering ice-covered areas enjoy as a result of the provision negotiated as *lex specialis* at the UNCLOS. As is considered to be a pristine eco-system predicted to be embraced by vessel-source pollution inevitable by the consequences of climatic changes, the Arctic Coastal States are legally ranked in pioneering development and enforcement strategies in their EEZ. The international disposition of shipping hence creates a specific nexus between IMO's global functional yet regulatory role and the special legislative and enforcement jurisdiction that Arctic Coastal States revels in the EEZ.[38]

---

[35] *Supra* note 25.
[36] *Ibid.*
[37] *Supra* note 18, Article 234.
[38] Aldo Chircop, "International Arctic Shipping: Towards Strategic Scaling-Up of Marine Environmental Preotection" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP, p. 177, where it is indicated that it is important to acknowledge the provisions incorporated exclusively for ice-covered areas in

2.1.4.1 Development of Article 234 in the Wake of Canadian National Legislation

The development of Article 234 dates back to 1970 when Canada advocated for a radical shift in the international regime of the sea to provide a license for the exercise of an extensive national legislative and enforcement jurisdiction over the global transboundary shipping activities in the Arctic via Arctic Waters Pollution Prevention Act[39].[40] This was a rejoinder to the voyage of the *S.S Manhattan* tanker in the NWP and invited objections from the U.S. as regards to its acquiescence with international law.[41] This contentious issue was controverted by Canada at UNCLOS where it was contrived to warrant the adoption of a provision regarding ice-covered areas pertaining to its vital interests, respectively the affirmation of the Arctic Waters Pollution Prevention Act 1970, and the amplification of jurisdiction over its Arctic waters and NWP.[42] This was as opposed to the compromise brokered by the U.S. Delegation to UNCLOS which layered Article 234 jurisdiction over the Coastal State's environmental jurisdiction in the EEZ.[43] The U.S. has consistently declined to accept the the validity of this legislation. It seems that much of the air of conflict surrounding Arctic shipping stems from the propensity of both Canada and the U.S. to formulate issues relating to this matter in jursidictional terms which broadly involves the demarcation of boundaries within which authority maybe exercised.[44] The Canadian *lex specialis* provision had as its objective international recognition of the jurisdiction pledged by Canada under its

---

UNCLOS and its relationship to the IMO's mandate for establishing global rules and standards for International shipping since only the IMO can espouse global rules and standards for shipping.

[39] *Arctic Waters Pollution Prevention Act*, R.S.C. 1985, c. A-12, adopted in 1970. Regulations were also adopted in 1978 under the Act, namely *Arctic Shipping Pollution Prevention Regulations*, C.R.C., c. 353 and *Arctic Waters Pollution Prevention Regulations*, C.R.C., c. 354. The Act is said to have extended Canadian jurisdiction to 100 nautical miles from the territorial sea baselines in waters North of 60 degrees latitude. Bill C-3 was introduced in December 2008 to extend that limit to 200 nautical miles. The Bill became *An Act to amend the Arctic Waters Pollution Prevention Act*, S.C. 2009, C. 11, proclaimed into force with effect on 1 August 2009.

[40] *Supra* note 25, p. 182.

[41] Ashley J. Roach and Robert W. Smith, *United States Responses to Excessive Maritime Claims*, Martinus Nijhoff Publishers (The Hague/Boston/London), 1992, Second edition, pp. 339-353, *See inter alios* D.M. McRae and D.J. Goundrey, "Environmental Jurisdiction in arctic waters: the extent of article 234", *University of British Columbia Law Review*, Vol. 16:2, 1982, and R. Hubert, "Article 234 and Marine Pollution Jurisdiction in the Arctic" in Oude Elferink A.G. and Rothwell, D.R. (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction*, 2001, Martinus Nijhoff Publishers, pp.249-267.

[42] D.M. McRae, "The Negotiation of Article 234" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press, pp. 98-114.

[43] *Supra* note 25.

[44] Oran R. Young, "Arctic Shipping: An American Perspective" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press, p. 124.

legislation and the final and approved text of Article 234 embodied that recognition.

2.1.4.2 Pragmatic Applicability of Article 234

It is by now transparent that Article 234 basically entails that the laws and regulations adopted by the Coastal State under this provision can be more rigid that GAIRAS insofar as it lays down the Coastal State's prescriptive and enforcement jurisdiction.[45] Although the *prima facie* virtue of this provision is an approximative ascription of jurisdictional power, by dint of certain wordings[46] the influence of this provision has been restricted in the event of implementation. It also implies that the principles of reason and logic must follow as not to interfere with international navigation and to have due regards to protect and preserve the marine environment based on what is termed as "best available scientific evidence". Hence, Article 234 does not provide Coastal States of the Arctic region with a *carte blanche* regulatory dominion.[47]

In reality, Article 234 has been termed as "probably the most ambiguous, if not controversial clause, in the entire treaty".[48] Interpretation and lucid applicability of Article 234 via *travaux préparatoires* is cumbersome.[49] The provision comprises that the regulatory authority must be exercised within the limits of EEZ. In some instances this includes the territorial sea and in others it does not, thus limiting its application to the EEZ.[50] Then again, among other issues that have been highlighted by the international community are unilateral stricter CDEM standards, transit fees, and obligatory ice-breaker escort and other measures that may hinder smooth navigation. In addition, the provision suggests that the regulation has to be for environmental protection purpose. However, if the regulation is exclusively for safety objectives, there is a chance that Article 234 may not cover that situation and ultimately it maybe difficult to distinguish between the two purposes of regulation.[51] In either cases, Article 234 must be based on the best approved scientific substantiation. Moreover, with the

---

[45] Alan Khee-Jin Tan, *Vessel-Source Marine Pollution: The Law and Politics of International Regulation*, Cambridge University Press, 2006, p. 234.
[46] *Supra* note 16, Article 234, *Note* the wordings "non-discriminatory", "shall have due regard" and "based on the best available".
[47] Aldo Chircop, "Challenges for the Regulation of International Shipping through the Arctic" in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University Publications, p. 212.
[48] Cynthia Lamson, "Arctic Shipping, Marine Safety and Environmental Protection", *Marine Policy*, Vol.11, 1987, p.3, and Øystein Jensen, *The IMO Guidelines for Ships Operating in Arctic Ice-Covered Waters: From Voluntary to Mandatory Tool for Navigation Safety and Environmental Protection?*, The Fritjof Nansen Institute, FNI-rapport 2/2007, p.7.
[49] Myron H. Nordquist, *United Nations Convention on the Law of the Sea, 1982: A Comentary*, University of Virginia, Center for Oceans Law and Policy, Vol. 3, pp. 392-398.
[50] *Supra* note 25.
[51] *Ibid.*

impact of climate change the presence of ice in such areas "for most of the year" is no longer a reality. A question is left on the face of this provision as to whether the dramatic deterioration of sea-ice shall prove the inapplicability of Article 234 in the coming decades. It seems that the requirement for Arctic Coastal States to approve laws and regulations through IMO is absent. It is believed that the policy-makers efforts served the best interest for those Arctic Coastal States by allowing them to adopt higher national standards as opposed to negotiated standards.[52] What started out as a negotiation provision now forms part of the larger package deal of UNCLOS and would not be an aberration if non-Arctic States expressed an interest in this provision. Till date Canada and Russian Federation have implemented this provision. The relationship between Canadian regulation with a view to protecting the Arctic marine environment and Canadian undertakings assumed under MARPOL 73/78 is articulated in a reservation to the latter treaty, using the authority of Article 234.[53] The Russian claim to jurisdiction over the NSR is based on Article 234 and under the Russian Regulations, all vessels intending to enter the NSR should give advanced notifications to Russian authorities and submit therewith an application for guiding (which implies paying a fee for using the Route).[54] Diplomatic endeavours between involved parties (especially between Canada, the U.S. and the Russian Federation) have had a certain degree of success and climate change acting as a catalyst, time will only reflect the reaction of future navigators (of the Arctic frontier) and concerned State parties.

2.2 Analysis of IMO Instruments Pertaining to Arctic

It is estimated that nearly most of the international instruments which correspond to the protection of the marine environment are applicable in Arctic waters.[55] While UNCLOS provides the general jurisdictional

---

[52] *Ibid.*

[53] *Ibid.*, where it has been highlighted that "Consequently, Canada considers that its accession to the Protocol of 1978, as amended, relating to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL 73/78) is without prejudice to such Canadian laws and regulations as are now or may in the future be established in respect of arctic waters within or adjacent to Canada (IMO, 2005)".

[54] Katarzyna Zysk, *Russia's Arctic Strategy: Ambitions and Constraints*, Joint Force Quarterly, Issue 57, 2nd Quarter, 2010, available at: <http://www.ndu.edu/press/lib/images/jfq-57/zysk.pdf> (date accessed 20 February 2012), where the contemporary practice has been highlighted by stating that, the question of the legal status of the NSR complicates the fact that it is not a single shipping channel, but a series of different shipping lanes stretching between 2,200 and 2,900 nautical miles, depending on ice conditions. According to Russian experts, "the integral nature of the NSR as a transport route is not affected by the fact that individual portions of it, at one time or another, may pass outside boundaries of internal waters, territorial waters and EEZ, i.e., it may pass into the high seas." The NSR may thus include sea lanes running beyond Russia's EEZ as long as part of the voyage includes waters under undisputed Russian jurisdiction.

[55] Donald R. Rothwell, *The Polar Regions and the Development of International law*, 1996, Cambridge University Press, p. 213.

provisions for ice-covered areas, IMO has a bearing role in the operationalisation of these provisions.[56] The varying requirements among states in terms of CDEM, emmission standards and ship navigation has been sought to being harmonised by IMO in view of the commercial, shipping and environmental aspects inherent in international shipping. Pollution from ships, when it is not accidental, is operational in nature and emanates from a routine of the manner in which the ship operates.[57] Under the regulatory regime of IMO, MARPOL 73/78 which is the most relevant IMO instrument deals with regulating the discharge and emmission standards. Moreover, for ice-covered areas it is significant to acknowledge the Guidelines for Ships Operating in Arctic Ice-Covered Areas (here and after, referred to as Polar Shipping Guidelines)[58].

2.2.1 Regulations Governing Operational Discharge under MARPOL 73/78

MARPOL 73/78 is not limited only to the regulation of oil pollution from ships but also comprises various types of ship-source pollution insofar as it supplements evidence of internationally agreed standards of environmentally sound management for the transport of hazardous wastes and chemicals.[59] Given its scope and applicability to all vessels flying their flags or under the authority of State party, it contains in its Annexes restrictions as regards to voluntary discharge from those vessels.[60] These rules and standards for the Arctic have been termed as "Level 1" standard of protection which is generally accepted minimum under MARPOL 73/78. Annexes I, II and V paves the way for the possibility to establish areas designated as "Special Areas" and "Sox emission control areas" where the specific sensitivity justifies the application of more stringent discharge and emission standards. The number of ratifications[61] of MARPOL 73/78 Annexes by Arctic countries refers to the efforts and assiduity to harmonize discharge and emission standards. However, the discharge of oil from

---

[56] *See Supra* note 19 for further analysis of IMO's role.

[57] Proshanto K. Mukherjee, "The Penal Law of Ship Source Marine Pollution" in *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas Mensah*, 2007, Martinus Nijhoff Publishers, pp. 480-485, *Note* that marine pollution in this context has been immaculately divided into "voluntary" and "accidental" and "voluntary" has been further sub-divided into "deliberate (dumping)" and "operational (discharge)".

[58] *Guidelines for Ships Operating in Arctic Ice-Covered Areas*, Adopted by IMO MSC/Circ. 1056, MEPC/Circ. 399, of 23 December 2002, available at <http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf > (date accessed 22 February 2012).

[59] Patricia Birnie and Alan Boyle, *International Law and the Environment*, 2002, Oxford University Press, p. 363, *Note* that Article 2 of MARPOL 73/78 defines "discharge" which covers any means of release such as disposal, spilling, leaking, pumping, emitting and emptying, but does not include dumping in the meaning of the London Convention.

[60] Whereby, Annex I deals with prevention of pollution by oil, Annex II on control of pollution by noxious liquid substances in bulk, Annex IV on prevention of pollution by sewage from ships, Annex V on prevention of pollution by garbage from ships and Annex VI on the prevention of air pollution from ships.

[61] All the Arctic countries are signatories to MARPOL 73/78.

machinery spaces of all ships which is regulated by regulation 15 (Annex I) restricts the discharge of any amount in the Antarctic from ships less than 400 Gross Tonnage unless it complies with Regulation 15-C, but does not provide special attention in that regard to the Arctic Ocean. Similarly, Annex II (Discharge of Noxious Liquid Substance) and Annex V (Disposal of Garbage) does not consider Arctic to be a part of "Special Areas" as opposed to Antarctic where operational discharges are unauthorized. Whereas Canada and the Russian Federation have adopted stringent regulation under the terms of Article 234 of the UNCLOS in the Arctic north of 60 degrees North latitude, Canada has deliberately precluded MARPOL 73/78 for those areas.[62] In addition to the provisions and standards of MARPOL 73/78 applicable in ice-covered areas, those States demand for the compliance of stricter standards. Unlike the Antarctica, there is a vacuum of designated areas i.e."Sox emission control area" for the purpose of special protection under MARPOL 73/78. These nominated areas would, to a greater extent strengthen the protection of the marine environment in Arctic ice-covered areas specifically in those lying in Areas beyond national jurisdiction.

2.2.2 Investigating the IMO Polar Shipping Guidelines

The significant initiative for regulating ship construction, equipping and operations in polar waters took place under the auspicies of IMO instigated by the disaster of *Exxon Valdez*, off the coast of Alaska in 1990.[63] IMO noted that the existing Arctic national legislation as regards to technical requirements for navigation within the EEZ of Canada, Norway, Russia and the U.S. differed extensively, making it impossible for the Flag State to comply with every law in the course of the one and same voyage.[64] Hence, the Polar Shipping Guidelines evolve from an integrated approach of IMO which originally revolved around promoting standards for safety of navigation. Although the history of the Polar Shipping Guidelines date back to 1991, when Germany proposed the inclusion of a provision which entailed that ships intended for service in the polar regions should have suitable ice strengthening for polar conditions, it was in fact Canada on behalf of Outside Working Group who submitted the international Code of Safety for Ships in Polar Waters in 1998. This Code after a certain extent of revision and exclusion of Antarctica developed as the Polar Code by the Marine Environment Protection Committee at its 76th session (December 2002).[65]

---

[62] *Bill C-3: An Act to Amend the Arctic Waters Pollution Prevention Act*, Legislative Summary, LS-617E, Penny Becklumb Industry, Infrastructure and Resources Division, 19 December 2008, Accessed at <http://www.parl.gc.ca/Content/LOP/LegislativeSummaries/40/1/401c3-e.pdf> (date accessed 22 February 2012).
[63] *Supra* note 45, p. 8.
[64] *Ibid*.
[65] *Ibid.*

It is already acknowledged that there is a dearth of waste reception facility in the Arctic and the polar environment coupled with the special navigation criterions imposes additional demands on the shipping industry than other general standards prescribed by IMO. The Guidelines relate to ships operating in Arctic ice-covered waters as defined in paragraph G-3.2, and while engaged in International voyages.[66]The environmental protection aspect is embedded in Part-D (Chapter 16) of the Polar Shipping Guidelines.[67] This part is divided into three sections where section 16.1 deals with the general provisions, section 16.2 comprises the prescriptive part relevent to equipment and materials and section 16.3 directly deals with the protection of the environment which restrains itself to remit to national and international rules regulating discharges and emissions from ships but affixes no specific standards which take in consideration the particular effects of vessel-source intentional pollution in arctic ice-covered areas.[68] Acknowledging the fact that the Arctic lacks "Special areas" or "Sox emission control areas" under MARPOL 73/78, the Polar Shipping Guidelines with this simple remission as incorporated in Chapter 16 adds no particular re-inforcement to the protection of the Arctic marine environment and this vacuum till date is consistent. Then again, the Guidelines non-legally binding nature and limited regulation on environmental protection sets no obligation on the States in respect to operational vessel-source pollution and special particularities in ice-covered areas.

2.3 Deliberate Dumping in Arctic and International Law

The UNCLOS is appropriate in a general, rather than a precise sense to address ocean dumping issues in the Arctic and sets forth a global framework for ocean dumping.[69] The provisions of UNCLOS which relate to pollution from ocean dumping are Articles 1(1) (5), 210 and 216 where Article 210 presumably refers to LC72[70] and its Annexes indicating the fact that national regulations shall be no less operative than the rules and standards set globally. LC72 is a pertinent and comprehensive instrument

[66] *Ibid.*
[67] *Ibid.*
[68] *Ibid.*
[69] *PAME: Working Group on the Protection of the Arctic Marine Environment*, Report to the Third Ministerial Conference on the Protection of the Arctic Environment, 20-21 March 1996 Inuvik, Canada, Ministry of Environment, p. 95, *Note* that the Convention provides minimum standards for contracting parties in that domestic laws, regulations and measures shall be no less effective in preventing, reducing and controlling pollution from ocean dumping than the global rules and standards. *See* also Olav Schram Stokke, *Radioactive waste in the Barents and Kara Seas: Russian implementation of the global dumping regime* in Protecting the Polar Marine Environment, Davor Vidas (ed.), 2000, Cambridge University Press, p. 203.
[70] Adopted on 29 December 1972 in London, Mexico City, Moscow and Washington, D.C., and entered into force on 30 August 1975.

which consists of three Annexes[71] to address ocean dumping in the Arctic which relates to ocean dumping and incineration. The five Arctic countries are parties to the LC72 and have implemented it domestically whereby the Russian Federation and the U.S. are not parties to the protocol of 1996.[72] Canada fulfills its international obligations, in part, through Part 7, Division 3 (Disposal at Sea) of the Canadian Environmental Protection Act, 1999. The U.S. has adopted Ocean Dumping Act, codified as titles I and II of the Marine Protection, Research and Sanctuaries Act of 1972, 33 U.S.C. (paragraph 1401 et seq.). Then again, Sweden's Law 1971:1154 on Prohibition of Dumping on Wastes at Sea (pp. 1-3) is a conforming national law in this regard. LC72 is applicable to all marine waters outside internal waters and sets a minimum standard for all States on the basis of categories of pollutants and a system of permits for those substances permissible for dumping.[73] Although LC72 has displayed competency to accommodate new expansion through these flexible Annex structures, it lacks a formal non-compliance procedure and no action has been taken to improve liability procedures. Non-acceptance of LC72 ban on low level radioactive waste dumping by the Russian Federation portrays a substantial gap in conformability relevant to protecting the Arctic environment although the Russian Federation's Federal State Programme has implemented national regulation.[74] On 7 November 1996, a Protocol to the Convention was adopted which was intended to gradually replace LC72.[75] The Protocol explicitly highlights the precautionary principle, requiring that the appropriate preventative measures ought to be taken when there are reasons to believe that wastes or other matter introduced into the marine environment are likely to cause harm, even when there is no conclusive evidence to verify a causal relation between inputs and their effects and goes onto say that "the polluter should, in principle, bear the cost of pollution". The Protocol was amended in 2006[76] to accommodate a basis in International environmental law for the regulation of carbon capture and storage under the seabed, for the purposes of tackling climate change and ocean acidification. This amendment is a big step for LC72 to mitigate complex yet technical environmental issues in the Arctic region.

[71] Dumping of matter listed in Annex I is prohibited; dumping of matter listed in Annex II is allowable only by special permit; dumping of matter listed in annex III is allowable only by general permit.
[72] Official webpage of IMO, available at; <http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx> (date accessed 29 February 2012).
[73] *Ibid.*
[74] Official Webpage of IMO, available at; <http://www.imo.org/About/Conventions/StatusOfConventions/Pages/Default.aspx>, (date accessed 23 February 2012), *Note* that the information gathered from the Webpage was as regards to the status on LC72.
[75] Official Webpage of IMO, available at; <http://www.imo.org/OurWork/Environment/SpecialProgrammesAndInitiatives/Pages/London-Convention-and-Protocol.aspx> (date accessed 23 February 2012), *Note* that the information fathered from the Webpage was as regards to the summary of LC72.
[76] The amendements entered into force in February 2007.

2.4 International Legal Regime of Accidental Pollution in the Arctic

Oil-spill, more specifically, accidental oil-spill in ice-infested waters could generate severe marine pollution consequences and a great risk of detriment to the environment for prolonged periods of time. Instances maybe drawn from the double purpose passenger and supply ship *Bahia Paraiso*, which grounded in January 1989 in the Antarctic exemplified the dangerous effects of pollution as a result of increased shipping traffic in ice-areas. On 24 March 1989, the tanker *Exxon Valdez* spilled 11 million gallons of crude oil into the Pacific Gulf of Alaska and over 1,200 miles of coastline of the Alaska Peninsula were contaminated with oil, which caused massive damage to the natural marine environment in addition to other damages.[77] Under OPRC[78] and OPRC-HNS Protocol[79], governments of Coastal States have been prescribed to establish measures for dealing with accidental pollution, either nationally or via bi-lateral co-operation.[80] Parties to the Convention are also required to provide assistance to others in the event of a pollution emergency and provision is made for the reimbursement of any assistance provided. It is significant to note that this Convention provides for the IMO to play an important co-ordinating role.[81] With reference to the Arctic, the Costal States are dependent on MOU and regional or bilateral arrangements are in place that provides a framework for co-operation among Arctic States under OPRC.[82] Several Arctic states have joint contingency planning arrangements and they include, among others, the Canada/United States Joint Marine Pollution Contingency Plan for the

---

[77] James D. Ford, Barry Smit, Johanna Wandel, "Vulnerability to Climate Change in the Arctic: A case study from Arctic Bay, Canada" in *Global Environmental Change*, 2006, Vol. 6, Issue: 2, Elsevier publisher, p.145-160.

[78] (IMO) Adoption: November 1990; Entry into force: 13 May 1995

[79] (IMO)Adopted in 2000.

[80] Official Webpage of IMO, available at; <http://www.imo.org/About/Conventions/ListOfConventions/Pages/Protocol-on-Preparedness,-Response-and-Co-operation-to-pollution-Incidents-by-Hazardous-and-Noxious-Substances-(OPRC-HNS-Pr.aspx> (date accessed 23 February 2012).

[81] *Ibid.*

[82] "Governance of Arctic Shipping" in *Arctic Marine Shipping Assessment*, 29 April 2009, available at; < http://www.arctic.gov/publications/AMSA/governance.pdf> (date accessed 23 February 2012), Note that OPRC is a framework for international cooperation in combating incidents or threats of marine oil pollution, to which all five Arctic States including the other three States that are located in the Arctic circle i.e. eight Arctic States are parties. Article 10 of the OPRC promotes the development of bilateral and multilateral agreements for oil pollution preparedness and response, such as on a regional basis, *See* also, *See Infra* note 124, where it is elaborated that, the OPRC convention provides yet another foundation for Polar States to develop comprehensive strategies to respond to maritime incidents, which have an environmental repercussion. By placing minimum obligation on the Flag States to ensure that, their vessels have an oil pollution emergency response plan. Polar States can be reassured that the vessels from OPRC convention parties, which operate in their waters, have met this standard. The requirements for cooperation among States to deal with such incidents are also important, given the difficulties in responding to emergencies in polar waters. Nevertheless, the significant issue is whether States should meet higher standards than the OPRC when venturing in the Arctic waters. The Canadian AWPPA is a notable example in this regard.

Beaufort Sea area, the Russia/USA Joint Marine Pollution Contingency Plan, the joint Russian/Norwegian Plan for the Combating of Oil Pollution in the Barents Sea and the Canada/Denmark Agreement for Marine Environmental Cooperation, which includes annexes for responding to shipping and offshore hydrocarbon spills.[83] The other international regime which deals with accidental pollution is Annex I and Annex II of MARPOL 73/78. Annex I covers prevention of pollution by oil from accidental discharges and the 1992 amendments to Annex I made it mandatory for new oil tankers to have double hulls, which was subsequently revised in 2001 and 2003.[84] Then again, Regulation 13F relating to "Prevention of oil pollution in the event of collision or stranding" does not provide specific reference to the Arctic which requires more stringent policies because of the vulnerable charactersitics it possesses. Similar comments have been aimed against Annex II relating to control of pollution by Noxious liquid, which has completely ignored the Arctic regime.

[83] *Ibid.*

[84] Official Webpage of IMO, available at; <http://www.imo.org/about/conventions/listofconventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx> (date accessed 23 February 2012), parties to MARPOL 73/78 may enforce the convention in three ways; through ship inspections to ensure vessels meet minimum technical standards, by monitoring ship compliance with discharge standards, and by punishing ships which violate the standards, *See* also Andrew Griffin, "MARPOL 73/78 and Vessel Pollution: A Glass Half Full or Half Empty?", *Indiana Journal of Global Legal Studies*, 4 January 1994, Vol. 1, Issue 2, Article 10, pp. 489-513, *Note* that, the revised MARPOL 73/78, Annex I *Regulations for the prevention of pollution by oil* was adopted in October 2004 and enters into force on 1 January 2007. It comprises the various amendments adopted since MARPOL 73/78 entered into force in 1983, including the amended regulation 13G (regulation 20 in the revised Annex) and regulation 13H (regulation 21 in the revised Annex) on the phasing-in of double hull requirements for oil tankers. It also separates, in different chapters, the construction and equipment provisions from the operational requirements and makes clear the distinctions between the requirements for new ships and those for existing ships. Unique and updated as it may seem, the revision provides a more user friendly and compatability, simplified and transparent Annex I, to be regulated in regions which are sensitive and pristine in nature. This is, of course, based on a general context, rather than being tailor made for a specific region including the Arctic.

3 Pertinent National Legislation of Arctic States

3.1 Canada and the Arctic

3.1.1 Investigating Torrey Canyon Antecedents

The *Torrey Canyon* incident had its worst impact upon the miles of beautiful, rural coast of Southwestern England.[85] It was opined that neither existing international conventions nor national legislation dealing with oil pollution specifically addressed issues relating to what protective measures a Coastal State may adopt to address incidents such as the *Torrey Canyon.* In examining the history, it maybe clear that the 1954 Convention for the Prevention of Pollution of the Sea by Oil, as an instance, established zones extending 50 miles from the coast in which ships were prohibited from discharging oil into the sea, and prescribed penalties to be imposed by signatory states for such discharge.[86] Similarly, national legislation of that era were aimed at punishing the routine discharge of oil, for example, the U.S. Oil Pollution Act of 1924[87] which prohibited "the discharge of oil by any method…into or upon the navigable waters of the United States…". Then again, there existed British legislation i.e. Oil in Navigable Waters Acts of 1955[88] and 1963[89] which made the discharge of oil punishable, but specifically exempted were those instances where the escape of oil was

[85] Albert E. Utton, *Protective Measures and the "Torrey Canyon"*, 9 B.C.L. Rev. 613 (1968), available at; <http://lawdigitalcommons.bc.edu/bclr/vol9/iss3/4> , (date accessed 27 February 2012, the reaction of it has been further demonstrated in p. 617 where it has been highlighted that in view of this threat of future incidents such as the *Torrey Canyon* disaster and in response to the statement in the British White Paper on the *Torrey Canyon* incident that "[t]he law relating to international shipping is ... in a number of ways quite out of date,"" it is appropriate to explore what measures a coastal state may take in order to protect itself from the threat of oil pollution emanating from damaged vessels off its coasts. In examining the question of *what* measures may be taken, it is necessary to answer the included question of *when—prior* or subsequent to collision—such measures may be taken and *where* in the adjacent high seas they may be taken, *See* also The Times (London), March 29, 1967, at 1, col. 1, where it is highlighted that The *Torrey Canyon* went aground on the Seven Stones Reef, outside British territorial waters, 15 miles west of the Cornish peninsula, and about 10 miles from the British Isles of Scilly and thus, measuring from the Isles of Scilly, the wreck occurred well within the 12-mile maximum for contiguous zones set by the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone. Within this contiguous zone, and outside the British territorial sea," the British took direct action. In addition to the bombing, measures used in the *Torrey Canyon* case included spraying the oil slick with emulsifying agents or coagulating agents, burning the escaping oil by use of combustible agents, and using urethane booms.

[86] Art. III, annex A. In 1962 the Convention was amended by enlarging the restricted zones and changing the Conference of Contracting Governments to the Convention of 1954, London, April 4-11, 1962.

[87] 33 U.S.C. §§ 431-37 (Supp. II 1965-66).

[88] *Oil in Navigable Waters Act, 1955*, 3 & 4 Eliz. 2, c. 25.

[89] *Oil in Navigable Waters Act, 1963*, c. 28.

caused by damage to the vessel. This exception was identical to and suited the *Torrey Canyon* situation. The general consensus was that there was the need for a new legal regime, while acknowledging the need for State intervention on the high seas in cases of grave emergency, clearly restricted that right to protect other legitimate interests.[90] Thus, was introduced by IMO the first International Convention related to liability and compensation i.e. the CLC[91] and the FUND[92] Convention. There was, therefore, no clear policy during the 1950s and early 1960s on the status of the Arctic waters and, Canada's response to the convention promulgated in 1969 could not be determined as positive.

3.1.2 The *Manhattan Voyage*

On October 1968, Humble Oil, a private company for the U.S. acting on behalf of "Exxon" announced the voyage of *Manhattan* through Canada's portion of the NWP to prove that an icebreaking bulk carrier was capable of year-round sailings between Alaska and the east coast of the United States.[93] There seemed to exist an intricate balance of threats and opportunities for Canada who established "jurisdictional" alongside "preservation of marine-environment" concern. Initially the government of the U.S. seemed co-operative, but steered clear of offering *de facto* support for Canada's "jurisdictional" claims.[94] American officials took the position that the *Manhattan* had navigated through high seas in the Passage because it had not traversed Canadian territorial waters, which at that time were distinctively embedded in the *Territorial Sea and Fishing Zones Act*[95] as extending for three miles from the islands of the Arctic Archipelago.[96] But Ottawa's intention to facilitate the *Manhattan* experiment followed with the motive to ensure *de facto* Canadian sovereignty and to avoid or delay a major confrontation over sovereignty.[97] The technical avoidance shifted gear from the spring of 1969 via public signals of determination on its position on sovereignty issues and a stronger emphasis on "jurisdictional" sovereignty dawned soon after.[98] The then Soviet Union tacitly signaled its

[90] Official webpage of IMO, available at; <http://www.imo.org/about/conventions/listofconventions/pages/international-convention-relating-to-intervention-on-the-high-seas-in-cases-of-oil-pollution-casualties.aspx> (date accessed 27 February 2012).
[91] Adoption: 29 November 1969; Entry into force: 19 June 1975; Being replaced by 1992 Protocol.
[92] Adoption: 18 December 1971; Entry into force: 16 October 1978; superseded by 1992 Protocol.
[93] John Kirton and Don Munton, "The Manhattan Voyages and their Aftermath" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press, p. 70, where it is indicated that the *Manhattan* left an eastern seaboard port on 25 August 1969, to begin its Arctic journey, and broke through to ice-free waters off northers Alaska on 14 September. Eventually, it returned for a second voyage, confined to the area north of Baffin Island, in April-May 1970, *See* also *Supra* note 1.
[94] *Ibid.*, p. 71, para. 2.
[95] *Territorial Sea and Fishing Zones Act*,S.C. 1964-65, c. 22.
[96] *Supra* note 90, p. 72.
[97] *Ibid.*,
[98] *Ibid.*, p. 73, reference maybe drawn from the bill of 22 April introduced to amend the "Territorial Sea and Fishing Zones Act" to allow all waters above the Continental Shelf to

support for Canada's efforts to enhance Coastal State control over Arctic waters. Nevertheless, *Manhattan's* voyage reflected the need for a definitive legal statement. It seems that two competing tendencies were evolving (in Canada) where the former one reflected the traditional approach to applying existing general International law to ice-covered waters (corresponding to International consensus) while the latter gave priority to pollution control over economic development by creating new International law in ice-covered areas.[99] "Consistent with International law" was, however, beginning to become less of a sacred principle as Canada had already asserted responsibility to itself on the use of this uniquely vulnerable environment and assumed to take the leading role in preserving its portion of this reserve.[100] This sense of urgency arose as the U.S. declared its second trip of *Manhattan*. The dawn of 1970 was marked with a firmly established policy of passing legislation to control shipping and pollution in the Arctic, exercising sovereignty through these actions.[101]

3.1.3 Legal Regime of AWPPA and ASPPR

Following the 1969-1970 *Manhattan* voyage, the Trudeau government enacted the AWPPA[102] creating a 100-mile environmental protection zone within Canadian Arctic waters.[103] Under the dominion of Canada's Northern Strategy and in light of the assumed pioneering role, Canada has recently authorized the prolongation of the spatial scope of AWPPA from 100 nautical mile to 200 nautical mile limit with complementary extension of the shipping safety control zones via Bill C-3.[104] The AWPPA and regulations adopted therewith i.e. the ASPPR[105] are the original regulatory

---

be declared fishing zones exclusively for Canadian fishermen. This was duly criticized by the U.S. as contrary to International law, p. 76.

[99] *Ibid.*, p. 79.

[100] *Ibid.*, p. 81.

[101] *Ibid.*, p. 86.

[102] *Arctic Water Pollution Prevention Act* 1970 [r.s.c. 1985 (1st Supp.) C.2, (1st Supp.) S.1.], available at; <http://www.tc.gc.ca/media/documents/acts-regulations/A-12-acts.pdf.> (date accessed 29 February 2012).

[103] *Supra* note 90, p. 67 where it is highlighted that on 8 April 1970, the government introduced into the House of Commons the Arctic Waters Pollution Prevention bill which was designed to prevent the pollution of waters adjacent to the mainland and islands of the Canadian Arctic, it asserted off-shore jurisdiction within a 100-mile pollution prevention zone.

[104] *Supra* note 62, *Note* that the extended definition of arctic waters is consistent with pre-existing provisions in the *Oceans Act*, which create Canada's exclusive economic zone, as well as the definition of the "sea" used in the *Canadian Environmental Protection Act, 1999*, which includes "any exclusive economic zone that may be created by Canada" for the purposes of provisions relating to disposal at sea. Moreover, it also provides an extended area of waters with respect to which the Governor in Council may establish Vessel Traffic Services Zones (VTS Zones) under section 136 of the *Canada Shipping Act, 2001*

[105] *Arctic Shipping Pollution Prevention Regulations*, C.R.C. Ch. 353, available at; <http://laws.justice.gc.ca/PDF/Regulation/C/C.R.C.,_c._353.pdf.> (date accessed 29 February 2012), *Note* that the AWPPR applies to the deposit of waste in Arctic waters; or in any location on the mainland or islands of the Canadian Arctic; and the liability for such deposits. The AWPPR regulates the deposit of domestic and industrial waste in Arctic

instruments to what comprises discharges from vessels in the Arctic. Moreover, the Canada Shipping Act 2001[106] and regulations incorporated therein i.e. the Migratory Birds Convention Act 1994[107] and the Fisheries Act 1985[108] also accomodates provisions to what concerns vessel-source pollution.

In a hackneyed description of AWPPA, it maybe stated that it is a "zero-discharge" Act, which states, "no person or ship shall deposit or permit the deposit of waste of any type in the Arctic waters" (Section 4 of AWPPA).[109] Tracing the law and to what concerns enforcement powers, The AWPPA describes offences and punishments; and outlines the powers that may be given to Pollution Prevention Officers so that they may enforce the Act (Section 14 and 15 of AWPPA).[110] In this context it is germane to mention that this Act is an unique Act which acts with flexibility. The underlying reason for this comment is that with the growing trend to criminalize seafarers, examples of which are set forth by the European Union Directive 2005/35/EC as Amended by Directive 2009/123/EC, the AWPPA[111] only provides for monetary compensation even if the act was committed with *mens rea*.[112] This is also evident from Section 23(1) (a)

---

waters and on land in the Arctic, and the deposit of waste by ships in Arctic water. This Act also describes the limits of liability.

[106] *Canada Shipping Act, 2001* S.C., ch.26, available at; <http://www.tc.gc.ca/media/documents/acts-regulations/C-10.15-acts.pdf.> (date accessed 29 February 2012), *Note* that *Canada Shipping Act* and associated Regulations such as the Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals (SOR/2007-86) constitute the main instrument regulating overall marine transportation in Canada including vessel-source pollution. Through these instruments Canada further implements MARPOL 73/78 Annexes II (noxious liquid substances), IV (sewage), V (garbage) and VI (air emissions). However, the discharge provisions provided for in the Pollution Prevention Regulation Sections 40 (oily mixtures), 82, 83 and 108 (noxious liquids and pollutants), 128 (sewage and sewage sludge), 139 (garbage) are not applicable to arctic waters *viz* ice-covered areas as safety control zones are expressly excluded.

[107] *Migratory Birds Convention Act*, S.C., 1994, Ch. 22, available at; <http://laws.justice.gc.ca/PDF/Statute/M/M-7.01.pdf.> (date accessed 29 February 2012).

[108] Fisheries Act, R.S., 1985, C.F-14, available at; <http://laws.justice.gc.ca/PDF/Statute/F/F-14.pdf.> (date accessed 29 February 2012)

[109] *Supra* note 90.

[110] *Ibid.*

[111] Section 18 and 19 of AWPPA which embodies "offences and punishment" in contravention to Section 4 and in the event of such contravention shall be subject to monetary compensation

[112] *See DIRECTIVE 2005/35/EC of The European Parliament and of the council of 7 September 2005;* on ship-source pollution and on the introduction of penalties for infringements, available at; <http://cleanseanet.emsa.europa.eu/docs/public/Directive_2005_35_EC.pdf> (date accessed 29 February 2012), *See* also, *Europa* press release available at; <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/437&format=HTML&aged=1&language=EN&guiLanguage=en> (date accessed 29 February 2012), where it is stated that the European Commission has used a recent judgment of the European Court of Justice (ECJ) to take powers to create new criminal penalties to enforce the entire body of European Union law. The ECJ Judgment (C-176/03), on 13 September, gave the EU jurisdiction to order prosecutions in cases of breaches of EU environmental law and on 23 November the Commission adopted a communication setting out its interpretation of the judgment of 13 September 2005 by which the Court of Justice annulled a framework

which empowers the pollution prevention officers to only seize a vessel and its cargo whenever there are suspicions or reasonable grounds that any provision of AWPPA or ASPPR regulations adopted there under have been breached. ASPPR embodies, pursuant to Section 4 of AWPPA, special permissions to what concerns only sewage and oil discharges which means for instance that the disposal of garbage or other noxious substances in Arctic waters is not allowed. Owing to the restrictive character of Canadian norms, Section 28 of ASPPR does not restrain the discharge of sewage generated on board ships in Arctic waters while Section 29 (c) permits the discharge of oil only under very restricted circumstances when related to the safety of lives, or the vessel and to the normal operation of the engine or its components insofar as such discharges are minimal and unavoidable.[113] Section 17 (2) of ASPPR corresponding to enforcement jurisdiction allows the annulment of a ships Arctic pollution certificate if upon inspection it is realized that there exists a probability that the ship is in danger of discharging or actually discharging waste into Arctic waters in violation of Section 4 (1) of AWPPA.[114]

3.1.4 Absoloute Libility and Strict Liability

The AWPPA as was introduced in the House of Commons on 8 April 1970, did not directly assert sovereignty over Canadian waters. It was an instrument to establish a pollution control zone and an extension of which was implemented via Bill C-3. The incorporation of such Act reflected the dire need to determine a jurisdiction over the function of the entire area, the jurisdiction of which was intended to be exercised preventively by setting shipping standards for that area and remedially by constituting a domestic liability and compensation regime.[115] To enforce the regulations, the legislation provided sanctions for pollution prevention officers with a broad enforcement powers. This coupled with the prohibition policy of "waste" in the Arctic waters leading to monetary penalty amalgamates the notion of "absolute liability", that is, like "strict liability" there was no need to prove that the damage was a result of negligence.[116] However, unlike strict liability, there were no defenses available to a polluter. The Act does not specify the limits of liability, leaving it to be determined by the Act itself. This is the "absolute liability" regime which exists in Canadian waters

---

decision on the protection of the environment through criminal law. As requested by the Commission, which had the backing of Parliament in its action against the Council, which for its part was supported by 11 Member States, the Court held that the Community had sole competence to take the criminal law measures needed to ensure the effectiveness of Community law. The judgment confers on the European Parliament a decisive role in the adoption of such measures whenever they are taken in a field governed by co-decision. This strengthening of parliamentary control, especially in areas as sensitive as criminal law was considered is a step forward for democracy.

[113] *Supra* note 103.

[114] *Ibid.*

[115] R. Michael M'Gonigle and Mark W. Zacher, "Canadian Foreign Policy and the Control of Marine Pollution" in *Canadian Foreign Policy and the Law of the Sea*, Barbara Johnson and Mark W. Zazher (eds.), 1977, The University of British Columbia, p. 117.

[116] *Ibid.*

North of 60 degrees. The liability facet of ship source oil pollution as is understood, is covered by CLC and amended by the CLC 1992, the elementary features of which is 'strict liability' of the tanker owner who is obliged to pay for damage resulted from 'persistent spill'. A significant compromise reached in the event of drafting the CLC is the notion of 'channelling of liability' where the liability for oil pollution would be channelled through to the 'registered owner' who is burdened with compulsory insurance.[117] Canada's initial impression on CLC being "insufficient" emanates from the idea where it devises a liberty for other parties and although recourse against those other parties may be initiated by the 'registered owner', this had to be done after satisfying the claimant and sometimes it did not suffice to cover the entire pollution damage.[118] This alongside the massive pollution caused by the *Torrey Canyon* confirmed Canada the necessity to draw the control line by the regime of "absolute liability". This status quo is, as the critiques would believe to be completely uneconomic and impractical for commercial interests since "absolute liability" exists as a potential removal of liability limitations and the power to unilaterally to set higher construction and operating standards.[119] As for "strict liability", part XX of CSA integrates a comprehensive national regime for oil spill response, liability and compensation which was an innovative movement in the domain of domestic oil spill legislation.[120] This regime was endorsed by Canada prior to the International implementation and coming into force of CLC and FUND. CSA shrouded in antiquity, is one of the oldest piece of legilslation was based on the *British Merchant Shipping Act,* 1894. It was amended over the years to suit contemporary purpose and in 1993, amendments to the CSA led to the creation of a network of private sector oil spill response organizations. Funded and operated by the private sector, the regime was established in 1995 to enable industry to respond to oil spills of up to 10 000 tons in Canadian waters south of 60 degrees north latitude.[121]

---

[117] Marc A. Huybrechts, *Criminal Liability of Master and Crew in Oil Pollution Cases*, Maritime Pollution Liability and Policy: China, Europe and the US, Edited by Michael G. Faure, Han Lixin & Shan Hongjun, 2010, Kluwer Law International, p. 216.

[118] The CLC and the Fund Convention as amended by their respective 1976 and 1992 Protocols (i.e. the CLC **c**onvention 1992 and the Fund Convention 1992) now have the force of law in Canada pursuant to the Marine Liability Act, S.C. 2001, c. 6, Part 6 (Liability and Compensation for Pollution) (sects. 47-105) (in force 8 August 2001). Part 6 includes divisions on "Civil Liability for Pollution" (sects. 51-71) and on "Compensation for Pollution" (sects. 72-105). Part 8 (sects. 165-184) of the Canada Shipping Act, 2001, S.C. 2001, c. 26, deals with "Pollution Prevention and Response - Department of Fisheries and Oceans", while Part 9 (sects. 185-193) concerns "Pollution - Department of Transport", thus dividing the responsibility for the prevention of marine pollution in Canada between the Department of Fisheries and Oceans and the Department of Transport.

[119] *Supra* note 117.

[120] *Supra* note 106, which establishes the strict liability of owners to be responsible for costs and damages for a discharge of oil from all classes of ships.

[121] *Environmental Response*, Report of the Canadian Coast Guard Maritime Services, Ottawa, Ontario, 2009, Fisheries and Oceans Canada Publishers, available at; <www.ccg-gcc.gc.ca/eng/Ccg/er_Home> (date accessed 2 March 2012), where it is stated that All oil tankers of 150 tons gross tonnage and all other vessels of 400 tons gross tonnage trading in

3.2 The Russian Federation and the NSR

3.2.1 Background

The NSR is synonymous to the Russian name for what is often known "outside Russia" as the Northeast Passage.[122] NSR activity was at its peak in 1987, but as the Soviet system started to crumble a perplexing situation arose for the state to uphold the high level of subsidies that was required to maintain most activities in the Arctic, and NSR cargo volumes diminished.[123] Gorbachev's *perestroika policy* was stamped with an alteration as regards to geo-politics and economic objectives at the end of the cold war, the change which supplemented receptive conditions for the opening of navigation in the NSR to foreign vessels.[124] Ever since in the wake of that change, the Russian Federation has made an effort to confederate its concern and sovereignty as regards to development and policy simultaneously in the Arctic.[125] In Russia, the term NSR holds different connotations, and evokes discernment of a grand national transport corridor significantly utilized for bringing natural resources out, and for bringing deliveries in to the many settlements in the Russian Arctic.[126]

3.2.2 Jurisdiction and Regulations

Russia today claims formal jurisdiction over the NSR, based on Article 234 of UNCLOS. The Russian Regulations set out in the Guide to Navigation through the Northern Sea Route[127] incorporates that all vessels wishing to enter the NSR (*including* all areas within Russian 200 nautical miles exclusive economic zone) should give notifications to the Russian authorities beforehand. They must also submit an application for guidance and subject to paying a set fee to use the route, sporadically referred to as

---

Canadian waters, as well as oil handling facilities located within Canadian jurisdiction, must have an arrangement with a response organization.

[122] Claes Lykke Ragner, "Den norra sjövägen", In Hallberg, Torsten (ed.), *Barents – ett gränsland i Norden (Norden Association's Yearbook)*, Stockholm, Arena Norden, 2008, pp. 114-127, English translation available at; <http://www.fni.no/doc&pdf/clr-norden-nsr-en.pdf> (date accessed 3 March 2012).

[123] *Ibid.*

[124] Douglas R. Brubaker, "Regulation of Navigation and Vessel Source Pollution in the Northern Sea Route: Article 234 and State Practice" in *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention*, Davor Vidas (ed.) 2000, Cambridge University Press, p. 221, where it is indicated that this initiative eventually resulted in the formal opening of the NSR to non-Soviet vessels on 1 July 1991, only a few months before the Soviet Union was dissolved.

[125] Aleksandr A. Kovalev and William Butler, *Contemporary Issues of the Law of the Sea: Modern Russian Approaches*, 2004, Eleven International Publishing, p. 180.

[126] *Supra* note 122.

[127] Guide to Navigating through the Northern Sea Route, Head Department of Navigation and Oceanography of the Ministry of Defense of the Russian Federation, Notice to Mariners 81-84 (13 July 1996), *See* also Erik Franckx, "The Legal Regime of Navigation in the Russian Arctic", *Journal of Transnational Law and Policy*, 2009, Vol. 18, no. 2, p. 337.

the 'ice-breaker fee'. Russia also claims the straits within and between the Russian Arctic archipelagos and the mainland as part of its internal waters. Other countries to a certain extent has accepted Russia's *de facto* control of these waters, and have not challenged the regime Russia has put in place. The U.S. with vigorous objections maintains that the straits should be considered international strait, and thus open to transit passage.[128] The Federal Law on the Internal and Territorial Marine Waters, Territorial Sea and the Adjacent Zone[129] establishes the basic provisions for the prevention of pollution of marine environment where Article 37 stipulates that the discharge from vessels of harmful substances in these areas are prohibited and determines that operational discharges from vessels cannot exceed the permissible concentrations supplemented in other federal legislation. Moreover, The Federal Law on the Exclusive Economic Zone of the Russian Federation[130] is drafted with a similar structure, the concept of which is reflected in Article 4[131]. The sovereign rights of the Russian Federation in the EEZ is embedded in Article 5. The significant provisions of this Federal law is assumed to be Article 32 and Article 33, which relates to vessel-source pollution in Arctic ice-covered areas. Observance with regards to the wordings of Article 32[132] would reveal its resemblance with Article 234 of UNCLOS which takes into cognizance special environmental characteristics of the Russian Arctic. Domestic Regulations[133] and Resolutions[134] with regards to operational discharge is parallel to MARPOL

---

[128] *Supra* note 122.

[129] Federal Law of 31 July 1998, available at; <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/RUS_1998_Act_TS.pdf > (date accessed 3 March 2012).

[130] Federal Law of 17 December 1998, available at; <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/RUS_1998_Act_EZ.pdf > (date accessed 3 March 2012).

[131] Paragraph 13 of Article 4 of the Federal Law of 17 December 1998 states that, "Discharge of harmful substances or effluents containing such substances…: any discharge from vessels and other floating craft (hereinafter referred to as "vessels"), aircraft, artificial islands, installations and structures for any reason, …; discharge of harmful substances does not include the ejection of harmful substances occurring directly as a result of the exploration, exploitation and related treatment at sea of mineral resources of the continental shelf of the Russian Federation, or the discharge of harmful substances in order to conduct legitimate scientific research for the purpose of combating or monitoring pollution;".

[132] Article 32 of the Federal Law of 17 December 1998 states that, "With regard to areas which are within the limits of the exclusive economic zone and where particularly severe climatic conditions and the presence of ice covering such areas for most of the year … and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance, the Russian Federation may adopt and enforce federal laws and other regulations for the prevention, reduction and control of marine pollution. Such federal laws and other regulations shall have due regard to navigation and the protection and preservation of the marine environment and the natural resources of the exclusive economic zone based on the best available scientific evidence. The limits of such areas shall be published in *Notices to Mariners*." [Emphasis added].

[133] Regulations for Preventing the Pollution of Offshore Waters, Sanitary Regulations and Norms Preventing the Pollution of Offshore Waters in Water Supply Areas. They prescribe that the discharge of oil must comply with the requirements of MARPOL 73/78 for special areas

[134] Russian Federation Government Resolution Nº 251 of 24 March 2000 approving the list of denied toxic substances into the EEZ from ships and other floating equipment, aircraft,

73/74, but contains more stringent policies. Within the list of policies and Regulations, it is significant to note the Law of the Russian Federation on Environmental Protection[135] concerning environmental regulations on vessel-source pollution in Arctic ice-covered areas and the Water Code of the Russian Federation[136] which invokes enforcement jurisdiction in the event of water contamination. Till date there exists various port Regulations and Federal prescriptions relating to NSR navigation[137] and the legal framework of it all which is in line with Maritime Doctrine and State Principles for the Arctic[138], is undergoing substantive alterations to respond to the dawning demands of the Arctic waters.

3.2.3 Comparions with AWPPA

NSR is considered to be a nexus between the Russian Federation and the Arctic. Hence, development of law and policy to protect NSR is in theory, protection of the Russian Arctic. In practice, protection of NSR from ship-source pollution is embodied in disparate random Regulations. Although the Federal laws give reference to "ice-covered areas", there still exists the need for a single predominant regulation which concentrates on the Arctic. The Law of the Russian Federation on Environmental Protection[139] although applicable to NSR is too general in a sense it does not give due regards to the current conditions of the Arctic. Examples maybe drawn from AWPPA which in its "short title" provides a rather forthright insight of the Arctic waters by indicating "the internal waters of Canada and the waters of the territorial sea of Canada and the exclusive economic zone of Canada". Then again, the Water Code of the Russian Federation[140] provides for the designation of "Specially Protected Water Bodies" (Article 66) with a liability facet without including special conditions of the Arctic water. This

---

artificial installations or structures and Russian Federation Government Resolution Nº 208 of 10 March 2000 establishing rules for the development and approval of norms of maximum permissible concentrations of harmful substances and permissible impacts on the marine environment and natural resources of internal waters and territorial sea.

[135] Federal Law on Environmental Protection of January 10 January 2002, N 7-FZ, available at; <http://www.icfinternational.ru/doc_files/oops.pdf> (Russian version) (date accessed 3 March 2012).

[136] Water Code of the Russian Federation of 3 June 2006, N 74-FZ, available at; <http://www.icfinternational.ru/doc_files/vodn_kodeks.pdf > (Russian version) (date accessed 3 March 2012).

[137] *Supra* note 48 , legislations which include the 1973 USSR Statute on State Maritime Pilots, the 1984 Edict on Intensifying Nature Protection in Areas of the Far North and Marine Areas Adjacent to the Northern Coast of the USSR, the 1985 Statute on the Protection of the Economic Zone of the USSR, the 1985 Statute on the Protection and Preservation of the Marine Environment in the Economic Zone of the USSR, Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route, Law on the Russian Federation's Internal Sea Waters.

[138] Maritime Doctrine of Russian Federation 2020, approved by President Vladimir Putin on 27.06.2001, available at; <http://www.oceanlaw.org/downloads/arctic/Russian_Maritime_Policy_2020.pdf> (date accessed 3 March 2012).

[139] *Supra* note 135.

[140] *Supra* note 136.

Code, however does not provide any definition of waters that are of specific relevance to the Arctic. The actual effectiveness of Russia's environmental legislation for the Arctic is said to be weakened by administrative, financial and operational constraints. This guarantees that principle policy statements corresponding to environmental protection rarely extends beyond official rhethoric.[141] On the other hand, Paragraph 3 (2) of AWPPA narrows down the application of the Act to Arctic while 3.1 (1) supplements the option for amendments and enforcement of those amendments. Although Edgar Gold has reflected on the positive side of various national port regulations and Federal prescriptions for the NSR[142], it can be clearly deduced that the Russian Federation with the foregoing optimistic claim over NSR should amalgamate the provisions into a single regulation with relevant guidelines. AWPPA is in fact, a model which might be taken into consideration to change the *status quo* of the Russian Arctic regime.

3.3 Arctic and the American Perspective

3.3.1 Background

During the height of the Cold War, the Arctic region was acknowledged as a geo-political and geo-strategic playground for the U.S. and the then Soviet Union.[143] The U.S. has stood strong against Canada by pressing equally hard provisions guaranteeing "non-suspendable" transit rights in the Articles of UNCLOS pertaining to international straits.[144] Moreover, it has raised doubts as to the future status of the Convention with regard to its relations with Canada. The contemporary policy towards the Arctic was introduced in National Security Decisions Memorandum from 1971 which explicitly stated its concern in the rational development of the Arctic maneuvered by the rationale of curtailing all adverse effects to the environment coupled with protecting the principle of freedom of the seas and superjacent airspace.[145] The National legislation emanate from different themes[146] and the end of the Cold War narrowed the concern of military security while heightening the other themes.[147]

---

[141] J. D. Oldfield, "Russian Environmentalism", *European Environment: the Journal of European Environmental Policy*, 14 March 2002, doi: 10.1002/eet.286, Vol. 12, No. 2, p. 126.
[142] *Infra* note 153.
[143] Heather Conley and Jamey Kraut, *U.S. Strategic Interests in the Arctic: An Assessment of Current Challenges and New Opportunities for Co-operation*, "A Report of the CSIS Europe Program", Centre for Strategic and & International Studies, April 2010, p. 1.
[144] *Supra* note 18, UNCLOS Articles 34-45.
[145] Donald R. Rothwell and Christopher C. Joyner, "Domestic perspectives and regulations in protecting the polar marine environment: Australia, Canada and the United States" in *Protecting the Polar Marine Environment*, Davor Vidas (ed.), 2000, Cambridge University Press, p. 150.
[146] *Ibid.*, i.e. military security; scientific security; economic security; and environmental security.
[147] *Ibid*., p. 157.

3.3.2 Acts for Arctic

Relevant legislation relating to the Arctic is the Coastal Zone Management Act of 1972[148], the participation of which is voluntary and where Alaska is one of the participating States. Federal assistance is afforded to any Coastal State to amplify and implement this comprehensive set of management infrastructure, thus encouraging states to participate in the Act itself.[149] The Oil Pollution Act of 1990[150] was adopted as a direct response to the *Exxon Valdez* incident. It incorporates "Prince William Sound Provisions" in Title V (Section 5001) which calls for the establishment of "Oil Spill Recovery Institute" where the significant function is to "identify and develop" convenient techniques, equipment, and materials for "dealing with oil spills in the Arctic and sub-Arctic marine environment".[151] The legal bodies created under this Title are the "Advisory board", "Scientific and Technical Committee", "Director" and "Regional Citizen's Advisory Councils". Compliments maybe rendered in view of its efforts to organize "Oil Terminal Facilities and Oil Tanker Operations Association" which is unique in the sense that it incorporates a balance between the categories of members i.e. government, owners and operators of oil tankers, owners and operators of terminal facilities and the locals of Alaska with a unique voting system. Then again, a significant comparison maybe drawn with Canadian AWPPA is that although it is a direct comprehensive Act dealing with pollution prevention in the Arctic, it only creates one entity i.e. Pollution Prevention Officer with enforcement authorities. This is as opposed to Oil Pollution Act, 1990, which immaculately provides a comprehensive strategy coupled with an administrative system to prevent and control any major oil spills in the near future. Other principle Acts[152] are in operation under the Federal system among which Act to Prevent Pollution from Ships[153] is the U.S. enactment of MARPOL 73/78. Moreover, in the Arctic state of Alaska, operation and response are regulated by the Alaska Oil and Hazardous Substances Pollution Control Act and the Alaska Environmental Conservation Act.[154]

---

[148] *The Coastal Zone Management Act*, 1972, as amended through Pub. L. No. 109-58, the Energy Policy Act of 2005, available at; <http://coastalmanagement.noaa.gov/about/media/CZMA_10_11_06.pdf > (date accessed 5 March 2012).

[149] *Infra* note 150, p. 160.

[150] *The Oil Pollution Act of 1990*, 33 United States Codes § 2701–2761 (1990), available at; <http://epw.senate.gov/opa90.pdf> (date accessed 5 March 2012).

[151] *Ibid*.

[152] The 1980 Comprehensive Environmental Response, Compensation and Liability Act (42 United States Codes §§ 9601–9657 (1980)), the Federal Water Pollution Control Act (United States Codes §§ 151–160 (1948) as amended), the Trans-Alaska Pipeline Authorization Act (43 United States Codes §§ 1651–1655 (1973)), the Port and Tanker Safety Act (33 United States Codes §§ 1221–1236 (1978)), the Refuse Act (33 United States Codes §§ 407), the Marine Protection, Research and Sanctuaries Act (16 United States Codes c.32 (1972)).

[153] *The Act to Prevent Pollution from* Ships, 33 United States Codes §§ 1901–1903, available at; <http://epw.senate.gov/atppfs.pdf> (date accessed 5 March 2012).

[154] Edgar Gold, *Gard Handook on Protection of the Marine Environment*, 3rd Edition, 2006, Arendal: Assuranceforeningen Gard, p. 369.

4 Emergence of Geographical Issues Due to Climate Change

4.1 Geographical Changes and the NWP

Canada has been quite reluctant for some twenty-three years, ever since the transfer of British territories and possessions in North America not already included within the dominion of Canada by Great Britain in 1880.[155] However, from 1903[156] onwards the Canadian government with the intention to consolidate its title to the Arctic islands and its control over the water areas, including those of the NWP inaugurated a number of expeditions at various points along the East-coast of the Canadian Arctic Archipelago.[157] In the scholarly writings of Pharand[158], these expeditions have been summed up as emanating from the intention to take ascendance over the Canadian national security, safety of the Inuits[159] and marine environmental protection.[160] The temptation of other States in the NWP of course lies in the probability of establishing a shorter shipping route connecting the Atlantic and Pacific oceans while sailing between Europe and Asia.[161] In addition, the NWP passage would curtail the original shipping routes through the Panama Canal with 9000 kilometers and around Cape Horn with 17000 kilometers.[162] In August 2007, the NWP became admissible to ships without an escorting ice-breaker which was an essential postulate in the *Manhattan* incident.[163] Changes are taking place which is

[155] Donat Pharand in association with Leonard H. Legault, *Northwest Passage:Arctic Straits*, 1984, Martinus Nijhoff Publishers, p. 38.
[156] *Ibid*., *Note* that this is the year when Amundsen set out to cross the NWP.
[157] *Ibid*., p. 39.
[158] Pharand as referred to by the author is the last name of the scholarly writer Donat Pharand.
[159] Donat Pharand, "The Arctic Waters and the Northwest Passage: A Final Revisit", 38 *Ocean Development & International Law*, 2007, p. 3, Accessed via Elin@Lund (date accessed 13 March 2012), where the author explains that the Inuits are Canadas' native habitants with their resident in the arctic region and the effect of continuous shipping in this area could have effects on the Inuits life style, culture and economy.
[160] *Ibid*.
[161] *Infra* note 163, *Note* the author's reasons which highlight that "[t]here are five to seven different seaways through the Archipelago, including the McClure Strait, the Prince of Wales Strait, and Baffin Bay via the Davis Strait. Except for the route through Baffin Bay and the Davis Strait, the other routes are not suitable for larger ships".
[162] John Falkingham, Dr Humfrey Melling and Katherine J. Wilson, *Shipping in the Canadian Arctic: possible climate change scenarios*, Newsletter of the northern climate change, 2002, p. 4, available at;
<http://www.taiga.net/nce/resources/newsletters/NCE_Newsletter_Fall2002.pdf> (date accessed 13 March 2010).
[163] Hiromitsu Kitagawa, "Arctic Routing: Challenges and Opportunities" " in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts

shaping up landscapes as we speak and with that change in mind, coupled with commercial interest, different interest groups are rising to the occasion questioning Canada's claim over the NWP and as to whether the NWP should be acknowledged as an international strait.

4.1.1 The Legal Status of International Straits

A fundamental difference existed as regards the position and definition of "International Straits" between maritime powers and bordering States, while the former insisted an unrestricted freedom of navigation, it was opposed by the latter on the grounds of protecting the marine environment.[164] A general comprehension of this term is laid down by Churchill and Lowe as "…a natural passage or arm of water connecting two larger bodies of water" which is considered as a terse yet compromising definition in the scholarly arena.[165] This push and pull factor as to the determination of an international strait was taken up in the ICJ by Albania and the United Kingdom in the *Corfu Channel* Case where the central issue was whether the North part of the Corfu Channel was to be considered an International Strait.[166] The United Kingdom Government protested to the Albanian Government, stating that innocent passage through Straits was a legal right endorsed by International law and the ICJ firstly concluded that "…generally recognized and in accordance with international custom that states in time of peace have the right to send their warships through Straits used for international navigation between two parts of the high seas without the previous

---

of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University Publications, pp. 171-175.

[164] *Supra* note 155, p. 89.

[165] R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 3rd Edition, 1999, Manchester University Press, p. 102.

[166] *Corfu Channel* Case, The Government of the United Kingdom of Great Britain and Northern Ireland vs. the Government of the People's Republic of Albania, (Merits), Judgment of the International Court of Justice, 9 April 1949, ICJ Rep. p. 4, where the Albanian Government contended that the sovereignty of Albania was violated because the passage of the British warships on 22 October 1946, was not an innocent passage. The reasons advanced in support of this contention was based on the grounds that the passage was not an ordinary passage, but a political mission; the ships were maneuvering and sailing in diamond combat formation with soldiers on board; the position of the guns was not consistent with innocent passage; the vessels passed with crews at action stations; the number of the ships and their armament surpassed what was necessary in order to attain their object and showed an intention to intimidate and not merely to pass; the ships had received orders to observe and report upon the coastal defenses and this order was carried out. It was however, admitted by the United Kingdom Agent, that the object of sending the warships through the Strait was not only to carry out a passage for purposes of navigation, but also to test Albania's attitude. As mentioned above, the Albanian Government, on 15 May 1946, tried to impose by means of gunfire its view with regard to the passage. As the exchange of diplomatic notes did not lead to any clarification, the Government of the United Kingdom wanted to ascertain by other means whether the Albanian Government would maintain its illegal attitude and again impose its view by firing at passing ships. The legality of this measure taken-by the Government of the United Kingdom cannot be disputed, provided that it was carried out in a manner consistent with the requirements of international law. The "mission" was designed to affirm a right which had been unjustly denied. The Government of the United Kingdom was not bound to abstain from exercising its right of passage, which the Albanian Government had illegally denied.

authorization of a coastal state, provided that the passage is innocent".[167] ICJ then proceeded with the question as to whether the strait can be regarded as "International" by highlighting the norms it has to satisfy to enable it to do so and where the decisive criterion was rather its geographical situation as connecting two parts of the high seas and the fact of its being used for International navigation.[168] The "geographical criterion" (connecting the high seas) was transparently determined whereas, in determining the "functional criterion" (International navigation), the Court took into consideration the "number of ships"[169] passing through the Channel during a period of one year nine months. This was a significant strategy adopted by the Court which in turn proved to be important in the legal development of the doctrine of international straits in international conventions. Then again, the North Corfu Channel constituted a frontier between Albania and Greece whereby, a part of it was wholly embraced within the territorial waters of these States.[170]

In the light of these considerations the Court drew the final conclusion that the North Corfu Channel should be considered as belonging to the class of international highways and that it is to be designated as an international strait with an implicated right of transit passage.[171] Both the "geographical criterion" and "functional criterion" were enshrined simultaneously in Article 16 (4) of the GCTS[172], and the Coastal State jurisdiction was subject to innocent passage.[173] This provision was incorporated in UNCLOS into two separate provisions i.e. Article 37 and Article 44 whereby, the definition of international straits is quite verbatim to the definition as laid down in GCTS which states "...straits which are used for international navigation between one part of the high seas ... and another part of the high seas ...." Although Article 37 embodies both the criteria, a subtle difference is noticed in UNCLOS as regards the "geographical criterion" where a Strait that connects a part of the high seas with a part of the Territorial Sea is not considered to be an international strait. The doctrine of international strait is more extensive in UNCLOS as it provides the rights and duties of Coastal States and Flag States and subscribes to the

---

[167] *Ibid*., p. 28.
[168] *Ibid*., the two decisive criterion's have been termed as "geographical criterion" and "functional" criterion respectively.
[169] *Ibid*., p. 29, where the total number of ships estimated was 2,884 where the flags of the ships were Greek, Italian, Romanian, Yugoslav, French, Albanian and British.
[170] *Ibid*.
[171] *Ibid*.
[172] Convention on the Territorial Sea and the Contiguous Zone, 1958, Done at Geneva on 29 April 1958, Entered into force on 10 September 1964, United Nations, *Treaty Series*, vol. 516, p. 205.
[173] Daniel Patrick O' Connell, *The International Law of the Sea*, Vol. I, 1982, Oxford: Clarendon Press, pp. 309-316, where the attempts at the codification of customary international law on international straits made by a number of international bodies such as *Institut de droit* International, the International Law Association and the International Law Commission is highlighted, *See Supra* note 155, p. 90, which is a critique to this novel approach and states that these International bodies did not achieve much success as to the "International use" element of the definition and that guidance had to be sought in the *Corfu Channel* Case of 1949 which is still the only International decision on the quesion.

establishment and maintenance of "navigational and safety aids and other improvements in order to prevent, reduce and control pollution from transiting vessels".[174] UNCLOS covers five categories[175] of international straits and provides for four different legal regimes, which is a compromise as to the types of passage that is permissible in international straits.[176]

4.1.2 NWP as Regards to "Geographic Criterion"

In order to satisfy this criterion, the geography of the NWP must link two parts of the high seas and comprise an overlap of Canada's territorial waters. The first element coinciding with the element of "link" is demonstrated in the geographical fact that the eastern end of the passage leads to Baffin Bay, the Davis Strait, the Labrador Sea and the Atlantic Ocean, while the western end leads to the Beaufort Sea, the Chukchi Sea, the Bering Strait and the Pacific Ocean.[177] Nevertheless, when comparing with other Straits, the NWP is unique in the sense that it is embraced by ice almost throughout the year and according to Pharand, the Beaufort Sea, which is a part of the Atlantic ocean should not be considered as high seas because of the presence of ice.[178] Considering the veracity of this fact, questions may arise as to whether this presence of thick ice would help designate the NWP even as a regular Strait? Moreover, does this correspond

[174] *Supra* note 18, *See* Article 43.
[175] *Supra* note 155, the five categories of international straits include, 1) international straits with a route of high seas (or exclusive economic zone) of "similar convenience" and over-flight applicable to the high seas and exclusive economic zone, 2) international straits with a route of high seas (or exclusive economic zone) not of "similar convenience" will be governed by the right of transit passage, 3) international straits with high seas (or exclusive economic zone) route of "similar convenience" seaward of an island (which forms the Strait) of the Coastal State are subject to the right of non-suspendable innocent passage. 4) international straits joining a part of the high seas (or an exclusive economic zone) with the territorial sea of a foreign State governed by the traditional right of non-suspendable innocent passage, 5) international straits joining a part of the high seas (or an exclusive economic zone) which another part of the high seas (or exclusive economic zone) and not included in the previous categories are subject to the right of transit passage.
[176] *Ibid*., Initially the maritime powers insisted on treating International Straits as an autonomous legal institution, divorced from the territorial sea and providing for the same freedom of navigation and over flight as on the high seas and on the other hand a Coastal State group wished to keep international straits linked to the territorial sea. This would limit the right of passage to one of non-suspendable innocent passage and requiring prior notification or authorization for warships. The compromised article, entitled "Passage of Straits used for International Navigation" was introduced by the United Kingdom at Caracas in 1974 which made two significant changes, the former which substituted the words "the same freedom of navigation as on the high seas" with "transit passage" while the latter limited the application of "transit passage" to straits joining two parts of the high seas and retained the innocent passage rule for straits joining one part of the high seas with the territorial sea of a foreign State. This remained intact in subsequent texts of UNCLOS.
[177] *Ibid*., p. 99.
[178] Donat Pharand, *The Law of the Sea of the Arctic: with Special Reference to Canada*, 1973, University of Ottawa Press, pp. 174-179, where the suggestion is based on the assumption that the Arctic Ocean, including the Beaufort Sea, is covered by some kind of permanent ice cap which would constitute a complete barrier to navigation.

to the "geographic criterion" or does it merely correspond to the restriction and hardship of international navigation which relates to the functional aspect? As is exemplified from the *Manhattan* voyage, there have been vessels, which have transited the passage and icebreakers have escorted all these transits. Article 37 (Part III) read together with Article 38 (2) of UNCLOS provides that straits in which there is a right of "continuous and expeditious" transit via exercise of the freedom of navigation between one part of the high seas and another part of the high seas are considered as international straits. These provisions do not provide a bar as to how the vessels should make itself through the ice-covered waters and only reflects on the issue of transit. Then again, the pack ice, comprised of ice floes and in constant motion does not extend to the continental coast of Canada and Alaska for about three months of the year, which does not necessitate the escort of icebreakers.[179] It is assumed that due to climate change the period of ice-existence shall deteriorate expediting the number of vessel-navigation in that part. Even so, if vessels escorted by icebreakers are able to transit the NWP between one part of the high seas to another part of the high seas, then the NWP satisfies the first element of "geographic criterion" of international straits. The second element pertains to an overlap of territorial waters and it is estimated that all the NWP routes presupposes passage through such an overlap.[180]

Although Canada has not drawn straight baselines around the Archipelago, it has claimed that the waters of the Archipelago and those of the NWP are internal in nature by virtue of historic title.[181] Even if there is a supposition that the waters of NWP are not internal, the extension of Canada's territorial waters to 12 nautical miles in 1970 resulted in an overlap of the territorial waters in the western portion on the Barrow Strait.[182] Pharand emphasises that if the NWP is considered as being only through the M'Clure Strait, then it would still qualify as a legal (territorial) Strait.[183] On the other hand, route through the Prince of Wales Strait has always had an overlap of territorial waters because the presence of the Princess Royal Islands at about the middle of the strait narrows the strait to less than 6 nautical miles. It seems that prior to 1970 Canada acknowledged that a strip of high seas might exist throughout the M'Clure Strait and the same opinion was held by the U.S. in 1969 when *Manhattan* attempted to cross the NWP by attempting to navigate through it instead of the Prince of Wales Strait. Hence, the NWP constitutes a legal Strait in that it connects two parts of the high seas and has an overlap of territorial waters which offers the greatest potential for deep-draft navigation.[184]

---

[179] *Supra* note 155.
[180] *Ibid*., p. 100.
[181] *Supra* note 178.
[182] *Supra* note 155.
[183] L. Brigham and R. McCalla, *Arctic Marine Shipping, 2009 Report.* Arctic Marine Shipping Assessment (AMSA), *Note* that the NWP consists of five familiar routes or passages amongst which Routes1 and 2 are considered deep water ones while others have draught restrictions of a maximum 10 meters due to the underwater shoals and rocks in the sea.
[184] *Ibid*.

4.1.3 NWP as Regards to "Functional Criterion"

Some authors are doubtful of the authentication of "functional criterion" of the geographical test of international straits.[185] This contention is also held by interest groups with an intention to dismiss the designation of NWP as an international strait. However, one of the decisive factors that was dominant in the decision of the *Corfu Channel* Case is the "functional criterion" i.e. whether the Strait "...is being used for international navigation".[186] The codification of this criterion in GCTS and UNCLOS provides a strong ground for any strait to undergo this test. Both these conventions spell out the word "used", the concrete interpretation of which indicates the "actual" utility of the strait as opposed to a future anticipated use or a mere prediction of future traffic without any stretch of the imagination. This is parallel to the conclusion drawn by Pharand that "...before a strait may be considered international, proof must be adduced that it has a history as a useful route for international maritime traffic."[187] The "functional criterion" is dependent on two elements as has been observed in the *Corfu Channel* Case where the former involves the number of vessels that have had transit during a certain period and the latter responds to the number and types of Flag States, which are represented during those transits. Pharand is of the opinion that the NWP does not satisfy the "functional criterion" and concludes, "[t]hroughout the 80-year history of attempted exploratory navigation in the NWP, only 40 complete transits of the passage have taken place and of these 27 were Canadian ships" and forwards a statistical explanation that "[a]mong the 13 foreign crossings, 10 were American, 1 Norwegian, 1 Dutch and 1 Japanese".[188] However, the Canadian Coastguard has estimated that after the completion of the first transit in 1906, there has been 69 non-Canadian transits in the NWP and during the year 2004-2005, there were only 7 transits.[189] This when compared with the number of transits and number of Flag States of the *Corfu Channel* Case is relatively low.[190] Other scholars like McDorman[191] and Mckinnon[192] have had similar views of Pharand and argues that the number of transit in the NWP is insignificant and that it does not meet the "functional criterion" due to the fact of the low number of International transits. However, Rothwell is of a different opinion and states that "[c]ertainly, the amount of traffic through the NWP is not comparable to that of the *Corfu Channel*, or other

---

[185] James Kraska, "The Law of the Sea Convention and the NorthWest Passage" in *International Journal of Marine and Coastal Law*, Vol. 22, No. 2, 9 May 2007, p. 257.
[186] *Supra* note 166.
[187] *Supra* note 159.
[188] *Supra* note 155.
[189] Canadian Coast Guard, *The Northwest Passage: Summary of Complete Transits, Fleet News no. 11*, 1985.
[190] *See Supra* note 164.
[191] Ted L. McDorman, "In the Wake of the 'Polar Sea': Canadian Jurisdiction and the Northwest Passage", *Les Cahiers de Droit*, 1986, Vol. 27, pp. 623-646, where the author states that "The Passage is not a crucial international thoroughfare, it has limited strategic importance, it is used almost exclusively by Canadians …".
[192] J.B. McKinnon, "Arctic Baselines: *A Litore Usque ad Litus*", in 66 *Can. Bar Rev*, 1987, pp. 790-797.

commonly accepted international straits. The need to apply different standards in the polar regions, however, has been recognized".[193] He also argues that the presence of ice in the Passage and the polar weather conditions should allow for a test requiring a lower volume of international navigation of the passage in order to classify it as an international strait.[194] However, according to Pharand, a review of shipping activities within the NWP clearly exemplifies that the "functional criterion" even assessed according to a polar standard, has not been satisfied. Nevertheless, it seems that the two international conventions which codify the international strait regime do not exactly provide a general threshold as to the number of vessels and the number and types of Flag States that need to ply back and forth for transit in the NWP. There is a vacuum of case-law in this regard and it is only a matter of time before this issue is placed before an International Tribunal to indicate a specific figure which will help determine the "functional criterion". It can under no circumstances be adjudged on the basis of comparison with a higher figure since the environmental aspects of it must be duly considered. International navigation will surely internationalize the NWP and if the "potential use" and the lack of a specific threshold are taken into account, then the NWP has clearly satisfied the "functional criterion".[195] The scholars must take into consideration the issue of global warming and the alarming rate at which the Arctic ice is melting which is a catalyst to the internationalization of NWP and with that, the number of transits are likely to increase.

4.1.4 Sectory Theory and the Canadian Arctic

Linked principally with the Antarctic, the Sector theory, which is a method for delimiting an area claimed by a state, has had a pivotal role in international law as a basis of claiming jurisdiction in the Arctic waters by Canada.[196] This claim of jurisdiction has become more concrete as the Arctic surroundings are shaping up due to global warming, rendering Canada a reason to be more resistant in its claims on adjacent waters. The Russian Federation has also applied the Sector theory as a basis of their land

---

[193] Donald R. Rothwell, "The Canadian-U.S. Northwest Passage Dispute: A Reassessment", 26 *Cornell Int'l L.J.*, 1993, pp. 331-352.
[194] *Ibid*.
[195] *See Supra* note 191, where McDorman speculates that promises of mineral wealth in the Arctic will doubtless lead to increased maritime traffic, *See* also *Ibid*, where Rothwell points to evidence of an already increasing usage of the Passage of twenty-three transits, eight by non-Canadian flagged vessels recorded during the 1980s alone, *See Supra* note 178, where Pharand shares this view, warning that International navigation has already begun in the eastern part of the Passage, used for the transportation of minerals from the Nanisivik Mine to the south of Lancaster Sound, and the Polaris mine, north of Barrow Strait.
[196] Suzanne Lalonde and Ronald St. J. MacDonald, "Donat Pharand: The Arctic Scholar" in *The Canadian Yearbook of International Law-Annuaire Canadien de droit international*, 2006, Vol XLIV, University of British Columbia Press, p. 59, where the authors have cited from Pharand which states "[t]he Sector theory has been invoked by a number of politicians and officials in Canada as a legal basis for claiming jurisdiction not only over the islands of Canadian Arctic Archipelago, but also over the waters within and north of the islands right upto the pole".

and maritime claims.[197] Initially what started out as a claim over the Arctic Archipelago is now being applied to the EEZ and Continental Shelf. According to Pharand, the Sector theory in the Canadian Arctic is attributed to Senator Pascal Poirier, in 1907, who was a pioneer "to actually systemize the use of meridians of longitude to claim territorial sovereignty in the Arctic".[198] Senator Pascal Poirier asserted that Canada owned everything within a pie-shaped sector extending from the continental coastline to the geographic North Pole.[199] Three elements are integral parts of this theory and "Boundary treaty", as the first element of three legal foundations has been dismissed by Pharand on the ground that the *1825*[200] and *1867*[201] boundary Treaties cannot serve as a legal basis as in both instances the subject matter was land only, and not land and sea, except for inland waters and the territorial sea.[202] Pharand's evaluation of the second element, the doctrine of "Contiguity" as a legal foundation is held to be threefold i.e. *state practice*[203], *International decisions*[204] and *doctrinal opinion*[205] and has been disregarded as insufficient insofar as they cannot serve as a legal basis for the acquisition of territorial sovereignty. The sole reason was that, since "Contiguity", by itself, is incapable of generating sovereignty over land areas, it cannot be justified as an instrument of acquisition over the sea areas.[206] The final legal foundation of the Sector theory, according to

---

[197] *Infra* note 199, where the author explains that internationally, the Soviet Union has adopted the Sector theory, at least in literature, where Soviet writers refer to the Soviet northern seas as the entire Soviet sector up to the North Pole. This sector of the Arctic is considered as historical waters to which the Soviets have a historical right, created by the Russian people's industrious work during several centuries. A second Russian reference enclosing all of the Arctic up to the North Pole is contained in a note to the American Government following a 1924 incident. A decree in 1926 stated that the treaty between the U.S. and the Russian Federation, which draws a demarcation line between the two countries in the Bering Strait, "goes in a direct line to the north, without deviation right to the Polar Sea". Using this line as the eastern sector line the Soviets also propose a western line that would go from 32• 04' 35" East to the North Pole with a deviation to allow for the Norwegian-Russian agreement on the Svalbard Islands.

[198] *Ibid*.

[199] Robert S. Reid, "The Canadian Claim to Sovereignty Over the Waters of the Arctic", 12 *The Canadian Yearbook of International Law*, 1974, pp. 111-115.

[200] *Treaty of Saint Petersburg, 1825.*

[201] Convention between the U.S. and His Majesty the Emperor of Russia, for the Cession of the Russian Possessions in North America to the United States, Concluded at Washington, March 30, 1867; Ratification Advised by Senate, April 9, 1867; Ratified by President, May 28, 1867; Ratifications Exchanged at Washington, June 20, 1867; Proclaimed, June 20, 1867.

[202] Donat Pharand, *Canada's Arctic waters in international law*, 1988, Cambridge University Press, pp. 17-25.

[203] *Ibid*., p. 38 where Pharand considers the United State of Americas' reliance on the doctrine in the nineteenth century, that of various European powers with respect to colonial Africa, as well as that of Canada and the Russian Federation with respect to the Arctic.

[204] *Ibid*, p. 38, where Pharand discusses the *Aves Island Case* (1865), the *Island of Bulama Case* (1870), the *British Guiana Case* (1904), the *Island of Palmas Case* (1928), the *Eastern Greenland Case* (1933), the *Minquiers and Ecrehos Case* (1953) and the *Western Sahara Case* (1975).

[205] *Ibid*., p. 40, where the doctrinal opinions as discussed by Pharand include the French jurist Fauchille, the American jurist D. H. Miller, the English writer M. F. Lindley, the Soviet writer W. L. Likhtine, the British Professors C. H. M. Waldock and H. Lauterpacht.

[206] *Supra* note 196.

Pharand, lies in the practice of "Customary law". Then again, according to Pharand, Canada has never adopted any legislation in Council claiming a sector and has resorted to a number of official steps indicating its reliance on it which is inconsistent in pattern and position.[207] Boundaries following sector lines have evolved in maps since 1952 and this method has been accounted for as part of the subsequent conduct of the Parties as an aid for the interpretation of a treaty.[208] But the involvement of treaty is impertinent in this regard to determine the eastern line of the sector. The western line corresponding to the meridians of longitude were used only to delimit the territorial possessions of the parties and the 1825 and 1867 boundary treaties were already adjudged by Pharand, to have no legal basis.[209] Hence, regardless of the probative value of maps and charts in certain circumstances, it would not provide Canada with any logical support in favour of its own claim. The U.S. has never relied on the pragmatic aspect of the Sector theory and has expressed opposition in its usage as a basis for claiming sovereignty over the Arctic Ocean. It is of the view that division under the Sector theory would in fact constitute claims of sovereignty over the high seas and this novel approach to artificially create a closed sea would in repercussion infringe the rights of all nations to the free use of the area.[210]

4.1.5 A Legal Alibi Distorting International Regime?

As Pharand suggests, Canada's claim to the waters as internal would be supportable if reliance was placed on the 1951 decision of the ICJ in the *Anglo-Norwegian Fisheries Case*[211] by which Canada's Arctic could be equated with the islands along the Norwegian Coast via use of straight baselines.[212] Under the domain of customary international law, as applied by the ICJ in this case, there exists no right of passage in waters enclosed by straight baselines, regardless of the previous status of the newly enclosed waters.[213] This was subsequently modified in the GCTS which made the enclosed waters subject to the right of innocent passage on the condition that they were previously territorial waters or high seas. Since Canada is not a party to GCTS, it had to rely on customary law for the validity of its straight baselines which as a result is not secure since the Convention provision itself was a part of customary law.[214] A further investigation would illuminate the fact that the GCTS provision for innocent passage in

---

[207] *Ibid*., p. 77.
[208] *Ibid*.
[209] *Ibid*.
[210] Bo Johnson Theutenberg, *The Evolution of the Law of the* Sea, 1984, Tycooly International Publishing Company.
[211] *Anglo-Norwegian Fisheries Case* (United Kingdom vs. Norway), 18 December 1951, I.C.J. Report, p. 116, *See* also L. C. Green, *The Modern Law Review*, Vol. 15, No. 3 (Jul., 1952), pp. 373-377
[212] Donat Pharand, "The legal regime of the Arctic: Some outstanding issues", *International Journal* , 1984, Vol. 34, No. 9, p. 748-769.
[213] *Supra* note 202, p. 228.
[214] *Ibid*.

newly enclosed internal waters has had universal usage as to become legally binding on all States. Then again, the claim of Arctic as historic internal waters by reason of straight baselines could also be expedited if reliance could be placed upon Inuit use of the waters and surrounding land owing to the fact that it would indicate a presence over an extended period of time.[215] But this technicality was avoided by Canada because of the significant issues that would arise for the Government in its negotiations with the Inuit over outstanding land claims.[216] Moreover, Canada has never publicly asserted its use of straight baselines during the *Polar Sea* voyage in 1985 although there existed an agreement of Continental Shelf boundary founded on straight baselines between itself and Greenland in 1973.[217] A diplomatic protest would have certainly justified Canada's position in the NWP. Nevertheless, peer pressure from the international community, more specifically the U.S. for Straits to embody the right of International navigation has been consistent even prior to the *Manhattan* voyage.[218] More convincing is the recent trend of international shipping across the NWP which has developed over relatively few years. Pharand infers that "[o]n the question of international shipping, it has already begun in the eastern part of the passage…" and further adds that "[a]lso, it seems to be only a question of time before regular shipping takes place…along the full length of the Northwest passage".[219] Assuming this to be correct, now the obvious question is what right of passage would apply after internationalization? As is understood, a consensus has been reached in UNCLOS as to the type of passage that is applicable in the Straits termed as "transit passage". This term was advocated by the U.S. and the Russian Federation to act as a substitute for the term 'free passage".[220] This definition contains two limitations where the first one is to exercise the given "freedom" in accordance with this part and the second one is that transit must be "continuous. This "continuous" transit is in conjunction with the term "expeditious" where the burden of proof lies with the defendant. These certain limitations have been embedded in the form of duties imposed on ships and aircraft during transit in Articles 39, 40, and 41.[221] This is as it exists today, what is incorporated in theory. In practice, however, the NWP is for the moment not an international strait and consequently the right of transit passage is absent. Consent of Canadian authorities is necessary for American ice-breakers to enter NWP which is incorporated in the agreement

[215] *Supra* note 191, p. 634.
[216] *Ibid*.
[217] *Ibid*.
[218] J. M. Spinnato, "Historic and Vital Bays : An Analysis of Libya's Claim to the Gulf of Sidra", 13 *Ocean Development and International Law Journal*, 1983, p. 65-68, where it is stated that, as regards to navigational rights the United States has persistently taken a strong stand to safeguard the right of navigational passage, and in August 1981, the U.S. aircraft and Libyan aircraft were involved in a brief skirmish in the Gulf of Sidra that Libya had declared in 1973 to be an historic bay and hence internal waters in which the U.S. vessels were not permitted
[219] *Supra* note 155, p. 230, para. 2.
[220] *See* 1971 Draft Articles of the United States, A/AC.138/S.C.II/L.4 and the 1972 Draft Articles of the Soviet Union, A/AC.138.S.C.II/L.7.
[221] *Supra* note 18.

of 1988 and is still applicable.[222] Whether there exists a right of innocent passage in the NWP, according to customary law seems to be controversial. McDorman is of the opinion that if an international tribunal was looking at the legal cases of Canada and the United States at the time the *Polar Sea* traversed the NWP, the tribunal would reject the Canadian position and would similarly reject the position of the U.S.. He further adds that the tribunal would be left with the option that the NWP was part of Canada's territorial sea in which foreign vessels would have the undisputed right of innocent passage. Then again, the applicability of Sector theory to Arctic waters has received International critique. The Canadian government's support of the Sector theory as a means of defining the EEZ and continental shelf boundaries can only be seen as increasing. This view of the Sector theory does not conflict with the earlier view held by the U.S. that the Sector theory could not be used to enclose the high seas as only the zones of UNCLOS would be defined with this principle. International navigation for the shipping industry is significant to uphold the commercial pillar which is a part of international commercial law. But where this right of transit passage is subject to objection by controversial theories, it can be held that those theories constitute a legal alibi which is distorting the international regime. Different interest groups have laid down different claims as a result of climate change which is shaping up the adjacent sea areas. Sovereign claims must be coupled with the flexibility as endorsed by international conventions to give due regards to innocent passage of Flag States. If otherwise, it leads to the contortion of the international regime. The ultimate question is as to whether the region will develop in an orderly fashion based on the existing set of International rules that have been primarily established by UNCLOS or, will the circumpolar States increasingly turn to unilateral actions based on random theories which will face challenges from other States and international bodies for control. The answer is not readily available until and unless the fact of matter has been placed before the international courts.

4.2 Compromise in the NSR?

In theory, it is claimed that distance savings through NSR can be elevated compared to the currently used shipping lanes via Suez or Panama.[223] The history trails back to the time when the English colonial powers expanded their empires and trading routes into Asia in the 16th century in search of a shorter sea route.[224] The legal regime of the waters North of the Soviet coastline between Norway and the Bering Strait has been consolidated and

[222] *Agreement between the government of Canada and the government of the U.S. on Arctic cooperation* (Canada-U.S.), 11 January 1988, C. T. S. 1988/29, available at; <http://www.lexum.umontreal.ca/ca_us/en/cts.1988.29.en.html> (date accessed 20 March 2012).
[223] *Supra* note 122.
[224] *Ibid*. In theory the set of navigational routes between Kara Gate in the west and Bering Strait is known as the Northern Sea Route which corresponds to a number of narrow straits which ultimately represent a constraint in safe sailing.

transformed significantly since the Soviet government took steps to become signatory to UNCLOS.[225] Then again, this transformation was coupled with collateral developments potentially concerning the utilization of Arctic sea lanes and the exploitation of Arctic resources which included the continuous use of the Arctic waters by several States to reach the North pole, joint resource exploitation and joint shipping on the Soviet Arctic continental shelf and most importantly the utilization of the NSR as an international shipping route between the Atlantic Pacific Oceans.[226] Among the four maritime boundary agreements, the first maritime boundary in the Arctic was negotiated between Norway and the then Soviet Union in 1957.[227] The Russian Federation favored a boundary that coincided with a Sector line as applied in its national legislation and rejected the application of equidistance based on special circumstances.[228] On the other hand, the longest maritime boundary was successfully negotiated between the U.S. and the then Soviet Union in 1990 which established the boundary for the territorial sea, EEZ and the continental shelf in the Arctic Ocean, Bering Sea and the Chukchi Sea respectively and relevantly, the Russian Federation continental shelf submission[229] complies with this treaty so as not to define any portion of the Arctic continental shelf to the East of the boundary.[230] The rejection of this submission has more or less instigated the Russian Federation to develop an introvert Arctic policy owing to the prediction that climate change would surely internationalize the NSR. However, compliments maybe rendered to these MOU's as it reflects the commitments of the States concerned with the NSR to retain a good relation with their Arctic neighbours. Nevertheless, this appearance has taken its toll when the co-operation has been disrupted following the Russian Federation's placement of a flag at the North Pole.[231] Although this issue dissolved with time, it left a question on the face of mutual agreement which maybe threatened when opposing groups place unilateral "land-grabbing" claims as the NSR witnesses the dawn of climate change.

---

[225] William E. Butler, "The legal regime of Soviet Arctic marine areas" in *The Soviet Maritime Arctic*, Lawson W. Brigham (ed.), 1991, Belhaven Press, p. 215, para. 1, *Note* that the author explains the alteration which "…takes the form chiefly of legislation ving effect to the 1982 LOS".

[226] *Ibid*., p. 216.

[227] Brian J. Van Pay, "National Maritime Claims in the Arctic" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP, p. 71, *Note* that the author refers to the *Agreement between the Royal Norwegian Government and the Government of the Union of Soviet Socialist Republics* concerning the sea frontier between Norway and the U.S.S.R in the Varanger Fjord, signed 15 February 1957.

[228] *Ibid*., *Note* that the competing claims resulted in a series of disputed areas totaling 175,000 kilometers. *See* also Alex G. Oude Elferink, "Arctic Maritime Delimitations: The preponderance of Similarities with Other Regions" in *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction*, Alex G. Oude Elferink and Donald R. Rothwell (eds.), 2000, 185 Kluwer International, Great Britain.

[229] The Russian Federation made a submission to the Commission on the Limits of the Continental Shelf, pursuant to Arcticle 76 of UNCLOS on 20 December 2001.

[230] *Ibid*., p. 74.

[231] R. Hubert, "Cooperation or Conflict in the Arctic" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP, p. 32.

Future forecasts have been laid down as to the emergence of seasonal lanes in the NSR through the ice locked Arctic.[232] This trend of climatic change if constant would result in the disappearance of summertime ice caps and this significant retreat of ice cap will ensure the possibility to use the NSR in shipping which would eventually reflect less trip distances and hence, a reduction in the operation cost. As the framework conditions for the NSR is undergoing a sloth alteration, the Russian Federation petroleum activities are moving Northwards and is expected to go offshore.[233] This aggrandized petroleum activity will lead to unprecedented levels of shipping in and Westwards from the Barents and Kara seas.[234] If the Russian Federation can offer competitive considerations, there might be individual ship-owners willing to make sporadic use of the transit route which depends on the foreign policies it adopts. Moreover, on the issue of continental shelf, the government of the Russian Federation adopted a new Arctic strategy in September 2008 which emphasizes the region's importance to the Federation's economy as a major source of revenue.[235] The national security strategy released by the Russian Federation indicated a possible conflict in the future over the question of rights to the Arctic oil coupled with the possibility of war breaking out as a result of the struggle for control thereby.[236] This strategy is inferred to be congruous to most foreign objectives that relate to the opening of the NSR for very limited period of the year which could be accessible for longer periods in the future. However, compliments maybe given to the Russian Federation's acquiescence in observing UNCLOS before adoption of any new International agreement relating to the co-ordination in using the Arctic spaces.[237] It maybe deduced that the reason behind this conformity lies in the Russian Federation's intention to prevent distortion of the international regime and to tone down the line of hostility with its Arctic shareholders. Although the Arctic strategies reveal its efforts to use special forces to establish its jurisdictional claims, on the other hand, it has indicated its positive face to co-operate via existing MOU's for further exploitation of resources in the NSR.

[232] *Supra* note 225.
[233] *Supra* note 122.
[234] *Ibid*.
[235] Alexander S. Skaridov, "Russian Policy on the Arctic Continental Shelf" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP, p. 490.
[236] *Ibid*.
[237] *Ibid*.

5 Emanation of Environmental Issues and Regional Responses

The level of International interest in the Arctic has surely intensified. It has already been established that, with this interest flows the increased action of international navigation that seeks commercial concern through a shorter sea-route. The first norm of the result of climate change is the geographical issue while the final norm relates to the environmental issue. To be precise, climate change is instigating changes in the legal regime. Once the "land-grabbing" claims are resolved and the right of innocent passage has been granted, the Arctic States will have to give due consideration to the problems that arise out of International navigation i.e. the environmental issues. A single major oil tanker casualty in the Arctic may have serious environmental outcomes. The environmental issue in this context can vary from global, regional, trans-boundary, domestic or an amalgamation of these.[238] In order to examine environmental law in an international context, it is important to observe the interplay of International, regional, sub-regional and national rules and institutions.[239] Questions have been raised as to whether the region will respond to the environmental changes in an orderly fashion based on the existing set of international rules that have been primarily established by UNCLOS i.e. Flag State, Port State and Coastal State jurisdiction, or will the circumpolar States increasingly turn to unilateral, bi-lateral or multilateral actions in an effort to safeguard the marine environment.[240] The answers for fact lie in the *status quo* efforts initiated at the circumpolar level. A critique of these efforts would certainly highlight the fact as to whether they have instigated a modification in the legal regime and to what extent these endeavour's have been able to respond to the environmental changes

5.1 Arctic Council Initiatives

It was not until the end of the Cold War that the initial effort to form multilateral agreements began to succeed.[241] As the Soviet Union began to transform, the Finnish Government sought for means of promoting co-operation which led to the creation of the AEPS which ultimately

[238] *Supra* note 59, pp. 6-7.
[239] Oran R. Young, *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*. Fourth conference of Parliamentarians of the Arctic Region, Rovaniemi, 2000, available at; <http://www.arcticparl.org/_res/site/File/images/conf4_sac.pdf> (date accessed 30 March 2012).
[240] *Supra* note 231, p. 30, para. 2.
[241] *Ibid*.

transformed into the Arctic Council[242].[243] Although the AEPS has been assimilated in the infrastructure of the Arctic Council, till date it remains as a valid strategy of working groups for the Council. Keeping a constant focus on the international environmental issues, the Council has moved to strengthen relations among the Arctic States. Then again, it has facilitated the means of obtaining a mutual understanding of the environmental challenges that the Arctic States are facing.[244] The Arctic Council is the directing authority of the Arctic legal regime. However, it is not considered as an international organization with a legal personality and describes itself as a "high-level forum intended to provide a means for promoting cooperation among Arctic states... on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic."[245] But the Council underwent the same frustration which plagued the AEPS as limited resources hindered the development of an International yet effective strategy. All of the working groups were retained, and the task force on sustainable development was transformed into a working group. Hence, the Arctic Council may be distinguished from AEPS insofar as the Council is specifically mandated to develop a sustainable development program.[246] The Arctic is transforming into a geopolitically important factor and the growing interest in Arctic issues stem from climate change, melting ice-caps and improved access to the Northern regions rich in oil, gas and minerals. It is argued that the interest in the Arctic issues is a privilege for the Arctic nations since many of the problems found in the Northern environment are the result of activities of non-Arctic States. Then again, it is believed that the Arctic Council can provide the basis for an international platform on environmental policy. But a significant drawback is that the main course of action for the Arctic Council has been identifying environmental threats and establishing Guidelines for a course of remedial action, while leaving the duty of implementation to the individual Arctic nationalities. The Arctic States are responsible for responding according to its own means. In practice, the disparate working groups that have been specifically mandated to deal with marine environmental issues, have not so

[242] *Note* that the Arctic Council is created by the Ottawa Declaration 1996.
[243] David Scrivener, *Environmental Cooperation in the Arctic: From Strategy to Council*, Security Policy Library No.1, (Oslo: Norwegian Atlantic Committee, 1996), *Note* also that the AEPS divided its activities between working groups and task forces. The four working groups were the Arctic Monitoring and Assessment Program (AMAP); Protection of the Arctic Marine Environment (PAME); Emergency Prevention, Preparedness and Response (EPPR), Conservation of Arctic Flora and Fauna (CAFF). However, because the AEPS was not supplemented with its own sources of funding and was not a formal treaty, its capacity to provide remedies for the environmental problems it uncovered was to a certain extent restricted. It was these restrictions that paved the way to the creation of the next major environmental arctic initiative i.e. the Arctic Council.
[244] *Supra* note 231, where it is stated that the Council compels the senior leaders to focus on Arctic issues every two years when ministerial meetings are held.
[245] Linda Nowlan, *Arctic Legal Regime for Environmental Protection*, 2001, IUCN, Gland, Switzerland and Cambridge, UK and ICEL, Bonn, Germany, available at; <http://weavingaweb.org/pdfdocuments/EPLP44EN.pdf> (date accessed 31 March 2012).
[246] David VanderZwaag, R. Huebert and Stacey Ferrara, *The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy, Vol. 30:2, pp. 131-171.

far developed a mandate that goes beyond determining the marine environmental issues facing the Arctic region.

5.2 Analysing OSPAR: Arctic Regional Instrument on Dumping of Wastes

OSPAR is a regional instrument which aims to amalgamate the Oslo Convention and the Convention for the Prevention of Marine Pollution from Land-based Sources (Paris Convention), whereby Annex II deals with prevention and elimination of pollution by dumping or incineration.[247] Although OSPAR is a regional instrument, the preamble acknowledges national, regional and International actions and calls for a combined effort when dealing with marine pollution. Then again, this Convention expressly includes a definition of internal waters and embodies such waters within maritime area where the convention applies.[248] Although OSPAR addresses two primary concerns corresponding to Ocean dumping of radioactive wastes and the dumping of dredged material, the significant drawback of the convention is that it covers only a part of the Arctic marine environment. Since OSPAR has membership different from the Arctic region, countries with no national interest in the Arctic region may influence in decision making not unique to specific Arctic concerns.[249] The three Arctic non-signatories possess jurisdiction over an extensive regime of the marine environment and a complex situation may arise where these States would separate the Arctic regime in their domestic environmental legislation. Moreover, it relies on the domestic administrations to prevent and punish conduct that contravenes the convention. Since Denmark and Norway are the only Arctic States which are parties to this convention, it is impossible to implement the provisions or policies of this regional instrument on non-contracting States. In addition, there is no means of monitoring the domestic administrations for strict compliance of its regulations and as a result protective measures cannot be ensured against illegal dumping in the Arctic waters.

5.3 Regional Response as a Catalyst of Change

Although the Arctic has not witnessed the development of competent and persuasive multilateral agreements, the Arctic Council has managed to address certain significant issues. Nevertheless, it remains limited as an instrument which is dependant on multilateral agreement. The provisions of

[247] Official Webpage of OSPAR, available at; <http://www.ospar.org/content/content.asp?menu=00340108070000_000000_000000> (date accessed 27 February 2012).
[248] *Ibid.*
[249] *Ibid*., p. 105.

international law is the first layer of the Arctic legal regime and UNCLOS does not deal with marine envioronmental issues ellaborately but only gives reference to GAIRAS. A traditional interpretation of UNCLOS wording and the definition of pollution would indicate the fact that climate change was not the original intention of the policy makers.[250] Moreover, there is no indication that the parties were intending to limit the definition to those threats exclusively, that were identified at the time of negotiating UNCLOS.[251] It is relevant to mention that the Polar Shipping Guidelines which also acts as an International instrument only provides for environmental protection incorporated in a single part and is characterised as insufficient, brief and non-legally binding in nature. On the other hand, it is not always the fact that national legislation corresponds to the International systems verbatim and the Arctic being a region of marine diversity, it would be impossible for the Arctic States to enact similar national legislation. These dissimilar legislation may instigate conflict of laws and this is where the regional responses come into play. Hence, the emergence of regional cooperation although it relies on the generosity of its member States to provide the resources needed to engage in its activities.[252] The "soft law" approach of regional cooperation takes its position as a legal regime in the Arctic domain. This regional response is in fact indicated as a modification to the legal regime in its entirity since the general focus is on international law and the national legislation that follow. The Arctic States have committed to engaging in a circumpolar agreement where the Arctic Council is the flagship of this dimension of legal regime. Although it is not entrenched as "hard law" through a treaty and defined on the basis of its flexible influence, it is in reality envisioned as a catalyst of change in the legal domain of the Arctic.

5.4 A Critique of the "Council"

Many of the Arctic Maritime boundaries remain disputed and the five Arctic States have been unable to resolve any of the existing maritime disputes.[253] Accepting the veracity of this statement, it can be deduced that the Arctic Councils endeavour's in trying to establish MPA's within the zones of a specific Coastal State or to adopt special Resolutions for a particular area cannot be accomplished due to those overlapping claims. After pinpointing co-ordinates of those boundaries the individual States can relate to the guidelines or resolutions suggested by the Council and define "special areas" to protect and preserve their designated part of the Arctic with stringent legislation. Till then, it is just a "wait and see" policy. Then again, contemporary international environmental law is aimed at regulating emerging environmental issues by setting common international standards

[250] Meinhard Doelle, *Climate Change and the Use of the Dispute Settlement Regime of the Law of the Sea Convention*, Ocean Development International Law, 2006, Vol. 37, Issue: 3-4, Taylor & Francis Publishers, pp. 319-337
[251] *Ibid*.
[252] *Supra* note 231, p. 40.
[253] *Ibid*. pp. 41-43.

for prevention or mitigation of harm. It also aspires to provide an adaptable rule-making technique that can allow for flexible and regular amendments and much of this regulatory system is composed not only of multilateral treaties but also "soft law" techniques provided by regional organizations. In this regard, it is submitted that the Arctic Council has to a greater extent left a trail of success. Nevertheless, with the entrance opening up in the Arctic, the Council needs to be alert as regards any contamination of the marine system and the fact that the Arctic requires a "multiple user" MPA in Coastal and offshore environments resulting in that a single MPA can comprise a mosaic of management coupled with restriction categories in terms of voluntary marine-pollution. Taking this into account and to designate 'any marine area' in the Coastal or offshore environments and areas beyond national jurisdiction as MPA there needs to be a development of a circumpolar network in the Arctic which is complicated because of the mix of national and international agencies and jurisdictions with responsibilities in the region. This responsibility lies in the wake of the Arctic Council and is yet to be on its agenda. In addition, the very structure of the Council's working arrangement, divided as it is among working groups, places limits on the ability of the Council to clasp with the complex and interrelated problems posed by the new development opportunities in the region.[254] Then again, the Arctic Council could reflect a determinant role by acting as the high-level forum it intends to be and becoming the coordinating nexus for the Arctic legal regime. However, for this approach to work, there remains the need of a significantly strengthened Arctic Council where the question of funding must be prioritised. Otherwise the Council could never rise to the occassion to act as a decisive force. The Council should be the balancing factor in the region which can amend guidelines to tackle any new form of environmental hazards caused by the increased international navigation. The ramified working groups of the AEPS and the Arctic Council could also be upheld and given extended mandates and more resources in dealing with multifarious environmental issues at large which in the near future may emerge with the dawn of climate change. The analysis as mentioned is in fact a theory. The practicality of it lies with the individual States who are participants of this Council and who need to assure primarily, that the existing boundary agreements remain constant. The Council needs to be given that "designated area" to implement its policies. The Arctic Council needs to shift gear to being an organization that has much more of a presence in domestic and international affairs and such a shift should give buoyancy to issues like solving maritime boundary problems and then dealing with complex issues of the marine environment. Then and only then will the enactments of the Arctic Council manifest a high level of sophistication and competency. To what extent can the "soft law" of the Council succeed, remains to be seen.

[254] R. Hubert and Brooks B. Yeager, *A New Sea: The Need for a Regional Agreement on Management and Conservation of the Arctic Marine Environment*, Januwary 2008, A Report Published by WWF International Arctic Programme, Oslo, Norway, p. 23.

6 Strict Ocean Governance and Commercial Implications of Arctic Navigation

There has been large-scale ocean-based international trade for millennia.[255] The Maritime business is considered an antiquated yet most economic and intensive business coupled with a high economic sensitivity due to its global nature. Ocean-based international trade continues to expand and there are several current trends that are driving the continuing increase in scale.[256] Gradual liberalization of international trade and liberalization of international finance since World War II have acted as accelerators of this continuous expansion.[257] Climate change, in addition, entices States to engage in geographical distribution of the oceans and develop international trade to accommodate large-ship traffic which has commercial implication. This gives rise to ocean governance whether international or national which, in turn, has an adverse effect on global trade. The Arctic will not be an exception to this trend. The relationship between Arctic international trade and Ocean governance is complicated and needs to be justified.

6.1 Troubled Waters of Arctic and Economic Incentives

It is already substantiated that the NSR has an indisputable advantage in travel between Europe and the Far East or the West Coast of North America. The navigational distance between Hamburg and Yokohama, through NSR is 6,920 nautical miles when compared with travelling via Suez Canal which covers 11,439 nautical miles while going around the Cape of Good Hope.[258] At the same time the NWP is a shortcut between the

[255] Elizabeth R. DeSombre and J. Samuel Barkin, "International Trade and Ocean Governance" in *Securing the Oceans: Essays on Ocean Governance- Global and Regional Perspectives*, Chua Thia-Eng, Gunnar Kullenberg and Danilo Bonga (eds.), January 2008, Published by GEF, UNDP and IMO in association with the Nippon Foundation, p. 160, where it is stated that such trades include the trade between ancient Rome and Egypt, and between Mediterranean and the Baltic from the late Middle ages to the Renaissance.
[256] *Ibid*, *See* also, Martin Stopford, *Maritime Economics*, 2009, London: Routledge, Taylor and Francis Group, where it is highlighted that "[t]he transport industry has been one of the prime forces responsible for shifting the world from an essentially national system to the global economy that exists today."
[257] *Ibid*. pp. 161- 163, where it is stated that "[l]iberalization over the past 2 decades has had the effect of bringing countries into the international trade system, such as China, that were previously only marginally involved in it".
[258] *Supra* note 255, *See* also, Peter Ehlers, "Effects of Climate Change on Maritime Transportation" in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University

East Coast of North America and its West Coast or the Far East which is about 9,800 nautical miles in comparison with 12,420 nautical miles via Panama Canal.[259] Curtailing longer distances has been a constant practice for stakeholders of the shipping- industry since cargoes are delivered expeditiously by consumption of less fuel. Therefore, climate change increases the hope of using the Arctic route, which is a promising region for navigation as it potentially halves the distance between the Far East and Europe and could possible save approximately a greater percentage of commercial voyages through Suez or Panama Canal.[260] A technical analysis of the reasons underlying opposing geographical claims in that region would reveal that Arctic oil and gas resources play a modest role among significant economic incentives similar to other maritime claims of the world. The Arctic is bordered by countries that consume a vast amount of hydrocarbons, especially the U.S., Russia, Norway and Canada, who would certainly benefit from a secure and proximate source of natural resources hidden beneath troubled waters.[261] The majority of the exploitable Arctic reserves made available due to climate change lie within the national jurisdictions of a few States which renders them as exclusive economic rights.[262] Other parts are currently under the regime of MOU's but joint development is just a theory. The hypothesis drawn from the economic incentive factor can pave a concrete understanding of the reasons why international navigation may witness a sharp increase in the near future. The driving force of economic profit is certainly a justification for the Arctic States to place contradicting claims in the troubled waters.

6.2 Arctic Ocean Governance

Oceans are perceived as a transportation conduit for international trade that affects sustainable development everywhere.[263] *Prima facie* there exist two categories of trade-related activity that have a bearing upon the ocean namely, the use of ocean as a transportation network and the use of ocean

---

Publications, p. 52, where it is stated that the NSR leads from Northern Europe around North Cape and along Siberia through the Bering Strait to Asia and shorten 11,000-12,000 nautical mile sea routes from Europe to Asia by 4,000 miles.

[259] *Ibid*, where it is stated that the NWP is a sea route that connects the Atlantic and Pacific Oceans through the Canadian Arctic Archipelago and ship routes via the NWP from Europe to Japan, China and other Eastern destinations would be 2,500 miles shorter.

[260] Nathan D. Mulherin, *The Northern Sea Route: its development and evolving state of operations in the 1990s / Nathan D. Mulherin ; prepared for U.S. Army Engineer District, Alaska*, 1996, U.S. Army Corps of Engineers, Cold Regions Research & Engineering Laboratory.

[261] Janelle Kennedy, Arthur J. Hanson and Jack Mathias, "Ocean Governance in the Arctic: A Canadian Perspective" in *Securing the Oceans: Essays on Ocean Governance- Global and Regional Perspectives*, Chua Thia-Eng, Gunnar Kullenberg and Danilo Bonga (eds.), January 2008, Published by GEF, UNDP and IMO in association with the Nippon Foundation, p. 635.

[262] *Ibid*.

[263] *Supra* note 255.

production processes.[264] Either ways, when maritime transportation inaugurates in a virgin territory worth a magnitude of commercial incentives, it develops radically and takes its toll on the environment itself. From intentional or accidental "oil pollution"[265] to threats of "invasive species"[266], the pristine environment becomes susceptible to any type of ship-source pollution. Hence, strategies for different forms of ocean governance is formulated which have either direct or indirect impact on trade. These range from the use of direct trade restrictions as a mechanism for impacting the behavior of States in protecting ocean resources, to other regulatory processes, commonly termed as indirect trade restrictions but which have an influence on trade itself.[267] Nevertheless, in the context of pragmatic international trade, the WTO and GATT have laid down rules where States are not allowed to impose discriminatory trade restrictions, the exception of which is subject to environmental considerations.[268] To what extent can this "exception" be applicable depends on the vulnerability of the zones. Arctic ocean governance in this regard needs further clarification. This can be estimated by observing the *status quo* legal regime of regions possessing equal or approximately similar characteristics and a comparative study between the both.

6.2.1 Antarctic Treaty as a Model Regime

Currently the Arctic region consists of an array of specific regimes with very narrow issue areas.[269] The regional regime suffers from lack of co-ordination in structuring protected areas beyond national waters while the legal regime suffers from unenforceability. That global and regional co-operation is necessary to protect and preserve the marine environment, is already recognized in Article 197 of UNCLOS. The Arctic States have failed to implement any pragmatic regional treaty or common integrated policy with respect to protected areas. The AEPS and later the Arctic Council are recent developments which have been successful so far in

[264] *Ibid*., p. 160, para. 1, where it is indicated that "[t]he oceans have played both of these roles in human commerce for thousands of years. But the impact of both kinds of commerce on ocean ecosystem has increased exponentially in the past century".
[265] *Supra* note 18, *See* article 1 (4), where it is expressly stated that, "...the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea and water and reduction of amenities".
[266] Michael Elliot, "Biological pollutants and biological pollution-an increasing cause for concern", *Marine Pollution Bulletin*, 2003, volume 46:1, Publications expediting incorporation, p. 275, whereby it has been explained that biological pollution as opposed to any other ship source pollution has been transparently taken to comprehend the pollution emanating from organisms i.e. nutrients or organic matter, and even pollution affecting biological organisms. The author furthers the interpretation as the effects of introduced, invasive species sufficient to disturb an individual, a population or a community; including the production of adverse economic consequences.
[267] *Ibid*, p. 170.
[268] *Ibid*., p. 171.
[269] *Supra* note 55, p. 420.

pinpointing the need for designation of MPAs within and beyond national jurisdiction. Majority of the Council members linger with *ad hoc projects* with no clear agenda.[270] The Antarctic treaty regime is observed by scholars as a framework that should be used in the Arctic as well owing to the fact that the South Pole shares a similar environmental stress factor with its northern counterpart, and is governed by a comprehensive environmental protection treaty i.e. *modus operandi*. Hence, the Arctic region seems incomplete when compared with the far-reaching "zero-discharge" policy regulating the Antarctic.[271] In brief, the Arctic legal regime is less comprehensive when compared with the treaty-based regime that regulates the Antarctic, a region with a similar environment. As such, the point of analysis is whether the Arctic is in need of a new legal regime, and whether it should be modeled after the Antarctic-treaty. Analysis of the Arctic *status quo* reveals that UNCLOS does not explicitly provide any reference to it even if the "Canadian Clause" i.e. Article 234 is interpreted and stretched far to fit its conditions. This sense of deprivation as regards the Arctic region mounts up when investigating the provisions of MARPOL 73/78 which gives no reference to the "numbers and figures" of pollutant discharges in the Arctic. Whether the Antarctic-treaty should be idolized by the Arctic Council is a question the answer to which remains in the analysis of future commercial implications of the Arctic. Although the Antarctic-treaty "zero discharge" policy seems suitable to safeguard the marine environment, the applicability of this strict ocean governance corresponding to sustainable development needs to be determined by placing it opposite to the notion of progressive international trade.

6.2.2 Sustainable Development vs. Commercial Implication

Sustainability is complemented by the "security concept" and "security" itself is a spectrum that includes social, environmental and other aspects.[272] In the Arctic, security will include matters related to sovereign control, rights of use and movements of people and goods by sea.[273] Once sovereign control is gained, it will be inevitable for the States to focus on sustainable development so that the resources are not exhausted.[274] Sustainable development can be achieved by keeping the Arctic Ocean free from

[270] *Supra* note 242, pp. 131-170.
[271] *Ibid*.
[272] G. Kullenberg, "Approaches to addressing the problems of pollution of the marine environment", *Ocean and Coastal Management*, Volume 42, Number 12, December 1999 , pp. 999-1018; *See* also, Marc. A. Levy, "Is the Environment a National Security Issue?", *International Security*, Vol. 20, No. 2, Autumn 1995, MIT Press, pp. 35-62.
[273] *Ibid*, p. 644, para. 2.
[274] Stephen A. Macko, "Changes in the Arctic Environment" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP, p. 108, where it is stated that "[o]nce the ownership in offshore regions is delineated, exploitation of these resources will occur.

maritime contamination and "zero-discharge" policy with a liability facet, apparently, is an idea which seems to ensure that. "Zero-discharge" in a technical manner, can be compared to "absolute liability" insofar as the duty of the Flag State is to keep the discharge of pollutants or other wastes to the level of "zero" and in case of failure the defendant will not be given the benefit of the doubt i.e. negligence. The reason behind supporting this policy lies in the fact that the Arctic has not yet been developed for international navigation and in dealing with the pollutants appropriately, since it lacks a number of legal issues and establishments corresponding to protection of the marine environment.[275] The positive aspect of it is that a legal regime complementing "zero-discharge" policy parallel with the Antarctic-treaty will boost the concept of sustainable development, or so the environmentalist extremists would have the world believe. This idea in general, is not compatible with the term "navigation" because it conflicts with the smooth operation of the vessel by restricting a minimal fraction of discharge and emission.

Although the international dictators of environmental policies suggest strict protected MPA's at a regional level for the Arctic, such notion in terms of the Arctic route which halves the distance between Far East and Europe cannot be implemented due to objections which will be raised by the international shipping community who seek commercial interest by being thrifty with time when using those routes.[276] Then again, UNCLOS does not encourage the implementation of "zero-discharge" policy when authorising Coastal States to have effective control over Flag State vessels. "Control" under a logical interpretation means "control from damage" where the general threshold should be the normal quantity of discharge or emission.[277] This normal quantity of discharge does not disparage the theory of sustainable development as opposed to "pollution beyond control". It would be quite unethical for the policy makers to dominate the shipping industry by incorporating "zero-discharge" regulations in the Arctic and suppressing the commercial implication it holds.

---

[275] This is observed as a significant issue for the Arctic since well-developed ports is relatively few in number and reception facilities may not exist. Furthermore, there is no port State control or Memorandum of Understanding for this purpose in the Arctic.

[276] Douglas R. Brubaker and Willy Østreng, "The Northern sea route regime: Exquisite superpower subterfuge?", *Ocean Development and International Law*, Vol. 30, Issue 4, 1999, pp. 299-331, *Note* also, the commercial advantages of the Arctic Sea Route can be estimated from the advantages reaped from the use of the Suez Canal which is considered to be the shortest link between the East and the West due to its unique geographic location; it is an important International navigation canal linking between the Mediterranean sea at Port said and the red sea at Suez.

[277] Reference has been made to Canada's AWPPA which promotes "zero-discharge" policy. Nevertheless, under certain provisions of ASPPR discharge of oil and sewage generated on board the ships is permissible. Hence, "zero-discharge" under AWPPA is coupled with flexibility. But the Author's discussion of "zero-discharge" under this context refers to the idea of a complete restriction of discharge in the Arctic, a presupposition favored by many scholars, *See* also, *Supra* note 93, where the main reason for implementation of Canada's AWPPA has been seen as an effort to gain International recognition, an indirect means of being acknowledged for the sovereign claim over the NWP.

It is relevant that under UNCLOS, States have the right to impose special environmental requirements as a condition for access to their Ports and ascertain necessary steps vis-à-vis vessels, regardless of their flag, to prevent any violation of these conditions (Article 2 (1)). Port State's prescriptive jurisdiction can be found in Article 25 (2) and 211 (3) of UNCLOS which is significant for States to impose requirements and to reject entrance to vessels not complying with these conditions which is a part of customary international law.[278] To what concerns Port State Jurisdiction, and in fact the only provision in UNCLOS that refers to Port State, is Article 218 which confers a right on Port State to investigate, correct and eventually punish violations of International "discharge" standards by foreign ships on the high seas or in any areas under the jurisdiction of another State.[279] This provision is hence, one of the exceptions to the supremacy of Flag State jurisdiction on the high seas which upholds the intention of "sustainable development". On the other hand, in exercising enforcement powers, a set of safeguards are to be observed by the Port State to protect the commercial interest of foreign ships.[280] This balances the commercial interest of those ships against discriminatory yet excessive authority of the Port States.[281] This can also be interpreted as a bar against any stringent policies set up to impede the normal discharge level of a particular vessel. Moreover, IMO instruments, such as MARPOL 73/78 indicates to the regime corresponding to the legislative jurisdiction of Coastal States contained in UNCLOS.[282] This mode of balance as immaculately enshrined in the texts of international conventions cannot be implemented due to the inadequate number of ports in the Arctic region.[283] It seems, establisment of Ports with effective Port State control stripped off discriminatory Regulations consistent with international law can ensure sustainable development. Considering the commercial implications of the Arctic region, sustainable development under no circumstances provides a reason to execute over-rated standards for the shipping industry.

---

[278] The conditions laid down in Article 2 (1) and 211 (3) must be given due publicity and communicated to the IMO; Port States can grant or deny entry into their ports is a part of customary international law which has been recognized by ICJ *See also Nicaragua Case* (Nicaragua vs. U.S.), Judgment of 27 June 1986, ICJ Reports, p. 14-101, para. 213, *See* also, David Anderson, "Port States and Environmental Protection" in *International Law and Sustainable Development: Past Achievements and Future Challenges*, Alan Boyle and David Freestone (eds.), 10 May 2001, OUP Oxford, pp. 325-337.

[279] *Supra* note 25, p. 205.

[280] *Supra* note 18, Part XII, Section 7, Articles 223-231.

[281] From a general perspective, there must exist a nexus between access requirements and legitimate interests of Port States to ensure environmental protection and should be balanced with the navigation rights of Flag States.

[282] Article 9 (2) of MARPOL 73/78 states that, "Nothing in the present Convention shall prejudice the codification and development of the law of the sea by the United Nations Conference on the Law of the Sea […] nor the present or future claims and legal views of any State concerning the law of the sea and the nature and the extent of coastal and flag State jurisdiction".

[283] *Supra* note 163, p. 188.

7 Analysis of Alternatives to set the "Balance"

Whatever is reiterated from the technological aspect, the reality of it all is that climate change is a phenomenon that will not shift gear. The Arctic, in fact, will never revert back to its original state. However, the detrimental effects of it can be lessened and it is inevitable that the present legal regime needs to change to adapt to the new situation. An analysis is necessary to extract and understand the suitable alternative that adapts to the current Arctic regime that balances different interest groups.

7.1 "Hard Law" vs. "Soft Law"

Does the vacuum of treaty law constitute the detriments of an important possibility to adequately deal with the environmental issues existing in the Arctic, or is the *status quo* soft law approach the best that could be achieved in terms of the varied interests and competence of the Arctic states?[284] The *status quo* "negotiation-dependent" framework in the Arctic, as embodied by the Arctic Council, is characterized by a "soft law" approach, which in its entirety is essentially a voluntary approach. In other words, it portrays the lack of a more strenuous "treaty approach" i.e. "hard law".[285]

7.1.1 The "Hard Law" Approach

The theory of incorporating a mandatory legal regime binding on the Arctic States built on the concept of the Antarctic-treaty system has been voiced by various civil-society Organizations namely, the IUCN and the WWF.[286] The WWF places forth that the Arctic needs a concrete management framework, and that such a framework must be comprehensive and ecosystem-based in order to be operative.[287] A multilateral regional treaty enshrined with provisions of management and protection of the Arctic would certainly provide a significant outline for a holistic management of the Arctic Ocean and of the ever-expanding maritime actions that are likely to shape the future of the Arctic geographical region. An all-embracing treaty would,

[284] *Supra* note 246.
[285] WWF, *A New Sea: The need for a regional agreement on management and conservation of the arctic marine environment*, published by WWF International Arctic Programme, Oslo, 2008, available at; <www.vliz.be/imisdocs/publications/130977.pdf> (date accessed 13 April 2012).
[286] Olav Schram Stokke, "A legal regime for the Arctic? Interplay with the Law of the Sea Convention", *Marine Policy* Vol. 31, pp. 402-408.
[287] *Supra* note 285, where it is further stated that, it must also provide for an efficient management of human activities in the Arctic in order to conserve the living resources of the region without losing focus of sustainable development or neglecting the welfare of the traditional communities.

moreover, evoke substantial diplomatic-commitments from the Arctic governments as regards to sustainable development objectives coupled with serious obligations to protect the environment via pragmatic enforceable aims and agendas.[288] Many of the building blocks for implementing such "hard law" is already in place whereby, UNCLOS provides for an international framework for establishing "protected area(s)" while the Arctic Council fills in the gaps with political framework. UNCLOS in this regard is armoured with strong mechanisms in order to preserve its universality, whilst simultaneously being replete with references to rules and co-operation on the regional level.[289] The Arctic States may adopt a legally binding "Arctic Operation Scheme" which gives reference to implementing an umbrella convention i.e. UNCLOS where the Coastal States could depend on Article 234 to implement stringent control from vessel-pollution in the off-shore areas. It could on the other hand provide a balance by providing restrictions on the Costal States from implementing discriminatory laws where "due regard" is paid to rights of the Flag State. In this context, it becomes transparent that the umbrella convention can moderately accommodate regional approaches to marine environmental protection subject to the condition that regional arrangements will not be inconsistent with the object and purpose of UNCLOS as laid down in Articles 237 and 311, and are in compliance with the framework for marine environmental protection established by Part XII.[290] Then again, forces from regional conventions such as OSPAR, supplements a model for procreating a pioneering regulation of pollution control for a "multiple user" specific region.

The Arctic States may also forward a request to IMO to designate the Arctic as a "Special Area" under MARPOL 73/78 or to empower the Arctic Council to designate such areas as protected areas to provide additional safeguard values from excessive voluntary vessel-pollution emanating from commercial exploitation.[291] Thus, the Arctic states could utilize marine regionalism as a basis for the development of an umbrella convention dealing with the Arctic marine environment.[292] Nevertheless, this would be completely redundant because there exists a binding legal regime, i.e. UNCLOS, that applies to the Arctic and rather than focusing on new regimes, resources should be utilised in working with what already exists. For any drawbacks, the Arctic States should work towards strengthening it. As Hans Corell suggests, "[t]here already exists a legal regime functioning in the Arctic – the UNCLOS and the other treaties in force in the Arctic – and we should now focus on their implementation".[293]

---

[288] *Ibid*.
[289] Alan Boyle, "Globalism and regionalism in the protection of the marine environment" in *Protecting the Polar Marine Environment*, Davor Vidas (ed.), 2000, Cambridge University Press, pp. 21-22.
[290] *Ibid*., p. 22.
[291] Since UNCLOS gives reference to Regulatory Conventions i.e. MARPOL 73/78.
[292] *Supra* note 55.
[293] Hans Corell, "Reflections on the Possibilities and Limitations of a Binding Legal Regime", *Environmental Policy and Law*, 2007, Vol. 37, No. 4, p. 321, Reference can also be made to the fact that UNCLOS contains the specific provisions on enclosed and semi-

Be that as it may, UNCLOS is not designed to take into consideration the geographical impact of climate change with estimated provisions on how to delimit new land areas that are yet to take shape. Since the Arctic Council plays a key role in the evaluation and implementation of the Arctic legal regime, it should after considering the geographical impact, implement within the "hard law" a corresponding special provision. This special provision shall either direct the Arctic States with delimitation problems to seek the assistance of International Tribunals to delimit the maritime boundary that already exists or shall incorporate a "wait and see" policy allowing considerable time for the offshore landscapes to permanently take shape. However, it is strictly upon individual States to take their own initiatives and with the existing MOU's, the States may be reluctant. Then again, the "wait and see" policy is ambiguous since the period of anticipation is uncertain. Under these circumstances, the Arctic Council may consider strict monitoring of the existing MOU's and that it does not inhibit international navigation or innocent passage. This would to a larger extent resolve complexities and set the Arctic States to deal with marine environmental projects.

7.1.2 The "Soft Law" Approach

Proponents of the "soft law" approach dismantle the "hard law" theorem, applicable in the Antarctic, as unrealistic. It is opined that the "hard law" is misdirected, given that the two poles show more differences than similarities whereby, the Arctic consists of an ocean surrounded by continents, whereas the Antarctic is a continent surrounded by ocean.[294] Moreover, the Antarctic is void of human habitation, while the Arctic is inhabited by indigenous peoples and other local communities.[295] A significant distinguishing feature is that much of the Arctic lies under the sovereignty and sovereign rights of the Arctic States, while Antarctic sovereignty claims have been frozen for the time being, and there are thus no territorial sovereigns in the Antarctic.[296] Furthermore, collaborating on a comprehensive governance system for the Arctic can be exorbitant, and the end result could also prove to be difficult to implement, resulting in a range of new yet complex international issues hindering global commerce.[297]

---

enclosed seas as well as ice-covered areas, *See* also D.M. Johnston, "The Future of the Arctic Ocean: Competing Domains of International Public Policy", 17 *Ocean Yearbook* 2003, 596, at 600–602, where it is indicated that given the 'constitutional' nature of the UNCLOS, which for the most part codifies the present law of the sea, it is no wonder that scholarly suggestions have focused on how to apply this Convention to the very particular circumstances prevailing in the Arctic region, although there are also proposals which argue that special rules should apply to the Arctic waters.

[294] Timo Koivurova, "Alternatives for an Arctic Treaty-Evaluation and a New Proposal" in *Review of European Community and International Environmental Law* (RECIEL), 17 (1) 2008, Special International Polar Year Issue, pp.14-26.

[295] *Ibid.*

[296] *Ibid*.

[297] *Supra* note 239, p. 8.

Indication on the reliance of a tailor made provision in an already existing "hard law" regime, that of UNCLOS, has been endorsed by international Organizations, where Article 234 vividly vibrates Regulations that ought to be incorporated in the Arctic. However, the international Organizations have failed to realize that the conditions set forth in Article 234 relating to "ice-covered areas" will not be consistent with the Arctic region eventually, because climate change in repercussion will undoubtedly thaw ice-caps marking a longer period of "ice-free zones". In the context of international conventions as a binding treaty, it is essential to observe the number of ratifications by Arctic States. Parties to "hard law" often make reservations or exclude themselves from the law itself in order to limit their vulnerability to new commitments as the U.S. has excluded itself from being a party to UNCLOS. More complex than that is the notion of "adopting stricter standards" as encouraged by MARPOL 73/78 where some Arctic States have adopted stringent standards while others have remained silent.[298] This conflict of law in the long run creates different jurisdictions distorting the international legal regime, which is frustrating for international trade. Furthermore, creation of a binding treaty will be faced with the same problems as any other treaty or conventions where the ratification procedure is apt to be cumbersome, and the relevant parties to such binding law are sporadically hesitant to adapt to adjustments even though circumstances may have changed. With 'soft law', it is more flexible to procure widespread assent to new rules within a short period of time since they are not legally binding. This adaptable approach results in greater sub-regional trans-border co-operation and could thus encompass a wide spectrum of Arctic interests outside of the purely formal governmental level.[299]

The "soft law" approach can be virtually criticized from a number of aspects;[300] nevertheless, the primary question that revolves around this topic is the matter of "competence". The Arctic States only have competence to deal with matters over which they have control. Since the environmental problems that have emanated are not primarily generated in the Arctic, the obvious question is whether the Arctic States through the norms of "soft law" are able to undertake and mitigate environmental problems that are generated globally where they have failed the initial task of compromising in maritime delimitation issues. The solution, apparently, lies in the fact that the existing circumpolar network, to some extent, is in need of global participation.[301] But an argument which can be advanced against this is that only 45 members of the 191 UN member States are parties to the Antarctic treaty.[302] Whether or not the voluntary-regional arrangements can balance the interests lies with the circumpolar political will and scientific input needed to make such measures work. Drafts of

[298] *Supra* note 62.
[299] *Supra* note 55, pp. 254-255.
[300] *See* para. 6.2.1, p. 51.
[301] *Supra* note 293.
[302] *Ibid.*

mere voluntary rules cannot solve any of the problems facing the Arctic region.[303]

7.2 Recommendations to Balance the Interests

The bearing of the last pristine eco-system accompanied by great prospects of a short-route with natural resources under troubled waters provide a two-fold purpose for the Arctic legal regime, namely to balance environmental concerns with the rapid growth of International trade.[304] The *status quo* infrastructure for marine environmental conservation in the Arctic is active at multiple levels and could be well described as a cross-road of international instruments (and referred Regulatory conventions), regional co-operation and domestic legislation. Instead of an adequate synergy or interplay between the various layers, there exists insufficient synthesis and an overlap between the international instruments and regional regulations. While this overlap continues, the Arctic States have implemented national legislation to establish sovereignty which is accomplished by incorporating unreasonable standards to the detriment of the shipping industry.[305] This entire scenario is burdened with an accelerated strain on the Arctic region as a result of climate change which needs to be dealt with decisively. It is clear that the solution lies in the regional co-operation which should be at the mid-point connecting international law at one hand, guiding domestic legislation on the other. The Arctic Council in this regard is the most logical body to be coordinating efforts, promoting and negotiating an "Arctic treaty", as well as becoming a decision making body.[306] Having established that, it comes down to the question as to what character should the "Arctic

[303] *Supra* note 289, p. 33.

[304] Alexander Klepikov, Alexander Danilov and Victor Dmitries, "Consequences of Rapid Arctic Climate Changes" in *International Energy Policy, The Arctic and the law of the Sea*, Myron H. Nordquist, John Norton Moore and Alexander S. Skaridov (eds.), 2005, Martinus Nijhoff Publishers, p. 227.

[305] *Supra* note 34, *Note* that, the success of International Conventions depend on actions carried out at the domestic level. As such, it is only natural that the domestic legislations of the Arctic States have been singled out as an essential element for the purposes of Arctic marine environmental protection. Initiatives taken on the domestic level can have an impact on the Regional or International level, and vice versa. Canada's unilateral response in the wake of the *Manhattan* incident resulted in Article 234 of UNCLOS, which is a lucid example. The AWPPA embodies "zero discharge" policy entailing "absolute liability". Compliance with "zero discharge" policy in a route for International navigation is difficult to relate to. This indirect policy of establishing territorial sovereignty takes its toll on the shipping industry. Then again, existence of a legal obligation for the Arctic states, and that this legal obligation has arisen as a result of the amalgamated effects of principles of international environmental regulations, marine regionalism and the obligations imposed on Coastal States would enable them to cooperatively manage the marine environment by UNCLOS.

[306] *Supra* note 47, where it is stated that, "[t]o do this would require the Arctic Council to shift gears from being a decent clearinghouse, but a rather weak international organization with limited funding, to an organization that has much more of a presence in domestic and international programs…."

treaty" assume? It is quite lenient to comprehend the imperfections of both "hard law" and "soft law". What is thought to be a protective measure for the sensitive marine eco-system does not precisely spell good news for the commercial beneficiaries and *vice versa*.

It can be suggested that the balance can be brought by an intercross between "hard law" and "soft law" i.e. a combination of binding and non-binding arrangements that complement the environmental and economic state of the Arctic.[307] This can be done by considering the existing "soft law" based regional Arctic Council and the binding international treaties applicable therewith (or which are in an indirect manner related to the Arctic). Since the "Arctic treaty" will be operating under the Arctic Council, it is important to organize the main body of the Council. The Arctic Council can constitute a bipartite body, accommodating two interest groups.[308] The five Arctic States can constitute the "Arctic Council" which will be the main body, the participation of which is voluntary by Arctic States, and the Flag States who wish to utilize the Arctic sea routes shall form the "Arctic Council Members", the participation of which must be mandatory.[309] The "Arctic Council Members" will be a subsidiary body of the Council which is international in character as opposed to the "Arctic Council" which is regional.[310] Understanding the fact that the Arctic suffers from designated maritime boundaries, it will be the duty of the "Arctic Council" to primarily convert the existing MOU's into binding treaties so that the States concerned can jointly focus on environmental responsibilities.[311] The five working groups of the existing Arctic Council

[307] *Ibid*., It is of course true that it is less cumbersome to replicate what has been done before, but unique problems require unique solutions. The Arctic at first has to be acknowledged as a unique environment. Although the contemporary Arctic regime is randomly connected to different branches and sources of law, nothing clearly structured and coordinated. A lot of laws are, if properly analysed, applicable to the Arctic. But it is law that differentiates between "ought" and "could" and guides the States to solutions rather than complexities. Interplay without coordination leaves more complexities than solution and that is what the Arctic is facing today.

[308] Since a balance is being sought between only two groups, namely Arctic Coastal States and States interested in International navigation.

[309] The reason for making the entire legal body partly voluntary and partly mandatory is because once the Arctic States observe that the number of International participation has increased (due to their own urgency to use a shorter route through the Arctic), the number of participation will increase, since it is feared that mandatory participation will inhibit participation.

[310] This will ensure the interplay between Regional and International regimes.

[311] In an effort to trace back to the geographical problems as analysed in Chapter 4, it is significant to address certain boundary issues before the Arctic States commence environmental coordination. In this proposal to create two legal organs under a bi-partite system, the main body should have a strong sense of connection so as to deal with other major problems collectively. In a way, if the existing MOU's have been ignored and violated by opposing States, there is a probability that the same may occur at any time in the future. The binding treaties will safeguard the diplomatic connection between Arctic States so that it is not weakened by any sense of violation. It is suggested that the Arctic States resolve one problem at a time and a disorganized council with an array of problems will not be the proper body to maneuver environmental strategies. There will always remain a silent problem if the maritime boundaries are not delimited or undecided under a

i.e. SDWG, AMAP, PAME, CAFF and EPPR and their Secretariats will work under both the bodies where the funding for operating these working groups will be borne equally.[312]

The "Arctic treaty" will act as a coordinated and integrated nexus between the Coastal States and the Flag States with provisions which ensures the balance between both the interest groups. The Arctic Coastal States who have already ratified the international instruments must act according to the provisions (of prescriptive and enforcement jurisdiction) embedded therein. As for the States who are not parties to those international conventions will be bound by "separate provisions" which will be similar to the international regime and give "due regards" to the rights of the Flag States in terms of innocent passage and international navigation. To avoid complexity in creating two separate regimes for parties and non-parties to the international conventions, there can be one single regime parallel to the international conventions which suits the contemporary Arctic environment. This regime should accommodate "alteration provisions" that focus on climate change and the best possible measures that should or can be taken by the Coastal States in the near future to fit the situation that exists then.[313] This regime should act as a "model regime" for Arctic States to implement in domestic legislation or to amend the *status quo* national legislation accordingly. This "model regime" will help lessen "conflict of laws" and assist the Arctic States in developing a form of national alignment.[314] It should under no circumstances encourage a "zero-discharge" policy modeled after the Antarctic treaty, because in the Antarctica, there was never any need to strike a balance between environmental protection and commercial interest.[315] Rather, there can be a legal framework which refers to a "multiple user" MPA so that it can set a standard of emissions or discharge of toxic elements.[316] This standard must

---

binding treaty. If so, the Arctic council will not be able to act as the strong platform it so desires.

[312] Since funding and budgeting for these working groups have been raised as a complex issue, the financial co-operation of the non-Arctic States shall lift the burden from the Arctic States. The Coastal States may impose a moderate tariff on the Flag States, a part or its entirety (depending on discussions between both the participants) shall be utilized to operate the five working groups.

[313] i.e. based on scientific evidence.

[314] It cannot be expected that the Arctic States shall develop similar national legislation, but when the "Arctic treaty" discourages certain policies which hinder international trade, it will act as a bar for those States in implementing such provisions of "absolute liability".

[315] Rather than replicating the Antarctic treaty regime, the Arctic has a major potential of becoming a unique model regime.

[316] This will include areas within and beyond national jurisdiction with the permission of individual Arctic States. The Arctic requires a 'multiple user' MPA in coastal and offshore environments resulting in that a single MPA can comprise a mosaic of management coupled with restriction categories in terms of voluntary marine-pollution. The primary responsibility for the designation of MPAs falls to individual States enacting specific legislations, but the Arctic area also requires MPA's beyond national jurisdiction which will be the focal point of commercial exploitation. Although MPA's provide a wide range of application, it must be acknowledged that they do not provide sufficient protection against all threats resulting from voluntary vessel-pollution. *See Supra* note 196, where Aldo Chircop has addressed many of the current MPAs as "desktop MPAs" and hence, in

be negotiated with the Flag States so that the standard is not unreasonable, and the balance can be maintained.[317] If, however, certain zones are considered extremely sensitive, then the Arctic States may designate them as "strict MPA(s)" restricting any amount or fragment of pollutant. However, in order to maintain equilibrium with the Flag States' smooth navigation, the Coastal State in its immediate vicinity must establish port reception facilities to assist them. There should be separate Guidelines and Regulations under the "Arctic treaty" which embody provisions as regards to Flag State prescriptive and enforcement jurisdiction where flag States are under an obligation to take all precautionary measures to abide by the standards set forth in the regime itself.[318] This will be effective for both voluntary vessel-pollution and intentional vessel-pollution. Since the five Arctic countries are parties to the LC72 Convention on ocean dumping,[319] ratifying this Convention can be made mandatory for the "Arctic Council Members". Moreover, since the Arctic States are under joint contingency planning arrangements under OPRC as regards to accidental oil pollution,[320] the "Arctic Council Members" will also need to be parties to the convention or form a common contingency plan with the "Arctic Council". If the "Arctic Council" is of the opinion that the international conventions relating to pollution-liability is insufficient then, the liability facet should also be incorporated in a separate "liability regime" where both the "Arctic Council" and the "Arctic Council Members" must negotiate on compensation issues for areas beyond national jurisdiction of Arctic States.[321]

---

considering a strict protected area in the Arctic would not be of pragmatic value. According to Simon Jennings, the term "protected areas" is currently being used as "areas where there have been measurable changes in human pressure" rather than "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives." "Human pressure" in this instance can be referred to the routes through which future commercial navigation shall take place at a very fast pace creating pressure on the marine environment through intensive dumping and operational discharges. Taking this into account and to designate "any marine area" in the coastal or offshore environments and areas beyond national jurisdiction as MPA there needs to be a development of a circumpolar network in the Arctic which is complicated because of the mix of national and international agencies and jurisdictions with responsibilities in the region. In the Antarctic, the Antarctic Treaty Consultative Parties have estimated the areas where measurable changes have been caused due to human pressure and designated MPA's around sub-Antarctic islands within the greater Antarctic region. The Arctic States have to endeavor to establish a jointly agreed and coordinated network of protected areas where consistent if not identical rules for conservation and access will have to be formally implemented. Currently there are no representative channels of Marine Protected Areas in most or all of the Arctic marine area.

[317] The standards so fixed can be communicated to the IMO for approval and a request to implement them in MARPOL 73/78 for international acceptance. This is also an inherent reason for aggregating the non-Arctic States as a part of "Arctic Council". This will add to the force of the requests pledged by the Arctic States.

[318] This can be parallel to IMO Polar Shipping Guidelines.

[319] *Supra* note 72.

[320] *Supra* note 82.

[321] 'This liability facet' shall not include negotiations on compensations already assigned in domestic legislation of Arctic States for areas within national jurisdiction. Individual Arctic States shall maintain *status quo* of the liability regime already in force for those areas.

8 Conclusion

The proposed[322] Arctic legal regime, firstly, is a conglomeration of two different entities. The former entity is the congregation of the five Arctic States and the latter is the international group which is an addition to the already existing Arctic Council. Broadly interpreted, it cannot be the single concern of the Arctic states to protect an environment that has the possibility of being contaminated by an act that is global in nature. Reverting back to the analysis of the "functional criterion"[323] of the NWP, it was clear that there were "69 non-Canadian transits"[324] and the conclusion drawn from the "potential use" of the NWP was that climate change would certainly overturn this figure in the nearest decade.[325] The international community rejects the so-called "Sector theory" applied by both Canada and the Russian Federation in order to establish a right in the Arctic sea routes for prospects of commercial benefit. But it ignores the fact that, the benefits procured from the international navigation in this route may have consequences against sustainable development of that region and the Arctic Council's antiquated policy is not sufficient to combat the detrimental effects of marine contamination, which constitutes a part of the reason for such sovereign claims. Hence, the intention to bind the international community in a body[326] separate from the Arctic Council in an organizational framework, where provisions to safeguard the marine environment is weighed opposite to commercial interest in a perfect balance. This balance in the organizational structure simultaneously accommodates the interplay of international law and regional law coupled with directives guiding the national law. But the question remains as to whether the Arctic Council will be able to preserve its regional status or will this proposed system constitute another distortion in the legal regime. Since the body of "Arctic Council Members" is a subsidiary body of the "Arctic Council", it will act as an added force to the original regional cooperation based on "soft law". The logic behind the system of incorporating "Arctic Council Members" as a subsidiary body is to ensure that the international community will not have any control over the "Arctic Council" decision making authority. The "Arctic treaty" or the "single regime parallel to the international conventions" guarantees that the "Arctic Council" will not inhibit the smooth operation of vessels representing Flag States,[327] and reliance in this regard can be made on the current international instruments on Flag States' prescriptive and enforcement jurisdiction.[328] The "Arctic

---

Areas within national legislation should only be modified to the extent where it inhibits the smooth operation of international navigation with extreme standards.

[322] As proposed in paragraph 7.2.

[323] *See* paragraph 4.1.3, where a decisive factor in the decision of the *Corfu Channel Case* was to determine if the Strait was used for international navigation.

[324] *Supra* note 189.

[325] *Supra* note 195.

[326] i.e. "Arctic Council Members".

[327] In areas beyond national jurisdiction.

[328] *Supra* note 25.

Council Members" will have the authority to call for negotiations when certain provisions exceed the *status quo* international *standards*. This "negotiation" is a form of silent "veto" which indicates "non-compliance" towards extreme standards thus, effective against any distortion of the existing international regime.

The new Artic legal regime, secondly, constitutes a concrete stability among the Arctic States by converting the several MOU's that exist today into a single binding treaty or several binding treaties by the application of the 1969 Vienna Convention on the Law of Treaties.[329] The basic principles of *pacta sunt servanda* will be applicable whereby, the zones of conflict[330] will be governed by the rules of the treaty and the concerned States will be obliged to do so in good faith. The underlying reason is that, the geographical claims have a subtle connection with the sustainable development of the marine environment.[331] As stated in the report of the World Commission on Environment and Development as regards to sustainable development, "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations."[332] This binding treaty is an agreement followed by a liability facet, which will bring cohesiveness among Arctic States in the absence of any initiatives to resolve the maritime delimitation by an international Tribunal. The new "Arctic Council" is actually, operating as that "institutional change" which is a part of the big "process of change" in the sustainable development mechanism. The question revolves around the issue as to what extent the Arctic States are prepared to harmonise issues among them to bring the final balance between the "Arctic Council" and "Arctic Council Members". Although the Russian Federation's placement of a flag at the North Pole acted as an undermining statement on the face of mutual agreement, the two existing MOU's in the NSR are certainly praiseworthy and reflects the intention to bring the anticipated "harmony".[333] To date eight bilateral maritime boundaries have been delimited and there are several more that will need to be delimited via regional treaty.[334] The Arctic States should be united and prepared for arrangements to strengthen the "Arctic Council" both in terms of geographical and political aspects, which will in the long run have an influence over non-Arctic States navigating through the Arctic sea routes. This binding treaty, moreover, will provide a firm framework for co-

[329] Malcolm N. Shaw, *International Law*, 2008, 6th Edition, Cambridge University Press, pp. 94-95, *Note* that, It depends on the intention of the five Arctic States whether the binding treaty should be bilateral or multilateral.
[330] As a result of overlapping claims.
[331] Once the claims have been resolved or joint development plans are undertaken for unresolved areas, the Arctic States can concentrate on outlining the "Arctic treaty" provisions to control international shipping for the Arctic sea routes combined.
[332] World Commission of Environment and Development, *Our Common Future*, 1987, New York: Oxford University Press, pp. 43-46.
[333] *Supra* note 237.
[334] *Supra* note 47, p. 205.

operation among Arctic States under OPRC and strengthen the established joint contingency arrangements to combat oil pollution.[335] With the binding treaty as a root for co-operation, the "Arctic Council" can adopt mandates to transform the environmental segment of the Polar Shipping Guidelines into a set of Directives to impose an obligation[336] on the Flag States in respect of operational vessel-source pollution. Hence, the non-legal binding nature of the Polar Shipping Guidelines can be given a binding reality in the new legal regime governed by the "Arctic Council".

On the opposite side of the equation stands the interest of the shipping industry. What started with an inter-Arctic navigation of the *Manhattan* voyage, has evolved as new routes connecting trading partners on the premises of the warming and ice melting Arctic ocean, which is envisaged as being faced with accelerated ship traffic. The NWP and NSR have emerged out of the three[337] main routes because of the support that the Coastal States can provide for international shipping.[338] Nevertheless, the international shipping in turn needs to be within the conglomeration of the Council since it is the only body that seeks the so called "commercial interest". The analysis is that, if the Coastal States have "due regard" to international navigation as endorsed by Article 234 of UNCLOS,[339] the equation is correctly balanced if the international sector has "due regard" for the marine environment of the Coastal States as regards areas within and beyond national jurisdiction. Regulations and Guidelines in the form of "hard law" can be an option to ensure that the Arctic marine environment is within the Flag State agenda. Questions can be raised as to why the participation of individual Flag States is made compulsory with compelling Regulations. While "soft law" may be helpful, their application pertaining to Flag States will never be uniform because of its non-binding legal nature. International "hard law" instrument or a regional "hard law" instrument international in character would set common standards of enforcement and would work towards eliminating the difficulties in events where each Flag State applies different standards when issues relating to operational discharge, voluntary discharge or deliberate dumping emanate. The keyword of "hard law" is accountability and to ensure this in the field of the marine environment, there needs to be enforcement of binding Regulations. Individual accountability can be ensured if the participation of individual Flag States is made mandatory and is adjoined in the taskforce of sustainable development policy making. If the Arctic States should deter from a "zero discharge" policy corresponding to absolute liability, they must be ensured with agreements that the pristine environment will be free from hazards of Arctic navigation. The Arctic Coastal States, however, for enforcement of "hard law" must satisfy certain conditions to ensure efficacious compliance. The construction of port facilities in the Arctic has been extremely limited and is a main constraint for the provisions of OPRC

[335] *Supra* note 82 and *Supra* note 83.
[336] In the form of discharge restrictions or indicate "Sox emission control areas".
[337] The three main routes include Arctic Ocean Proper, the NSR and the NWP.
[338] *Supra* note 47, p. 206
[339] *Supra* note 37.

to operate effectively.[340] To help Flag States comply with "hard law", the "Arctic Council" must establish adequate ports, monitor Flag State navigation via Port State control and provide port reception facilities.[341]

This bipartite concept, like every organization can be subject to criticism and therefore, disputed. However, when disputed it must be recalled that the issue to be dealt with is climate change in the Arctic and the distortion it is causing to the existing legal regime. It is not only a matter of balancing certain interests, but it is adjusting "soft law" and "hard law" where flexible policies can meet accountability. In between, the moderate tariff imposed on the Flag State will be sufficient to fund the five subsisting working groups, and the secretariat of the five working groups will collaborate with the Flag States in trying to develop strict MPA's.[342] Not only does this solve the budget predicament, but also allows transparency insofar as the Flag State has an equal voice in the decision, which does not override the Council's decision. In this hypothetical model, the national legislation of Canada[343] and the US[344] could serve as inspiration, and could play a pivotal role in development of an "Arctic treaty" via the Arctic Council. A joint proposal on behalf of the "Arctic Council" can be forwarded to IMO, stating that areas designated by the Council as MPA along with discharge standards as negotiated between the Arctic States and international participants be referred in MARPOL 73/78. This will save the Council from the cumbersome process of creating a separate legal regime and the Arctic States can insist ratification of MARPOL 73/78 on non-Arctic members whereby the other detailed Annexes may assist in future references for environmental policies which is inevitable as a result of climate change.

Sustainable development and global partnership are intertwined. It is after all, the arguments in favour of international navigation that has led to the concept of balancing interests. If the proposed legal regime is put aside and "refinement" or "revision" of the existing regional approach is considered, then the conflict of laws will still be constant. The Arctic States in an effort to uphold sustainable development behind the facade of state sovereignty will not deter from extreme standards. Objections will be aimed at Arctic policies by the shipping industry and the Arctic legal regime will continue to vibrate the absence of global partnership. The preamble of Agenda 21 addresses the need for global partnership and highlights the significance of a balance and integrated approach, "…[i]t reflects a global consensus and political commitment at the highest level on development and environment cooperation. Its successful implementation is first and foremost the

[340] *Supra* note 82, p. 155, where it is indicated that emergency response is particularly challenging in the Arctic for a variety of reasons, including the remoteness and great distances that are often involved in responding.
[341] *Ibid*.
[342] *Supra* note 312.
[343] *Supra* note 102.
[344] *Supra* note 148 and *Supra* note 150.

responsibility of Governments…International cooperation should support and supplement such national efforts. In this context, the United Nations system has a key role to play. Other international, regional and subregional organizations are also called upon to contribute to this effort. The broadest public participation and the active involvement of the non-governmental organizations and other groups should also be encouraged."[345] This, of course, should be combined with decisive action based on structure and coordination. The Arctic States must with the valid participation of international community set an example and portray to the world at large that it is possible to create, agree upon and implement an efficient management regime that takes both environmental protection international trade into account. Other regimes are not worth following when the Arctic can be a unique model itself. Then again, environmental protection is a sensitive issue for the Arctic States and only upon participation in a common legal body can the international community comprehend this necessity.

No matter what configuration the new Arctic legal regime ends up taking in the end, it must accommodate both international navigation and the concept of sustainable development. International navigation must come with accountability and sustainable development must be accompanied by "due regards" for international trade and commerce. This balance will always remain in theory unless the concerned groups connected to each of these categories are in a common platform.[346] The global participation must be followed by a legal order, an order which is necessary to combat the effects of climate change at the turn of the century incorporated under a defined body. They should "break the ice" and act fast, before climate change breaks the polar ice completely.

---

[345] *United Nations Conference on Environment & Development*, Rio de Janerio, Brazil, 3 to 14 June 1992, Agenda 21, United Nations Sustainable Development, *See* chapter 1, Preamble para. 1.3, *See* also chapter 2, para. 2.1, where it is stated that, "…[t]his partnership commits all States to engage in a continuous and constructive dialogue, inspired by the need to achieve a more efficient and equitable world economy, keeping in view the increasing interdependence of the community of nations and that sustainable development should become a priority item on the agenda of the international community. It is recognized that, for the success of this new partnership, it is important to overcome confrontation and to foster a climate of genuine cooperation and solidarity. It is equally important to strengthen national and international policies and multinational cooperation to adapt to the new realities." This if related to the Arctic deduces the fact that partnership between "Arctic Council" and "Arctic Council Members" can surely foster the desired cooperation to balance interests. Global partnership has, thus, been acknowledged as a catalyst that can bring a balance in the uneven equation.

[346] *Ibid*., *See* chapter 2, para. 2.8, where it is stated that, "[t]he international trading environment has been affected by a number of developments that have created new challenges and opportunities and have made multilateral economic cooperation of even greater importance."

Supplement A

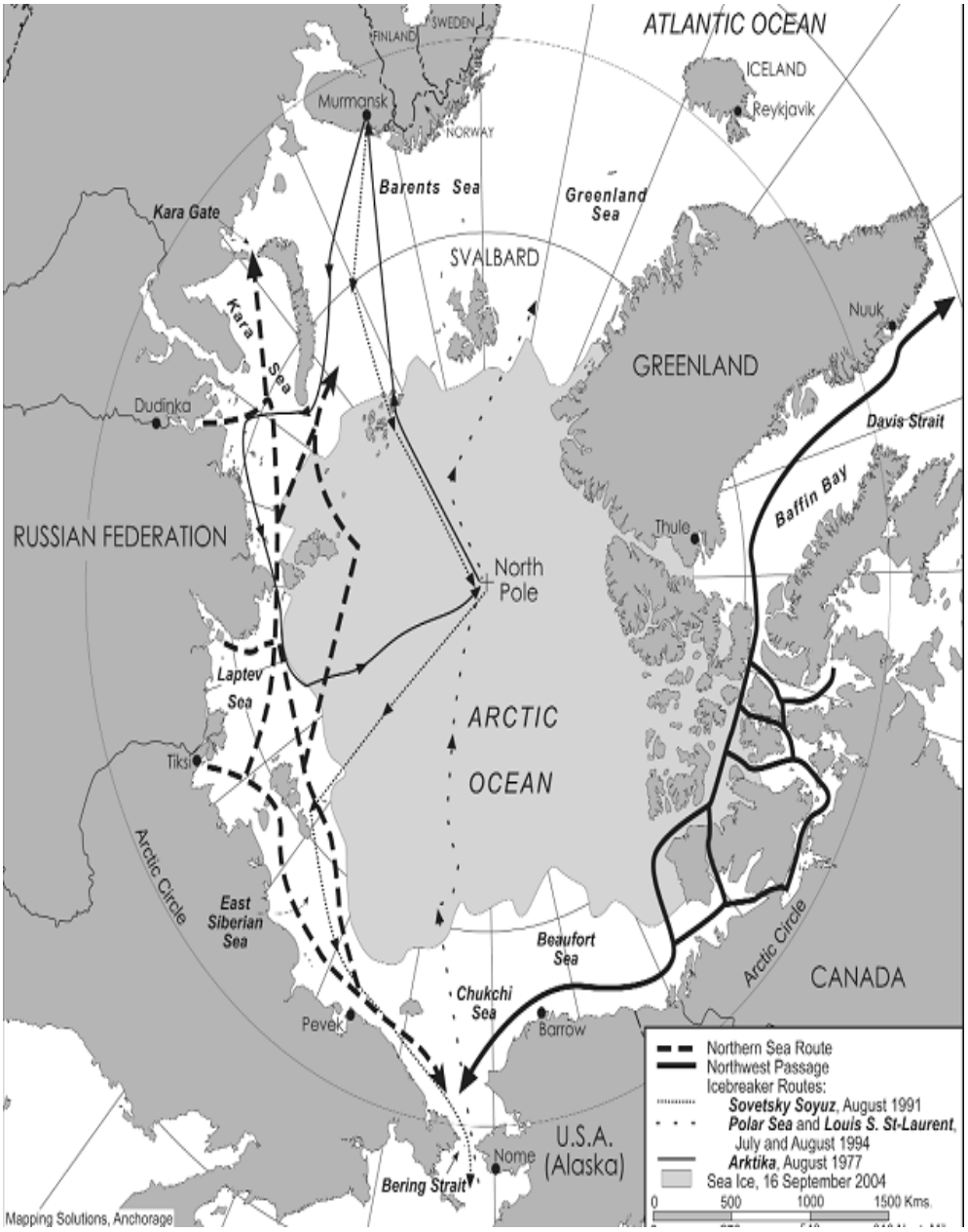

Figure 1: The Arctic Northern Sea Route and Northwest Sea Passages with the Ice Extents in 2004/ The Arctic ocean with transportation corridors[347]

Source: Arctic Marine Transport Workshop 28-30 September 2004

[347] Mapping solutions, Lawson Brigham, USARC Anchorage 2006.

Supplement B

Figure 2: Sailing lanes of the NWP

Source: Marine Traffic in the Arctic: A Report Commissioned by the Norwegian Mapping Authority[348]

[348] ARHC2-04C, available at; <http://www.iho.int/mtg_docs/rhc/ArHC/ArHC2/ARHC2-04C_Marine_Traffic_in_the_Arctic_2011.pdf> (date accessed 23 April, 2012).

Supplement C

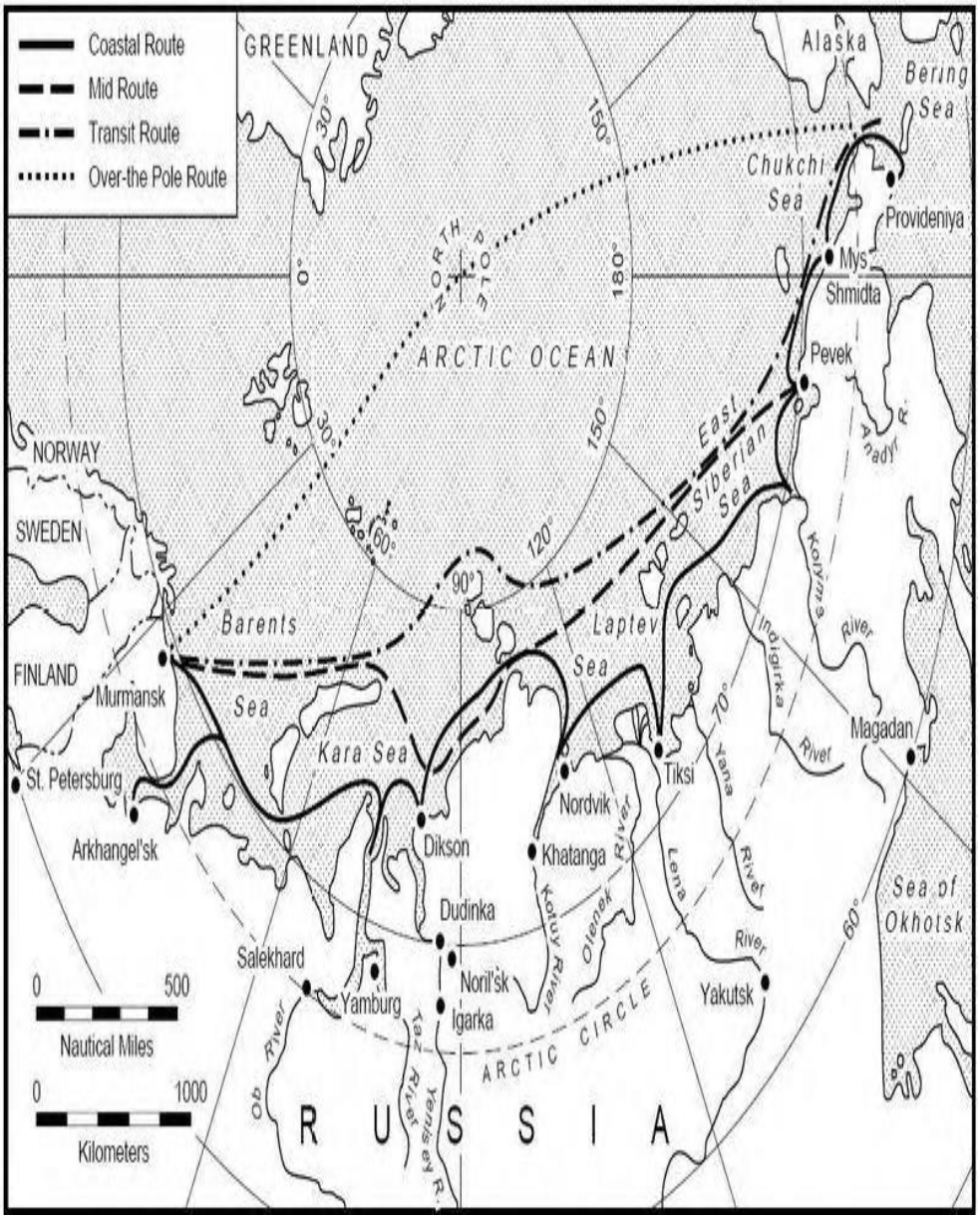

Figure: Map of the Northern Sea Route

Source: International Northern Sea Route Programme (1999)[349]

[349] *Ibid*.

Bibliography

Books

Birnie, Patricia and Boyle, Alan, *International Law and the Environment*, 2002, Oxford University Press.

Churchill, R.R., and Lowe, A.V., *The Law of the Sea*, 3rd Edition, 1999, Manchester University Press.

Doelle, Meinhard, *From Hot Air to Action? Climate Change, Compliance and the Future of International Environmental Law*, 2005, Thomson/Carswell.

Frank, Veronica, *The European Community and the Marine Environmental Protection in the International Law of the Sea: Implementing Global Obligations in the Regional Level*, 2007, Martinus Nijhoff Publishers.

Gold, Edgar, *Gard Handook on Protection of the Marine Environment*, 3rd Edition, 2006, Arendal: Assuranceforeningen Gard.

Huybrechts, Marc A., *Criminal Liability of Master and Crew in Oil Pollution Cases*, Maritime Pollution Liability and Policy: China, Europe and the US, Edited by Michael G. Faure, Han Lixin & Shan Hongjun, 2010, Kluwer Law International.

Klepikov, Alexander, Danilov, Alexander and Dmitries, Victor, "Consequences of Rapid Arctic Climate Changes" in *International Energy Policy, The Arctic and the law of the Sea*, Myron H. Nordquist, John Norton Moore and Alexander S. Skaridov (eds.), 2005, Martinus Nijhoff Publishers.

Kovalev, Aleksandr A. and Butler, William, *Contemporary Issues of the Law of the Sea: Modern Russian Approaches*, 2004, Eleven International Publishing.

Mansell, John N.K., *Flag State Responsibility: Historical Development and Contemporary Issues*, 2009, Springer.

Nordquist, Myron H., *United Nations Convention on the Law of the Sea, 1982: A Comentary*, University of Virginia, Center for Oceans Law and Policy, Vol. 3.

O' Connell, Daniel Patrick, *The International Law of the Sea*, Vol. I, 1982, Oxford: Clarendon Press.

Pharand, Donat in association with Legault, Leonard H., *Northwest Passage:Arctic Straits*, 1984, Martinus Nijhoff Publishers.

Pharand, Donat, *The Law of the Sea of the Arctic: with Special Reference to Canada*, 1973, University of Ottawa Press.

Pharand, Donat, *Canada's Arctic waters in international law*, 1988, Cambridge University Press.

Roach, Ashley J. and Smith, Robert W., *United States Responses to Excessive Maritime Claims*, Martinus Nijhoff Publishers (The Hague/Boston/London), 1992, Second edition, pp. 339-353.

Rothwell, Donald R., *The Polar Regions and the Development of International law*, 1996, Cambridge University Press.

Shaw, Malcolm N., *International Law*, 2008, 6th Edition, Cambridge University.

Stokke, Olav Schram, *Radioactive waste in the Barents and Kara Seas: Russian implementation of the global dumping regime* in Protecting the Polar Marine Environment, Davor Vidas (ed.), 2000, Cambridge University Press.

Martin Stopford, *Maritime Economics*, 2009, London: Routledge, Taylor and Francis Group.

Tan, Alan Khee-Jin, *Vessel-Source Marine Pollution: The Law and Politics of International Regulation*, Cambridge University Press, 2006, p.234.

Theutenberg, Bo Johnson, *The Evolution of the Law of the* Sea, 1984, Tycooly International Publishing Company.

Vidas, Davor, *Protecting the Marine Environment: Law and Policy for Pollution Prevention*, Cambridge University Press 2000.

Vukas, Budislav, *United Nations Convention on the Law of the Sea and the Polar Marine Environment*, Davor Vidas (ed.), *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention*, Cambridge University Press 2000,

Chapters in Books

Anderson, David, "Port States and Environmental Protection" in *International Law and Sustainable Development: Past Achievements and Future Challenges*, Alan Boyle and David Freestone (eds.), 10 May 2001, OUP Oxford.

Boyle, Alan, "Globalism and regionalism in the protection of the marine environment" in *Protecting the Polar Marine Environment*, Davor Vidas (ed.), 2000, Cambridge University Press.

Butler, William E., "The legal regime of Soviet Arctic marine areas" in *The Soviet Maritime Arctic*, Lawson W. Brigham (ed.), 1991, Belhaven Press.

Brubaker, Douglas R., "Regulation of Navigation and Vessel Source Pollution in the Northern Sea Route: Article 234 and State Practice" in *Protecting the Polar Marine Environment: Law and Policy for Pollution Prevention*, Davor Vidas (ed.) 2000, Cambridge University Press.

Chircop, Aldo, "International Arctic Shipping: Towards Strategic Scaling-Up of Marine Environmental Preotection" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP.

Chircop, Aldo, "Challenges for the Regulation of International Shipping through the Arctic" in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University Publications.

DeSombre, Elizabeth R. and Barkin, J. Samuel, "International Trade and Ocean Governance" in *Securing the Oceans: Essays on Ocean Governance-Global and Regional Perspectives*, Chua Thia-Eng, Gunnar Kullenberg and Danilo Bonga (eds.), January 2008, Published by GEF, UNDP and IMO in association with the Nippon Foundation.

Ehlers, Peter, "Effects of Climate Change on Maritime Transportation" in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University Publications.

Elferink, Alex G. Oude, "Arctic Maritime Delimitations: The preponderance of Similarities with Other Regions" in *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction*, Alex G. Oude Elferink and Donald R. Rothwell (eds.), 2000, 185 Kluwer International, Great Britain.

Hubert, R. "Article 234 and Marine Pollution Jurisdiction in the Arctic" in Oude Elferink A.G. and Rothwell, D.R. (eds.), *The Law of the Sea and Polar Maritime Delimitation and Jurisdiction*, 2001, Martinus Nijhoff Publishers.

Hubert, R., "Cooperation or Conflict in the Arctic" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton

Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP.

Kennedy, Janelle, Hanson, Arthur J., and Mathias, Jack, "Ocean Governance in the Arctic: A Canadian Perspective" in *Securing the Oceans: Essays on Ocean Governance- Global and Regional Perspectives*, Chua Thia-Eng, Gunnar Kullenberg and Danilo Bonga (eds.), January 2008, Published by GEF, UNDP and IMO in association with the Nippon Foundation.

Kirton, John and Munton, Don, "The Manhattan Voyages and their Aftermath" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press.

Lalonde, Suzanne and MacDonald, Ronald St. J., "Donat Pharand: The Arctic Scholar" in *The Canadian Yearbook of International Law-Annuaire Canadien de droit international*, 2006, Vol XLIV, University of British Columbia Press.

Macko, Stephen A., "Changes in the Arctic Environment" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP.

McRae, D.M., "The Negotiation of Article 234" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press.

M'Gonigle, R. Michael and Zacher, Mark W., "Canadian Foreign Policy and the Control of Marine Pollution" in *Canadian Foreign Policy and the Law of the Sea*, Barbara Johnson and Mark W. Zazher (eds.), 1977, The University of British Columbia,

Mukherjee, Proshanto K., "The Penal Law of Ship Source Marine Pollution" in *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas Mensah*, 2007, Martinus Nijhoff Publishers.

Ragner, Claes Lykke, "Den norra sjövägen", In Hallberg, Torsten (ed.), *Barents – ett gränsland i Norden (Norden Association's Yearbook)*, Stockholm, Arena Norden, 2008, pp. 114-127, English translation available at; <http://www.fni.no/doc&pdf/clr-norden-nsr-en.pdf> (date accessed 3 March 2012).

Reid, Robert S., "The Canadian Claim to Sovereignty Over the Waters of the Arctic", 12 *The Canadian Yearbook of International Law*, 1974.

Rothwell, Donald R. and Joyner, Christopher C., "Global environmental protection instruments and the polar marine environment" in *Protecting the*

Polar Marine Environment, Davor Vidas (ed.), 2000, Cambridge University Press.

Rothwell, Donald R., and Joyner, Christopher C., "Domestic perspectives and regulations in protecting the polar marine environment: Australia, Canada and the United States" in *Protecting the Polar Marine Environment*, Davor Vidas (ed.), 2000, Cambridge University Press.

Skaridov, Alexander S., "Russian Policy on the Arctic Continental Shelf" in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP.

Van Pay, Brian J., "National Maritime Claims in the Arctic" in in *Changes in the Arctic Environment and the Law of the Sea*, Myron H. Nordquist, John Norton Moore and Tomas H. Heidar (eds.), 2010, IDC Publishers, Martinus Nijhoff Publishers and VSP.

Young, Oran R., "Arctic Shipping: An American Perspective" in *Politics of the Northwest Passage*, Franklyn Griffiths (eds.), 1987, McGill-Queen's University Press,

International Treaty Instruments

Convention on the Territorial Sea and the Contiguous Zone, 1958, Done at Geneva on 29 April 1958, Entered into force on 10 September 1964, United Nations, *Treaty Series*, vol. 516.

DIRECTIVE 2005/35/EC of The European Parliament and of the council of 7 September 2005; on ship-source pollution and on the introduction of penalties for infringements, available at; <http://cleanseanet.emsa.europa.eu/docs/public/Directive_2005_35_EC.pdf > (date accessed 29 February 2012).

Guidelines for Ships Operating in Arctic Ice-Covered Areas, Adopted by IMO MSC/Circ. 1056, MEPC/Circ. 399, of 23 December 2002, available at <http://www.imo.org/blast/blastDataHelper.asp?data_id=29985&filename=A1024(26).pdf> (date accessed 22 February 2012).

International Convention for the Prevention of Pollution from Ships, 1973 as modified by the protocol of 1978, Adoption: 1973 (Convention), 1978 (1978 Protocol), 1997 (Protocol - Annex VI); Entry into force: 2 October 1983 (Annexes I and II).

United Nations Convention on the Law of the Sea, Montego Bay, 10 December 1982, available at: <http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf >.

National Legislation and Guidelines

Canada;

Arctic Water Pollution Prevention Act 1970 [r.s.c. 1985 (1st Supp.) C.2, (1st Supp.) S.1.], available at; <http://www.tc.gc.ca/media/documents/acts-regulations/A-12-acts.pdf.> (date accessed 29 February 2012).

Arctic Shipping Pollution Prevention Regulations, C.R.C. Ch. 353, available at; <http://laws.justice.gc.ca/PDF/Regulation/C/C.R.C.,_c._353.pdf.> (date accessed 29 February 2012).

Canada Shipping Act, 2001 S.C., ch.26, available at; <http://www.tc.gc.ca/media/documents/acts-regulations/C-10.15-acts.pdf.> (date accessed 29 February 2012).

Migratory Birds Convention Act, S.C., 1994, Ch. 22, available at; <http://laws.justice.gc.ca/PDF/Statute/M/M-7.01.pdf.> (date accessed 29 February 2012).

Territorial Sea and Fishing Zones Act,S.C. 1964-65, c. 22.

Russian Federation;

Federal Law of 31 July 1998, available at; <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/RUS_1998_Act_TS.pdf > (date accessed 3 March 2012).

Federal Law of 17 December 1998, available at; <http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/RUS_1998_Act_EZ.pdf > (date accessed 3 March 2012).

Federal Law on Environmental Protection of January 10 January 2002, N 7-FZ, available at; <http://www.icfinternational.ru/doc_files/oops.pdf> (Russian version) (date accessed 3 March 2012).

Guide to Navigating through the Northern Sea Route, Head Department of Navigation and Oceanography of the Ministry of Defense of the Russian Federation.

Maritime Doctrine of Russian Federation 2020, approved by President Vladimir Putin on 27.06.2001, available at; <http://www.oceanlaw.org/downloads/arctic/Russian_Maritime_Policy_2020.pdf> (date accessed 3 March 2012).

Water Code of the Russian Federation of 3 June 2006, N 74-FZ, available at; <http://www.icfinternational.ru/doc_files/vodn_kodeks.pdf > (Russian version) (date accessed 3 March 2012).

United States.;

The Act to Prevent Pollution from Ships, 33 United States Codes §§ 1901–1903, available at; <http://epw.senate.gov/atppfs.pdf> (date accessed 5 March 2012).

The Coastal Zone Management Act, 1972, as amended through Pub. L. No. 109-58, the Energy Policy Act of 2005, available at; <http://coastalmanagement.noaa.gov/about/media/CZMA_10_11_06.pdf > (date accessed 5 March 2012.

The Oil Pollution Act of 1990, 33 United States Codes § 2701–2761 (1990), available at; <http://epw.senate.gov/opa90.pdf> (date accessed 5 March 2012).

Journal Articles

Boyle, Alan E., "Marine Pollution under the Law of the Sea Convention", *The American Journal of International Law*, 1985, Vol. 79.

Corell, Hans, "Reflections on the Possibilities and Limitations of a Binding Legal Regime", *Environmental Policy and Law*, 2007, Vol. 37, No. 4

Douglas R. and Willy Østreng, Willy, "The Northern sea route regime: Exquisite superpower subterfuge?", *Ocean Development and International Law*, Vol. 30, Issue 4, 1999.

Doelle, Meinhard, *Climate Change and the Use of the Dispute Settlement Regime of the Law of the Sea Convention*, Ocean Development International Law, 2006, Vol. 37, Issue: 3-4, Taylor & Francis Publishers.

Falkingham, John, Melling, Dr. Humfrey and Wilson, Katherine J., *Shipping in the Canadian Arctic: possible climate change scenarios*, Newsletter of the northern climate change, 2002, p. 4, available at; <http://www.taiga.net/nce/resources/newsletters/NCE_Newsletter_Fall2002.pdf> (date accessed 13 March 2010).

Ford, James D., Smit, Barry and Wandel, Johanna, "Vulnerability to Climate Change in the Arctic: A case study from Arctic Bay, Canada" in *Global Environmental Change*, 2006, Vol. 6, Issue: 2, Elsevier publisher.

Franckx, Erik, "The Legal Regime of Navigation in the Russian Arctic", *Journal of Transnational Law and Policy*, 2009, Vol. 18, no. 2.

Green, L. C., *The Modern Law Review*, Vol. 15, No. 3 (Jul., 1952).

Griffin, Andrew, "MARPOL 73/78 and Vessel Pollution: A Glass Half Full or Half Empty?", *Indiana Journal of Global Legal Studies*, 4 January 1994, Vol. 1, Issue 2, Article 10.

Johnston, D.M., "The Future of the Arctic Ocean: Competing Domains of International Public Policy", 17 *Ocean Yearbook*, 2003.

Kitagawa, Hiromitsu, "Arctic Routing: Challenges and Opportunities" " in *Impacts of Climate Change on the Maritime Industry*, The proceedings of the Conference on Impacts of Climate Change on the Maritime Industry, 2-4 June 2008 (Sweden), Neil Bellefontaine and Olof Linden (eds.), 2009, World Maritime University Publications.

Koivurova, Timo, "Alternatives for an Arctic Treaty-Evaluation and a New Proposal" in Review of European Community and International Environmental Law (RECIEL), 17 (1) 2008, Special International Polar Year Issue.

Kraska, James, "The Law of the Sea Convention and the NorthWest Passage" in *International Journal of Marine and Coastal Law*, Vol. 22, No. 2, 9 May 2007.

Kullenberg, G., "Approaches to addressing the problems of pollution of the marine environment", *Ocean and Coastal Management*, Volume 42, Number 12, December 1999 ,

Lamson, Cynthia, "Arctic Shipping, Marine Safety and Environmental Protection", *Marine Policy*, Vol.11, 1987, p.3.

Levy, March A.,"Is the Environment a National Security Issue?", *International Security*, Vol. 20, No. 2, Autumn 1995, MIT Press.

McDorman, Ted L., "In the Wake of the 'Polar Sea': Canadian Jurisdiction and the Northwest Passage", *Les Cahiers de Droit*, 1986, Vol. 27.

McKinnon, J.B., "Arctic Baselines: *A Litore Usque ad Litus*", in 66 *Can. Bar Rev*, 1987.

McRae, D.M. and Goundrey, D.J., "Environmental Jurisdiction in arctic waters: the extent of article 234", *University of British Columbia Law Review*, Vol. 16:2, 1982.

Molenaar, E.J., Book Review of "Coastal State Regulation of International Shipping" by L.S. Johnson, 22 *International Journal of Marine and Coastal Law*, 2007.

Oldfield, J.D., "Russian Environmentalism", *European Environment: the Journal of European Environmental Policy*, 14 March 2002, doi: 10.1002/eet.286, Vol. 12, No. 2.

Pharand, Donat, “The legal regime of the Arctic: Some outstanding issues”, *International Journal* , 1984, Vol. 34, No. 9.

Pharand, Donat, “The Arctic Waters and the Northwest Passage: A Final Revisit”, 38 *Ocean Development & International Law*, 2007, Accessed via Elin@Lund (date accessed 13 March 2012).

Rothwell, Donald R., “The Canadian-U.S. Northwest Passage Dispute: A Reassessment”, 26 *Cornell Int’l L.J.*, 1993.

Scrivener, David, *Environmental Cooperation in the Arctic: From Strategy to Council*, Security Policy Library No.1, (Oslo: Norwegian Atlantic Committee, 1996).

Spinnato, J.M., “Historic and Vital Bays : An Analysis of Libya's Claim to the Gulf of Sidra”, 13 *Ocean Development and International Law Journal*, 1983.

Stokke,Olav Schram, “A legal regime for the Arctic? Interplay with the Law of the Sea Convention”, *Marine Policy* Vol. 31, pp. 402-408.

Utton, Albert E., *Protective Measures and the "Torrey Canyon"*, 9 B.C.L. Rev. 613 (1968), available at <http://lawdigitalcommons.bc.edu/bclr/vol9/iss3/4>, (date accessed 27 February 2012.

VanderZwaag, David, Huebert, R. and Ferrara, Stacey, *The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters*, Denver Journal of International Law and Policy, Vol. 30:2.

Zysk, Katarzyna, *Russia’s Arctic Strategy: Ambitions and Constraints*, Joint Force Quarterly, Issue 57, 2nd Quarter, 2010, available at: <http://www.ndu.edu/press/lib/images/jfq-57/zysk.pdf> (date accessed 20 February 2012).

Magazines and Webpages

Funk, Mckenzie, Arctic Landgrab, *National Geographic*, Vol. 215, No. 5, May 2005.

Graff, James, Fight for the top of the World, *Time Magazine*, Vol. 170, No. 13, October 2007.

Official Webpage of IMO, available at; <http://www.imo.org> (date accessed 23 February 2012).

Official Webpage of OSPAR, available at; <http://www.ospar.org> (date accessed 27 February 2012).

The Times (London), March 29, 1967, at p.1, column 1.

Other Documents (Reports, Bulletins, Commentaries and Proceedings of Conferences, Bi-lateral Agreement)

Agreement between the government of Canada and the government of the U.S. on Arctic cooperation (Canada-U.S.), 11 January 1988, C. T. S. 1988/29, available at; <http://www.lexum.umontreal.ca/ca_us/en/cts.1988.29.en.html> (date accessed 20 March 2012).

Bill C-3: An Act to Amend the Arctic Waters Pollution Prevention Act, Legislative Summary, LS-617E, Penny Becklumb Industry, Infrastructure and Resources Division, 19 December 2008, Accessed at <http://www.parl.gc.ca/Content/LOP/LegislativeSummaries/40/1/401c3-e.pdf> (date accessed 22 February 2012).

Brigham L. and McCalla R., *Arctic Marine Shipping, 2009 Report.* Arctic Marine Shipping Assessment (AMSA).

Canadian Coast Guard, *The Northwest Passage: Summary of Complete Transits, Fleet News no. 11*, 1985.

Conley, Heather and Kraut, Jamey, *U.S. Strategic Interests in the Arctic: An Assessment of Current Challenges and New Opportunities for Co-operation,* "A Report of the CSIS Europe Program", Centre for Strategic and & International Studies, April 2010.

Elliot, Michael, "Biological pollutants and biological pollution-an increasing cause for concern", *Marine Pollution Bulletin*, 2003, volume 46:1, Publications expediting incorporation.

Environmental Response, Report of the Canadian Coast Guard Maritime Services, Ottawa, Ontario, 2009, Fisheries and Oceans Canada Publishers, available at; <www.ccg-gcc.gc.ca/eng/Ccg/er_Home> (date accessed 2 March 2012).

Europa press release available at; <http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/05/437&format=HTML&aged=1&language=EN&guiLanguage=en> (date accessed 29 February 2012).

"Governance of Arctic Shipping" in *Arctic Marine Shipping Assessment*, 29 April 2009, available at

<http://www.arctic.gov/publications/AMSA/governance.pdf> (date accessed 23 February 2012).

Hubert R. and B. Yeager, Brooks B., *A New Sea: The Need for a Regional Agreement on Management and Conservation of the Arctic Marine Environment*, January 2008, A Report Published by WWF International Arctic Programme, Oslo, Norway.

Jensen, Øystein, *The IMO Guidelines for Ships Operatinf in Arctic Ice-Covered Waters: From Voluntary to Mandatory Tool for Navigation Safety and Environmental Protection?*, The Fritjof Nansen Institute, FNI-rapport 2/2007.

Mulherin, Nathan D., *The Northern Sea Route: its development and evolving state of operations in the 1990s / Nathan D. Mulherin ; prepared for U.S. Army Engineer District, Alaska*, 1996, U.S. Army Corps of Engineers, Cold Regions Research & Engineering Laboratory.

Nowlan, Linda, *Arctic Legal Regime for Environmental Protection*, 2001, IUCN, Gland, Switzerland and Cambridge, UK and ICEL, Bonn, Germany, available at; <http://weavingaweb.org/pdfdocuments/EPLP44EN.pdf> (date accessed 31 March 2012).

PAME: Working Group on the Protection of the Arctic Marine Environment, Report to the Third Ministerial Conference on the Protection of the Arctic Environment, 20-21 March 1996 Inuvik, Canada, Ministry of Environment.

Report of the United Nations Secretary General, "Impact of the entry into force of the 1982 United Nations Convention on the Law of the Sea on related, existing, and proposed instruments and programmes", UN Doc. A/52/491, Section J, paras. 8-9.

United Nations Conference on Environment & Development, Rio de Janerio, Brazil, 3 to 14 June 1992, Agenda 21, United Nations Sustainable Development.

World Commission of Environment and Development, *Our Common Future*, 1987, New York: Oxford University Press.
WWF, *A New Sea: The need for a regional agreement on management and conservation of the arctic marine environment*. Published by WWF International Arctic Programme, Oslo, 2008, available at; <www.vliz.be/imisdocs/publications/130977.pdf> (date accessed 13 April 2012).

Young, Oran R., *The Structure of Arctic Cooperation: Solving Problems/Seizing Opportunities*, Fourth conference of Parliamentarians of the Arctic Region, Rovaniemi, 2000, available at;

<http://www.arcticparl.org/_res/site/File/images/conf4_sac.pdf> (date accessed 30 March 2012).

Unpublished Master's Thesis

Essallamy, Mohamed Ahmed, The Arctic Sea Routes: Marine environmental impacts on effect of the climate change and opening of the passages for international shipping traffic, Submitted as Master Thesis (Master of Science in Maritime Affairs) at World Maritime University, Malmo, 2008.

Pålsson, Malin, *Marine Environmental Protection in the Arctic*, Submitted as Master thesis (International Environmental law) at the Department of Law, University of Lund, Lund, Spring 2008.

Table of Cases

30 June 1865	*Aves Island* Case, Arbitral award relating to the issue of control and sovereignty over Aves island, raised between Venezuela and the Kingdom of the Netherlands, Vol. XXVIII, pp. 115-124.
21 April 1870	*Island of Bulama Case*, Arbitral Award between Portugal and the United Kingdom, Reports of International Arbitral Awards, Vol. XXVIII, pp. 131-140.
6 June 1904	*Guiana Boundary Case*, Brazil vs. Great Britain, Reports of International Arbitral Awards, Vol. XI pp. 11-23.
4 April 1928	*Island of Palmas Case*, United States of America vs. The Netherlands, Permanent Court of Arbitration Rep., The Hague, p. 837.
5 September 1933	*Legal Status of Eastern Greenland* , Denmark vs. Norway, Permanent Court of International Justice, (ser. A/B) No. 53 (Apr. 5) Judgment No. 20, Publications of the Permanent Court of International Justice Series A./B. No. 53; Collection of Judgments, Orders and Advisory Opinions, A.W. Sijthoff's Publishing Company, Leyden, p. 732.
9 April 1949	*Corfu Channel* Case, The Government of the United Kingdom of Great Britain and Northern Ireland vs. the Government of the People's Republic of Albania, (Merits), Judgment of the International Court of Justice, ICJ Rep. p. 4.
18 December 1951	*Anglo-Norwegian Fisheries Case*, United Kingdom vs. Norway, 18 December, International Court of Justice Report, p. 116.
17 November 1953	*The Minquires and Ecrehos Case*, International Court of Justice Reports, pp. 47, 52, 67.
16 October 1975	*Western Sahara Case*, Advisory Opinion, International Court of Justice Reports, p. 12.

27 June 1986	*Nicaragua Case,* Nicaragua vs. U.S., International Court of Justice Reports, p. 14-101, para. 213.