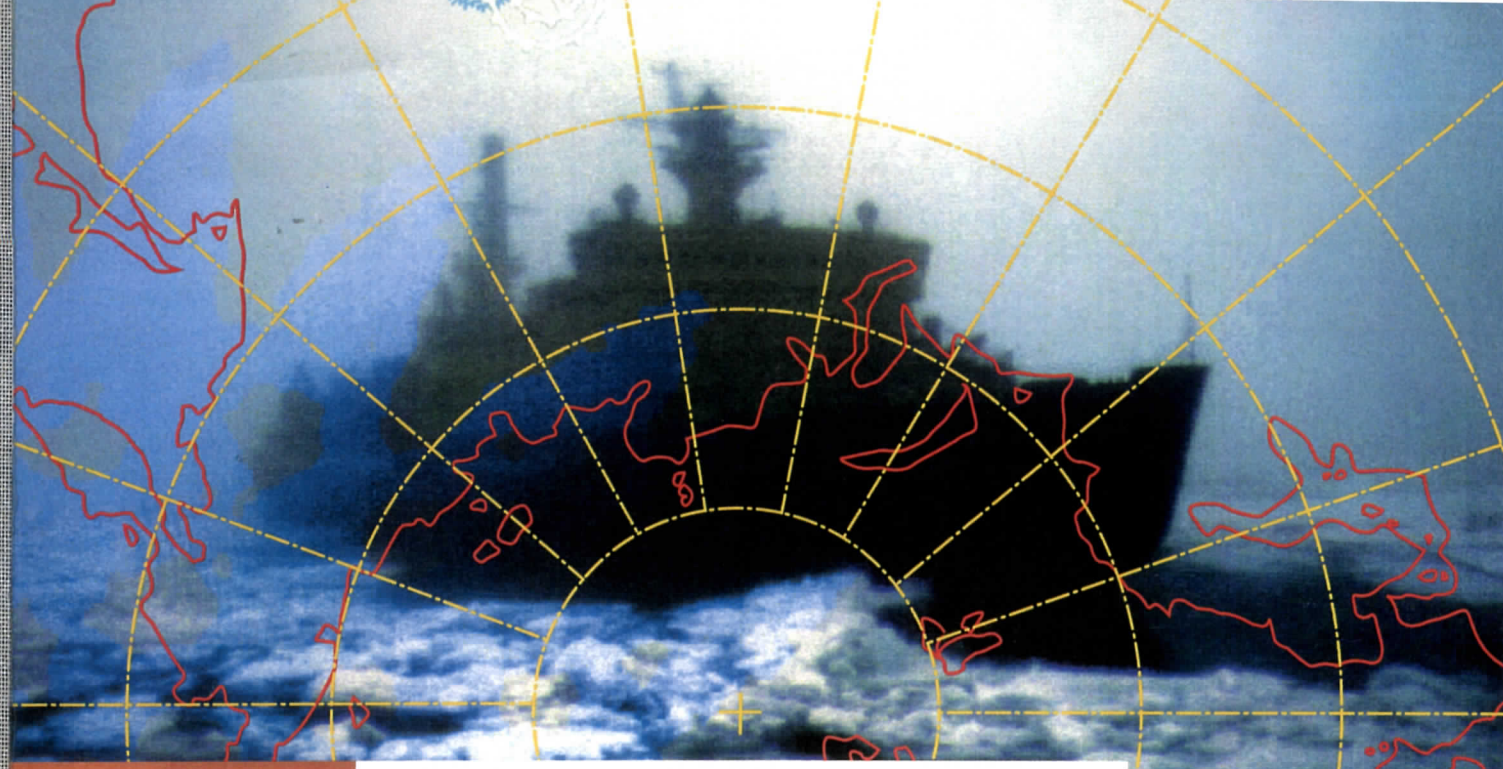

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Marine Insurance for the Northern Sea Route Pilot Study

Diana L. Torrens

INSROP International Northern Sea Route Programme

Central Marine Research & Design Institute, Russia

The Fridtjof Nansen Institute, Norway

Ship and Ocean Foundation, Japan

International Northern Sea Route Programme (INSROP)

Central Marine Research & Design Institute, Russia

The Fridtjof Nansen Institute, Norway

Ship & Ocean Foundation, Japan

INSROP - WORKING PAPER

Sub-programme IV: Political, Legal and Strategic Factors

Project 3.3: Marine Insurance for the Northern Sea Route. Pilot Study.

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What is an INSROP Working Paper and how to handle it:

FOREWORD - INSROP WORKING PAPER

INSROP is a five-year multidisciplinary and multilateral research programme, the main phase of which commenced in June 1993. The three principal cooperating partners are **Central Marine Research & Design Institute (CNIIMF)**, St. Petersburg, Russia; **Ship and Ocean Foundation (SOF)**, Tokyo, Japan; and **Fridtjof Nansen Institute (FNI)**, Lysaker, Norway. The INSROP Secretariat is shared between CNIIMF and FNI and is located at FNI.

INSROP is split into four main projects: 1) Natural Conditions and Ice Navigation; 2) Environmental Factors; 3) Trade and Commercial Shipping Aspects of the NSR; and 4) Political, Legal and Strategic Factors. The aim of INSROP is to build up a knowledge base adequate to provide a foundation for long-term planning and decision-making by state agencies as well as private companies etc., for purposes of promoting rational decisionmaking concerning the use of the Northern Sea Route for transit and regional development.

INSROP is a direct result of the normalization of the international situation and the Murmansk initiatives of the former Soviet Union in 1987, when the readiness of the USSR to open the NSR for international shipping was officially declared. The Murmansk Initiatives enabled the continuation, expansion and intensification of traditional collaboration between the states in the Arctic, including safety and efficiency of shipping. Russia, being the successor state to the USSR, supports the Murmansk Initiatives. The initiatives stimulated contact and cooperation between CNIIMF and FNI in 1988 and resulted in a pilot study of the NSR in 1991. In 1992 SOF entered INSROP as a third partner on an equal basis with CNIIMF and FNI.

The complete series of publications may be obtained from the Fridtjof Nansen Institute.

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- Arctic & Antarctic Research Institute, Russia
- ARTEC, Norway
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- Norwegian School of Economics and Business Administration
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Marine Insurance for the Northern Sea Route

Pilot Study

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FOREWORD

This report constitutes a preliminary study by the Fridtjof Nansen Institute (FNI) within the framework of its International Northern Sea Route Programme (INSROP). It is not intended as a final, definitive word on marine insurance as it should be applied to the Northern Sea Route (NSR). Rather, it should be looked on as a initial contribution to what will be a dynamic and ever-evolving process over the coming years. The report contained in the following pages is but the beginning of what FNI will develop into a full-scale study. Another goal is to foster discussion between the various players who will play a role in marine insurance for the NSR becoming a reality, as no formal links appear to exist between these various players at present.

In writing this report, I have attempted to reach as wide an audience as possible: insurers contemplating widening their field of expertise and activity; Russian and Western shipowners seeking to expand their operations; cargo owners contemplating sending their goods through the Route; officials in government ministries with competence or interest in the matters discussed; legal experts who will have to work out - and with - the legal and contractual framework in which operations will be carried out; other Western interests who may simply be curious to find out about the Route, etc. There are many things still to be done before marine insurance in what could be termed a usual form becomes a reality. Each new insurance situation, each client, each trade, etc., presents its own characteristics. There are also the growing pains which every new business relationship carries with it, and which are worked out together by the parties involved. All in all, it makes for a very exciting, challenging dynamic.

A foreword would not be complete without acknowledgements. First of all, I wish to thank Willy Østreng, Director, and Douglas Brubaker, Research Fellow, both of the Fridtjof Nansen Institute, for giving me the opportunity to participate in such an exciting and interesting project. Henning Simonsen, Research Fellow at FNI, was a constant source of support and a solid colleague. Professor Dr. juris. Hans Jacob Bull, Scandinavian Institute of Maritime Law, University of Oslo, provided academic guidance. K. Joseph Spears, A.B. Oland Barristers & Solicitors, Vancouver, who wrote a corresponding report on Arctic marine insurance in Canada, offered guidance on structure and substance. Anders Cleve and Rolf L. Berentzen, Marine Insurance Division, Gjensidige Forsikring, Lysaker, Norway, lent their expertise to the hull chapter. James B. Wooder, Commercial and Legal Officer, LASMO, Halifax, Canada, and Terje Holte, Underwriter, Assuranceforeningen Gard, Arendal, Norway, provided invaluable insights for the section on P&I. Dr. Edgar Gold, among other things Professor at the Faculty of Law, Dalhousie University, Halifax, Canada, cast his expert eye over the final draft. A list of the numerous other individuals, corporations and organisations who provided assistance is listed in Appendix 1. Without the assistance and support of many, this report would not have been possible. My deepest thanks go out to all. Any opinions or conclusions expressed in this report are mine alone, unless otherwise indicated. I, of course, bear full responsibility for any shortcomings.

Diana L. Torrens
Polhøgda, Norway, June 1993.
Halifax, Canada, December, 1993.

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LIST OF ABBREVIATIONS

ASPPR	Arctic Shipping Pollution Prevention Regulations (Canada)
AWPPA	Arctic Waters Pollution Prevention Act (Canada)
AWPPR	Arctic Waters Pollution Prevention Regulations (Canada)
BIMCO	Baltic and Maritime Council
CLC	Civil Liability Convention
CMI	Comité maritime international
CNIIMF	Central Marine Research & Design Institute, St. Petersburg
CRISTAL	Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution
CRC	Consolidated Regulations of Canada
CSA	Canada Shipping Act
DNV	Det norske Veritas
FAL	Forsikringsavtaleloven (Norway - Insurance Contracts Act)
FESCO	Far East Shipping Company
FNI	Fridtjof Nansen Institute
ICC	Institute Cargo Clauses
IMO	International Maritime Organization
INSROP	International Northern Sea Route Programme
ITC	Institute Time Clauses
IVC	Institute Voyage Clauses
Int. Leg. Mats.	International Legal Materials

LOF	Lloyd's Open Form (Salvage)
MARPOL	International Convention for the Prevention of Pollution from Ships
MIA	Marine Insurance Act
NCIP	Norwegian Insurance Plan for the Carriage of Goods of 1967 (Norsk transportforsikringsplan for varer av 1967)
NMIP	Norwegian Marine Insurance Plan of 1964 (Norsk sjøforsikringsplan av 1964)
NSR	Northern Sea Route
P&I	Protection and Indemnity (insurance)
SOF	Ship & Ocean Foundation, Tokyo
SOLAS	International Convention for the Safety of Life at Sea
SOPF	Ship-source Pollution Fund (Canada)
TOVALOP	Tanker Owners' Voluntary Agreement Concerning Liability for Oil Pollution

Marine Insurance for the Northern Sea Route

Pilot Study

MARINE INSURANCE FOR THE NORTHERN SEA ROUTE

1.0 Introduction

In his speech in Murmansk on October 1, 1987, Mikhail Gorbachev put forth the following:

> (...) Sixthly, the shortest sea route from Europe to the Far East and the Pacific Ocean passes through the Arctic. I think that depending on progress in the normalization of international relations we could open up the Northern Sea Route to foreign ships, with ourselves providing the services of ice-breakers."[1]

The Northern Sea Route (NSR) over Siberia has been officially open for Western traffic since July 1991 (see Figure 1). Russian interests would like to see it become a major artery for international maritime traffic, on a par and competitive with the Suez Canal, for goods travelling between Europe and the Far East. For Japan, too, there is an interest in developing the Route, the better to shorten the distance to European markets. European markets stand to gain a corresponding advantage. For countries such as Norway, there is money to be made in acting as a intermediary in various capacities between Russia and European countries further to the south.

At today's juncture, we are yet to see a massive wave of ice-breakers crashing out a path through the ice, followed by product carriers carrying copious quantities of goods between Europe and the Far East. For that to happen, an infrastructure, indeed a whole market, must be set up.

Marine insurance will be an essential building block in that structure. The shipping industry would not survive without some organised form of financial protection against marine risks, and this is no less true in a whole new geographical area, with its own hazards and particularities. If Russia is to be able to develop this Route, sell it to Western markets, and reap the hard-currency benefits of that venture, it will require Western insurance coverage.

---

1 General Secretary Mikhail S. Gorbachev, speech at the Ceremonial Meeting on the presentation of the Order of Lenin and the Gold Star Medal to the City of Murmansk, Murmansk, October 1, 1987; reproduced in Brigham, at 303 *et seq.*

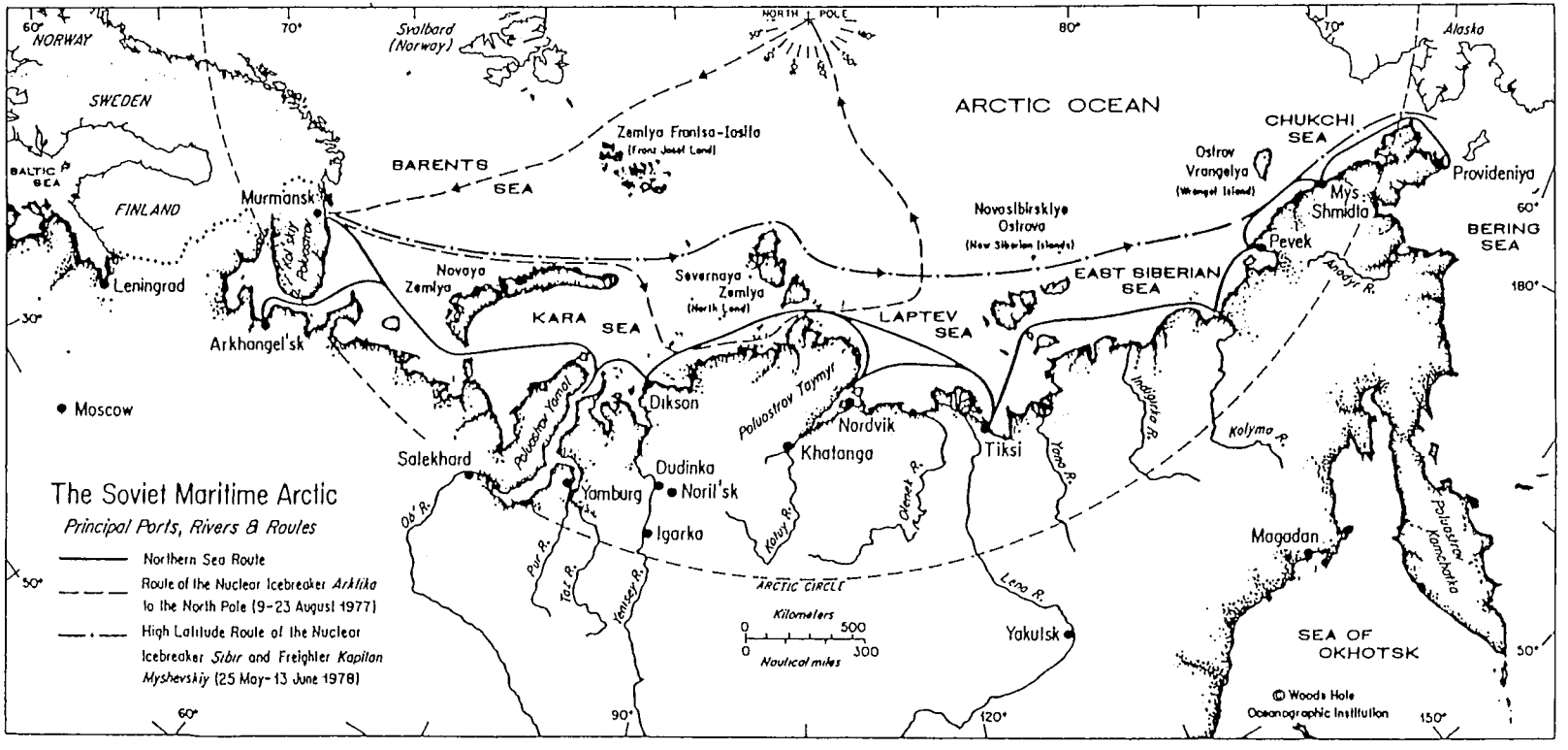


Figure 1 Principal ports, rivers, and routes of the Soviet maritime Arctic.

Source: Lawson Brigham, ed., *The Soviet Maritime Arctic* (London: Bellhaven Press, 1991) 3.

Clearly, the risks associated with Arctic shipping are unique. Marine insurance to cover these risks have developed somewhat, but not to the point where ice risks are a matter of routine in an insurance policy. Western marine insurance rules have not traditionally even contemplated an area such as the NSR, with each system excluding such areas in its own way (see Figure 2 and Table 1). Marine insurance is a vast field, and each of the three major categories: hull and machinery, Protection and Indemnity (P&I) and cargo, carry their own particularities. Marine insurance is also determined by a very fluid blend of law, public authorities and rules, private organisations and their rules and influence, market forces, etc.; and marine insurance for Arctic shipping presents its own unique conjuncture. But to state simply that it is not possible or not worth bothering with is unfair to two sides: to Russian shipping interests and other players by depriving them of a fair-and-square opportunity to introduce their product (the NSR) into the Western market; and to Western insurance and other market interests by depriving *them* of a market opportunity to earn either shipping or premium income.

At the moment, there is only a very limited record of commercial shipping in the NSR on which insurers can base themselves in determining what marine insurance for the area should require and cost. The area is largely an unknown frontier, and shipping possibilities are limited, both seasonally and geographically. It is difficult to know whether a premium accurately reflects the risk the insurer has been asked to cover. This leads to higher, across-the-board per-unit premiums, which in turn contributes to a higher overall cost of the venture. Clarification on both sides could well lead to a more streamlined insurance operation. By this is meant that if insurers were better informed of what is required to carry out a voyage safely through the NSR, they would be in a position to set specific requirements for cover. If potential assured parties were then better informed as to just what they must do to obtain and keep cover, they could take steps to meet these requirements, and thereby possibly reduce their insurance costs as well. That is what this discussion paper is about.

Table 1
Geographical Limits in English Marine Insurance

Institute Warranties

1. Warranted no:

(a) Atlantic Coast of North America, its rivers or adjacent islands,
  (i) north of 52° 10'N. Lat. and west of 50°W. Long.;
  (ii) south of 52° 10'N. Lat. in the area bounded by lines drawn between Battle Harbour/Pistolet Bay; Cape Ray/Cape North; Port Hawkesbury/Port Mulgrave and Baie Comeau/Matane, between 21st December and 30th April both days inclusive.
  (iii)west of Baie Comeau/Matane (but not west of Montreal) between 1st December and 30th April both days inclusive.

(b) Great Lakes or St Lawrence Seaway west of Montreal.

(c) Greenland Waters.

(d) Pacific Coast of North America, its rivers or adjacent islands north of 54° 30'N. Lat., or west of 130° 50'W. Long.

2. Warranted no Baltic Sea or adjacent waters east of 15° E. Long.

(a) North of a line between Mo (63° 24'N. Lat.) and Vasa (63° 06'N. Lat.) between 10th December and 25th May b.d.i.

(b) East of a line between Viipuri (Vyborg) (28° 47'E. Long.) and Narva (28° 12'E. Long.) between 15th December and 15th May b.d.i.

(c) North of a line between Stockholm (59° 20'N. Lat.) and Tallinn (59° 24'N. Lat.) between 8th January and 5th May b.d.i.

(d) East of 22° E. Long., and south of 59°N. Lat. between 28th December and 5th May b.d.i.

3. Warranted not North of 70° N. Lat. other than voyages direct to or from any port or place in Norway or Kola Bay.

4. Warranted no Bering Sea, no East Asian waters north of 46°N. Lat. and not to enter or sail from any port or place in Siberia except Nakhodka and/or Vladivostock.

5. Warranted not to proceed to Kerguelen and/or Croset Islands or south of 50°S. Lat., except to ports and/or places in Patagonia and/or Chile and/or Falkland Islands, but liberty is given to enter waters south of 50°S. Lat., if *en route* to or from ports and/or places not excluded in this warranty.

6. Warranted not to sail with Indian coal as cargo:

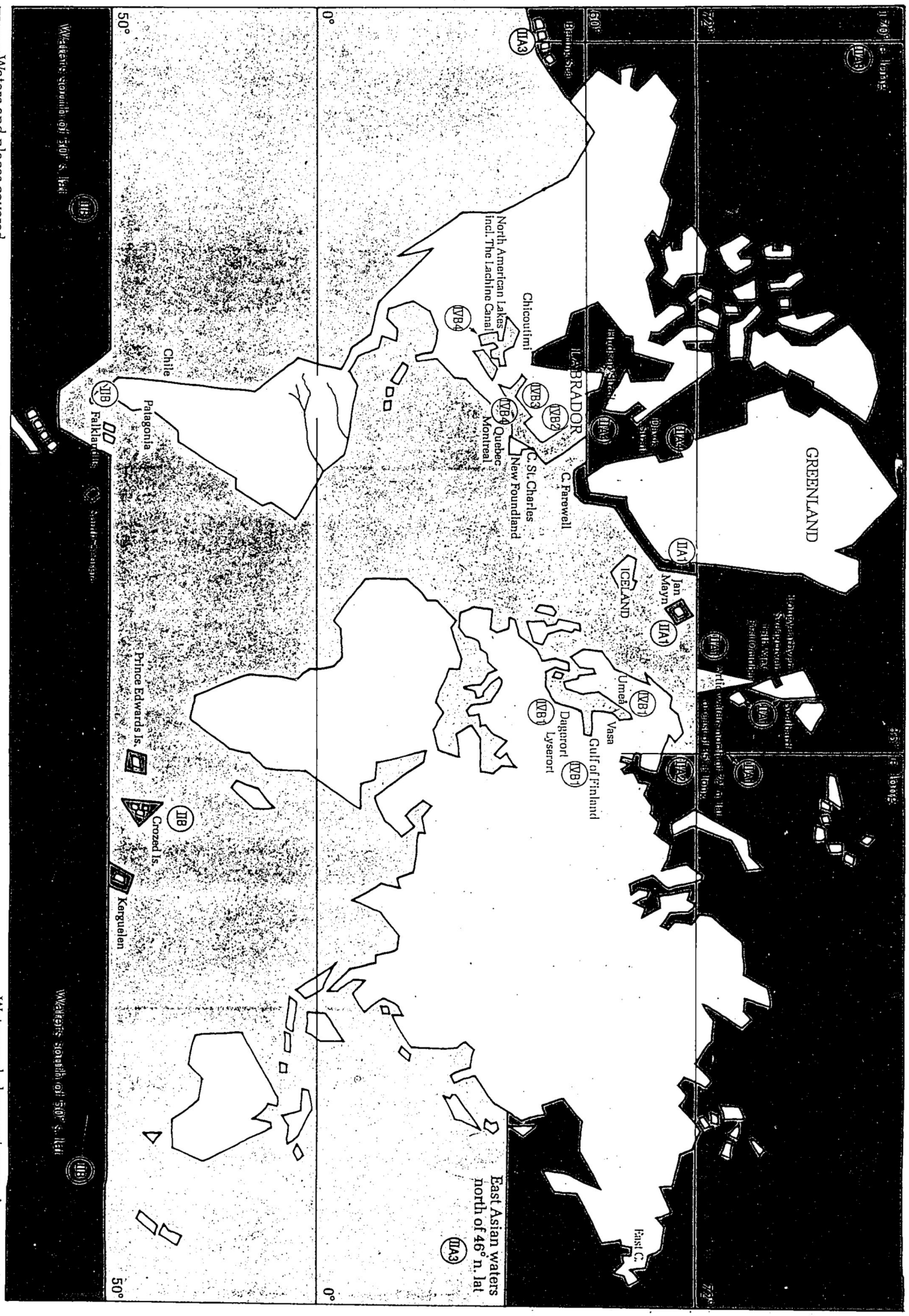
(a) between 1st March and 30th June, b.d.i.

(b) between 1st July and 30th September, b.d.i., except to ports in Asia, not West of Aden or East of or beyond Singapore.

Source: E.R. Hardy Ivamy, *Marine Insurance*, 4th ed. (London: Butterworths, 1985) 561-562.

Figure 2

Norwegian Trading Warranties and Additional Premiums



Waters and places covered without additional premium.

Waters and places held covered at additional premium. (IV B)

Waters and places not covered or covered by special agreement. (II-III)

Source: Vesta Insurance, Bergen, Norway

1.1 Scope

This report examines the eventual application of Western marine insurance in the Russian legal and geophysical context. What standards will be imposed for hull insurance? What peculiarities arise in relation to protection and indemnity (P&I), in light of what may be greater liability in the event of a disaster? How does the presence of ice impact on the insurance arrangement and process? How do the unique environmental factors of the Arctic factor in? The report is but one part of a comprehensive, multidisciplinary research effort encompassing: natural conditions and ice navigation; environmental factors; trade and commercial shipping aspects; and political, legal and strategic factors.

The discussion will begin with a brief sketch of the overall situation in the NSR. An historical overview will be given, along with a description of the physical setting of the NSR region, including weather patterns and bathymetry. Marine activities in the area, present and future, will be discussed. A sketch of the Russian legal framework will be given, with emphasis on aspects most likely to affect an insurance arrangement.

The main section will focus on Western insurance, with a view to application to navigation on the NSR. It will canvass the insurance set-up for hull, P&I and, to a lesser extent, cargo, existing in Norway, England and Canada. It will look at (Western) legislation affecting insurance arrangements; privately drawn up rules governing the relationship between insurer and assured; and differences which may arise depending on which market one obtains insurance coverage. All will be discussed in connection with eventual application to navigation on the NSR. In an attempt to preserve clarity, the discussions of hull, cargo and P&I insurance have been kept separate. A final chapter will offer conclusions and recommendations on how insurance for this very special area should be approached, along with perspectives for future development of the NSR, to the benefit of both Russian and Western interests. It must be emphasised that the discussion in the following pages is preliminary. Conclusions and recommendations from this report will be taken and developed further in later study, and eventually published under the auspices of INSROP.

The cost aspect has been dealt with only cursorily, for a number of reasons. Firstly, no study can predict with accuracy what a specific insurer will charge a specific client for a specific voyage. Instead, this study focuses on which variables an insurer would take into account in establishing the policy and accompanying premiums. A final, actual premium is a matter for the market-place at a particular juncture. Suffice it to say that premiums for the NSR will likely be high at first, and probably go down eventually as the trade becomes a more familiar item in the market. Secondly, this study was approached from a legal viewpoint more than an economic viewpoint. Put another way, it is more a *conceptual* study than a cost-benefit analysis. It is simply too early at this stage to go into figures. First one must ascertain whether the whole idea is conceptually possible. Answer: it is.

1.2 Definitions of Key Terms

The definitions here have been grouped thematically, rather than alphabetically, to assist the reader in seeing connections between the concepts.

Northern Sea Route: a shipping lane passing along the coast of Russia through the seas of the Arctic Ocean, *viz*, the Kara, Laptev, East Siberian and Chukchi Seas. It stretches from the Novaya Zemlya Straits or Mys Zhenlaniya in the west to Bering Strait in the east. It does not include the Barents Sea, but will be a logical route for cargoes of oil coming from both the Kara and Barents Seas.

Risk: A fortuity. Something which may happen but not something which must happen. Does not include an inevitability[2]. A risk is not the same as a peril, in the insurance context; the latter has a more technical meaning.

Insured peril: A marine insurance policy covers losses proximately caused by the perils insured by the policy (some cargo clauses express perils in respect of which the assured need only prove that the loss was reasonably attributable thereto for a claim to succeed). An insured peril may be specifically expressed in the policy or be embraced in a general description, such as "all risks". A peril which is not embraced within the policy conditions is termed an "uninsured" peril. The policy conditions may incorporate "paramount" exclusions. If one of these operates it takes precedence over an insured peril and the loss is excluded. For example, "barratry" (wilful, wrongful act of the crew or master) is an insured peril under the Institute Hull Clauses, but if the barratrous act involves the detonation of an explosion, the damage caused thereby is excluded[3].

Maritime peril: Perils of the seas and incidental thereto.

Insurer: The party in an insurance contract who accepts the proposal of the person requesting insurance protection. Once the contract is accepted the proposer becomes the assured[4]. The insurer may be termed the "underwriter" or the "assurer".

Underwriter: One who agrees to write a risk. An insurer writes, or underwrites, a risk when s/he accepts liability for any loss to the subject-matter insured from an insured peril. The term derives from the practice of the insurer to accept a proportion of the risk by initialling his or her name under the conditions stated on the slip. With the passage of time the term "underwrite" has come to be used for any action whereby a person guarantees the losses of another[5].

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2 Brown, at R23.

3 Brown, at 163.

4 Also referred to in some contexts as the "insured". The terms are synonymous.

5 Brown, at U4.

The reader may notice that in some places the words "insurer" and "underwriter" have been used seemingly interchangeably. The term "insurer" is more general and can, in some contexts, encompass both broker and underwriter, or simply an insurance company. Where reference has been made to insurers in their underwriting capacity, the term "underwriter" has been employed.

Terms such as hull, P&I and cargo insurance are dealt with in their own chapters below.

1.3 Sources

Marine insurance as it exists in Norway, England and Canada have all been canvassed in this study. Firstly, the Norwegian marine insurance scheme is necessary because of its pertinence in insuring vessels in the NSR region, and because of its important role in marine insurance generally. Additionally, the Norwegian market has a geographical and historical link to navigation in ice-infested waters. Secondly, there could not be a credible study of marine insurance without bringing the London market into the discussion. Thirdly, Canada is the country with the most comprehensive legislation covering Arctic areas, and the most experience in Arctic navigation on Western record. It also has a sizeable Arctic marine insurance market. These three were believed to be the most important of the world's markets for the present preliminary study. Other markets and other insurance arrangements will be incorporated in at a later stage in the research.

Canadian legislation basically mirrors the English *Marine Insurance Act 1906*, and Canadian case-law is subject to the *stare decisis* rule of English law. Consequently, where in the ensuing discussion comparisons are made between the English and Norwegian systems, references to English law can be assumed to also hold true for Canadian law, unless stated otherwise.

The marine insurance field is vast. Rules are determined by a number of different players: governments, underwriters, brokers, classification societies and Administrations, shipowners, indeed, the market at large. Additionally, much of the literature on marine insurance tends to deal only with legal concepts without giving much insight into the dynamic interaction of the concepts with the market-place. Consequently, interviews were conducted in person and by telephone with numerous parties in various countries, with a view to giving as accurate a picture as possible of what goes on. Even then, one can only go into so much detail, due to the confidential nature of the business relationship between insurer and assured. Parties contacted include government officials, insurance brokers, underwriters, insurance associations, shipowning concerns, classification societies and Administrations, maritime and maritime law organisations, P&I clubs, cargo owners, and academic and research experts; countries included: England, Norway, Canada, Russia, Japan, the United States, France, Sweden, Finland and a number of other countries in Europe. The reader is asked to bear in mind that none of the sources cited in any way legally bound themselves with the statements they made in connection with this research effort.

2.0 Description of the NSR

2.1 Historical Background of the NSR and INSROP

Russian involvement in its Arctic region dates back five centuries, and is marked by gradual expansion of the Muscovy empire. The first full transit of the NSR was accomplished only in 1878-9, when A.E. Nordenskiöld made the crossing from west to east in the *Vega*. Efforts at developing the Route in the earlier parts of this century were directed at creating a complementary route to take some of the strain off of the congested, single-track Trans-Siberian Railway.

During the years of the Soviet Union, the Route was not used by foreigners. *Glastnost* and *perestroika* brought in a new era of openness towards the West, however. The Route was officially opened for Western commercial traffic in July 1991, about one month before the coup which toppled the Soviet regime. It is therefore safe to assert that the NSR would have been developed even without the change in State that has occurred, although the change undeniably has helped the process move along more quickly.

The background for the programme and this report is testimony to how much can be attained when people cooperate across borders. In 1987 then USSR President Mikhail Gorbachev offered to open the Northern Sea Route to Western traffic, pending normalisation of East-West relations. One year later the Fridtjof Nansen Institute was approached by representatives of the USSR Ministry of the Merchant Marine, who were seeking to establish cooperative links between the Institute and corresponding Russian institutions, with a view to developing international navigation through the shortcut between the Atlantic and Pacific Oceans. After probing into the possible interest for such a project in Northern Norway and in Norwegian shipping circles, the Institute responded affirmatively to the invitation, on two conditions. Firstly, the project would have to have partners in several countries, to obtain the necessary plurality, breadth of premises, and independence, so as to ensure quality. Secondly, the project group would have to have access to relevant Russian information, so as to avoid duplication of research already carried out. These conditions were agreed to and so far have been met by the Russians.

Since then FNI has built up an extensive network of partners in Russia, the USA, the UK, Japan, Canada and Norway, to name but a few countries. The goal of the programme at this point is to develop a solid base of expertise to which decision-makers in public and private sectors in different countries can refer when making decisions and drawing up strategies about the NSR. Basing political and business decisions on sound knowledge, rather than uncertain presumptions, is of paramount importance, all the more so in a very vulnerable ecological region where economic activity must take place within the developmental framework of sustainable development. Since marine insurance is a vital component of any commercial shipping operation, it was believed important to conduct a study on marine insurance possibilities for the Route.

2.2 The Physical Setting - the Russian Arctic Rim

"Vast, cold expanse" sums up the Russian Arctic. The entire northern coast of Russia which borders on the Arctic Ocean stretches across more than 160 longitudinal degrees, from the Kola Peninsula eastward to the Bering Strait. Ostrov Ratmanov is considered to be the eastern extremity of the region. If one looks at the globe from the top, it is possible to get an idea of the vastness of the area. The region also spans 11 of 24 of the world's designated time zones. More than half of the Russian Arctic lies above 70°N[1]. Appendix 1 gives an overview of the region.

The following sections give a description of the physical environment in which shipping in the NSR region is carried out. It is detailed from a marine insurance point of view, but it is only the tip of the iceberg from a scientific point of view. The Arctic presents unique characteristics. Perhaps these should be taken more into account by insurers.

One point shipowners, cargo owners and their insurers may wish to keep in mind when assessing the overall risk is that while ice and climatic conditions in the NSR can be severe, they are not always so; nor are they so the whole way through the passage. For example, if one contemplates a 26-day voyage from Mo i Rana, Norway, to Yokohama, Japan, it is important to keep in mind that the ship will not be exposed to Arctic conditions the whole time. One might, for example, spend a total of 11 of those 26 days actually in the Northern Sea Route, the other 15 being spent on approach to the NSR from the European side and on southerly navigation on the Asian side once the Route has been crossed. Additionally, the Route itself is not always packed with ice; some strategic planning is possible, with mid-August to mid-September probably being the best time frame. Some years it is even possible to traverse the whole Route encountering no ice at all. So the picture is not as bad as some people might imagine, based on general perception and lack of scientific data.

In most years, the maximum period for transit by foreign vessels will normally be from July 1 to October 30, based on currently available icebreaker technology. This gives a working year of 123 days.

---

1 See, generally, Brigham, at 1 *et seq.*

2.2.1 Ice and Ice Patterns

Ice is the main obstacle to vessel operation in the NSR. It is of several types and works in several ways. "Ice vocabulary" is extensive and technical. Only a brief overview will be given here, for the purpose of illustrating that ice is a serious, quasi-omnipresent factor in NSR navigation, and that an understanding of ice patterns can help a navigator, and eventually an underwriter in the assessment of the risk[2].

The NSR area is in large part covered by sea ice of varying thicknesses. In the arctic seas the general ice arrangement depends on the formation of fast ice whose external boundary is located within an isobath of about 20 or 30 metres. Unlike the moving pack ice in the Arctic Basin, where thickness is determined by ice dynamics and oceanic heat fluxes, the fast ice has a thickness which is determined almost entirely by the air temperature history through the winter. Consequently, climatic severity relates to ice severity. An exception is the East Siberian Sea where there is also an influx of ice from the Chukchi Sea.

Between the zones of pack first-year ice, multi-year ice and fast ice, there are intermediate zones where sea ice actively forms. Here polynyas of young ice are likely to evolve. Polynyas are non-linear shaped openings which may contain brach, new ice nilas (thin, elastic crusts also known as finger rafting) or young ice. Depending on the distribution of atmospheric pressure in the winter period, polynyas are formed in the western area of the NSR more frequently than in the eastern area.

The ice conditions along the NSR vary according to a three-phase cycle. Phase one, the freezing phase, is by far the longest phase. During an average year this lasts from August/September until May. Ice can reach a thickness of up to 2.5 metres (first-year ice). Phase two, the thawing phase, is short and lasts from May until July. Phase three, the ice-flow phase, lasts from June until August/September. It is important to remember, however, that ice conditions across the Russian Arctic vary considerably.

By the end of an average winter period the ocean-bound ice pattern comprises: a fast ice zone; an intermediate flaw zone of young ice formation; a predominantly first-year ice zone; and a multi-year ice zone. The thickness of the fast ice varies, however, even within a relatively small section of the sea. Deviations in average ice thickness are often due to variability in annual snowfall. Excessive snow results in lower ice thickness because of the thermal insulation effect. For example, the average maximum thickness of the naturally-formed ice at the end of winter in the Kara Strait is 120-130 cm; near Dixon Isle it is 160-170 cm; 190-200 cm in the Straits of Vil'kitsky and Dmitrii Lapteva; and 160-170 cm in Long Strait. Subtle differentiations in ice thickness and formation are fashioned through tide, temperature and climatic shifts in the various areas.

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2 An "ice lexicon" is found at the back of Kjerstad (Navigasjon). See also Østreng, Jørgensen-Dahl, *passim*. Much of the information in this section on ice conditions is taken from their Pilot Studies Report.

In spring and summer periods the Arctic sea ice begins to melt. The first ice which melts is the ice in the southwestern part of the Kara Sea and the southern part of the Chukchi Sea, open to the warm streams of the Barents and Bering Seas. From there the melting wave spreads to the central part of the NSR. The melting processes cause not only the ice thickness to decrease, but also its strength, which can be particularly important for navigation. Arctic navigation is to a large extent dependent on the fast ice melting rate, i.e., the steady transition of the fast ice into pack ice.

The fast ice first begins to fracture in June, and spreads from there eastward, and from the Bering Strait westward, though most of the Arctic zones become completely free of fast ice in July. The periods of ice fracturing vary considerably from year to year, anywhere from one to three months. Some high latitude locations are not free from fast ice all year round.

From June to September, the melting processes cause the area under the Arctic sea ice to gradually diminish.

With these ice patterns, year-round navigation on all of the NSR is not an economically attractive option[3], although year-round navigation from the European side in as far as Novaya Zemlya through to Dudinka on the Yenisey River is carried out[4]. It can also be helpful to point out that there is a ten-year periodicity in ice cycles. One year out of every ten, it is possible to navigate the entire Route, ice-free[5]. Two out of every ten years have what could be termed severe ice conditions, whereas the remaining six to seven have moderate or average ice conditions[6].

It is not just the ice in the shipping lane that is a problem. One of the unique types of problems that arise in Arctic shipping will be the severe icing of the vessels. Icing is of two types: sea spray icing and atmospheric icing. Sea spray icing is perhaps the more serious of the two and is generated by the impact of waves on vessels. Atmospheric icing is caused by freezing fresh water, which is: supercooled drizzle or rain; snow or sleet; supercooled fog; or frost smoke. The most hazardous result of vessel icing is the extra top weight due to accretion of ice which, in extreme cases, will cause loss of stability and capsizing. Atmospheric icing is less severe than sea spray icing due to a substantially lower accretion rate.

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3 Ivanov, Ushakov, Isakov, Batskih, Armstrong, at 21.

4 Wergeland, at 189.

5 This was the case in 1991, when the *Kapitán Danilkin* travelled through, with the Norwegian Captain Norvald Kjerstad on board. An account of that voyage is found in Kjerstad (East Bound).

6 See, generally, Sackinger.

2.2.2 Winter

It is not just ice which complicates navigation; in winter, the Arctic is almost submerged in darkness. From an operational viewpoint, this places severe psychological stress on crews. It also makes the job of keeping watch difficult, as it becomes nearly impossible to detect differences in ice cover which might assist in finding the most favourable path through the ice. This can be partly offset through the use of satellite, surveillance systems and the like.

Extreme cold is another factor, one which can affect everything from crew capability to functioning of machinery.

At present, through winter navigation is not being seriously considered for the NSR in any event, due to the presence of thick ice[7].

2.2.3 Summer

Summer is very much the opposite of winter in the NSR, in that there is usually twenty-four hours of sunlight. Even this can be problematic. Fog can pose a threat. Even in clear weather, frequent temperature inversions can create abnormal refraction, giving a distortion of land-forms and making visual navigation difficult.

Dead reckoning, often used in Arctic navigation, becomes more difficult due to lack of a visible shoreline with which to take bearings. The lack of detailed charting of the coastline along the NSR only compounds the problem.

One positive thing that can be said is that summer navigation, unlike winter navigation, is within the realm of the possible at the moment. Moreover, insurers seem to be willing to underwrite these risks, as will be discussed *infra*. What will happen with extended-season shipping is something that can be contemplated later, after a solid basis in summer navigation and Western insurance has been established.

7 Wergeland, at 209.

2.2.4 Physical Oceanography and Bathymetry

Most of the NSR provides just barely sufficient depth for navigational purposes, while some areas, notably Proliv Sannikova and Proliv Dmitrii Lapteva around the New Siberian Islands, pose a definite and unique hazard to mariners, with minimum depths of 13 and 8 metres, respectively. In addition, there are two "bottlenecks" as they are called: Proliv Karskiye Vorota between Novaya Zemlya and the Siberian mainland, and Proliv Vil'kitskogo between Svernaya Zemlya and the mainland. The former is navigable in fact 12 months of the year, but can be shallow. The latter is located in an area of permanent pack ice, which creates its own problems.

The seas of the NSR are of shallow to medium depth. The problem is that they are often mostly covered with ice, and ice formation complicates navigation considerably. Icebergs can extend as much as 100 metres down into the ocean, while ice floes can have a keel of as much as 50 metres. Pingoes, ice-filled structures formed from a release of pressure in the permafrost, extend up from the ocean floor. Thus, while the Barents Sea, for example, has an average depth of 230 metres, much of this can be taken up by ice in one form or another[8]. The Barents is in fact one of the deeper seas of the Eurasian Arctic. The Kara Sea is characterised by the thick wall of fast ice extending 150-200 kilometres seaward from the coast. The only passage is right along the edge of this wall, during the short summer navigating season. More than half of the Laptev Sea is less than 50 metres deep, owing to its broad continental shelf. In fact, south of 76°N, the depth does not exceed 25 metres. The East Siberian Sea, like the Laptev, has a broad continental shelf, and over 50% of the Sea still has at least partial ice cover at the height of the melt season, the least summer melt of all the Arctic seas. The Chukchi Sea, furthest east along the NSR, has only a narrow continental shelf belt and therefore only a narrow band of ice formation. However, northerly winds compact drifting ice from the Arctic Ocean together against the Siberian coast, creating extensive pressure ridging and making it potentially the most difficult section of the NSR during the navigation season[9].

In certain areas tidal currents and river outflows play major roles, as the bathymetry is shallow, typically ranging from 25 metres to 50 metres. At the junction of fresh water (0°C) and freezing sea water (-1.8°C) a density stratification takes place as soon as an ice cover is in place, which allows the freshwater upper layer to lose heat to the colder seawater lower layer, as well as to the ice above, leading to the formation of freshwater ice layers and low-salinity ice layers in coastal region. This ice is generally stronger than sea ice for most temperatures[10].

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8 See, generally, Østreng, at 207-208.

9 See, generally, Barnett, at 47.

10 See, generally, Sackinger.

Wind is another factor influencing navigation. The winds in the Proliv Vil'kitskogo are channelled along that passage by the mountainous terrain on both sides, which helps to keep the passage free of ice, but makes isolated floes of drift ice a probability. In August winds towards the shoreline in the Laptev Sea are infrequent, but more frequent in the East Siberian Sea. The wind situation improves in September, and becomes even better in October[11].

2.2.5 Environmentally Sensitive Areas[12]

The entire NSR region could be described as an environmentally sensitive area, in that the Arctic environment possesses particular characteristics. While the Arctic is relatively clean as compared to other areas with denser populations and higher levels of industrial activity, new information is coming out constantly on past sins, to wit, the news-making items in the media lately concerning the dumping of old vessels and nuclear reactors into the sea.

The urgent economic situation in Russia may lead to rash decisions, from an environmental point of view, to step up the exploitation of the vast energy, mineral and biological resources in Siberia. Shipping along the NSR will be part of this movement, and quite possibly a catalyst for it. It is important to keep in mind that the Russian NSR encircles half of the globe's Arctic, thereby making the state of the environment there an international concern. Whatever floats on water - oil, for example - can float its way in and out of the NSR.

The Arctic is characterised by cold temperatures, long periods with little or no daylight, and by sea ice and permafrost. Biological production and decomposition is possible only during limited periods. There is a low number of plant and animal species, but those that do exist are well adapted, and thrive on the lack of composition from other species.

The sea ice is the principal physical factor in the polar seas. It influences how and when biological and chemical processes take place. For example, in areas totally covered by permanent pack ice, change and processes are extremely slow. Other areas, covered only part of the year by ice, come to a virtual biological halt in winter, only to burst into an intense period of productivity in the summer.

Permafrost is perhaps the defining feature of the Arctic. It is normally 100 to 400 metres deep, and is a key characteristic of Arctic terrestrial biota. The thin layer which melts during the brief summer offers poor conditions for plant production, and thereby also puts restrictions on the migratory animal population.

Marine and terrestrial species in the Arctic are probably not more vulnerable than in more southern areas to human impact. Some things, however, such as an oil spill, may produce far more deleterious effects in the Arctic. There are several reasons for this:

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11 Sackinger, at 76.

12 Much of the information for this section was taken from Hansson.

- biological and chemical processes in the Arctic are slow;
- the reproductive potential is low in many plants and animals;
- the food web is simple, and therefore more easily destroyed; and
- several Arctic species congregate at certain times in numbers that constitute a large segment of the population[13].

Three types of factors affect the potential for accidents on the NSR. The first is the physical environment, which poses a greater threat of damage to vessels and equipment, or may force ships to take emergency action with environmental repercussions. Navigational flexibility may also be reduced due to the presence of ice, and effectiveness may be hampered by dense fog. Secondly, environmentally safe standards for ships, crews, equipment and communication may be prohibitively expensive. Especially now when Russian interests are seeking to maximise profitability, the pressure will be great to reduce costs - at all costs. Thirdly, navigation in Arctic waters requires particular skills. Russian crews usually have this, but many others do not. Additionally, there may be language communications difficulties between Russian and other nationalities during the practical operation of getting through the Route. Good communication can be a challenge at the best of times. In an emergency, it is critical.

Oil spills pose a major potential threat to the Arctic environment resulting from the use of the NSR as a commercial shipping route. The *Exxon Valdez* incident provided some indications as to the impact potential of an oil spill in the NSR. One may safely multiply the impact in extrapolating, as the *Exxon Valdez* occurred south of the marginal ice zone.

Oil is known to kill or injure fish larvae. Its effect on Arctic phytoplankton and zooplankton is not well known, but since plankton is the basis of all marine life, deleterious effects on plankton will inevitably work their way up through the food chain. Additionally, Arctic seabirds and sea mammals such as sea otters and polar bears are extremely vulnerable to oil spills. Since the habitat of these species is on the sea surface, it is a given that they will be contaminated. Species which live in the water, such as seals and whales, also stand to suffer.

Even small oil spills, if they become frequent, will have considerable negative impact. The self-cleansing properties of the ocean are infinitely slower in the Arctic. What might clean itself out in a year in a more temperate zone may remain in Arctic waters for decades. Additionally, spilt oil can get caught under pack ice or in between ice floes, where it will affect algae. After a while, through capillary processes, the oil comes to the top of the ice, where it can affect sea birds and other surface species.

Another problem area is the use of nuclear-powered ice-breakers, which make up most of the Russian ice-breaker fleet. The question of maintenance, handling and storing over the years is not the subject of favourable perception in the West. A single accident with one nuclear-powered vessel could cause impacts which would last for many years. Both oil pollution liability and the nuclear aspect are discussed *infra*.

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13 Hansson, at 9.

In an effort to step up international cooperation to protect the last frontier on earth, the Arctic Rim countries - the Soviet Union (confirmed by Russia), the United States, Canada, Sweden, Finland, Iceland and Norway - have signed the ministerial Declaration of the Rovaniemi Process. The Process reflects concern over the Arctic environment and a desire to protect it. Under the process, an Arctic Monitoring and Assessment Programme have been set up, with a view to monitoring the state of the Arctic environment and advising national politicians on the management of Arctic environments. A Canadian initiative on guidelines for the management of Arctic flora and fauna is under negotiation, while Sweden has proposed plans for inter-Arctic cooperation on preparedness and response to environmental accidents. Additionally, Norway and Russia have concluded, although not yet ratified, an oil spills contingency agreement.

2.3 Marine Activities in the NSR Region

2.3.1 General Activities

The Russian Arctic is rich in natural resources. Fish and seafood processing has been bountiful in the Barents Sea region, as have oil and gas reserves, discussed elsewhere herein. Moving eastward, timber and logging operations have been carried out in various areas of the Russian Arctic. The area also contains some of the world's principal sources of gold, diamonds and non-ferrous metals. Briefly then, the potential certainly is present for the region and the Route to play a major role in the development of Russia.

Unfortunately, development and exploitation of these resources has been uneven, and infrastructure has often been lacking. There is also the issue of the high toll on the environment taken by years of Communist Party planning, which often achieved departmental objectives, but at a heavy social and environmental cost.

2.3.2 Shipping and Shipping Routes

The Northern Sea Route, as mentioned, passes along the coast of Russia through the Kara, Laptev, East Siberian and Chukchi Seas. It stretches from the Novaya Zemlya Straits or Mys Zhenlaniya in the west to Bering Strait in the east. The length of the shipping lane within these limits is between 2200 and 2900 nautical miles, depending on the actual route taken. Minimum depths in most straits exceed 20 metres, but in Proliv Sannikova are only 13 metres, and in Proliv Dmitrii Lapteva 8 metres[14]. Transit operations in this latter passage cannot be done with vessels larger than about 20,000 dwt., unless the vessels are specially designed for shallow water or a more northerly route is used. Many river bars are also quite shallow, so draughts of ships must be limited there as well. The reader is referred back to Figure 1, which shows the shipping routes of the NSR.

Most of the NSR has been surveyed in detail, and charts are available down to 1:10 000 for the narrowest passages, although not all have yet been released for general distribution. There are nine seaports along the Route: Amderma, Dikson, Khatanga, Tiksi, and Pevek all belong to the Ministry of the Merchant Marine; Dudinka, Igarka, Zelenyy Mys and Mys Shmidta all belong to other agencies. There are also about 100 other unequipped points where vessels are unloaded. Dudinka is perhaps the busiest of the ports, and handled six million tonnes of cargo in 1990, 63% of the total volume of shipping that went through the western part of the route. Loading and unloading can be carried out at temperatures down to -50°C. The various rivers: the Ob', the Yenisey, the Khatanga, the Lena, the Kolyma and so on, are important arteries for communities along them and are used to ship sizeable volumes of cargo[15].

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14 See Ivanov, Ushakov, Isakov, Batskih, Armstrong, at 6.

15 See, generally, Ivanov, Ushakov, Isakov, Batskih, Armstrong, at 6 *et seq.*

The ice-breaker fleet is the key to transport in the Far North. Some of the vessels are Russian-built, while others were constructed abroad by firms such as Wartsila. Ice-strengthened vessels are also a necessity. Figure 3 gives an idea of the existing Russian fleet. Foreign vessels would have to be approved by Marine Ice Operations. Communications, both radio and satellite, are developed all along the Route.

Figure 3

RUSSIAN FLEET OF POLAR ICE-BREAKERS

N/N	Vessel type and class	Propulsion plant and capacity (h.p.)	Displacement (t)	Speed (kn)	Ice-breaking capability (m)	Shipowner + number of ice-breakers
1.	*Arktika* LL1	Nuclear reactor 75000 h.p.	23 460	21.0	2.3	Murmansk Shipping Company, 4 ice-breakers*
2.	*Taimir* LL2	Nuclear reactor 50000 h.p.	22 000	18.0	1.77	Murmansk Shipping Co. 2 ice-breakers
3.	*Ermak* LL2	Diesel-electric 41400 h.p.	22 241	20.0	1.8	Far Eastern Shipping Co. 3 ice-breakers
4.	*Moskva* LL3	Diesel-electric 26000 h.p.	15 350	18.5	1.4	Far Eastern Shipping Co. 4 ice-breakers
5.	*Kapitan Sorokin* LL3	Diesel-electric 24 800 h.p.	14 900	19.5	1.4	Murmansk Shipping Co. 3 ice-breakers** Far Eastern Shipping Co. 1 ice-breaker

* Two more ice-breakers of the Arktika type are currently being built (*Yamal* had a planned delivery time of 1992, *Ural* delivery slated for 1994).

** Two ice-breakers of the *Kapitan Sorokin* type were converted and their ice-breaking capability improved by about 40%.

Some types of Russian ice-going vessels most suitable for carrying transit cargo on the NSR

N/N	Vessel type and class	Deadweight (t)	Propulsion plant and capacity (h.p.)	Speed (kn)	Ice-breaking capability* (m)	Shipowner + number of vessels
1.	Barge carrier *Sevnmorput* UL	333 980 74 barges 1324 containers	Nuclear reactor 40000 h.p.	20.5	1.2	Murmansk Shipping Co. 1 vessel
2.	*Norilsk* (SA-15) ULA	19 942	Diesel plant 20800 h.p.	18.1	1.0	Murmansk Shipping Co. 9 vessels. Far Eastern Shipping Co. 8 vessels. Sakhalin Shipping Co. 2 vessels.
3.	*Dmitry Donskoy* (M. Strekalovsky) UL	19 885 (19 250)	Diesel plant 11200 h.p.	15.5	approx. 0.5	Murmansk Shipping Co. 25 vessels. Far Eastern Shipping Co. 2 vessels.

* Ice-breaking capability in level ice without ice-breaker assistance.

Source: Capt. Vladimir Mikhailichenko, NSR Administration, Presentation given at the Nordic Institute of Navigation, International Symposium on Arctic Operations and Navigation, Tromsø, March 30 - April 1, 1992.

2.3.3 Future Activities in the NSR Region

Development of the NSR as a hard-currency earning asset is a top priority for players in the region. This in turn would shore up trade at the many ports along the Route and down its various rivers. The mining industry in Siberia also stands to benefit from the increased traffic, and resulting ease of access to markets.

Oil and gas development on a greater scale is also a priority, given its appeal and earning ability on both domestic and foreign, hard-currency markets. Various ideas have been advanced, including the swap deals[16]. How much of this would get transported through the NSR is an open question at this juncture. Some parties oppose it absolutely, on environmental grounds, while others see no reason why not, provided sufficient precautions are taken. There are also plans for future cooperation in the onshore energy sector. Norwegian interests, such as Norsk Hydro and Saga Petroleum, have been involved in these.

All in all, it would appear that much of the development in the coming years will not be dependent on, but will certainly be significantly helped along by, cooperation with Western partners in various joint ventures.

16 See Moe (Energy), at 64-65.

3.0 The Legal and Administrative Framework

3.1 Government Structure

One *caveat* that must be pointed out right from the beginning when discussing the structure of the Russian government is that it is *tentative*. Any of the descriptions or explanations given below are subject to rapid, unannounced change, due to the well-known political upheavals in the former Soviet Union over the past few years. Every attempt has been made to secure accurate, up-to-date information[1]. The goal of the present study, however, relates to marine insurance law, not to political science. In addition, much of the legal study is based on Western marine insurance institutions, which have not been subject to the same tumultuousness in recent years.

It is also important to keep in mind that, unlike the situation in Western countries, maritime transport generally - including merchant shipping - has in the USSR been the domain of the State. All shipping companies and their assets were nationalised by a decree of February 5, 1918, a measure which included State ownership of *all* ocean-going vessels. Some limited privatisation measures were introduced over the years, and companies and other organisations are now continuing the decentralisation effort, but this will not be accomplished overnight. The discussion of para-governmental organisations *infra* should be read with this in mind.

The **Ministry of Transport**, which includes the **Northern Sea Route Administration**, is charged with the administration of the various waterways of Russia. The Northern Sea Route Administration has Marine Ice Operations offices in Dikson and Pevek, which are subordinated to the Murmansk and Far Eastern Shipping Companies respectively. The duties of these offices include: management of shipping operations, pilotage, navigation safety, pollution problems, and search and rescue.

The Ministry of the Merchant Marine is also charged with the operation of vessels. Under the Soviet system there were various "state shipping authorities", including the various shipping companies now seeking to establish commercial links with the West, which were subordinate to the Ministry.

Also part of the Ministry of the Merchant Marine is the **Russian Ship Registry**, which would appear to be more an equivalent to Det norske Veritas than to the Norwegian Ship Registry. It has broad supervisory powers over all ocean-going vessels. Its principal functions include: drafting rules and technical norms for safety and navigation; promulgating instructions and technical conditions regarding vessel classification, construction and repair; examining vessels;

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1 Perhaps superfluously, please note that any mention of the USSR in legislation may now be read as referring to Russia.

and issuing documents certifying seaworthiness, etc. The Registry also provides, *inter alia*, classification-related services to foreign vessels. This could become pertinent in the event of an insurer outside Russia wishing to ascertain whether a ship had maintained its classification while in transit[2].

3.2 Para-governmental players

There have been three companies active in navigation in the NSR area: Murmansk Shipping Company (MSC), Far East Shipping Company (FESCO) and Arctic Shipping Company. The three are involved in transporting cargoes of many types: oil, timber, minerals, supplies to the various towns located along the NSR and its tributary rivers. The largest of these and the most active promoter of the NSR has been MSC. There is also the Northern Shipping Company located in Arkhangelsk, whose operations are concentrated on the transport of timber.

Under the former Soviet system, insurance was a State monopoly by virtue of Article 14(o) of the USSR Constitution. Where companies did not arrange for self-insurance, it was taken care of either by *Gostrakh* (which means "domestic insurance"), which was responsible for hull insurance on the domestic market, or by *Ingosstrakh* (which means "international insurance", and operated much the way Intourist did with passenger travel), which arranged P&I insurance. Ingosstrakh was under the Foreign Insurance Administration of the USSR, which in turn was part of the Ministry of Finances of the USSR. Ingosstrakh carried out operations directly and through brokers abroad, including on the London market. It was competent to draft rules and instructions and concluded general insurance agreements and reinsurance contracts with foreign companies. Ingosstrakh was also charged with representing the interests of foreign shipowners and insurers in judicial and arbitral proceedings.

Soviet hull insurance conditions did not contain ice clauses or geographical limitations on navigation in its hull policies, as Western insurance has done as a matter of course. The State owned the ships, set its own insurance conditions and operated its own drydocks, including in the Siberian areas along the NSR. Hull insurance could be covered entirely on the Russian market because the ships were paid for in rubles. In some cases, a type of barter system was used, e.g., ship-for-oil, as was carried out with interests in Finland.

Protection and indemnity (P&I) differed from hull in that it was required to be in hard currency for ships involved in foreign trade, as compensation had to be paid out in hard currency. P&I cover was achieved either through self-insurance or Ingosstrakh working on foreign markets, and included cover in relation to pollution, running down clauses, and cargo cover for goods being imported into the USSR. As a rule, the foreign club took care of virtually everything: main

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2 With respect to the foregoing, see generally Butler, Quigley, at 9 *et seq.*

cover, claims service, and so on. P&I was, in fact, a small part of Ingosstrakh's overall operations.

Ingosstrakh did, for a time, reinsure between 60% and 75% of its P&I risk on the London market with the UK Club, in connection with ships involved in foreign trade. A few years ago, however, the agency "defected" to an insurer (apparently not a full-fledged club) on the German market, for reasons not clear to Western clubs.

While Ingosstrakh still exists, the market is no longer exclusively controlled as a State monopoly. As in almost every other aspect of Russian life, the drive is on to open up the markets and the country to Western ways and capital. Murmansk Shipping Company, for example, now obtains some of its P&I cover with the Gard Club in Norway and on the German market. There is also an emerging need for hull cover in hard currency, as ships are being built outside Russia, and Russian shipbuilders as well now want hard currency for their products. Ingosstrakh is attempting to persuade shipowning interests to let it act as "broker to the West" for them, but there is no longer any requirement to do so; shipowners are free to approach directly whichever insurer they choose. While Ingosstrakh is looking to develop into a major, diversified insurance concern, Gostrakh is, practically speaking, not needed any more. There has been an influx of insurers into Russia, looking to cash in on the opportunities presented by the new political situation. In this unsettled context, the role of Ingosstrakh in future marine insurance for the NSR, as a player, as a co-signer on policies, or in some other capacity, is unclear[3].

3.3 International Treaty Affecting Regulation of the NSR

A discussion of the regulation of a sea route to be used by parties from various nations would not be complete without at least some mention of international law. A canvass of the various treaties and agreements in force reveals that about the only international treaty provision that would be pertinent is found in Article 234 of the 1982 *Law of the Sea Convention*[4]:

> "*Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering areas for most of the year create obstructions or exceptional hazards to navigation*, and pollution of the marine environment could cause major

3 The author is grateful to Terje Holte of Assūranceforeningen Gard, Arendal, Norway, and Stephen James of the UK Club, London, for their insights on this section.

4 *United Nations Convention on the Law of the Sea* (1982) A/Conf.62/122; (1982) 21 Int. Leg. Mats. 1261 (LOSC).

harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence." (emphasis added)

Russia is a signatory to LOSC[5], many of the provisions of which are seen as codifying customary international law[6]. Whether Article 234 reflects customary international law is a contested point. Canada's enacting of its *Arctic Waters Pollution Prevention Act* was contested, notably by the United States[7], but has since found some support, notably through the inclusion of Article 234 in the discussions at the Third Conference of the Law of the Sea and in the subsequent 1982 LOSC. While it is true that unilateral action by a State does not in itself serve to create international customary law - a case of putting the cart before the horse, as it were - it may be observed that the fact that such an article appears in LOSC is indicative of the direction international law is taking, and certainly may serve as inspiration for the development of customary law[8]. Russia would appear to have drawn inspiration from Article 234 in drafting its *Regulations for Navigation on the Seaways of the Northern Sea Route*, thus adding to the State practice in this area. Since there are few countries to which this Article is applicable, it is only logical that a small number of countries be required to establish what could be called "custom" or "State practice". Fears of infringements on the freedom of the high seas are not necessarily founded: the last part of the Article implies that while foreign shipping in the ice-covered areas can be severely restricted, it does not seem to contemplate allowing a total, unilateral ban on navigation.

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5 Butler (USSR Sea Law), at Introduction, A.1.

6 Brubaker (Pollution), at 62; Churchill, Lowe, at 19.

7 See Churchill, Lowe, at 245, and O'Connell, Shearer at 1022-1025.

8 Even Professor O'Connell's work, which appeared to take a much tougher stand on Canada's action, appeared to open the door to this type of interpretation. See O'Connell, Shearer at 1025.

3.4 Legislation Affecting Activities in the NSR Region

Russia has stepped up its legislative efforts with respect to its Arctic areas, mostly with a view to enhancing environmental protection in Russia's Exclusive Economic Zone (EEZ)[9]. Some of these can become pertinent to petroleum developers, shipowners and their insurers, but a detailed discussion is not necessary here[10].

3.4.1 The 1982 Law on the State Boundary of the USSR

Russia has, by way of its 1982 *Law on the State Boundary of the USSR*[11] and Decrees of the Council of Ministers in 1984 and 1985, established various baselines. The first set of baselines extends around the Novaya Zemlya and Severnaya Zemlya Archipelagos, enclosing the Kara Gates and Vil'kitsky Straits respectively. The latter is a key section of the NSR. Moving further east, baselines have been drawn around the New Siberian Islands Archipelago, enclosing the Sannikov, Eterikan and Dimitrii Laptev Straits. A set of baselines has also been drawn around Zemlya Frantsa Iosifa (Franz Joseph Land), but this is not relevant in our study of straits in the NSR[12].

The exact legal status of the various parts of the NSR is not settled; some areas form part of the internal waters of Russia, further out are parts of the territorial sea, exclusive economic zone and high seas. The law-making authority of Russia, the coastal state, is different for each category of sea[13]. The areas enclosed by the baselines would appear to be especially subject to Russian jurisdiction as forming part of internal waters of Russia, in respect of which the legal

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9 See generally, Franckx (USSR Legislation).

10 An attempt was made to step up protection of the marine area lying north of Siberia: a Decree of the Council of Ministers of the USSR, 1 June 1990, *On Measures for Implementation of the Edict of the Presidium of the USSR Supreme Soviet of 26 November 1984 "On Intensifying Nature Protection in areas of the Extreme North and Marine Areas Adjacent to the Northern Coast of the USSR"*, (1990) 16 *Sobranie Postanovlenii Pravitel'stva SSSR*, cited in Franckx (Nature), at 379.

Paragraph 4 of the 1990 Decree requires the owners of ships and other floating objects to enter into a contract of insurance to cover civil liability for damage resulting from pollution to the marine environment, or to have other financial security, the acceptability of which would be decided upon by the Administration of the Northern Sea Route. Evidence of such coverage would be required on board.

The 1991 Soyuzmorniiprojekt report has lamented the lack of enforcement of the Edict, but concludes that implementation is unrealistic. The proposals at the end of that report suggest a return to a more activist approach in regulation. Interested parties would therefore be advised to keep an eye on developments.

Please see the discussion *infra*, relating to the dismal experience of individual states which have attempted to impose extra requirements on ships regarding insurance certificates.

11 English translation published in (1985) 4 Law of the Sea Bulletin 25.

12 Pharand, at 152-155; Butler (Soviet maritime legal), at 216-220.

13 These legal questions in fact form another part of the INSROP study on the NSR. An introduction to the issues raised is found in Brubaker (Waters Legal).

regime is that Russia may impose what requirements it sees fit on maritime traffic, foreign as well as domestic[14]. Jurisdiction becomes more limited out in the territorial sea and exclusive economic zone. In any event, Russia has adopted regulation concerning navigation and insurance requirements for ships travelling through the NSR. This author will accept for the present purposes that Russia is competent to legislate in respect of the NSR.

For the moment, the aforementioned legislation is still valid[15]. In fact, the entire body of Russian maritime legislation is undergoing a thorough revision, but the process will take some time. A December 1991 Enactment upholding the existing legal framework will apply generally until more specific legislative norms enter into force[16].

3.4.2 The Merchant Shipping Code of the USSR

The present *Merchant Shipping Code of the USSR*[17] entered into force on October 1, 1968, and will remain in force in Russia until a new Code has been adopted[18].

Chapter XII of the Code deals with contracts of marine insurance. A perusal of the [dispositive] sections reveals no major differences from common Western contract principles. Since Western marine insurance will operate on premises based outside Soviet or Russian law,

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14 Brownlie, at 120-121.

15 *Armenia-Belarus-Kazakhstan-Kyrgyzstan-Russia-Tajikistan-Uzbekistan: Agreement on the Protection of the State Boundaries and Maritime Economic Zones of the States-Participants of the Commonwealth of Independent States* (1992) 31 Int. Leg. Mats. 495.

Also, telephone communication with Professor Dr. Erik Franckx, Free University of Brussels, Belgium.

16 UN Doc. A/47/623 Law of the Sea, Report of the Secretary General, as reported in (1993) 14 Law of the Sea Bulletin 12:

"As concerns the formal adoption or continued applicability of Soviet maritime legislation, article 2 of the Enactment of the Supreme Soviet of the Russian Federation (12 December 1991) affirms the continuing validity of legislative norms until the moment when and if they are replaced and provided that they are not at variance with Russian legislation. It has been generally understood, none the less, that this provision would cover acts of the Soviet Union which regulated [*inter alia*] the regime of the territorial sea ...".

One can conclude that the *Regulations for Navigation on the Seaways of the Northern Sea Route*, discussed below, would also continue to be valid. No legislation or decrees were found to the contrary, in any event.

17 *Merchant Shipping Code of the USSR, Vedomosti SSSR (1968)*, (Gazette of the Supreme Soviet of the USSR) No. 39, Item 351; confirmed in *Vedomosti SSSR (1968)*, No. 51, Item 488. Reproduced in English translation in Butler, Quigley.

18 Decree of the Russian Supreme Soviet, March 3, 1992, Article 8, published in *Rossiiskaya Gazeta*, March 25, 1992. Telephone and written communication with Dr Wim A. Timmermans, Documentation Office for East European Law, Leiden, Netherlands.

the sections of the Chapter are of limited import to the present study, and will not be discussed in great detail here[19].

3.4.3 Regulations for Navigation on the Seaways of the Northern Sea Route

The *Regulations for Navigation on the Seaways of the Northern Sea Route*[20] were approved by the USSR Minister of Merchant Marine on September 14, 1990. They were worked out in accordance with the USSR Council of Ministers Decision No 565 of June 1, 1990, and published, *inter alia*, in the Notices to Mariners.

Section 1 of the Regulations sets out definitions of: the Regulations, the Northern Sea Route[21], the Administration, vessel, special requirements, Administration Representatives and Marine Operations Headquarters.

Section 2 states as the goal of the Regulations:

> "... on the basis of non-discrimination for vessels of all States, [to] regulate navigation through the Northern Sea Route for the purposes of ensuring safe navigation and preventing, reducing and keeping under control marine environment pollution since the specifically severe climatic conditions that exist in the Arctic Regions and the presence of ice during the most part of the year bring about obstacles, or increased danger, to navigation while pollution of sea or the Northern Coast of the USSR might cause great harm to the ecological balance or upset it irreparably, as well as inflict damage on the interests and well-being of the North peoples."

The allusion to LOSC Article 234 is readily apparent, and indeed LOSC would appear to have been the inspiration behind the provisions[22]. Without going into the international law

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19 The translation in Butler and Quigley, *op. cit.*, includes an appendix reproducing a standard Soviet cargo insurance contract. Again, because it is mostly Western insurance interests and rules that are of interest for the present study, it has not been reproduced here.

20 *Regulations for Navigation on the Seaways of the Northern Sea Route*, approved by USSR Minister of Merchant Marine 14 September 1990, published by Head Department of Navigation and Oceanography, USSR Ministry of Defence, 1991, I-20903.

21 The NSR is defined in Section 1.2 as being bounded by the Western entrances to the Novaya Zemlya Straits and the meridian running north through Mys Zhelaniya, and in the east by 66°N and 168°58'37" W.

22 *Financial Security of Liability for Damage Inflicted by Ships in the Process of Navigation Along the Northern Sea Route, Foundation of Prospects for Sea Transport Development in the Arctic Regions Through to 2005* (Soyuzmorniiprojekt), Discussion Paper no. 40 972, UDK index 347.79, Report to the State Designing and Scientific Research Institute for Sea Transport, Moscow, October 1991. Approved by A.D. Kolodkin, chief legal advisor to the Russian government on the Northern Sea Route.

question of the status of the aforementioned Article or of regulation adopted pursuant thereto, suffice it to say that Section 2 contemplates, at least to some extent, the same ends as Canada's *Arctic Waters Pollution Prevention Act*, discussed below.

Section 3 deals with requests for leading of vessels through the NSR, which requests must be submitted *before* navigation through the Route has begun. Section 4 sets out requirements for vessels and command personnel, stipulating that the Master must have previous experience in ice navigation.

Section 5 is of particular interest with respect to insurance:

> "It should[23] not be permitted to navigate the Northern Sea Route to vessels that have not aboard a certificate of due financial security with respect to the civil liability of the Owner for damage inflicted by polluting [the] marine environment and the Northern Coast of the USSR."

Section 6 allows for inspection of vessels by government officials. Section 7 sets out the procedure for leading of vessels through the Route. Section 8 covers the administrative control of navigation through the NSR, while Section 9 gives authority to suspend navigation for purposes of safety or protection of the environment. Section 10 provides for removal of a vessel from the Route in the event of non-compliance with the Regulations.

Section 11 states that neither the Administration nor Marine Operations Headquarters shall be held liable for any damage caused to vessels or property arising from leading through the NSR, unless "guilt" can be proved. Whether this corresponds to the Western legal notion of "fault" is a question of legal interpretation of Soviet law, and far beyond the purview of this study. Lastly, Section 12 establishes a duty to notify of any pollution discharges.

Sections 5 and 11 are discussed further *infra*, under Protection and Indemnity Insurance.

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23 The word "should" in this context is somewhat unusual. It would have been more natural to employ "shall" in English legal formulation to express the mandatory idea regarding the certificates. This would appear to be a mistranslation of the Russian text, which apparently does contain an equivalent of "shall" and not "should": personal communication with Rune Castberg, Research Assistant, Russia and Eastern Europe Programme, Fridtjof Nansen Institute.

3.5 Para-legislative Measures Affecting Navigation Through the NSR

There are a number of para-legislative measures adopted by Russian authorities which come into play to a limited extent as regards insurance. They are given here by way of information to complete the picture. While Western insurers do not regard all of them as mandatory for insurance purposes, it should be pointed out that *Russian* authorities consider them mandatory, and that one should have this in mind when making plans to navigate through the area.

3.5.1 Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route

This is a set of technical specifications issued by the Northern Sea Route Administration in Moscow. It has been known for some time that the Russians have considerable expertise in building ships suitable for ice and severe conditions. While ship classification is well advanced in the West, insurers might consider taking a look at these specifications in assessing their risk or in setting their own requirements.

3.5.2 Guide to Navigation Through the Northern Sea Route

This Guide, a sort of self-appointed equivalent to the *Arctic Pilot*, etc., published by the Hydrographic Department in London, has been promised for a long time but is not yet available from the Northern Sea Route Administration. The Western guides which are available are not considered sufficiently reliable by Western insurers, as hydrographers have not had access to the region to survey the details of the Route[24].

The Guide will give information on the various services available along the Route:

- inspection/control check of the vessel to ascertain whether it is safe for sailing in Arctic waters;
- check of the competency and composition of the crew;
- presence and condition of steering and navigation equipment;
- presence of pollution prevention equipment;
- information on required services depending on the type of voyage, with respect to:

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24 This concern was expressed, *inter alia*, by Terje Holte of Assuranceforeningen Gard, Arendal, Norway. There is an *Arctic Pilot* covering the NSR region: *Arctic Pilot Vol. 1, Comprising the Coasts of the USSR from Mys Belyy Nos, Proliv Yugorskiy Shar to Mys Yakan Including Novaya Zemlya, Zemlya Frantsa Iosifa, and All the Islands Eastward to Novo Sibirskiye Ostrova*, 7th ed. (London: Hydrographer of the Navy, 1985), including 1992 Supplement. As mentioned, it is not considered sufficiently reliable.

- the pilot
- qualifications of the helmsman for navigating through ice
- recommendations of optimal course up to a certain geographical point at the request of the navigation service;

• hydrometeorlogical recommendations;
• plane- and helicopter-guided assistance;
• information on ice conditions and recommendations on which course to take:
  - with icebreaker assistance
  - with icebreaker and pilot assistance.

3.5.3 Rates of Charge for Leading Foreign-Flag Vessels Through the NSR

Guiding vessels through the NSR can take three forms: guiding of the vessel by an ice-breaker; guiding by means of a Russian pilot on board the foreign vessel; or towing of the vessel by a Russian icebreaker or other vessel. The Northern Sea Route Administration charges fees for guiding vessels through the NSR, similar to the fee vessels pay for going through the Panama or Suez Canal. Ship operators or masters can find out about current rates from the NSR Administration.

Pilot guiding is mandatory for all foreign vessels operating in the NSR, the fee for which is set based on distance. If a vessel is using the standard routes for mass navigation and has a pilot on board, the following are available at no extra charge:

• icebreaker assistance on request, if not required due to the fault of the crew;
• guiding by airplane or helicopter on request, if not required due to the fault of the crew;
• preparation of recommended routes;
• free use of communications systems (with the NSR Administration, ocean operations headquarters, shipping companies, etc.)

The rate of the fee for icebreaker escort depends on ice conditions at the time of passage, i.e., how much icebreaker assistance is required to get through, and on the type and size of the vessel. The NSR has been divided into three zones for fee purposes:

Zone A: NSR south of 78°N.Lat., between 60° and 90° E.Long. (Novaya Zemlya to Severnaya Zemlya)
Zone B: NSR south of 78°N.Lat., east of 90°E.Long. to 169°W.Long. (Severnaya Zemlya to the Bering Strait).
Zone C: All Arctic areas north of 78°N.Lat.

For transit sailing in two or more regions, the fee structure for Zone C is used.

When a vessel is not using the main route of the NSR, does not have a pilot on board or must request icebreaker assistance due to the fault of the crew, a daily rate is charged for the icebreaker from the time of the request until the icebreaker returns to its port of origin. The fee must be paid in convertible currency. The rate depends on the size of the icebreaker.

A number of other cost elements can arise during the voyage through the NSR. Rates are published in *Port Dues and Charges for Commercial Soviet Seaports*. These include:

- services of an ice helmsman, if the vessel does not already have one.
- maps and handbooks: these are required material and include marine charts for the various parts of the Route, pilot books, signals books, tide tables, sailing instructions, special atlases and other handbooks, as required;
- inspection/control check of vessels, occasionally done to prevent pollution, which can be made by the authorities at any port or along the Route, and the cost of which must be borne by the vessel;
- replenishing of bunkers in port: fuel plus filling charge;
- delivery of water.

3.5.4 Certificates Required on Board

A report published by the Russian State Designing and Scientific Research Institute for Sea Transport[25] lists a number of measures relating to navigation on the NSR. All of these relate to P&I liability, discussed *infra*. The legal status and enforceability of *all* of them remains unclear. One thing is known: the only two certificates of importance to Western insurers are the ones required under TOVALOP and CLC[26], at least as far as carriage of oil is concerned.

The "Certificate of Insurance or Other Financial Security in Respect of Civil Liability for Oil Pollution Damage"[27] is required for all vessels covered by the CLC, pursuant to Article VII of that Convention. Russia has, in addition, published instructions for its authorities relating to

25 Soyuzmorniiprojekt.

26 Both of these conventions are discussed in greater detail *infra*, under Protection and Indemnity Insurance.

27 Annex to the CLC.

certificate issuance[28]. These instructions would apply only in respect of Russian ships, as it is the insurer or the flag state authority which issues the CLC certificate[29].

The report also mentions a "Certificate on secured civil liability for oil pollution damage". Whether this is the TOVALOP certificate is not clear. The reader is referred to the discussion on TOVALOP and CLC *infra*, under Protection and Indemnity Insurance.

Lastly, the report mentions a "Certificate on insurance or other financial security of civil liability for oil pollution damage along the shipping lanes of the Northern Sea Route"[30]. It is submitted that this certificate would be irrelevant for the purposes of Western insurance for the NSR. The reader is referred to the discussion *infra* on national regulatory provisions.

3.6 Procedure for a Foreign Ship Wishing to Navigate the NSR

The procedure for a foreign vessel is set out in the *Regulations for Navigation on the Seaways of the Northern Sea Route*, discussed above. All foreign vessels must submit a request for leading through the Route to the NSR Administration, Marine Operations Headquarters[31]. The form and timing of the request will apparently be set out in the heralded *Guide to Navigation Through the Northern Sea Route*, when it is published of course. In the interim, a "reasonable period of time" prior to the planned navigation would be sufficient. Ship operators would be advised, as a practical matter, to allow an extra margin.

All foreign vessels must be led through the Route by a Russian escort. There is no choice on this matter, regardless of the ice class of the vessel. On certain portions of the Route, specified in the Regulations, there must be icebreaker escort with a Russian pilot on board the foreign vessel. The Regulations also make it clear that the vessel is at all times subject to the authority and orders of the Marine Operations Headquarters or anyone acting on its behalf.

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28 "Instruction about the procedure of certificate issuance about availability of proper security in the sense of Item 7 of the *International Convention on Civil Liability for Oil Pollution Damage, 1969*", sanctioned by Ministry of Sea Transport Order No. 105, June 13, 1975.

29 CLC, Article VII, para. 2.

30 Soyuzmorniiprojekt.

31 Section 3.

While this may seem like strict control, it is really not that much more stringent than what Canada imposes to control pollution in its Arctic waters. Both countries attempt, through slightly different methods, to keep a fairly close eye on the maritime traffic navigation in their northern waters.

As insurers would view compliance with the Russian regulations as part of the general category of "compliance with requirements set by law or public authorities" or, in some cases, as part of the safety regulations going to the general seaworthiness of the vessel, it would be a breach of the terms of the insurance contract not to comply with them, and would free the insurer from liability.

4.0 The Western Marine Insurance Industry and Its Potential Involvement in Navigation on the NSR

4.1 Historical Background

Marine insurance provides an essential service to the shipping industry. Merchant shipping would likely come to a halt if shipowners, charterers, cargo owners, etc., were not able to obtain some form of financial protection against marine perils. The system must be solid and provide some degree of certainty, yet flexible enough to deal with new situations as they arise, for example, new norms on oil pollution liability. It is a case of "heading into the future, riding on the past", as one insurer has put it[1]. In the past, marine insurance often involved taking an educated guess as to the risk of an adventure, in the days when voyages really were an adventure: ship technology was not what it is today, charts were minimal and more or less reliable, and so on. These days much of that type of guesswork has been removed. Nonetheless, the Arctic remains a largely unknown factor in the calculations. If insurers, who deal with risk assessment every day, have difficulty quantifying the risk, it is even more tricky for arbitrators and courts, trained in law, to decipher what can be essential to the policy and what is not.

It is not known exactly how far back marine insurance dates, but it is known that it is the oldest form of insurance. Some sources have put it as far back as 215 B.C.[2]. The modern era of marine insurance can be said to have begun in the late fifteenth century in London. A man by the name of Edward Lloyd, who was actually never an insurer at all, ran a coffee house. The coffee house served as a meeting place for various business parties, who came there and met to discuss the possibility of mutually protecting each other against marine perils. These grew into the early "hull clubs", which later grew into the Lloyd's insurance market. It was not until the late 1800s that non-marine insurance was first introduced into this market.

The Western marine insurance industry has not traditionally included heavy-ice navigation in its standard coverage. English legislation does not deal with it specifically. The Institute Cargo Clauses do not deal with ice specifically, although (B) and (C) 1.1.4 have been interpreted as including cover when the vessel collides with ice. The Institute Voyage Clauses - Hulls gets no more specific than to state "perils of the seas" as being among its named perils. A review of the related case-law and literature does not reveal any in-depth development of coverage regarding ice, other than to reinforce the insurer's belief that a vessel should not venture into it. Norwegian

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1 Rolf Berentzen, Gjensidige Forsikring, Lysaker, Norway.

2 Chouinard, J. in *Triglav* v. *Terrasses Jewellers Inc.* [1983] S.C.R. 283 at 294 quoting Arnould in Dover, *A Handbook to Marine Insurance*, 5th ed. (London: Whitherby, 1957) at 1-2; cited in Spears, at 106.

rules deal with some types but does not address all ice situations that would arise in the NSR. Canadian rules, traditionally, mirror the English rules. Underwriters, however, are in the risk business. Insurers in Canada have begun to underwrite Arctic risks, and it is submitted that insurers in other countries could follow suit.

One thing the Western marine insurance industry has done traditionally is follow market forces, including the law of supply and demand. Thus, when there are only a few insurers underwriting a risk such as NSR navigation, i.e. a situation of high demand and low supply, the price will tend to be high. As the market develops, and more underwriters join in, thereby increasing supply, the cost of insurance should logically come down, assuming demand remains constant. If underwriters begin to withdraw cover from NSR trade for whatever reason, thereby reducing market capacity, premiums will logically move up. Likewise, substantial losses sustained on NSR trade will cause premiums to rise for a period as underwriters attempt to recoup their losses. This is the mechanical side of the issue; there is also the degree of risk which figures into the premium, as will be discussed presently.

4.2 Principles of Marine Insurance

Marine insurance is a maritime reflection of insurance generally:

> "A contract of insurance in the widest sense of the term may be defined as a contract whereby one person, called the "insurer", undertakes, in return for the agreed consideration, called the "premium", to pay another person, called the "assured", a sum of money, or its equivalent, on the happening of a specified event."[3]

In a contract of marine insurance the insurer undertakes, in consideration of the premium, to indemnify the assured against loss occasioned by perils incident to a marine adventure[4].

Since it is a contract, it is necessary that the parties understand each other with regard to the substance of the agreement. For example, it has always been common for a Western policy to contain a clause forbidding navigation in ice-infested waters, hardly much help for the NSR. Russians, for their part, consider ice navigation as routine. This point should be cleared up by being dealt with explicitly and in detail in the insurance contract, so that there truly is a "meeting of the minds", an elemental requirement for a contract in most legal systems.

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3 Ivamy (General Insurance), at 3.

4 See Ivamy (Marine Insurance), at 4; also the British *Marine Insurance Act 1906* (MIA) s. 1.

Some basic principles are common to all Western marine insurance markets, regardless of country or, in some cases, legal system.

To avoid gaming or wagering, insurance rules require that the insured have an actual pecuniary interest in the subject-matter of the insurance[5]. In other words, the occurrence of the event insured against in the policy must be such that it would cause the assured economic loss. It is important to keep in mind that an insurance policy is a contract of *indemnity*.

To ensure fair, ethical business practice, the insurer and assured each have certain duties towards each other. In practice, there is often also a third party in the picture: the broker, who has special duties to perform as well. Some of the various duties mentioned below are fairly self-explanatory and do not require lengthy discussion for the present purposes. Others, however, do require some elaboration and, where appropriate, this has been done.

The principal duties of the assured are: to pay the premium, to disclose all facts material to the risk to the insurer, to respect all warranties in the insurance contract to the letter, to act as a prudent uninsured when a disaster occurs, and to assist the insurer as much as reasonably possible in investigating a casualty. The first, third and last of these are discussed in detail below.

The principal duties of the insurer are: to provide insurance coverage upon the happening of a peril insured against. This is apparent throughout this report.

The broker, the go-between of the underwriter and the assured, must: obey the principal's instructions; use proper care and skill in carrying out the various duties associated with the broker function; and duly carry out the transaction[6]. These also are discussed below.

One further principle will be discussed here, as it is central to the marine insurance contract, and its importance cannot be overstated.

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5 See, for example, the English rule in MIA s. 4, and the Norwegian rule in the *Norwegian Marine Insurance Plan* (NMIP) §6.

6 See generally, Ivamy (Marine Insurance), Chap. 5.

A cornerstone precept of marine insurance law is that the contract of marine insurance is *uberrimae fidei*, that is, based on the utmost good faith. This goes to the duty of the assured to disclose material facts[7]. *All* material information to which the assured has access must be disclosed, even if there are reasonable grounds for doubting the correctness of the information, or even if the information turns out on later analysis to be untrue[8]. What is material or not is a question of fact[9]. A practical matter in the case of the NSR has been the paucity of information in the West. The principle in Western marine insurance law, however, would appear to be clear: insured parties must relay whatever information they have, and let underwriters form their own opinion[10].

Various sections of the MIA and NMIP nuance what each system has believed to be important in disclosure. The MIA, for example, in s. 18, excuses the assured, for example, where a circumstance diminishes the risk[11], or the insurer can be assumed to know of the circumstance, or has waived the circumstance as affecting the risk. S. 20 sets the rules as to representations pending the conclusion of the insurance contract. As to the NMIP, §28 inculpates an insurer who was privy to the non-disclosure, and §29 imposes a duty to give prompt notice to the assured of his/her intention to invoke §26 or §27. §28 also prevents the insurer from invoking §26 or §27 when the circumstances are no longer material. §30 is of greater importance in relation to the NSR: it places a duty on the assured to inform and to keep the insurer informed regarding the condition and classification of the ship. This last point will be discussed in greater detail further on.

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7 MIA ss. 17-21, NMIP §§ 24-30. See Ivamy (General Insurance), at 132-170; Ivamy, (Marine Insurance), at 39-70; Bull, at 101-104. Similar provisions are found in the Norwegian Cargo Insurance Plan (NCIP),
§§ 35-41, but the Plan is apparently not widely used in practice any more.

8 Ivamy (Marine Insurance), at 40.

9 Generally, Ivamy, *ibid.*, at 40 *et seq.*

10 This is more apparent in the Norwegian rule than in the English one. NMIP §24 imposes a duty on the assured to "... make full and correct disclosure of all circumstances of importance *to him* [the insurer] ..." (emphasis added). Compare MIA s. 18(1) which would appear to set a more objective test for materiality by imposing a duty on the insured to disclose every "material circumstance", while s. 18(2) gives an objective definition of material: "Every circumstance is material which would influence the judgment of a prudent insurer in fixing the premium, or determining whether he will take the risk."

11 An example would be when a ship sets sail at a more favourable sailing time than the one stated in the policy. Note, however, that sailing time should be strictly adhered to as a rule, since it is crucial in the measure of risk. Another example might be a ship having a higher ice class than stipulated in the policy, in the event of a floating policy.

Examples of circumstances considered material under English law, and which could become pertinent in NSR navigation, include: previous claims record, even if it be inaccurate, incomplete or misleading[12]; sailing orders which fetter the discretion of the master of the vessel, for example, extraordinary instructions given by public authorities to proceed along a certain route instead of the route originally reported to the insurer, in which case liability can be avoided on the grounds of either non-disclosure or deviation (if not reported)[13]; and date of sailing[14].

The effect of non-compliance with this rule will hinge on where the policy has been taken out. English law would appear to take a harsher stand on non-disclosure: the effect is simply loss of coverage[15]. Norwegian rules take a graduated approach: NMIP §25 provides that where the non-disclosure was fraudulent or dishonest, the contract will not be binding on the insurer. §26, first paragraph provides that where the insurer would not have accepted the risk at all had full disclosure been made, the contract is not binding; paragraph 2 provides that if the insurer would have accepted the risk but on different terms, i.e., higher premium, then liability shall only lie to the extent that the loss is not connected to the non-disclosure; the same applies where there has been non-disclosure subsequent to the conclusion of the contract. In either of these last two cases, paragraph 3 allows the insurer to terminate the insurance on seven days' notice. §27 allows reprieve for the assured where the non-disclosure is attributable to someone other than the person affecting the insurance.

Tied into the notion of disclosure is that of misrepresentation, as contemplated in MIA s. 20. NMIP does not deal specifically with misrepresentation. Misrepresentation differs from non-disclosure in that in the case of non-disclosure, the assured has not divulged information s/he was under an active duty to do. Misrepresentation consists of statements uttered spontaneously by the assured or in response to questions put to him by the insurer[16]. Beyond this difference, the character and effects of misrepresentation are largely the same as for non-disclosure; what is a material misrepresentation is a question of fact[17]; the effect is loss of coverage[18], etc.

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12 *Container Transport International Inc and Reliance Group Inc* v *Oceanus Mutual Underwriting Association (Bermuda) Ltd* [1984] 1 Lloyd's Rep 476, CA; cited in Ivamy (Marine Insurance), at 59.

13 *Middlewood* v *Blakes* (1797) 7 Term Rep 162, cited in Ivamy, *ibid.*, at 56.

14 *Inter alia*, *Westbury* v *Aberdein* (1837) 2 M&W 267; cited in Ivamy, *ibid.*, at 57.

15 MIA s. 18(1) *in fine*.

16 Ivamy (Marine Insurance), at 71.

17 MIA s. 20(3).

18 MIA s. 20(1). See also the discussion on express warranties and representations, below.

4.3 Classes of Marine Insurance

This report seeks to give as complete a picture as possible of the insurance possibilities for the NSR. Thus, in some cases, it will be Russian vessels on charter to foreign interests that are discussed, while in others it may be useful to consider a foreign vessel travelling through the NSR with its own crew. Cargoes may be foreign or Russian, on foreign- or Russian-run ships. The possibilities are many. It will be evident from the examples which scenario is contemplated. The three principle categories of insurance: hull, cargo and P&I, are discussed in their own chapters later in the report. A brief description of some other kinds of insurance which are available on the market, and which could become pertinent in relation to the NSR, is in order.

4.3.1 Loss-of-Hire and Loss-of-Use Coverage

Loss-of-hire insurance is a form of coverage whereby the shipowner seeks to cover the loss of income incurred while the damaged ship is laid up for repair. NMIP Chapter 20 sets out some rules for loss-of-hire, apparently not much used in practice[19], while the English MIA does not set out any particular rules. Loss-of-hire belongs most logically with a time policy[20] but, as will be pointed out below, there is some room for creativity.

Economic loss relating to loss of business venture is not something normally included in a marine insurance policy, which relates more to compensating the physical damage caused to the vessel and/or the cargo. Loss of earnings resulting from the ship being off-hire is normally referred to as demurrage and is covered by the ship's P&I club, depending on the rules of the individual club. Normally, however, it is only direct liability and not the full extent of lost earnings that get covered. Some loss-of-hire protection can be included in a hull and machinery policy, to hedge against the loss of income while the vessel undergoes repairs. It is a precondition of cover that the vessel be damaged by a peril insured against in the hull policy.

In assessing the risk for the purpose of loss-of-hire cover, an underwriter will look at such things as the past record of the particular trade, the availability of similar class vessels, the general situation in the shipping market at the time, and the rates charged for hire. There is the legal question of what constitutes delay enough for payment of loss-of-hire to be justified, and when the hull insurer should even cover the loss-of-hire in the first place. By way of example, in Canada, a bridge collapse caused damage to vessels in St. Lawrence Seaway. It has been suggested that the resulting loss of operating opportunity not be covered by the hull insurer, since

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19 Bull, at 22-23.

20 As a parallel, see Institute Time Clauses - Hulls, Cl. 22, which provides for return of some of the premium during lay-up and cancellation. The provision is absent from the Voyage Hull clauses.

the damage to the vessel did not result from a peril covered under the hull policy[21]. Both the time period and the indemnity are tied to actual damage to the vessel.

Lost vessel-use time can occur in the Arctic in [at least] two ways.

One is where an ice-strengthened or ice-breaking vessel is physically damaged or otherwise put out of service from a specifically insured peril while in the ice-ridden area. This first scenario easily comes within the hull cover, provided of course that the ship operator has been vigilant enough to include a loss-of-hire clause in the hull policy.

The other scenario is where a vessel becomes caught in the ice without suffering any physical damage, but is nonetheless unable to move. Although there is no actual damage to the vessel, the loss of use during this time, which could conceivably run over a whole winter into the following spring, could cause the operator great financial hardship. Cover for this type of situation would not come within the hull loss-of-hire provision; it would have to be negotiated as separate loss-of-use cover, on either the marine or non-marine market. Underwriters would examine such factors as the income to be derived from a particular operation and the probability of trouble on the route, in fact in a similar manner to those underwriters who evaluate for loss-of-hire cover. The principal difference resides in the fact that this latter type of cover is intended for economic loss resulting from delay only, unrelated to the physical condition of the ship. Its form is actually quite flexible and it can encompass a very wide range of incidents and economic factors to be included in the cover, factors which may or may not be related to physical damage of the vessel or cargo, but real nonetheless. The legal implications of this flexibility are, of course, potentially nightmarish, as this area of the law is less established than, say, the Institute Clauses. Nonetheless, loss-of-use cover could be a boon to adventurous ship operators, to cover new types of catastrophes in a what is still a fledgling area of shipping - and maritime law[22].

Another form this flexibility could take could be in the form of loss-of-use where the ship is insured under a voyage policy. It has been suggested in this report that the most likely form of cover for the time being for the NSR would be voyage policies only, until the market grows more accustomed to the idea. The loss of use of the ship for a time will still mean hardship for the ship operator, regardless of what type of policy the ship is on. Loss-of-use cover could fill this gap.

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21 Spears, at 113 *et seq.*

22 Credit must go to Joseph Spears for the creative ideas of this section. I have allowed myself to elaborate somewhat on them.

4.3.2 War and Strikes Risks

In all types of marine insurance, war coverage is separate[23]. In most countries, war risks are covered through mutuals, as in Norway. A mutual operates on the idea of groups of parties with common interests pooling resources to cover each other in the event of disaster. On the London market, war coverage is assured both through the many Lloyd's syndicates, and through some mutual societies. On the Norwegian market there is the mutual, Den norske krigsforsikring for skib. Cargo war cover is ensured by Statens Varekrigsforsikring[24].

War cover in its traditional sense has been expanded in the past few years to cover perils relating to hostilities and other "less-than-war" situations. Given the upheaval that has taken place in some parts of the former Soviet Union, some parties - those financing a vessel, owners of goods on board a vessel - may require or wish a vessel or cargo to have war cover. It will be discussed briefly here for the purpose of pointing out that it exists and that it could be used for the NSR.

English law, with its named perils system, will not *prima facie* cover war risks anyway, as cover is, as a matter of methodology, limited to the named marine perils. War cover is obtained through use of a set of special Institute Clauses, complementary to the general Institute Clauses. The extent of cover will depend on whether the subject-matter insured is cargo, hull or freight (that is, freight income of the ship-owning or ship-operating assured). A typical clause, such as the Institute War and Strikes Clauses (Hulls-Voyage) covers the following:

1) war, civil war, revolution, rebellion, insurrection, or civil strife arising therefrom, or any hostile act by or against a belligerent power;
2) capture, seizure, arrest, restraint or detainment, and the consequences thereof or any attempt thereat;
3) derelict mines, torpedoes, bombs or other derelict weapons of war;
4) any terrorist or any person acting maliciously or from a political motive; and
5) confiscation or expropriation.

By way of comparison, the Norwegian clauses, according to all-risk methodology, would incorporate war risks were it not for NMIP §15 explicitly excluding: a) the perils comprised by an insurance against war perils, as set out in NMIP §16; b) measures taken by Norwegian or allied State authorities, in which event the State authority is expected to compensate; c)

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23 NMIP §§ 15, 16 and 17. English marine insurance achieves coverage through a series of separate Institute War Clauses, see Ivamy (Marine Insurance), at 526 *et seq.*

24 Bull, at 31.

insolvency, which is also excluded by the marine clauses. There is also NMIP §17 which restricts policies to marine perils only, unless otherwise stated.

War coverage under NMIP §16 then:

"**§16. Perils comprised by an insurance against war perils.**

An insurance against war perils comprises:

(a) perils attributable to war or war-like conditions, or to the use of arms or other implements of war in the course of military manoeuvres in time of peace or during armed neutrality,

(b) capture at sea, condemnation in prize, confiscation, requisition for title or use and other similar measures taken by alien State authorities. By alien State authorities is understood authorities of States with which Norway is not allied, and persons and organisations who lawfully pretend[25] to be exercising public or governmental authority,

(c) civil commotions, strikes, lock-out, sabotage and the like,

(d) piracy and mutiny.

The insurance does not comprise insolvency.

Where the subject-matter to which the interest attaches is temporarily seized or requisitioned for use by alien State authorities, the insurance also covers those perils which according to §15 are comprised by an insurance against marine perils."

Four things should be noted about the preceding paragraph[26]. Firstly, sub-paragraph (a) covers war *or war-like conditions*, meaning that near-war situations, conflict, etc., could be brought within the provision. If, for example, unrest were to break out between former republics, portions of republics or whatever other political entity that might crop up along the NSR, an assured whose vessel was damaged in the fray could seek compensation from a war risks insurer. Secondly, the last part of sub-paragraph (a) covers the use of arms even in peacetime, meaning that a vessel damaged by an armed corps on a peacetime exercise would be covered. Thirdly, sub-paragraph (b) covers generally unfriendly acts carried out by an "alien State authority". Forces officially allied with Norway easily fall outside cover, and would be expected to compensate a damaged vessel themselves. NATO and EEC forces as well, would *prima facie* not

25 It is submitted "purport" would be a better word here than "pretend", which denotes a lack of belief in one's authority to exercise the power in question. The term in the original Norwegian text is "utgir seg", which corresponds more closely to "purport" than to "pretend".

26 Bull, at 66 *et seq.*

be considered alien[27]. Fourthly, piracy and mutiny are covered by war insurance under sub-paragraph (d).

Where the loss has been caused by a combination of perils, §NMIP 20 provides that they will be covered by the respective insurers on a *pro rata* basis. In practice, this provision is little used; it does not find favour with insurers, and courts find it somewhat unwieldy to apply. A major exception to the rule in §20 lies in NMIP §21, which stipulates that where a marine or war peril has been the dominant cause of a loss, it shall be deemed to be the only cause; where it is not possible to determine a dominant cause, the loss shall be attributed equally to the two. One last pertinent rule is NMIP §18, para. 2, which sets out that even war damage which only manifests itself later, after the war cover has been lost, shall simply be billed to the marine insurer, the so-called "anti-Hektor" clause, after a case which caused many a headache for courts and jurists[28].

In both types of systems, most of the case-law turns on whether the loss was caused by a peril falling in the "war risk" category. The war-risk insurer would rather see the usual (peacetime) insurer cover the loss, and *vice versa*. Also in both types of systems, the burden of proving the loss results from a war risk lies upon the assured[29]. Often in practice, the assured will receive compensation from one of the two insurers, who will then "thrash it out" in negotiations, arbitration or court.

Examples[30] from English cases where acts have come within the meaning of "hostilities or warlike operations" included in war risks include: a commercial vessel being run down by a warship[31]; a commercial vessel in convoy coming into collision with a warship, on its way to a convoy[32]; and damage caused to a vessel carrying supplies for forces engaged in war operations[33]. Norwegian rules would arrive at a similar finding, provided that the damage was caused by an alien power as defined by NMIP §16(b), in light of NMIP §41.

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27 Note also NMIP §41, pursuant to which both marine and war risks insurance are suspended upon the ship being requisitioned by Norway or an allied power. Marine risks insurance becomes inoperative also where an alien power requisitions the ship (cover goes over to war risks).

28 ND 1945.103 *NV Hektor*.

29 Ivamy (Marine Insurance), at 207; NMIP § 19.

30 See, generally, Ivamy, *ibid.*, at 199 *et seq.*

31 *A-G* v *Ard Coasters* [1921] 2 AC 141, HL.

32 *Liverpool and London War Risks Association* v *Marine Underwriters of SS Richard de Larrinaga* (1921) 7 Lloyd's Law Rep. 151, HL.

33 *Atlantic Transport Co* v *R: The Maryland* (1921) 9 Lloyd's Law Rep. 370, KBD; *Hindustan Steam Shipping Co* v *Admiralty Comrs* (1921) 8 Lloyd's Law Rep. 239, KBD; *Eagle Oil Transport Co* v *Board of Trade* (1925) 23 Lloyd's Law Rep. 301, KBD (commercial oil tanker colliding with Government oil tanker); *Athel Line Ltd* v *Liverpool and London War Risks Association Ltd* [1946] KB 117, [1945] 2 All ER 694, CA (commercial vessel carrying cargo oil torpedoed while at anchor); *Yorkshire Dale SS Co Ltd* v *Minister of War Transport, The Coxwold* [1942] AC 691, HL.

Examples of operations which English courts have held not be "warlike" include: a vessel carrying a few troops on board, while on an otherwise commercial expedition[34]; a collision between vessels in ballast, even though they have just finished carrying supplies for war operations[35]; and a commercial vessel carrying raw materials to be used in the manufacture of arms[36].

Norwegian examples[37] of war risks include: a ship sailing outside its usual route to avoid submarine attack[38]; and damage to a ship caused by a mooring line on the bow of another vessel used to avoid running into mines in the water[39].

Sub-paragraph (c) *in fine*, of the Norwegian rule, "and the like", has been interpreted widely, to include acts of sabotage, defined as the causing of damage to a ship for the purpose of attaining a social or political goal. Clear enough as this may appear, it is not settled how to categorise near acts of sabotage. In one case there was a declaration of a bomb having been placed on a ship from Norway to Copenhagen, which turned out to be false. Nonetheless, expenses for checking the ship, etc., had been incurred. An arbitral tribunal held this to be a marine peril. In another case, a similar situation involving the Palestinian Liberation Organisation (PLO) led to a finding of war peril[40]. *Quaere*: what of similar acts occurring somewhere in the NSR region? It is submitted that an arbitral decision would lean towards terming such acts war perils, perhaps partly due to a lack of familiarity with the region, perhaps partly due to a vestige of Cold War feeling, but much will depend on the arbitrators and how the lawyers for each side present their case.

As evidenced by the above line of cases, it can be difficult to predict whether a court will place a situation in a war category or not. A guiding rule can be the conceptual proximity to actual war operations. It can also be assumed that near war-like situations and acts of hostility will be covered by war risks, as they are explicitly mentioned.

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34 *Harrison's Ltd* v *Shipping Controller* [1920] 1 KB 122, KBD.

35 *Wynnstay SS Co* v *Board of Trade* (1925) 23 Lloyd's Law Rep. 278, KBD.

36 *Clan Line Steamers Ltd* v *Liverpool and London War Risks Insurance Association Ltd* [1943] KB 209, [1942] 2 All ER 367, KBD.

37 See, generally, Bull, at 67 *et seq.*

38 ND 1941.204 Oslo *Heimvard*, although the loss was shared by the marine and war risk insurers, as the ship was held to have sailed too fast for prevailing conditions.

39 ND 1944.33 *NV Vestra*. Although the collision itself was held to be due to nautical mistake by the German vessel, and was charged to the marine insurer, the portion of the loss attributable to the mine-stopping line on that vessel's bow was charged to the war risks insurer.

40 Notes from lectures in marine insurance, maritime law course, Scandinavian Institute of Maritime Law, Autumn 1992.

Damage caused by nuclear weapons is explicitly excluded by all types of clauses. For English rules, see Institute War and Strikes Clauses (Hull-Time) and (Hull-Voyage), Clause 4.1.1[41]; Institute War Clauses (Cargo), Clause 3.8[42]; and Institute War and Strikes Clauses (Freight-Time) and (Freight-Voyage), Clause 4.1.1[43]. Norwegian NMIP hull rules do not explicitly exclude nuclear damage or loss, but insurers will often insert this in the contract anyway[44]. P&I rules specifically exclude nuclear loss and damage through NMIP §224, para. 2. See also the discussion involving nuclear damage below under hull and P&I.

Turning briefly to strikes, Clause 1 of the Institute War and Strikes Clauses (Hulls-Time) and (Hulls-Voyage)[45] provide that cover extends to loss of or damage to the vessel caused by "strikers, locked-out workmen or persons taking part in labour disturbances, riots or civil commotions". The Institute Strikes Clauses (Cargo)[46] exclude riots and civil commotions, but add "any terrorist or any person acting from a political motive". Institute War and Strikes Clauses (Freight-Time) and (Freight-Voyage)[47] covers the same as the hull clauses and adds: "any terrorist or any person acting maliciously or from a political motive" and "confiscation or appropriation".

NMIP §16 (c) provides that damage owing to civil commotions, strikes, lock-outs, sabotage, and the like, are covered under a war-risks policy. This last part of the provision has been discussed above. In addition, NMIP Chapter 21 sets out some explicit provisions relating to how strike cover is carried out, basically providing that the cover extends to direct expenses for running the ship for the duration of the strike; that the insurer is free from liability if the assured should have known about the strike, and that the assured has the usual duty to minimise the loss associated with the strike.

What direction these various provisions would take in the NSR is a matter of conjecture. The political situation at the time, what operations are carried out in response to an emergency, the nationality of the workers involved in a strike, and other factors can all come into play in the legal assessment of the clauses.

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41 Ivamy, (Marine Insurance), at 547 and 549.

42 Ivamy, *ibid.*, at 527.

43 Ivamy, *ibid.*, at 558 and 560.

44 See, for example, Cefor Form 235 A, Cl. 1. While this is not a war risks policy, it is to be expected that an insurer would insert this or a similar proviso even into a war risk policy, in the same manner as English insurers.

45 Reproduced in Ivamy (Marine Insurance), at 547-550.

46 Reproduced in Ivamy (Marine Insurance), at 530-532.

47 Reproduced in Ivamy (Marine Insurance), at 558-561.

4.4 The Assured-Broker-Insurer Relationship

The hull and cargo marine insurance contract is, in practice, not a purely two-sided affair. In between the insurer and assured comes a third party: the marine insurance broker. Very seldom do the assured and underwriter actually come in contact; the broker acts as a go-between and agent for both claims and the placing of insurance. On the Lloyd's market, business may only be conducted through a Lloyd's broker. Since most of the world's insurance goes through the London market in one way or another, brokers in the various countries usually have formal connections established with a brokerage firm on the Lloyd's market. Thus, in the case of a foreign policy, coming from, say, Norway or Canada, there are actually four parties: assured-broker-broker-underwriter. It is always possible, of course, for the assured to deal directly with a brokerage firm on the London market. Shipowners in Russia may wish to deal with a London firm directly. Alternatively, they may wish first to establish contact with Canadian shipowners or insurance firms, who are likely to have more experience in Arctic insurance. Yet again they may choose a Norwegian company, which is closer to home and has experience relating to navigation in ice and in Northern areas generally. Much will turn on the individual needs of the shipowner, Russian or of whatever nationality.

4.4.1 The Marine Insurance Broker

As mentioned above, the broker has three basic duties: to obey the principal's instructions; to use proper skill and care; and to carry out the transaction.

In the discussion earlier regarding good faith and full disclosure by the assured, the generic term "insurer" was mostly used, so as to designate generally the person on the insuring side of the contractual fence. In fact, as just mentioned, it will be the broker with whom the assured mostly deals. The duty of disclosure by the assured plays an important role in this connection. The broker must be supplied with all information the assured has which is relevant to the trade, so as to give the broker an accurate picture of the potential risks. It is only after the broker has collected all relevant information that an underwriter can be approached.

One of the most vital pieces of information regarding NSR cover will be the past loss record. The broker may have to approach several different markets to obtain cover for a very large risk, for example, large oil shipments, or a number of Russian vessels at once. While the broker can attempt to present the risk as positively as possible, it is important that they be able to answer an underwriter's questions. To do this, they require complete information, especially when they must deal in a specialised risk like Arctic shipping. Put another way, the underwriter may set the premium overly high in relation to the real risk if complete information is lacking. An underwriter is a naturally cautious person and, when in doubt, the premium will be most likely

be revised upwards, not downwards. Moreover, while the broker acts primarily for the assured, a general duty of reasonable skill and care is owed to the underwriter as well[48].

The broker also acts for the assured in the settlement of claims. If the claim is very complicated, it may be referred to average adjusters, who are paid by the underwriters. Here again, the broker must be able to give the adjusters complete information. The assured-broker relationship is a dynamic, ongoing one.

There is no reason why brokers acting for Arctic coverage would be in any different *legal* situation than when they broker for non-Arctic navigation. The differences that stand to materialise have more to do with transcendency of cultures and business practices. For example, when the shipowner is Russian and the broker is in London and has no knowledge of either the Russian language or way of thinking, the situation is ripe for misunderstandings, for example, as to the content of instructions given to the broker. No case-law has materialised on this point yet, but may do so as this market is developed. Most of the case-law canvassed appears *prima facie* to have found fault with brokers and held them liable for damages, with regard to both instructions and the duty of care[49].

4.4.2 The Insurer/Underwriter

The insurer is a person, natural or legal, who agrees to cover a potential risk. The idea behind this activity is to make a profit, i.e., to reap in higher premiums than what one has had to pay out in claims. The term "underwriter" arose because under the old form of Lloyd's policy, that is literally what the person who agreed to cover the risk did: they wrote their name at the bottom of the policy. If there were several insurers, each covering a portion of the risk up to a certain amount, they would add their names to the bottom of the list until the full amount was covered.

Nowadays, the mode of underwriting varies. In London, the traditional method of "Names" is still used, although changes are under way. In Norway, the risk is spread through the major insurance groups through the underwriting by the central hull committee. In Canada, it is largely ensured through corporations, and the underwriter is a person authorised to bind the corporation[50]. For a new type of risk like the NSR, the insurer will have to examine the risk from all angles, establish what types of legal provisions must be included and, not least, set a premium commensurate with the risk.

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48 Ivamy (Marine Insurance), at 33.

49 See, for example, Ivamy (Marine Insurance), at 32 *et seq.*

50 Spears, at 119.

The lead underwriter is the most determinative party with regard to whether or not the risk is underwritten at all and, in the affirmative, at what premium. In an ideal situation the lead underwriter is very familiar with the risk, so that when the broker comes and presents a case for cover, the underwriter is aware of all the possible pitfalls that may crop up. In the case of the NSR, however, it is a completely new risk. If the underwriter perceives a high degree of risk or if, due to incomplete information, has a false perception of the risk, a higher premium may be charged than is actually necessary. The legal side of the whole operation is new, too. Clauses imposing duties on the parties have not received a run-through in interpretation. Whole new sets of clauses may be needed, based on information from experts in Arctic conditions, lawyers and underwriters who have some experience in ice risks.

Underwriting does have the virtue of being a flexible process. Moreover, the market is competitive. What one underwriter is not willing to take on, another underwriter may be only too pleased to derive premiums from, especially if it appears more business will follow. Since a broker is under a duty to act in the assured's interest, that implies the freedom, indeed duty, to shop around for the best possible rate[51]. Part of the problem for NSR cover is that there are few people around who are experts in underwriting Arctic risk, due the relatively small volume of traffic up to now.

4.5 The Insurance Markets and Their Legal Backgrounds

4.5.1 The London Market

Risks on the London market are covered, literally "underwritten", by Names. The List of Names is a compilation of names of wealthy people who agree to absorb the loss in the event of a specified event, the consideration of which agreement is the premium. While the earning potential from premiums is great, personal liability to cover catastrophes is unlimited. Names are screened and approved by Lloyd's. Lloyd's is actually a huge insurance market, not a single corporation, as is often believed, and dates back to 1687. The number of Names on the Lloyd's list has dropped drastically in the past few years[52], due to heavy losses on various insurance fronts. Enormous natural catastrophes, along with ship sinkings, groundings and oil spills of unprecedented magnitude have led to major losses on the Lloyd's market, and a corresponding decline in the number of Names. A restructuring introduced in 1993 allows, for the first time,

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51 R. Flower, *Lloyd's of London* (London: David and Charles, 1974); cited in Spears, *ibid.*, at 121.

52 Some sources estimate the number of names to have gone down by half over the past five years. Personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

limited companies to invest in the Lloyd's market, thereby scrapping the once-sacred principle of unlimited liability[53].

This does not bode well for the NSR. One possibility might be for the Norwegian market to pick up where the English market has left off. Another possibility might be for the English market to follow the Canadian example and begin using a set of advisory rates for Arctic shipping. A set of rates has, in fact, been worked out for Northern Russian Waters east of Kola Bay and as far in as the Kanin Peninsula. This would not cover the NSR, however.

Marine insurance in England is covered by legislation: the *Marine Insurance Act 1906*[54]. The Act sets out fairly detailed rules, and is accompanied by rules of construction to assist in interpretation. The Act, used together with the Institute Clauses[55], which deal more specifically with hull, time and voyage policies, cargo, etc., make up the bulk of the legal framework governing English marine insurance law, completed by case-law, of course. It is, in this respect, quite different from Norwegian marine insurance, which relies instead on privately drawn up rules, and where the role of legislation and case-law is much more limited.

The most usual form of a hull insurance policy is the standard Lloyd's Marine Policy or Institute of London Underwriters Companies Marine Policy, incorporating the appropriate Institute Clauses, much the same way a Norwegian Cefor form refers to certain sections of the NMIP.

Premiums for hull insurance are drawn up by the Joint Hull Committee. The premiums are not binding, legally or otherwise, but in practice are generally followed. This is true on all three of the markets discussed in this report, which means that eventual policy-holders are free to attempt to negotiate lower premiums if they wish. Likewise, hull insurers are free to undercut the competition, albeit at their own risk and peril. This is not likely for the foreseeable future with regard to insurance for the NSR. P&I is insured through the various clubs on the London market.

As regards applicable law, the most likely scenario in the case of an English insurer would be that there would be a choice-of-law clause in the insurance contract stipulating English law as the applicable law governing the policy.

If needed, Canadian law and practice could be referred to by underwriters and eventually anyone else called upon to interpret the insurance policy. Under Common Law, English law can

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53 "Lloyd's plans £200m cut to rescue market", article by Pauline Springwell, Guardian Weekly, May 9, 1993, at 21.

54 *Marine Insurance Act 1906*, 6 Edw c 41 (MIA).

55 Where mention is made herein of the Institute Clauses, it is in reference to the Institute Clauses as at 1/10/83, as reproduced in Ivamy (Marine Insurance).

and has been used as precedent in Canadian law. The reverse has generally not been true, mainly for historical reasons, and technically there is no reason why not. Commonwealth countries regularly cite each other's case-law in support of an argument[56], although it is English case-law which carries the greatest precedential weight. Furthermore, it is submitted that this would be a most logical step in the case of Arctic marine insurance, as it is Canada that has the most experience and precedent to offer in this field. This could lead to different results in some instances, as will be discussed below.

4.5.2 The Norwegian Market

Norwegian hull insurance is largely determined by a set of privately drawn up rules, the Norwegian Marine Insurance Plan[57], and the accompanying *travaux préparatoires*[58], both of which are presently undergoing revision. While the provisions of the plan are not mandatory, in practice they are widely followed in the industry, and an established legal practice has been built up around them. A technical legal difference from the English MIA is that while the MIA will apply as a matter of law where the parties have not provided for a given situation, and in some cases even where they have so provided but contrary to a mandatory provision of the MIA, the NMIP has no such status; it applies only insofar as the parties expressly incorporate it into their contract. Insurer and assured ultimately remain free to draw up their own rules, and this is not an unknown phenomenon. Clauses are often customised variations of the NMIP provisions.

Hull premiums on the Norwegian market are established by the marine insurers' joint committee (Sjøassurandørenes Fellesutvalg - Cefor). The committee benefits from an exemption in Norwegian anti-competition legislation and, technically at least, is free to set rates as it sees fit. Control comes from the fierce competition provided by the London market. The Committee publishes a number of standard insurance forms used in the industry, the "Cefor" forms.

P&I insurance is done through the two Norwegian clubs, Skuld in Oslo and Gard in Arendal. A substantial portion of the risk is reinsured through the International Group.

One fundamental difference that would arise in relation to marine insurance for the Northern Sea Route, presuming one were to follow the standard NMIP set-up, is that it falls outside the

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56 Arnould and Ivamy, both English sources, regularly cite Canadian case-law in their works, Arnould and Marine Insurance, respectively.

57 *Norwegian Marine Insurance Plan of 1964* (NMIP). Cargo insurance is dealt with in the Norwegian Insurance Plan for the Carriage of Goods of 1967 (Norsk transportforsikringsplan for varer av 1967) (NCIP).

58 *Motiver til Norsk sjøforsikringsplan av 1964* (Motiver).

geographical parameters of the NMIP[59], thus rendering the Plan inapplicable to navigation on the NSR. The legal and practical ramifications of this small but fundamental difference are extensive. Marine insurance for the NSR becomes *sui generis*, set against its own legal backdrop, without the safeguards, advantages and drawbacks of the carefully thought out, painstakingly elaborated NMIP and its *travaux préparatoires*.

The main insurer may waive the benefit of these limitations in accordance with the conditions set by the marine insurers' joint committee, presumably in return for payment of a higher premium, and thereby make the Plan's terms applicable to the particular insurance contract. If the assured does not accept these terms, the policy goes out of effect upon the ship travelling out of the prescribed navigation area[60]. Additionally, in most cases the policy contains a clause forbidding navigation in ice-infested waters other than drift ice broken up for general maritime traffic. It is worth noting that Russia considers traffic along the NSR as "general"[61]. It is submitted that it would be worthwhile to deal with this point in a detailed and explicit manner in the insurance contract.

4.5.3 The Canadian Market

The entire body of Canadian shipping law derives largely from its British origins[62]. The *Marine Insurance Act 1906* forms the basis for marine insurance law throughout the Common Law world, even where it has not been adopted through legislation as, for example, is the case in the United States[63]. As the Act serves as a codification of marine insurance principles, and is relied on in case-law, the result is fairly homogenous marine insurance law throughout Common Law jurisdictions. It is not likely that Canada will move off in its own direction, even with respect to such uniquely northern insurance aspects as Arctic risks, given the international and centralised (in London) nature of the industry[64]. At the same time, Canada's approach to shipping in and regulation of its Arctic can provide some ideas for Russia to follow in its integration into the Western market. The following discussion will therefore focus mostly on administration and regulation of the Arctic.

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59 As per the Norwegian Trading Warranties.

60 See, for example, Cefor Form 235 A, Parts II and III.

61 Kjerstad (Navigasjon), at 134.

62 See, generally, Letalik, Gold, at 261-288.

63 *Ibid.*, at 273.

64 See Letalik, Gold, at 275, where they question the desirability of such a move in any event, *inter alia*, in light of standardisation efforts with Institute Clauses such as the work done by the United Nations Conference on Trade and Development (UNCTAD).

Marine insurance legislation in Canada basically duplicates the English *Marine Insurance Act 1906*, with the variant that in Canada it is five of the ten provinces that have enacted their own law, due to the constitutional division of powers[65], although there is some concurrent jurisdiction. It may be noted that a variety of legislation affects activities in the North, including: the *Canada Shipping Act*[66], *Arctic Waters Pollution Prevention Act*[67], the *Canadian Environmental Protection Act*[68], the *Canada Petroleum Resources Act*[69], the *Oil and Gas Production and Conservation Act*[70], and the *Fisheries Act*[71], although it is not necessary for the present purposes to go into detail on these here.

With respect to Arctic marine insurance, the federal Parliament has recently enacted its own Marine Insurance Act, which would cover marine insurance contracts for all of Canada including Canada's Arctic[72]. Competence to do so flows from jurisdiction over federal maritime law, which includes marine insurance[73]. The Act is not an attempt by the federal government in Canada to regulate the marine insurance industry which is, after all, primarily internationally driven, with risks being underwritten and reinsured across borders, notably on the London market. Rather, it is an attempt to bring federal Canadian legislation in line with marine insurance legislation existing in other jurisdictions, for the most part modelled on the English *Marine Insurance Act 1906*, so as to ensure greater certainty in the interpretation of marine insurance contracts. While the federal government remains free to impose specific restrictions or conditions as it sees fit on insurers within its jurisdiction, it cannot hope to amend the rules of an industry that exists largely outside its borders. This in effect substantially nullifies any conditions the federal government - and by implication eventually the Russian government - might wish to impose, since most marine insurance business is conducted abroad and even, one might say, supra-nationally. As is demonstrated throughout this report, the marine insurance industry is a largely self-regulated sphere of financial activity: control comes from the industry's own guidelines and market forces.

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65 S. 91 (10) of the *Constitution Acts 1867-1982*, which assigns shipping and navigation to the federal government; and s. 92 (10) and (13), *ibid.*, which assigns competence in matters of property and civil rights (and thereby business matters such as marine insurance) to the individual provinces. Formerly the *British North America Act, 1867*, (BNA Act), 30 & 31 Vict., c. 3 (U.K.), as am., renamed the *Constitution Act, 1982*, which was Schedule B of *The Canada Act, 1982*, U.K. 1982, c. 11, s. 50. The five provinces which have enacted marine insurance legislation are: Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia.

66 *Canada Shipping Act*, R.S.C. 1985, c. S-9 (CSA).

67 *Arctic Waters Pollution Prevention Act*, R.S.C. 1985, c. A-12 (AWPPA).

68 *Canadian Environmental Protection Act* (CEPA), S.C. 1986-87-88, c. 22.

69 *Canada Petroleum Resources Act*, R.S.C. 1985, c. 36 (2nd Supp.).

70 *Oil and Gas Production and Conservation Act*, R.S.C. 1985, c. O-7.

71 *Fisheries Act*, R.S.C. 1985, c. F-14.

72 *Marine Insurance Act*, S.C. 1993, c. 22. Entered into force May 6, 1993.

73 This point was established in *Triglav* v. *Terrasses Jewellers Inc.* [1983] S.C.R. 283.

The federal *Marine Insurance Act* works in tandem with the *Arctic Waters Pollution Prevention Act*, which sets out the legal framework for waters north of 60°N[74], including the Northwest Passage. The latter act is the most important piece of federal legislation currently affecting vessel activity in Canada's North. Its stated purpose is to permit economic development while protecting the "peculiar ecological balance" of Arctic waters, defined as those waters within the Arctic archipelago[75], and includes the surrounding waters inside the defined zones. A number of sets of regulations have been enacted pursuant to the AWPPA, only a few of which need be discussed here[76]. The AWPPA is administered in large part by the Coast Guard Northern in Ottawa.

The AWPPA employs a three-pronged approach to pollution prevention and control. Firstly, there is a complete ban on waste discharge[77], which is punishable on summary conviction. Waste is defined widely, to include, *inter alia*, "any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of water to an extent that is detrimental to their use by man or by any animal, fish or plant that is useful to man"[78]. Some exceptions have been made for land-based sources and offshore drilling waste discharges[79].

Secondly, civil liability is imposed on both vessel and cargo owner for environmental pollution damage, and this may include the cost of a government-ordered clean-up[80]. The starting principle under the AWPPA is *absolute* liability, meaning that when a spill has occurred,

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74 Waters south of 60°N are covered by the CSA. The CSA applies to all ships in Canada's internal waters and in its territorial sea, and to Canadian ships in all other waters. The pollution control provisions of the Act, as well as those relating to the safe operation of ships, also apply to all Canadian waters and fishing zones, except where the AWPPA applies. Part XVI of the CSA deals with Civil Liability and Compensation for Pollution, in accordance with the CLC and Fund Conventions, discussed below.

75 AWPPA s. 3(1).

76 By way of information on the scope of regulation: *Regulations Respecting Navigating Appliances and Equipment* (CSA 45), as am.; *Regulations Respecting the Establishment of Deck Watches and the Number and Qualifications of Navigational Personnel of Ships* (CSA 70); *Regulations Prescribing Radio Stations to be Fitted on Ships* (AWPPA 9), as am.; all established by C.R.C. 1978.

77 AWPPA s. 4. Canada's accession to MARPOL in 1993 does not affect its ability to regulate the internal waters of its Arctic, as it included a reservation permitting the maintenance of zero-discharge standards in the territory covered by the AWPPA. See Tanker Safety Panel.

78 AWPPA S. 2.

79 *Arctic Waters Pollution Prevention Regulations*, C.R.C. 1978, c. 354, as am. (AWPPR).

80 AWPPA s. 6. A distinction should be noted right away. Since the adoption by Canada of the Civil Liability Convention, discussed below under P&I, the CLC applies to all *Convention* ships, even in waters north of 60°N, rendering the AWPPA provisions inapplicable to those ships: CSA s. 675(2). The AWPPA and regulations' provisions continue to apply to *non-Convention* ships, until the entry into force of a provision eliminating this dichotomy. See the section below on Canada and limitation of liability.

the only defence the shipowner has is to prove it was caused by another person[81]. Contrast the CSA, which has "strict liability", meaning that the shipowner can be liable without fault or negligence being proved, just that the spill or damage may be traced back to that owner's ship. Available defences are: that the damage was caused by acts of war, intentional damage by third parties, or wrongful acts by authorities responsible for navigational aids[82]. Under the CSA, the limitation amounts are calculated at about CAN $200 per tonne, up to about CAN $21M for oil pollution damage, although shipowners can only limit their liability if they can prove that the events giving rise to the claim occurred without their actual fault or privity[83]. If they cannot, their liability is unlimited. The AWPPA adopted the same limitation of liability figures, but there is no provision for breaking liability limits[84]. Since under the *Arctic Waters Pollution Prevention Regulations* a certificate of financial responsibility must be issued - usually by an insurer - before a vessel is permitted to enter Arctic waters[85], it is the insurer who will benefit, at least directly, from limitations of liability. Some softening measures, i.e., extra defences for the insurer, to the absolute liability rule have been introduced since the AWPPA was first passed. Thus the insurer may escape liability in the event of: *force majeure*, intentional act of a third party; the act or omission of the government responsible for navaids[86]; and the intentional act of shipowners[87]. Thus, liability is less "absolute" than it seems at first glance.

Thirdly, there are regulations covering ship design, construction and operation. The *Arctic Shipping Pollution Prevention Regulations*[88] are important implementational instruments of the AWPPA in this connection, and these go into considerable technical detail on matters of structural strength, materials, etc., to support a number of ship classifications. There are fourteen types and classes of ship under Canadian rules. Types A-E indicate ice-strengthened vessels, which means vessels that do not break ice but can travel through it, assisted by an ice-breaker where necessary. Classes 1-10 indicate ice-breaking vessels, with 10 being the strongest, and the

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81 AWPPA s. 7. A very rough explanation may be in order for the non-legal expert. In "normal" liability situations, the plaintiff or prosecutor must prove 1) damage or loss; 2) fault or negligence of the defendant; 3) a causal link between the defendant's fault and the loss. In practice, there is a three-tiered system: "normal" liability; "strict" liability which will not require proof of fault or negligence, only that the actions of the defendant caused the loss or damage (as determined by legislation as, for example, under the CSA); and "absolute" liability, which does not require proof of fault or negligence, and for which the only defence would be to prove that another party caused the loss (as, for example, under the AWPPA).

82 CSA s. 677(3).

83 CSA s. 679.

84 AWPPR s. 15.

85 AWPPR s. 12(1).

86 AWPPR s. 12(2) (a)-(c). These first three defences are the same as allowed under the CLC.

87 AWPPR s. 12(2)(d). This is consistent with insurance law generally, under which liability of the insurer will attach for negligent, but not intentional, acts of the assured.

88 *Arctic Shipping Pollution Prevention Regulations*, C.R.C. 1978, c. 356, as am. to 14 August 1991 (ASPPR).

number roughly indicating the thickness of ice through which they can normally break. For example, Class 8 can normally break through ice 8 feet thick at a continuous speed of 3 knots[89]. In fact, there is no Class 10 in existence. There were plans for a Class 8 patrol ice-breaker to be built, mainly for the purpose of supporting Arctic gas, oil and mining developments and to assert Canada's sovereignty over its Arctic waters. The plans were cancelled, however, due to budget considerations. At present, Canada has a number of Class 2 and Class 4 vessels. By way of comparison, the US *Polar Star* and *Polar Sea* are assessed as equivalent to Class 6[90]. The reader is further referred to the discussion of ship classification *infra*. There are proposals to revise the *Arctic Shipping Pollution Prevention Regulations* with respect to hull scantlings and navigation control.

In Schedule VIII, the ASPPR set out where and when the ships can travel in accordance with the *Shipping Safety Control Zones Order*[91], under which the Canadian Arctic has been divided up into sixteen navigational zones, and restrictions apply as to where and when ships can navigate, based on time of year and class of ship. Figures 4 and 4.1 show the zones and permitted times of entry. An owner or master of a ship proposing to navigate within the zones *may* apply for an Arctic Pollution Prevention Certificate, indicating that the ship meets certain standards[92]. The certificate constitutes *prima facie* evidence that the ship has met these standards[93]. Certificates may be issued outside Canada to an owner or master of a vessel who is planning a voyage in one of the zones; it can be issued by one of the classification societies abroad, listed in the ASPPR[94]. The issuance of an Arctic Pollution Prevention certificate does not replace the regular inspections of the classification society or Administration for the purpose of maintaining the ship's class. Evidence of financial responsibility is required for all tankers and all other vessels which carry pollutants or persistent oil in bulk or bunkers, and all other non-Canadian ships carrying more than 2000 tonnes must submit documentary evidence to Coast Guard Northern for review. Lastly, because of the zero discharge rule, reporting of any spillage is mandatory[95].

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89 Compare Det norske Veritas Class Icebreaker 15, designed to break through ice 1.5 metres thick, or Icebreaker POLAR -20, designed to break through 2 metres of ice, etc; see Veritas Ice Classification Rules. Compare also the Russian *Noril'sk* SA-15, designed to break through ice one metre thick; see Brigham (Transportation), at 133.

90 See McCallum.

91 *Shipping Safety Control Zones Order*, C.R.C. 1978, c. 356. Authority for the regulations are found in AWPPA ss. 11-12.

92 ASPPR s. 12. Note that although the certificate is optional, in practice insurers require it, thus achieving *de facto* mandatory requirement of compliance with standards contemplated by the certificate.

93 ASPPR s. 16.

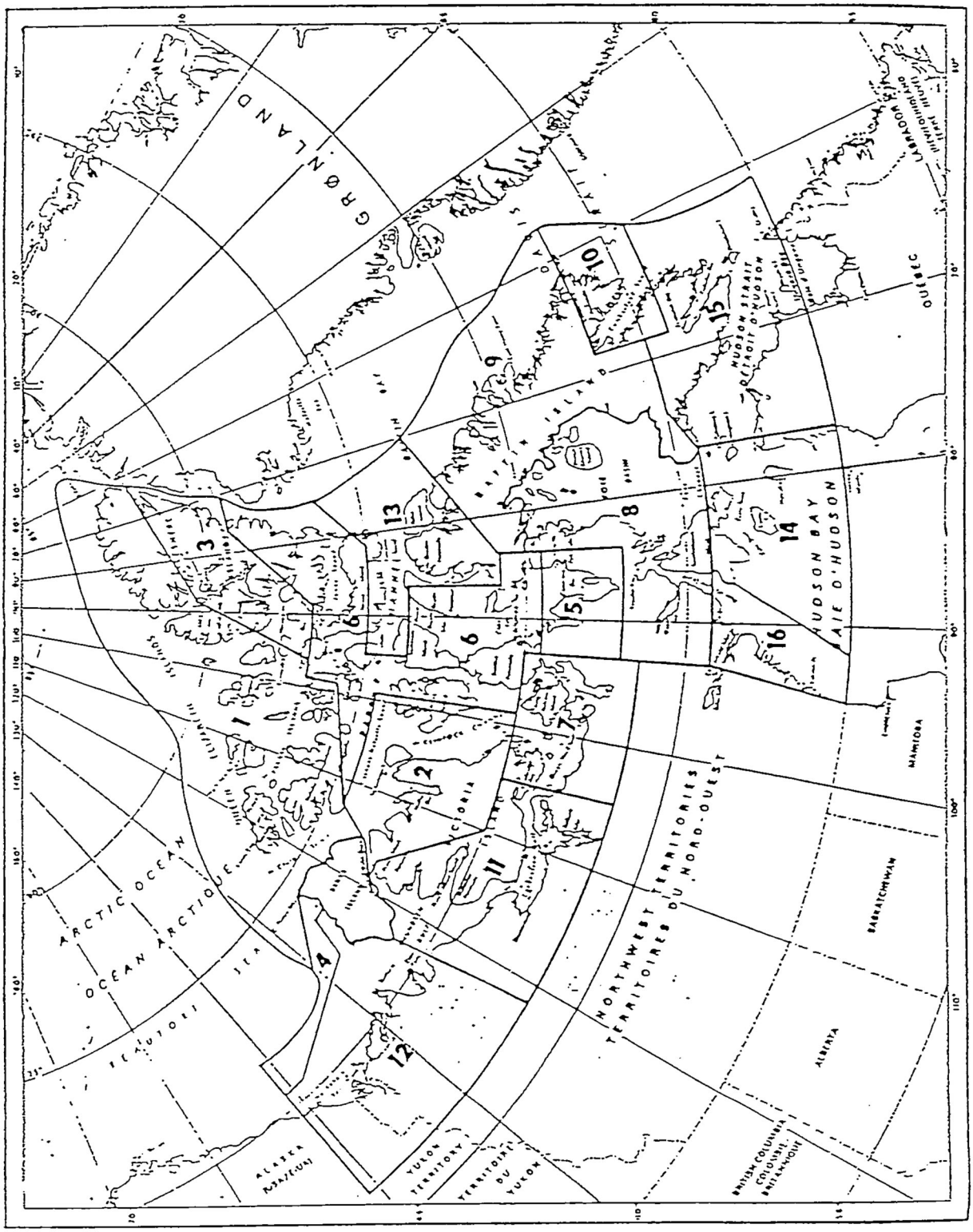
94 ASPPR s. 13.

95 AWPPR s. 7. Also, telephone communication with Victor Santos-Pedro, Manager, Arctic Ship Safety, Canadian Coast Guard; and Santos-Pedro, Tromsø Conference.

Premiums for hull insurance are drawn up by the Canadian Hull Insurance Committee. The Committee publishes advisory rates on a regular basis, including advisory rates for Arctic shipping, reproduced in Appendix 2. Both English and American Institute Hull Clauses are used. P&I is insured mostly through the London clubs. Hull risks are underwritten on the Canadian market, with a substantial portion of it being reinsured in London.

Figure 4

Shipping Safety Control Zones (Canada)



Source: Canadian Coast Guard

Figure 4.1 Allowed Sailing Times as per Date and Class of of Vessel

Item	Col. I Category	Col. II Zone 1	Col. III Zone 2	Col. IV Zone 3	Col. V Zone 4	I. VI Zone 5	Col. VII Zone 6	Col. VIII Zone 7	Col. IX Zone 8	Col. X Zone 9	Col. XI Zone 10	col. XII Zone 11	Col. XIII Zone 12	Col. XIV Zone 13	Col. XV Zone 14	Col. XVI Zone 15	Col. XVII Zone 16
1.	Arctic Class 10	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year
2.	Arctic Class 8	July 1 to Oct. 15	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year
3.	Arctic Class 7	Aug. 1 to Sept. 30	Aug. 1 to Nov. 30	July 1 to Dec. 31	July 1 to Dec. 15	July 1 to Dec. 15	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year	All Year
4.	Arctic Class 6	Aug. 15 to Sept. 15	Aug. 1 to Oct. 31	July 15 to Nov. 30	July 15 to Nov. 30	Aug. 1 to Oct. 15	July 15 to Feb. 28	July 1 to Mar. 31	All Year	All Year	July 1 to Mar. 31	All Year	All Year	All Year	All Year	All Year	All Year
5.	Arctic Class 4	Aug. 15 to Sept. 15	Aug. 15 to Oct. 15	July 15 to Oct. 31	July 15 to Nov. 15	Aug. 15 to Sept. 30	July 20 to Dec. 31	July 15 to Jan. 15	July 15 to Mar. 31	July 10 to Feb. 28	July 10 to Jan. 15	July 5 to Jan. 31	June 1 to Feb. 15	June 15 to Mar. 15	June 15 to Feb. 15	June 1 to Feb. 15	
6.	Arctic Class 3	Aug. 20 to Sept. 15	Aug. 20 to Sept. 30	July 25 to Oct. 15	July 20 to Nov. 5	Aug. 20 to Sept. 25	Aug. 1 to Nov. 30	July 20 to Dec. 15	July 20 to Dec. 31	July 20 to Jan. 20	July 15 to Jan. 25	July 5 to Dec. 15	June 10 to Dec. 31	June 10 to Jan. 10	June 20 to Jan. 31	June 20 to Jan. 10	
7.	Arctic Class 2	No Entry	No Entry	Aug. 15 to Sept. 30	Aug. 1 to Oct. 31	No Entry	Aug. 15 to Nov. 20	Aug. 1 to Nov. 20	Aug. 1 to Nov. 30	July 25 to Dec. 20	July 10 to Nov. 20	June 15 to Dec. 5	June 25 to Nov. 22	June 25 to Dec. 10	June 25 to Dec. 20	June 10 to Dec. 10	
8.	Arctic Class 1A	No Entry	No Entry	Aug. 20 to Sept. 15	Aug. 20 to Sept. 30	No Entry	Aug. 25 to Oct. 31	Aug. 10 to Nov. 5	Aug. 10 to Nov. 20	Aug. 10 to Dec. 10	Aug. 1 to Dec. 10	July 15 to Nov. 10	July 1 to Oct. 31	July 15 to Nov. 30	July 1 to Dec. 10	July 1 to Nov. 30	
9.	Arctic Class 1	No Entry	No Entry	No Entry	No Entry	No Entry	Aug. 25 to Sept. 30	Aug. 10 to Oct. 15	Aug. 10 to Oct. 31	Aug. 10 to Oct. 31	Aug. 1 to Oct. 31	July 15 to Oct. 20	July 1 to Oct. 31	July 15 to Nov. 30	July 1 to Nov. 30	July 1 to Nov. 15	
10.	Type A	No Entry	No Entry	Aug. 20 to Sept. 10	Aug. 20 to Sept. 20	No Entry	Aug. 15 to Oct. 15	Aug. 1 to Oct. 25	Aug. 1 to Nov. 10	Aug. 1 to Nov. 20	July 25 to Nov. 20	July 10 to Oct. 31	June 15 to Nov. 10	June 25 to Oct. 22	June 25 to Nov. 30	June 25 to Dec. 5	June 20 to Nov. 20
11.	Type B	No Entry	No Entry	Aug. 20 to Sept. 5	Aug. 20 to Sept. 15	No Entry	Aug. 25 to Sept. 30	Aug. 10 to Oct. 15	Aug. 10 to Oct. 31	Aug. 10 to Oct. 31	Aug. 1 to Oct. 20	July 15 to Oct. 25	July 1 to Oct. 15	July 1 to Nov. 30	July 1 to Nov. 30	July 1 to Nov. 10	
12.	Type C	No Entry	No Entry	No Entry	No Entry	No Entry	Aug. 25 to Sept. 25	Aug. 10 to Oct. 10	Aug. 10 to Oct. 25	Aug. 10 to Oct. 25	Aug. 1 to Oct. 25	July 15 to Oct. 25	July 1 to Oct. 10	July 15 to Nov. 25	July 1 to Nov. 25	July 1 to Nov. 10	
13.	Type D	No Entry	No Entry	No Entry	No Entry	No Entry	Aug. 10 to Oct. 5	Aug. 10 to Oct. 20	Aug. 15 to Oct. 20	Aug. 15 to Oct. 20	Aug. 5 to Oct. 10	July 15 to Oct. 20	July 1 to Sept. 30	July 30 to Nov. 10	July 10 to Nov. 10	July 5 to Oct. 31	
14.	Type E	No Entry	No Entry	No Entry	No Entry	No Entry	Aug. 10 to Sept. 30	Aug. 20 to Oct. 20	Aug. 20 to Oct. 15	Aug. 10 to Oct. 20	July 15 to Sept. 30	July 1 to Oct. 20	Aug. 15 to Oct. 31	July 20 to Nov. 5	July 20 to Oct. 31	July 1 to Oct. 31	

Source: Canadian Coast Guard

The Canadian marine insurance market is based in Toronto and Montreal, and has an annual volume of approximately CAN $300 million. Of this, approximately $85 to $90 million is insured entirely on the Canadian market, with the rest being underwritten mostly in London, but with a portion also placed in the US and Europe, including Scandinavia[96]. Insurance for Arctic shipping therefore involves a mix of the specialised legislation and what underwriters in London will agree to cover. Put another way, while Canada is free to regulate its Arctic legally, as a practical, commercial matter its insurance markets are closely linked to the London market. As Arctic shipping grows, both in Canada and in Russia, interests and concerns from the two Arctic-rim countries should logically have an influence on market practice and, by way of spin-off effect, on legal provisions and trends in case-law.

96 Telephone and written communication with Claudio Verconich, President of the Canadian Board of Marine Underwriters, Toronto. Figures from *Canadian Insurance Magazine*, June 1992.

4.5.4 Other Markets

Other markets which could eventually become pertinent for the NSR include the Finnish, Swedish, Danish, German, Japanese and some South American markets. For reasons of brevity, however, they will not be discussed here.

4.6 Inter-market Coverage - Reinsurance

It is in an insurer's interest to spread exposure so as to soften the impact of major loss. This is achieved through reinsurance[97]. Through this mechanism, the insurer can pass on some of the risk to a reinsurer. The latter enters into no legal relationship with the assured, but does agree to cover part of the insurer's risk in return for a corresponding part of the premium. The main insurer remains answerable to the assured, but the net exposure is lessened. It is quite common for a large risk to be insured in this way across several markets and countries. This is particularly so of P&I insurance, where the amounts involved can run into astronomical sums. When a large loss occurs, the repercussions can be felt, almost literally, around the globe.

Reinsurance across markets is a virtual certainty for NSR coverage, *a fortiori* because so little is as yet known about the risk.

4.7 The Role of Ship Classification

As mentioned throughout this report, ship classification takes on a crucial role in Arctic navigation, from several perspectives. In some countries such as Canada, noted above, a certain classification is required by law before the ship will be allowed to enter certain areas. Insurers use classification requirements and standards as guidelines in drawing up terms for Arctic coverage. In other countries, such as Norway, classification is very much a part of the legal framework, and is a much-used guidepost in risk assessment. Russia has also established various ship classifications, including a comprehensive list of ice-strengthened and ice-breaking vessels.

Ship classification throughout the world is carried on by approximately 20 public and para-public organisations, a number of national "Administrations" and what are referred to as "ship classification societies". They include: the Russian Ship Registry; Det norske Veritas (Norway); Lloyd's Register of Shipping; Nippon Kaiji Kyokai (Japan); Canadian Coast Guard; Finnish Board of Navigation; Swedish Marine Administration; American Bureau of Shipping;

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97 To be distinguished from co-insurance, where several insurers stand jointly and severally liable to the insured. Co-insurance is often used in hull insurance, but is not very common in P&I or cargo coverage. See Bull, at 31-32.

Germanischer Lloyd; Bureau Veritas (France); Polski Register Statkow (Poland); Register of Shipping - People's Republic of China; the Bulgarian Ship Registry; and Registro Italiano Navale.

The main functions of both Administrations and classification include:

i) the classification and registration of ships and offshore facilities;
ii) the surveying and issuance of certificates according to the *International Convention for the Safety of Life at Sea*[98] (SOLAS), *International Convention for the Prevention of Pollution from Ships*[99] (MARPOL), and the *International Convention on Load Lines*[100];
iii) testing, inspection and certification of materials and equipment of ships and machinery;
iv) conducting tonnage measurements and issuance of certificates according to tonnage measurement, convention or other regulations.[101]

For government Administrations, the key additional responsibility is the development of domestic shipping legislation, the adoption of international shipping rules, and the enforcement of those requirements, as appropriate, on domestic shipping companies wherever in the world they work, and on foreign shipping in the waters covered by that Administration (country).

For classification societies, the central function concerns setting classification standards for ships and attracting an international clientele of shipowners who will register their ships and pay for this service:

> "The classification process consists of: a) the development of rules, guides, standards and other criteria for the design and construction of marine vessels and structures, for materials, equipment and machinery; b) the review of design and survey during and after construction to verify compliance with such rules, guides, standards or other criteria; and c) the assignment and registration of class when such compliance has been verified."[102]

The certificate issued by a classification society or Administration constitutes an attestation by that society or Administration that the ship complies with certain

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98 *International Convention for the Safety of Life at Sea* (SOLAS), London, 1970, IMO.

99 *International Convention for the Prevention of Pollution from Ships, 1973* (MARPOL 1973), IMO, London, 1973.

100 *International Convention on Load Lines*, IMO, London, 1966.

101 American Bureau of Shipping, *Rules for Building and Classing Steel Vessels 1984* (New York: ABS, 1984); cited in Spears, at 91.

102 *Ibid.*

structural or mechanical standards of fitness, generally or for a given purpose, such as ice-breaking, in accordance with the rules and specifications of the society or Administration. Classification plays a very central role in risk assessment, since insurers, among others, rely almost absolutely on the information emanating from the issuer (society or Administration).

Once a certificate has been issued in respect of a vessel, regular re-inspection is standard procedure for keeping the vessel in class. It should be noted that while classification societies and some Administrations are increasingly becoming involved in quality assurance programmes, i.e., through inspection of both the ship and the manufacturing processes, the onus is ultimately on the ship owner or operator, as the case may be, to ensure that the ship meets and continues to meet the necessary standards. Additionally, in jurisdictions such as Canada, the onus is on the Master or owner of a vessel operating in Arctic waters to notify the Canadian Coast Guard of any changes which might affect the vessel's class or ice capability, as long as the vessel is within waters covered by the AWPPA[103].

Technical specifications of the various societies and Administrations differ, and there is no one "international" set of ice classes; for technical reasons the experts agree to disagree on specific standards. Some initial steps have been taken towards establishing a single set of internationally-accepted specifications, including a meeting of experts held in Helsinki in February 1993. A definitive international set of classes cannot be expected for at least a few years, however. In the meantime, *very* rough equivalencies can be made, and it is submitted these would be sufficient for an insurer to use as a guide in risk assessment[104]. Insurers may wish to establish closer links with Administrations and classification societies in this connection. Figure 5 gives a table showing approximate ice class equivalencies.

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103 ASPPR, s. 18.

104 Written communication with Victor Santoś-Pedro, Coast Guard Northern, Ottawa, Canada; personal communication with Capt. Norvald Kjerstad, Møre og Romsdal Fiskeritekniske Høgskole, Ålesund, Norway. Other information provided to Fridtjof Nansen Institute by Captain Vladimir Mikhailichenko, Head of Northern Sea Route Administration, Moscow.

The *Regulations for Navigation on the Seaways of the Northern Sea Route* do not specify any specific class of vessel required for navigation in the NSR. Section 4 merely stipulates that "a vessel shall satisfy special requirements". Section 6 confers authority on NSR Administration authorities to inspect the vessel, largely at their discretion. It is submitted this is too vague and creates uncertainty for Western insurers. They need to know whether or not a vessel meets *objective, standard* requirements for navigation through the NSR, so that they may assess the risk *before* navigation in the area has begun. Additionally, there does not appear to be any authority for foreign Administrations or classification societies to issue classification certificates constituting *prima facie* evidence that the ship is fit to make the voyage through the Route, as they can do for Canada[105]. Particularities such as extreme weather or ice conditions at the time can be dealt with using provisions like ss. 6 to 8 of the Regulations. In the absence of such provisions in law, insurers can stipulate a certain class as part of the insurance contract. It has been recommended that not less than DNV Class 1A or equivalent be used for any type of navigation in the NSR[106]. Insurers could, it is submitted, safely use this as a guidepost.

There has been some talk of creating "management classes" for ships requiring certain or a high level of expertise[107]. A highly-qualified master and crew could, in some cases, lead to a reduction of premium, or possibly offset some of the premium "caused" by the ship itself. This would definitely be a possibility worth looking into in the case of NSR navigation. Russian mariners, are known for competence in ice navigation. Any reduced cost would only spur a greater level of traffic in the Route.

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105 See ASPPR, s.5(4), and discussion below under 4.5.3.

106 Personal communication with Capt. Norvald Kjerstad. See also Kjerstad (East Bound), at 69.

107 See Kjerstad (Navigasjon), at 134.

Figure 5 Ship Classification Equivalencies Table

		Ice Class				
Organisation	Class Symbol	High	Medium		Low	
Det norske Veritas (post-1971)	1A1	1A*	1A	1B	1C	
Finnish/Swedish Rules (toll classes as per 1985)		IA Super	IA	IB	IC	II
American Bureau of Shipping (post-1971)	A1 (E)	IAA	IA	IB	IC	
Bureau Veritas (pre-1971)	I 3/3 E	I-Super	I	II	III	
Bureau Veritas (post-1971)	I 3/3 E	IA-Super	IA	IB	IC	
Bulgarian Register of Shipping	KM	ULA, UA	L1	L2	L3	L4
DDR Schiffs-Rev. und Klassif.	DSRK KM	Eis Arktis, Eis Super	Eis 1	Eis 2	Eis 3	Eis 4
Germanischer Lloyd	100 A4	E4	E3	E2	E1	
Lloyd's Register of Shipping (post-1971)	100A1	1AS	1A	1B	1C	1D
Polski Register Statkow	KM	L1A, UL	L1	L2	L3	L4
Nippon Kaiji Kyokai	NS	IA Super	IA	IB	IC	
Reg. of Shipping People's Rep. of China	ZCA	B1*	B1	B2	B3	
Reg. of Shipping of the USSR*	KM	ULA, UL	L1	L2	L3	L4
Registro Italiano Navale	100A-1.1	RG 1*	RG 1	RG 2	RG 3	
Registrul Naval Roman	RNR+M CM O	G 60, G 50	G 40	G 30	G 20	G 10
Canadian ASPPR Rules/Zones		A	B	C	D	E

The above table shows class symbols for ship ice classes of various classification organisations. It does not include ice breakers.

The following classes are used for ice breakers:

	Ice Class					
Organisation	High			Low		
Reg. of Shipping of the USSR*	LL1	LL2	LL3	LL4		
Det norske Veritas (also includes "Sealer" class)	Polar-30	Polar-20	Polar-10 Ice-15	Ice-10	Ice-05	
Lloyd's Register of Shipping	AC3	AC2	AC1.5	AC1		
Canadian ASPPR Rules/Zones	Equivalencies not available.					

* For Russian classes: L - ice; U - reinforced; A - Arctic.

Source: Adapted from Capt. Norvald Kjerstad, *Navigasjon og operasjon av skip i arktiske strøk* (Tromsø, Kjerstad, 1992) 76.

5.0 Hull and Machinery Insurance

5.1 The Hull and Machinery Insurance Contract

Hull and machinery insurance provides the shipowner with coverage against loss or damage to the hull, machinery and equipment of the vessel. The marine insurance policy form contains a number of clauses that have been developed through years of underwriting, hits and misses, losses and experience. Often the clauses have been "broken in" through arbitral or judicial interpretation, and subsequently refined. Consequently, they tend to enjoy a fair amount of legal certainty and consistency in their application. Parties using the clauses know this and rely on them accordingly.

Stipulations in the insurance policy, known as trading limits clauses, often restrict the vessel to a defined area where the risks are known and accepted. This does not *prima facie* include the Arctic[1]. Additionally, while a policy may be unvalued or valued, it practice it is virtually always the latter, i.e., there will be a limit as to how much the insurer will pay in the event of disaster[2]. The valuation is usually based on the total loss of the vessel. A distinction should be noted between the insurable value, which is the actual value of the ship at the commencement of the risk including machinery, fittings, etc., fuel, stores, outfit, wages, disbursements and insurance premiums[3], and the insured value, which is the amount given in the insurance policy, and is conclusive as between insurer as assured. It is what they have agreed to call the insurable value for the purposes of the policy[4]. In practice, assureds like to set the insured value high, so as to be sure the full value is covered and to allow for inflation. At the same time, care must be taken not to set it too high, as premiums must be paid.

The form of the insurance policy is discussed separately below, under English and Norwegian approaches.

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1 Spears, at 132 *et seq.*; Norwegian Trading Warranties; and Cefor Form 235 A, Part II: The trading area; Part III: Consequences of transgression of the limits; and Part IV: Additional premiums for trading in some parts of the trading area.

2 See MIA s. 27(2); and NMIP §7.

3 Brown, at 162.

4 *Ibid.*, at 163.

It may be stated as a truism for both systems, however, that the loss must be proximately caused by a peril insured against for there to be insurer liability: *causa proxima non remota spectatur*[5]. Causation is a complex area of the law and will not be the subject of a detailed discussion here[6].

One side point regarding hull insurance concerns the issue of "to double hull or not to double hull", and it takes on added materialness in NSR navigation.

In recent years it has become popular in parlance and in scholarship to advocate unconditionally the use of double hulls for vessels generally, especially for vessels carrying oil or petroleum products, and *a fortiori* any of those vessels if they happen to be navigating through ice-infested waters. From an environmental point of view, the double hull is seen as "friendly". The issue of double hulls is, however, not settled and not without controversy.

From a hull insurer's point of view, the double hull is not necessarily advantageous, almost certainly will not lead *ipso facto* to the procurement of insurance, and even less certainly to the obtention of a premium discount. A single hull is cheaper and easier to maintain and repair. Eventual liability resulting from an oil spill is the concern of the P&I insurer, not the hull insurer. There have been cases where the hull insurer has had to cover for liability for harm caused by the assured to another party, in situations where the harm-causing action was undertaken to avoid or reduce hull damage or collision liability[7]. The issue in such cases becomes *why* the damage-causing action was undertaken: to avoid [greater] damage to the vessel or as a "normal" manoeuvre. It is also conceivable that in the case of a very small spill, the cost of a clean-up is cheaper than the cost of maintaining a double hull.

Both hull and P&I insurer should evaluate their respective risk with this point in mind when assessing whether to insure for NSR navigation and, in the affirmative, at what price.

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5 MIA s. 55; NMIP §18; also §§19-22. See also Arnould §762; and Bull, at 98-99.

6 A lengthy discussion is found in the learned work by H.L.A. Hart and H.M. Honoré, *Causation in the Law*.

7 See ND 1978.139 NV STOLT CONDOR, cited in Bull, at 177.

5.1.1 Scope of Cover

The exact manner in which different systems go about covering their respective areas is discussed below. As a general proposition, however, it may be stated that hull and machinery insurance covers the hull of the vessel, the machinery and various parts attached thereto. It can also extend to the cost of measures taken to preserve the hull, or to prevent or reduce damage, as it is in the hull insurer's interest to encourage preventive measures. A number of other points are therefore also included in hull cover.

Total loss: this is when the vessel is physically lost in its entirety, through sinking, collision, disappearance, and so on[8]. The insured value in the policy is usually based on a worst-case scenario, *viz*, on the vessel being a total loss.

Some shipowners also take out "hull interest" cover, which will pay for the replacement cost of the vessel, beyond its actual market value recoverable under a usual hull policy[9]. It is a precondition for this type of cover that the ship is a total loss.

Partial loss: this is when the vessel is damaged or partially destroyed[10]. The decision whether to repair the vessel will be made on the basis of the cost in relation to the insured value[11].

Note that where repairs are carried out, the insurer is under no liability to pay out any claims until after the repairs have been carried out and paid for by the assured. This is in contrast to total loss: once a total loss has been established and the insured value paid out, the money can theoretically be used for any purpose. Not so with repairs: the money must go to fixing the ship. The rationale is that the cost of the repairs cannot be known before they are carried out; and since the insurance contract is one of indemnity, and not an occasion to make money, it is the actual bill which is covered. This would be true regardless of on which market insurance were obtained. There is one possible way to earn some money on repairs: sometimes the insurer and assured reach a "compromised total loss", where it is not worth it to repair the vessel and the parties agree to call it a loss

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8 Total loss is defined in MIA s. 57; s. 58 deals specifically with a missing ship. NMIP §§160 and 168-170 give roughly corresponding rules.

9 NMIP Ch. 15. The MIA does not explicitly allow for this, although s. 16(4) would appear to open the door to such policies.

10 See MIA s. 56; and NMIP §173.

11 See MIA s. 69 *et seq.*; and NMIP §174 *et seq.*

and have paid out a somewhat lesser amount than the insured value. The assured shipowner has no legal right to this, however; it is purely a goodwill agreement.

Constructive total loss: a constructive total loss occurs[12] when: a) the insured is deprived of the insured property (ship or cargo) and is not likely to recover it; or b) an actual total loss appears to be inevitable; or c) in the case of a ship, the ship is so badly damaged that the estimated cost of recovery and repair would exceed the recovered/repaired value, 80% of the insurable value or value in repaired condition in the case of Norwegian rules[13]; or d) in the case of cargo, the estimated costs of recovery, reconditioning and forwarding to destination would exceed the arrived value. The actual decision of whether a vessel is a constructive total loss turns on the individual facts of the case. Notice of abandonment, request for condemnation in the Norwegian rules, must be given by the assured to the insurer, otherwise the loss will only be treated as partial[14], although this is not a hard-and-fast rule[15]. The insurer steps into the assured's role and rights as owner of the vessel upon paying out the insured value[16].

Constructive total loss claims may become a common scenario on the NSR, where the expense of salvage, hauling or repair may become prohibitive. It could also be possible for the vessel to be damaged and not be removed before ice closed in for the season. If the vessel was ice-strengthened and suffered no damage, then the vessel might merely be delayed and not qualify for cover under the hull policy. Loss-of-use insurance could come in handy in this connection. If the vessel did become a wreck and the cost of removing it greatly exceeded its market value, the insurers might not want to take it over. In such event, responsibility for the wreck will normally fall on the shipowner, whose P&I club will usually be called in[17]. P&I will only cover where the wreck removal is required by law or the competent authorities, although a club may move more quickly on its own initiative if this will keep ultimate costs down[18].

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12 See Brown, at C42.

13 See MIA ss. 60-61; NMIP §163 *et seq.*, which rules refer to the ship as being "condemnable".

14 MIA s. 62; this is not expressly set out in the NMIP.

15 See Ivamy (Marine Insurance), at 365.

16 MIA s. 63; again, this is not stated in the Norwegian rules.

17 This is what apparently happened when the *Arctic Ublureak* sank in Canada's Arctic in 1983, and the Canadian government required that the wreck be removed by the following summer. Since the hull insurer did not pay removal costs, one may assume, or at least speculate, that it was the P&I club who did. See Spears, at 110.

18 Brækhus, Rein, Kingsley, at 218-225.

Collision liability: while at first blush collision liability might be deemed to be the realm of the P&I insurer, a portion of collision liability of the one ship towards the other is covered by the hull insurer. Under English rules this is limited to 3/4 of the liability incurred by the assured[19], under what is known as a "running down clause". In no case will the hull insurer pay out more than 3/4 of the insured value of the vessel. The P&I insurer picks up the last 1/4 and the *excess* liability, that is, the balance over and above the 3/4 of the insured value covered by the hull insurer; this latter cover is useful when a vessel with a small insured value collides with and damages a vessel having a much larger insured value. For the P&I insurer to cover excess liability, the vessel must have been insure to her full, realistic value[20]. Norwegian rules contain no such division of burdens, and the hull insurer has 4/4 liability exposure[21], limited only by the insured value stated in the policy[22]. Norwegian P&I clubs *will* pick up excess loss, like their English counterparts[23]. It is also important to note that liability is a function of degree of fault. For example, if a vessel is only 40% responsible for damage to another vessel, only 40% of the damages incurred will be owing, and the hull insurer's eventual liability limit will be applied to this. There has been talk in English insurance of expanding P&I to cover 4/4[24]. Which turn Norwegian insurance will take, towards the way of the English market, or simply along the same path as now, is a matter of conjecture. It is difficult to see why Norwegian clubs would take on liability they do not have to worry about now, unless there were especially attractive premiums to be had. A more detailed discussion of what P&I covers where hull does not is given below.

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19 See, for example, Institute Time Clauses - Hulls, Cl. 8.1, and Institute Voyage Clauses - Hulls, Cl. 6.1.

20 Hill, Robertson, Hazelwood, at 84.

21 NMIP §194.

22 NMIP §196.

23 Brækhus, Rein, Kingsley, at 195.

24 Hill, Robertson, Hazelwood, at 82.

The chances of collision in the NSR are arguably greater than in other areas due to the frequency of ice-breaker escort and sometimes towage[25]. This would stand to become even more problematic with extended-season shipping, when there would be increased danger of a vessel being lodged in multi-year ice, and more tricky and delicate manoeuvres were required to dislodge. Also, the chances of collision would be greater between a bulk carrier and a smaller, more "agile" ice-breaker than where an equal-size bulk carrier was rendering assistance.

General Average: the insurer is liable for the assured's contribution to general average[26]. While general average does include a liability element, traditionally the domain of P&I, in practice, it has been the hull insurer who has covered this loss[27].

Sue and labour: it is the duty of the assured to attempt to do everything possible to attempt to save the vessel. It is in the insurer's interest to see that the assured does so. As a matter of policy, the assured should not have to worry about running over the insured value in an emergency; the job of saving the vessel must be gotten on with. Consequently, both English and Norwegian coverage provide that the assured can be reimbursed in excess of the insured hull value when attempts are made to save the vessel[28].

5.1.2 Premiums

The primary obligation of the assured - aside, of course, from the duty to act as a prudent (un)insured - is to pay the premium. In English terms, the premium is the legal consideration paid by the assured in return for the insurer's promise to indemnify the former against a specific set of perils in a named policy. The premium is negotiated with the lead underwriter, usually through a broker. One should also keep in mind that hull underwriting is a creature of the market, meaning a broker will set a rate as high as is believed the market will bear in relation to a particular risk. The usual procedure is for separate rates to be charged each for hull and for machinery, reflecting both total and partial loss of

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25 One captain has observed: "Being at sea is risky; being at sea in ice is twice the risk; being at sea in ice in convoy with an ice-breaker is three times the risk". Arikaynen and Chubakov 1987:130-184; cited in Watson, at 159.

26 MIA, s. 66; NMIP §70.

27 See, for example, Institute Voyage Clauses - Hulls, Cl. 9; Cefor Form 235A, §15.

28 See, for example, Institute Voyage Clauses - Hulls, Cl. 11; NMIP §80, referring to §§68 to 73; also Cefor Form 235A, §3.

the vessel. The deductible paid by the assured serves as an incentive to "careful driving"; accordingly, an assured with a lower accident record will get a lower deductible. The premium is usually based on the tonnage of the vessel.

There is no set, scientific formula for determining premiums. Contrary to what some may believe, however, premiums are not simply set according to the whim of the underwriter:

> "There is no psychic basis on which success in underwriting may be founded. A dispassionate examination of so-called "flair" will show that its components - apart from the human element of "luck" which persists in obtruding in human affairs - are sound knowledge, recorded experience and an appreciation of relative values of the factors producing that experience, a long memory, wise judgement, quick decision, an understanding of human nature, and a gift of anticipation founded upon an accurate evaluation of current trends and future potentialities. An underwriter may not be able to give precise reasons why he accepts or declines, as the case may be, in a particular risk, for the subconscious plays a large part in influencing his decisions. He must know the "feel of the market" and the sense of a risk."[29]

Premiums can vary, depending on the particular risks the vessel will be facing during the time period or voyage of the policy. In the case of NSR navigation, coverage will most likely be obtained through voyage policies, as opposed to time policies, which usually apply for one year at a time. This will lead to a higher per-unit cost of insurance, but would appear to be the only alternative until insurers get more accustomed to covering risks in this area[30]. Thus the higher premium will reflect two aspects: the additional risk exposure which goes to the legal side of the contract, and the higher transaction costs associated with the short duration of the policy. In determining the premium, one must assume an existing time hull and machinery policy for total and partial loss. The increased premium will reflect the taking into consideration of Arctic operations. It is important to keep in mind that the insurer is, in principle, not a co-financier of the operation and does not share in the profits. Downward pressure on premiums comes from market competition, not an interest in the profitability of the voyage. Insurers, like their assureds, must attempt to run a profitable venture.

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29 Dover, at 142.

30 Personal communication with Rolf L. Berentzen and Anders Cleve, Gjensidige Forsikring, Lysaker, Norway. The voyage policy also would come with the stipulation that the vessel is to be inspected at the end of each voyage, i.e., one-way, through the Route. The minimum policy would be a one-year premium for a one-way voyage through the route, plus additional ice premium, plus basic deductible and additional ice deductible in the event of damage.

The cost of marine insurance will impact on the shipping operation as a whole and may, in some cases, be determinative as to whether the venture is undertaken. It will most likely take some time before premiums for the NSR are established and stabilised, due to both the newness of the risk and the fact that shipping is not yet developed on a wide enough scale to spread the risk among a large number of premium-payers and underwriters. The per-unit cost of insurance will most likely be high for the initial period until the market partners adjust to each other and the Western marine insurance industry accustoms itself to NSR navigation.

The experience of the Arctic Pilot Project in Canada can be instructive in this respect. Undertaken by a consortium composed of Petro-Canada Exploration Inc., NOVA, An Alberta Corporation, Dome Petroleum Limited, and Melville Shipping Limited (in turn composed of Federal Commerce and Navigation Ltd., Upper Lakes Shipping Ltd., and the CSL Group Inc.), the Project aimed to produce and liquefy some 9.0 million cubic metres of natural gas per day in Canada's Arctic and move it to Eastern Canadian markets in ice-breaking ships.

While insurance premiums are not the reason the Project was eventually shelved, it may be observed that out of the estimates of annual operating costs[31], hull insurance was the largest single component of the marine transportation costs. It accounted for no less than 23.5% of total marine transportation costs, out-pricing purchased fuel and fuel shrinkage combined[32]. Protection and Indemnity and war risk coverage, by contrast, accounted for a mere 1.2% of the total cost[33]. Insurance becomes then, a costly factor indeed, especially when one considers the numerous other items in the scenario which must be paid for, including the vessel itself, crew, husbandry, stores, regular maintenance, drydock costs, lubrication, pilotage and harbour costs, berthing, etc. Of the total operating costs for the Project, comprising the Melville Island Pipeline, the liquefaction facilities, marine transportation, and research and development, hull premiums still accounted for 12.4% of the total estimate, while P&I weighed in at a more modest 0.67%[34].

Appendix 2 gives an idea of how additional premiums for Arctic voyages are calculated in Canada. The rates, calculated periodically by the Canadian Board of Marine Underwriters, were last revised as at January 1, 1985. As mentioned earlier, the rates are advisory only; parties remain free to negotiate terms as they see fit.

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31 Arctic Pilot Project, Vol. 4, Part B - Operating Costs..

32 Arctic Pilot Project, Vol. 4, Part B - Operating Costs, at 15. Hull insurance was estimated at CAN $9,738,000 out of a total of CAN $41,313,000 in operating costs. Purchased fuel was estimated at $3,556,000 and shrinkage cost was estimated at $4,949,000. No breakdowns were given indicating premium and deductible.

33 *Ibid.* The cost of P&I was set at a (surprisingly low) CAN $521,000.

34 Arctic Pilot Project, Vol. 4, Part B - Operating Costs, at 2. The grand total for the three principal categories of operations was CAN $78,268,000.

5.2 The English Approach - Named Perils

5.2.1 Operation of the Named Perils Concept

English marine insurance works on a "named perils" basis, meaning that the insurer is, as a rule, not liable to indemnify the assured against losses not enumerated in the policy or encompassed by the general clause[35]. The classic formula for coverage is found in the Lloyd's S.G. Form, now the First Schedule to the *Marine Insurance Act*:

> "Touching the adventures and perils which we the assurers are contented to bear and do take upon us in this voyage: they are of the seas, men of war, fire, enemies, pirates, rovers, thieves, jettisons, letters of mart and counter-mart, surprisals, takings at sea, arrests, restraints, and detainments of all kings, princes, and people, of what nation, condition, or quality soever, barratry of the master and mariners, and of all other perils, losses and misfortunes that have or shall come to the hurt, detriment or damage of said goods and merchandises and ship, etc., or any part thereof."

While the foregoing clause may appear quaint nowadays, it does much to illustrate the English manner of insurance and interpretation.

There is no set insurance cover in English insurance. The parties use the basic Lloyd's Marine Policy Form or the Institute of London Underwriters Companies Marine Policy Form[36] and then mix and match the Institute Clauses[37] to accommodate the particular situation. On the derivative Canadian market, the American Hull Clauses are often used, with the same interpretative method applying.

The different types of Institute Clauses give marine insurance flexibility, one of its most valuable features. The two most important and widely used are: *time policies*, which cover the subject-matter of the policy for a set period of time; and *voyage policies*, which cover for a specific voyage, usually described as "at and from", or "from A to B, C, D", etc. The latter may prescribe that the voyage is to be completed within a certain time, without losing its "voyage" quality. An open voyage policy may also allow for a number of voyages under the one policy. *Construction policies* cover against builders' risks, and are sometimes used as well to cover when

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35 Arnould, § 41. It is common, especially in cargo policies, to insert a special clause enumerating the risks which it is particularly desired to cover; such clauses within the limits of the risks specified, usually impose a far greater liability on the underwriter than does the traditional clause. cf. §835.

36 Both of these are reproduced in Ivamy (Marine Insurance), at 510-515.

37 Reproduced in Ivamy, *ibid.*, at 516 *et seq.* This flexibility is a valuable feature of marine insurance.

a ship is undergoing extensive repairs. *Port policies* are used when a vessel is to spend a lengthy period laid up in port, thereby at reduced risk to insurer and assured. The premiums are as a rule lower than when the ship is out sailing, and therefore make this an attractive option when the ship will be laid up for an extended time. *Interest policies* are not used very frequently nowadays. Their purpose is to cover the total ancillary interests in the ship: anticipated freight, etc. *Honour policies* have in fact no legal status, due to MIA Section 4 which requires the assured to have an insurable interest in the subject-matter of the policy. They are nonetheless issued where there is an insurable interest which is difficult to specify in a precise legal description or computation. *Fleet policies* cover a number of vessels operating under one ownership and/or management. The vessels may or may not be specified in the policy and it is possible to make the policy open, i.e., any new vessels acquired by the assured are simply included in with the already-insured fleet. *Composite* or *combined policies* are subscribed by more than one company on the same form. *Block* or *blanket policies* are used in cargo insurance when several sendings of approximately the same value are made with a certain frequency. The sum insured represents the maximum amount of any one sending. *Floating policies* have seen a decline in popularity in recent years. They were primarily used in cargo insurance to cover all the voyages anticipated by the assured in the course of a given period. With each shipment the value of that shipment was declared and the value deducted from the total amount of the policy, until the policy amount was exhausted. *Specification policies* are used where there a number of shipments under an open cover policy. Basically, a set of specifications about the shipment is attached to the overall policy, thus obviating the need to negotiate cover so frequently[38].

Some of the Institute Clauses are so expansive as to cover every almost possible contingency[39], thus giving rise to *de facto* equally comprehensive coverage as obtained under the Norwegian system. It is not likely, however, that expansive, unamended Institute Clauses will be consented to by underwriters for use in NSR coverage, at least not until they become more familiar with the Route.

Parties wishing to take out insurance for NSR navigation must be vigilant in drawing up the list of perils covered, for the policy will cover these and no other[40]. Given the particular types of risks that can materialise on the NSR, the importance of this point cannot be overstated. This is also a fundamental difference from Norwegian marine insurance, discussed *infra*.

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38 Information and more detail on these types of cover can be found in Dover, at 127-134.

39 For example, IVCH cl. 4. See also the discussion in Brækhus, Bull, Wilmot, at 35.

40 Ivamy (General Insurance), at 255-256.

In the case of NSR shipping, ice damage would have to be included as a peril of the sea or like peril. It would be possible for counsel for an insurer to argue that ice did not fall within "perils of the sea"[41]. In return, counsel for an assured could argue that for the term to have any meaning in the Arctic context, it would have to include ice; that while at certain periods a vessel can proceed relatively ice-free through a passage, at other times the vessel is navigating more through ice than through clear water. Subsidiarily, with respect to hull and machinery damage caused by lack of adequate hydrographic data, it could be argued that the perils clause was developed at a time when commercial voyages truly were a "marine adventure", when accurate and adequate charts were the exception and not the rule[42].

"Perils of the sea" would not include the normal or expected sea conditions, but would include decisions made by the captain with regard to more severe weather conditions, even if it turned out later to be an unwise course of action. Simple negligence is, as a rule, covered by insurers. Thus, if it were known, for example, that particularly inclement weather was on the way or other adverse conditions were expected, and that the vessel should not be out in those conditions, any ensuing damage would still be covered. By contrast, if shipping control zones were set up in the NSR as has been done in Canada, and a ship ventured out into a zone for which it lacked the requisite class or for which there was a prohibition on entry and loss occurred, this would not be covered, as it would fall within the "intentional acts of the assured" which normally preclude insurer liability. The same would apply in any event if the master of the vessel were informed or ordered by the Russian authorities not to navigate into a certain area, as this would be tantamount to navigating into a prohibited zone. *A fortiori* is this true since insurers for the NSR would most likely require compliance with a vessel traffic management system along the lines of the NORDREG system used in Canada.

A more commonly used formulation nowadays is found in Institute Voyage Clauses - Hulls, Clause 4:

"4.1 This insurance covers loss of or damage to the subject-matter insured caused by

4.1.1 perils of the seas rivers lakes or other navigable waters

4.1.2 fire, explosion

4.1.3 violent theft by persons from outside the Vessel

4.1.4 jettison

4.1.5 piracy

4.1.6 breakdown of or accident to nuclear installations or reactors

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41 See the Rules of Construction of the MIA. Rule 7 states: "The term "perils of the seas" refers only to fortuitous accidents or casualties of the seas. It does not include the ordinary action of the winds and waves."

42 See the discussion in Spears, at 137.

4.1.7 contact with aircraft or similar objects, or objects falling therefrom, land conveyance, dock or harbour equipment or installation

4.1.8 earthquake volcanic eruption or lightning.

4.2 This insurance covers loss of or damage to the subject-matter insured caused by

4.2.1 accidents in loading discharging or shifting cargo or fuel

4.2.2 bursting of boilers breakage of shafts or any latent defect in the machinery or hull

4.2.3 negligence of Master Officers Crew or Pilots

4.2.4 negligence of repairers or charterers provided such repairers or charterers are not an Assured hereunder

4.2.5 barratry of Master Officers or Crew,

provided such loss or damage has not resulted from want of due diligence by the Assured, Owners or Managers.

4.3 Master Officers Crew or Pilots not to be considered Owners within the meaning of this Clause 4 should they hold shares in the Vessel.

A number of questions arise as to the interpretation of these stipulations in relation to the NSR.

The first item that would be the subject of special interpretation for NSR navigation would be 4.1.1, referring to the "perils of the seas rivers lakes or other navigable waters". This has been discussed somewhat above.

The second item that attracts attention is 4.1.6, referring to nuclear installations or reactors. Would this include damage caused by a nuclear-powered ice-breaker which was escorting the insured vessel? P&I clubs do not seem to want to accept any risk to do with anything nuclear. Why would the hull underwriters accept it?

Thirdly, 4.2.2 refers to bursting of boilers, breakage of shafts and the like. There is at least a probability that an insurer would strike this from the list of included perils, since there is an increased risk of freezing of pipes, damage caused by overheating due to ice being caught in the cooling system, etc.

Additionally, what constitutes a latent defect or not has been the subject of a great deal of litigation. Whether, for example, prolonged ice navigation resulting in structural damage to a vessel built to Arctic class standards would be termed a latent defect or ordinary wear and tear would turn on the facts of the individual case. A latent defect is usually described as a defect not discoverable by the ship owners or his servants using reasonable care[43]. The involvement of Administrations and classification societies, while helpful in practice, complicates the legal picture and opens to the door to much conjecture.

Fourthly, the extent of the "Inchmaree Clause"[44] provision found in 4.2.3 is unclear. Would the protection of the clause extend, for example, to the ice pilots required on board by Russian law, during certain parts of the passage? Until some litigation comes through the judicial or arbitral system on these questions, one cannot be sure.

Lastly, note the absence of any "and other like perils" type of clause.

No doubt other unique issues would emerge as experience with the clause in the NSR context was gained.

5.2.2 Warranties

A warranty in marine insurance is, in its strict sense, understood to denote a promissory warranty given by the assured which, if not complied with, will have a draconian effect on the continued existence of the policy[45]. The word "warranty" also appears in clauses which are merely intended to delimit the risk without otherwise affecting the policy, e.g. "warranted free of capture and seizure", or "warranted free of average". Here it serves merely as an exclusion from cover, meaning that if it is not complied with, the policy will not come to an end, but the insurer will not be liable in respect of that particular loss. Conversely, it is not necessary to use the word "warranty" to create a warranty for the purposes of the contract[46]. Warranties may be express or

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43 See *Prudent Tankers Ltd.* v *Dominion Assurance Co. Ltd.* [1980] 1 Lloyd's Rep. 338, where it was held that "One is concerned with the actual state of the hull and not with the historical reason why it has come about that the hull is in that state." The judge in that case held that the defense in MIA s. 55(2)(c) "inherent vice, or nature of the subject-matter insured" could not be relied on by the underwriters unless the policy so provided. Since latent defects was covered by the policy, the policy was held to cover this peril.

44 As established in *Thames and Mersey Marine Insurance Co. Ltd.* v. *Hamilton, Fraser & Co. (The Inchmaree)* (1887) 12 App. Cas. 484.

45 Anon, "Warranties in Marine Insurance Policies", (1993) 12 Clifford Chance Maritime Review.

46 MIA s. 35(1) states:
"An express warranty may be in any form of words from which the intention to warrant is to be inferred."
See also Arnould, §§679-681.

implied[47]. Breaches of warranty may be waived by the insurer[48], but if invoked, the burden of proof is on the insurer[49].

The most common examples of express warranties[50] are:

1 Sailing warranties
2 Warranty as to position of ship
3 Warranty as to number of crew
4 Convoy warranties
5 Warranty as to nationality
6 Warranty as to neutrality
7 Warranty as to part uninsured
8 Other instances.[51]

The principal implied warranties[52] are seaworthiness[53] and legality of the marine adventure[54]. The former is discussed *infra*, as are the relevant express warranties.

The burden of proving breach of an express warranty is on the underwriter[55]. The same applies for an implied warranty[56]. The effect of a breach of warranty is not retroactive, that is, the assured can claim for losses occurring before the breach[57].

MIA s. 33 states:

"33. Nature of warranty.- (1) A warranty, in the following sections relating to warranties, means a *promissory warranty*, that is to say, a warranty by which the assured undertakes that some particular thing shall or shall not be done, or that some condition shall be fulfilled, or whereby he affirms or negatives the existence of a particular state of facts.

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47 MIA s. 33(2).

48 MIA s. 34(3). This is usually achieved through a "held covered" clause.

49 Arnould, §686.

50 Express warranties are contemplated in MIA s. 35.

51 See the discussion in Ivamy (Marine Insurance), at 282 *et seq.*; also Arnould, Chap. 19.

52 See, generally, Arnould, Chap. 20.

53 MIA s. 39.

54 MIA s. 41.

55 Arnould, §686, Ivamy (Marine Insurance), at 287.

56 Arnould, §742; Ivamy, *ibid.*, at 298.

57 MIA s. 35(3). See also Arnould, §684.

(2) A warranty may be express or implied.

(3) A warranty, as above defined, is a condition which *must be exactly complied with, whether it be material to the risk or not.* If it be not so complied with, then, subject to any express provisions in the policy, the insurer is discharged from liability as from the date of the breach of warranty, but without prejudice to any liability incurred by him before that date." (emphasis added).

It may be advantageous at this point to highlight two differences between express warranties and representations. In practice, it is not always cut-and-dry as to which is which, and some guidance may therefore be helpful. The first difference is that the former will always be written on the face of the policy, while the latter will seldom, if ever, be written in. The second is that while substantial compliance is sufficient for a mere representation uttered in the negotiations leading up to the contract, express warranties require exact and literal performance of what has been promised, as reflected in MIA s. 33(3)[58].

It has long been the rule in marine insurance law that statements bearing on the risk introduced into the policy are to be construed as warranties, and strict compliance with the warranty is a condition precedent to the attachment of the risk[59]. In this respect, there is a major difference between English marine insurance law and Norwegian marine insurance rules, namely, that while under the former no causal link is required between the breach of the terms of the insurance contract and the loss for the insurer to escape liability[60], under the latter the assured may breach the warranty yet obtain compensation if the loss cannot be traced back to the breach. Parties taking out insurance for NSR navigation would do well to consider the implications of this when deciding on which market they wish to obtain coverage.

It might also be advantageous to follow developments in the case-law, in the UK and beyond. Separating warranties from mere exclusions from cover has been the subject of a number of cases. The legal effect of a breach of a promissory warranty is, it turns out, not cast in stone.

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58 See also Arnould, §682.

59 In *Thomson* v *Weems* (1884) 9 App Cas 671, Lord Blackburn stated, by way of *obiter dictum*, at 684: "In policies of marine insurance I think it is settled authority that any statement of fact bearing upon the risk introduced into the written policy is, by whatever words and in whatever place, to be construed as a warranty, and *prima facie* at least that the compliance with that warranty is a condition precedent to the attachment of the risk." Cited in Ivamy (General Insurance), at 282, note 6. See also Arnould §682.

60 Arnould §683; Ivamy (General Insurance), at 280.

Norwegian rules do not explicitly call such things warranties or conditions, preferring instead to deal with them somewhat differently. The general rule is that there must be a causal link between the breach and the loss for the insurer to escape paying compensation: Bull, at 98. Exceptions are the duty of disclosure and seaworthiness, discussed below.

In Canada, the strict interpretation of warranties under English law came under consideration by the Supreme Court of Canada in the case known as the *Bamcell II*[61]. The policy in that case contained the following clause:

> "Warranted that a watchman is stationed on board the *Bamcell II* each night from 2200 hours to 0600 hours with instructions for shutting down all equipment in an emergency."

There was no watchman stationed on board the vessel during the hours prescribed in the clause. The court held that this had no bearing whatsoever on the loss of the vessel which occurred in mid-afternoon. The issue then arose as to whether or not this clause constituted a warranty as defined in s. 34 of the British Columbia *Marine Insurance Act*[62]. If the clause constituted a true warranty, then, in accordance with s. 34, it must have been strictly complied with. A breach of the warranty at any time, even if there was no connection between the loss and the breach, would entitle the insurer to be discharged from liability under the policy as from the time of the breach.

The Supreme Court of Canada held that the clause was not a warranty, but rather a "special condition", finding that, for example, the parties could not have intended that if a watchman was late one night, or even missed a night, that the insurers should be discharged from liability for the remainder of the term of the policy.

From this it may be concluded that, in Canada at least, the courts will use normal rules of construction to make a detailed examination of the intention of the parties in determining whether a clause in a marine insurance policy is, in fact, a warranty. In attempting to ascertain this, they will look at the effects of the breach upon the risks covered by the policy as a whole. If it is reasonable to infer that a breach should terminate cover, the clause will be construed as a warranty. If the breach will merely increase the risk temporarily, however, it may be reasonable to interpret the clause as a mere exception, breach of which will suspend cover only temporarily, and only in relation to the breach in question. Where the status of the clause is in doubt, the fact that the breach is not material to the risk may be taken as an indication that it was not intended to be a warranty

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61 *Century Insurance Co. of Canada et al.* v. *Case Existological Laboratories Ltd.* 2 S.C.R. 47, 48 B.C.L.R. 273, [1984] 1 W.W.R. 97 [hereinafter the *Bamcell II*]. The case also expanded the notion of "perils of the sea".

62 British Columbia *Marine Insurance Act*, R.S.B.C., 1979, c. 203, s. 34. This is the equivalent section to the British MIA s. 33.

in the strict sense of the term, with the accompanying sanction of permanent loss of cover in the event of breach[63]. One could also add that even where there has not been breach or the clause is not construed as a warranty, there may be other conditions of the contract which must be fulfilled before the insurer is liable to pay any indemnity; most often this will be that the premium is paid up.

It may also be concluded that the situation is murky, to say the least, as to what constitutes a warranty in the strict sense of the term for the purposes of Canadian marine insurance. It may be noted that the *Bamcell II* decision has not gone uncriticised[64]. One solution might be for the parties to state explicitly, either in the individual clause or in a heading over a series of important clauses, the nature of the provision, the requirement of literal compliance, and the effect of any breach.

Quaere: will courts in other Common Law jurisdictions, notably the UK, follow the *Bamcell II* decision? It was asserted above that English courts would do well to follow Canadian examples in relation to *Arctic* shipping. Already that was a radical proposition. It is even less likely that English courts would allow themselves to be guided by the colonies in matters non-Arctic. There have been solid English sources advocating an interpretation based on the construction of the particular policy[65]. The conclusion is that a clause such as the one in the *Bamcell II* case could take two different directions, depending on where one had one's insurance and brought one's case. It is not inconceivable that Russian interests may prefer to approach markets in Canada, where there is experience with Arctic shipping.

Even where it has been established that the clause is a promissory warranty, there was until recently considerable doubt as to whether breach automatically

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63 This would be consistent with the decision in *Black King Shipping Corporation and Wayang (Panama) SA* v *Massie, The Litsion Pride* [1985] 1 Lloyd's Rep 437. In that case, a "held covered" clause made no mention of a condition or condition precedent, and contained nothing to convey the idea that failure to give the information as soon as practicable would result in loss of cover, and it was held that the clause should not be construed as a condition. Cited in Ivamy (General Insurance), at 280, note 11. See also the discussion in Anon (Clifford Chance).

64 See the discussion in McEwen & McEwen. They also cite a subsequent Canadian case, *Federal Business Development Bank* v. *Commonwealth Insurance Co. Ltd. (The Good Hope)*, C802314, 4 October 1983, unreported at date of article, which followed the *Bamcell II* reasoning with regard to the following clause: "Warranted vessel laid up at the north foot of Columbia Street with permission granted to demonstrate within Vancouver Harbour for the purpose of sale." The vessel was taken outside the limits of the trading warranty and then back inside again. The court found that the clause was not a warranty which was intended to be strictly complied with.

65 Namely, Arnould at §692, and Ivamy (Chalmers'), at 50. See also the discussion on "Route and Limits on Navigation" below.

resulted in termination of the policy or whether the breach merely gave the insurer an option to terminate. The confusion arose partly because of the wording of [English] MIA s. 34(3) which allows the insurer to "waive" the breach. The issue, of course, became: what constitutes a waiver? Since the *Good Luck* case[66], this time a House of Lords decision, it may be stated as settled law that the insurer is discharged from liability without having to do anything, and that an assured, to show that the breach of warranty has been waived, will have to show some positive conduct by the insurer which unequivocally affirms the policy. Mere silence is not likely to be sufficient.

One example of how all this would work in the NSR would be where the parties wished to make, for example, a certain ship classification a promissory warranty of the policy, e.g. Russian class L1. This would be a condition precedent to the attachment of the risk. If during the course of the policy that classification was lost, this would constitute an alteration of the risk as defined in the policy or, from another perspective, a violation of a condition subsequent to the policy. Cover would be lost as of the time the classification was lost[67], although the policy might stipulate that cover was to continue until the ship next reached port. Even absence of a breach of warranty would not *ipso facto* lead to liability of the insurers, depending on how the policy was drafted. A condition precedent to the liability of the insurers, for example, might be that the premium be paid up, or that the assured assist the insurers in investigating and ascertaining the cause and extent of the loss[68].

As can be seen, each side can protect itself or unwittingly leave itself open to liability or lack of cover. Wise advice to a client on either side of the contractual fence would be to be familiar with what situations can arise in the NSR, and to hedge against them explicitly, as it is not yet known how legal clauses will be construed in this context.

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66 *Good Luck* [1991] 2 Lloyd's Rep. 191.

67 MIA s. 33(3).

68 See generally, Ivamy (General Insurance), at 276.

5.3 The Norwegian Approach - "All-risk"

5.3.1 The All-risk Concept

NMIP §15 sets out the guiding principle for all-risk cover:

"§15. Perils comprised by an insurance against marine perils.
An insurance against marine perils comprises all perils to which the interest may be exposed, with the exception of:
(a) the perils comprised by an insurance against war perils, see §16[69],
(b) measures taken by Norwegian or allied State authorities. By State authorities is understood persons or organisations exercising public or intergovernmental authority,
(c) insolvency.

NMIP §155 further states that:

"§155. Insurance "on full conditions".
If not otherwise agreed, the hull insurer is liable for total loss, damage and collision liability in accordance with Chapters 11 to 13."

The difference as compared to coverage under English law is readily apparent, and is more related to the methodology of the systems behind the insurance than to the insurance itself, *viz*, inductive and deductive reasoning and interpretation, respectively. English law tends to work empirically, and will, from a number of cases, proceed by induction to a general rule. Norwegian law, by contrast, will start out with a rule and then proceed by deduction to apply it in particular circumstances.

Norwegian insurance cover can take many of the same forms as English cover, albeit in a different manner. Hull insurance can come in the standard-variety hull form[70], plus hull interest, covering the interest in anticipated freight, etc.[71]; builder's interest[72] and so on. The Norwegian rules do not go into the technical detail of the English Institute Clauses, preferring instead to leave the details to the parties themselves.

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69 The reader is referred back to section 4.3.5. discussed above, on war and strikes risks, for the content of NMIP §16.

70 NMIP Chap. 10-13.

71 NMIP Chap. 15. Like the English system, this is not widely used anymore. Bull, at 13.

72 NMIP Chap. 14.

The "all-risk" insurance policy is then, open-ended with respect to perils covered, that is, all perils which are not specifically excluded from the policy are included, provided of course that the peril falls within the scope of perils covered by the policy. Various less-than-all-risk forms are available.

There are three main consequences of this. Firstly, to the advantage of the assured, perils which were perhaps not contemplated at the time of signing the policy can be covered, whereas they would not under a positively-limited, "named perils" system. Secondly, with respect to interpretation of the policy in relation to a concrete event, an "all-risk" policy will be interpreted deductively, i.e., if a case is border-line between "included" and "not included" , the event will fall within the range of coverage. Thirdly, the "all-risk" label will shift the burden of proof to the insurer on the issue of whether the casualty was caused by a peril falling within the scope of cover[73]. All of these are of importance in the NSR context, where many dangers of types traditionally not covered - and indeed not contemplated - can arise.

Another consequence flowing from this concerns breach by the assured of an obligation under the insurance contract. As discussed above, under English law the assured loses the right to compensation almost *ispo facto* upon breach of a warranty or condition. Under Norwegian coverage, the general rule is that the assured is entitled to compensation, unless there is a causal link between the breach and the loss[74]. There are two principal exceptions to this: seaworthiness[75] and alteration of the risk[76].

5.3.2 Alteration of the risk

Alteration of the risk is a wide category used to "catch" almost anything the insurer did not bargain for at the time the policy was drawn up. It can include such things as navigating outside the geographical area contemplated in the policy, sailing outside specified time periods, a loss of ship classification, and so on. It is dealt with in NMIP §31 and following. §31 states:

> "There is an alteration of the risk where an alteration occurs in the circumstances which, according to the contract, are to *form the basis of the insurance*, and the risk thereby is changed *contrary to the implied conditions of the contract.*

73 See Bull, at 62-63.

74 Bull, at 98.

75 Covered by NMIP §45.

76 NMIP §31. Note that class of ship is unequivocally an implied condition of the contract.

Where, at the conclusion of the contract, it is an implied condition that the ship has a certain class, it is deemed to be an alteration of the risk if subsequently the ship loses this class or is transferred to another classification society."
(emphasis added).

Two elements shall be noted here, as they are the requirements for there to be an alteration in the risk justifying the insurer escaping liability. Firstly, the change in circumstances must be one which is part of the basis of the contract or, to re-use Common Law terminology, goes to the root of the contract. An example would be "not to break ice". Secondly, the change must be contrary to the implied conditions of the contract[77]. There must be an actual change in the risk and not merely an increase in the risk. If a boat happened to drift out into ice-filled water during inclement weather, this would give rise to the duty to report an alteration in risk to the insurer pursuant to NMIP §34[78].

The consequences of an assured causing the alteration of risk are dealt with in NMIP §§32-34[79]. If the assured has intentionally caused or acquiesced in an alteration of the risk, the insurer is free from liability, insofar as the risk would not have been accepted[80]. If the risk would have been taken on, on different terms, usually a higher premium, then the insurer will still be liable, although only to the extent the loss is not attributable to the alteration[81]. Regardless of fault or acquiescence, the insurer may cancel the insurance on 14 days' notice[82], three days if the assured has failed to give reasonable notice of a future or current alteration of which he or she has knowledge[83].

There are instances where the insurer cannot invoke the alteration to avoid liability. One of these is where the alteration has ceased to be of relevance to the insurer[84]. This is, in effect, a restatement of the rule that the alteration must go to the root of the contract. A second instance is where the risk was altered for the purpose of saving life or property[85]. In any event, the insurer

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77 See, generally, Bull, at 138 *et seq.*

78 See Motiver, at 38. See also Bull, at 139.

79 See, however, Cefor Form 235 A, which sets its own sanctions, explicitly to prevail over the provisions of the NMIP.

80 NMIP §32, para 1.

81 *Ibid.*, para. 2.

82 NMIP §33.

83 NMIP §34.

84 NMIP §35, para. 1.

85 *Ibid.*, para. 2. Norwegian rules deal quite extensively with salvage and, to a certain extent, ice. This is in all likelihood a reflection of the physical conditions with which Norwegian shipping and insurance interests have had to deal, more than others.

must notify the insured of the intention to invoke any of the available sanctions, or the opportunity to use them will be lost[86].

The two most important alterations of risk in Norwegian rules, at least as far as the NMIP would indicate, concern the geographical navigation area and the legality of the marine adventure[87]. The former will be dealt with *infra*, under Route and Limitations on Navigation.

Alteration of the risk would not encompass such things as sudden change in weather, or decisions made about weather conditions. While an unexpected tempest indisputably alters the immediate scenario, it does not go to the root of the insurance contract which is, after all, one of cover for a ship going through an Arctic area. As stated above, even if the decision to venture out turns out to be an unwise one, both English and Norwegian insurers generally cover simple negligence. Like the English system, the Norwegian system includes trying to protect assureds against milder forms of their own negligence. Thus, if a ship ventured out when adverse conditions were expected, any ensuing damage would still be covered. However, if zones were set up in the NSR and a ship ventured out into a zone for which it did not possess the necessary classification or for which there was a prohibition on entry, any ensuing loss would be excluded from cover, as under English rules, since it would constitute an intentional alteration of the risk by the assured, which the insurer would not be bound to cover. Likewise, if the Russian authorities informed the master of the vessel in advance about heavy ice conditions and advised against navigating into a certain area, or even prohibited it under the authority of the *Regulations for Navigation on the Seaways of the Northern Sea Route*, any ensuing damage would not be covered, on the same grounds.

5.3.3 Some Provisions and Exclusions of Note

Despite the differences from English law, Norwegian insurance rules, like the English, seek to provide cover against "perils", which term denotes a certain lack of foreseeability. It is important to keep in mind that "all risk" does not mean "all things".

One statistic of importance in this connection is the general accident rate for the NSR[88]. While some figures which have been made available illustrate the time of year when the most accidents occur and what part of the ship gets most damaged, etc., perhaps the most important figure which insurers want to know is: what is the percentage of accidents in relation to the total

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86 NMIP §36, also implicitly in §35.

87 NMIP §§37-39 and §40, respectively.

88 By way of reference, one may look at the figures discussed by Lensky, Tromsø Conference.

number of vessels using the route? Anything over 10% is considered unacceptable in insurance circles[89].

In another vein, NMIP Chapter 12, "Damage", contains a number of significant provisions. §186 "Ice damage deductions", stipulates:

> "Damage due to striking against or contact with ice - collision with icebergs in the open sea excepted - is recoverable subject to a deduction of one fourth."[90]

In the event of a ship sustaining several million dollars or kroner worth of damage, this is not a negligible deduction. Where the hull policy will cover 3/4 of the damage, the assured is left covering the final 1/4. The exclusion of icebergs from coverage is unfortunate, as they are a fairly common phenomenon in the NSR. Iceberg damage would have to be negotiated with an underwriter, subject probably to a very heavy extra premium.

Also subject to a 25% deduction are various types of machinery damage, as enumerated in NMIP §187. At least one Norwegian insurer has made it clear that there would be a total exclusion of engine damage resulting from ice damage to the water cooling system, i.e. overheating problems caused by "icing" of the water cooling system[91].

Another important limit is found in Chapter 13, "Assured's liability for collision or striking", §194(f). §194, para. 1 establishes the general rule that the insurer will cover liability in the event of collision or striking by the ship, including equipment or cargo. Para. 2 sets out the exceptions:

> "(...) However, the insurer is not liable in respect of:
> (...)
> (f) liability for loss caused by cargo or bunkers after a grounding or striking against ice."

This is an important exception in the case of NSR traffic. Navigation is often carried out behind an ice-breaker or in convoy, through passages of water carved out in the ice by the ice-breaker. Walls of ice, of varying thickness, lie on either side of the vessel as she proceeds through the channel, unless one is fortunate enough to hit a relatively ice-free period. Such times are, unfortunately, the exception, not the rule, although some strategic planning is possible.

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89 Personal communication with Rolf L. Berentzen, Gjensidige Forsikring, Lysaker, Norway.

90 Some of the problems of this point and related topics are discussed in Kjerstad (Navigasjon), at 134.

91 Personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

5.4 Factors Considered in Establishing the Insurance Contract

While there are considerable difficulties and unknowns in drawing up insurance for this new area, one must not be pessimistic: underwriters in England, Norway and Canada have all expressed openness to arranging insurance for voyages in the NSR[92]. The natural reaction of an underwriter is one of caution; it will therefore take time and experience to work out the legal details and, not least, premium structure for NSR travel.

There are many factors an underwriter may wish to look at when assessing the risk involved in underwriting an Arctic policy. The cost of minimising the risk and the cost of repairs figure strongly in the deliberations. The following are what was felt to be the most important factors taken into account, although there is nothing stopping an underwriter from looking at other aspects if necessary. Much is ultimately left up to the discretion of the individual underwriter. Each aspect will be dealt with in terms of its legal status in the eventual policy, and the consequences flowing from that status. Inter-market differences will be highlighted.

5.4.1 General Seaworthiness of the Vessel

Seaworthiness of the vessel is such a basic, such a cornerstone element of the insurance contract that many of the other factors discussed relate back to seaworthiness in one way or another. It is an implied warranty of any marine insurance contract.

With respect to English law, MIA s. 39 sets out:

> "39. Warranty of seaworthiness of ship.- (1) In a voyage policy there is an implied warranty that at the commencement of the voyage the ship shall be seaworthy for the purpose of the particular venture insured.
>
> (2) Where the policy attaches while the ship is in port, there is also an implied warranty that she shall, at the commencement of the risk, be reasonably fit to encounter the ordinary perils of the port.
>
> (3) Where the policy relates to a voyage which is performed in different stages, during which the ship requires different kinds of or further preparation or equipment, there is an implied warranty that at the commencement of each stage the ship is seaworthy in respect of such preparation or equipment for the purposes of that stage.

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92 Written communication with Hugh Falconar of Hugh Falconar Insurance, Edmonton; personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway; telephone communication with Trevor Hart, Lloyd's, London.

(4) A ship is deemed to be seaworthy when she is reasonably fit in all respects to encounter the ordinary perils of the seas of the adventure insured.

(5) In a time policy there is no implied warranty that the ship shall be seaworthy at any stage of the adventure, but where, with the privity of the assured, the ship is sent to sea in an unworthy state, the insurer is not liable for any loss attributable to unseaworthiness.

There are a number of points in the foregoing section of particular interest in relation to NSR navigation.

Firstly, general seaworthiness of the ship is an *implied warranty*, with all the legal implications that entails. The implied warranty that the ship is "tight, staunch and strong" is an integral part of every marine insurance contract. Seaworthiness is a relative, subjective concept, a function of the particular voyage contemplated[93]. It will entail more stringent and detailed requirements in the case of the NSR than for more southerly voyages. The latter does not normally require such items as a gyro-compass or satellite navigation equipment, just to get through without hull damage. Nor is classification - at least not ice-strengthened classification - usually part of the insurance contract.

Secondly, s. 39(2) requires the ship to be up to withstanding the rigours of the port, even before any voyage is embarked upon. Tied in with the doctrine of "seaworthiness by stages" implicit in s. 39(3), this implies that the ship must be able to survive berthing in ice, or at one of a number of jetties built on the permafrost, a frequently-used "quay" in Siberia[94].

Thirdly, seaworthiness can be accomplished in stages, as reflected in MIA s. 39(3)[95]. The doctrine can become applicable where there is a combined river and sea voyage being contemplated. This was established in the case of *Bouillon* v *Lupton*[96], where a ship was insured "at and from Lyons to Galatz". The ship left Lyons without a sea captain and crew (although with a river captain and crew) and certain equipment which she was unable to carry on the river portion of the voyage, but which would be necessary for the sea portion of the voyage. At Arles she took on the necessary crew and equipment, but was subsequently lost on the Black Sea. The court held that, in light of the two-stage nature of the voyage and mercantile usage, she had complied with the warranty of seaworthiness.

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93 This is implicit in ss. 39(1) and (4). See also Arnould, §730 *et seq.*; and Ivamy (Marine Insurance), at 296 *et seq.*

94 Watson, at 171-175.

95 The principle was originally enunciated in the case of *Dixon* v *Sadler* (1839) 5 M. & W. 405 at 414.

96 *Bouillon* v *Lupton* (1863) 33 L.J.C.P. 37.

The seaworthiness by stages doctrine can be of use in the NSR, where a good deal of shipping is combined river/sea transport. The principal river systems, the Ob'-irtysh system, the Yenisey system, the Lena Basin and the Northeast, and the Amur Basin, are used to move, *inter alia*, large quantities of oil[97]. Seaworthiness by stages can also apply where there are two distinct stages of sea voyage[98]. Arguably this could be the case when a ship only goes in as far as, say, Dikson, from the European side and back out again; or when a ship is ordinarily outfitted when leaving a port in, say, England, but stops in northern Norway or Murmansk to switch crew or take on heavy equipment.

Where at a certain stage of the voyage a pilot is required by regulation, as is the case for ice pilots in the NSR, then it goes to seaworthiness to see that a pilot is aboard[99]. Thus, it would be a breach of the implied warranty of seaworthiness not to comply with this. It should be noted that the fact that there is regulation creating a requirement to have a pilot as of a certain point creates a new stage for the purposes of the doctrine. Compulsory pilotage on entering a port does not necessarily go to seaworthiness, however, even where it is customary to use one, and non-use of a pilot would not necessarily lead to loss of coverage[100]. Thus, for example, in the NSR where inclement weather or ice conditions made waiting for a pilot impracticable, proceeding with a berthing would not necessarily lead to loss of cover.

Bunkering can also be divided into stages. While the draft *Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route* will merely *recommend* that all vessels navigating the NSR have on board a 30-day supply of fuel, a 60-day supply of food and a distilling plant[101], if enough fuel, etc. for only part of the voyage is on board at the start, each bunkering point starts a new stage for the purposes of seaworthiness. Once these stages have been fixed in the insurance contract, the ship operator must abide by them[102].

Fourthly, s. 39(4) defines seaworthy as being reasonable fitness to encounter the "ordinary perils of the seas" of the adventure insured. "Ordinary" can have many meanings. In the case of navigation in the NSR this would necessarily carry a different meaning than for more southerly voyages. How far this would be taken remains to be seen in the case-law. English law has never really considered ice navigation as falling within the parameters of "ordinary" navigation.

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97 North, at 177-197.

98 Arnould, §723A.

99 Arnould, §§ 724-725.

100 Arnould, §§726 and 741.

101 Mikhailichenko, Tromsø Conference. These recommendations are similar to what is *required* in Canada's Arctic, pursuant to ASPPR, s. 27.

102 Arnould, §727.

Conversely, Russians consider ice risk, indeed NSR ice risk, a normal part of operations[103]. How much deference English courts would pay to this is an open question.

Fifthly, a cargo can make a ship unseaworthy, when the ship cannot safely carry the kind of cargo with which she is loaded. This is implicit in the idea of the ship being fit for the specific voyage[104]. Where the courts would draw the line between seaworthiness and unseaworthiness would hinge on the individual combination of factors: the vessel itself in relation to the cargo, the time of sailing, the ice conditions and the master's knowledge thereof, and so on. The reader is referred to the discussion below on cargo.

Norwegian provisions relating to unseaworthiness are found in Chapter 2, Subdivision 3 of the NMIP. The main provision reads as follows:

> "§ 45. Unseaworthiness.
> The insurer is not liable for loss that is a consequence of the ship not being in a seaworthy condition, provided that the assured was or ought to have been aware of the ship's defects at such a time that it would have been possible for him to intervene.
> The burden is on the assured to prove that he neither was nor ought to have been aware of the defects. If the ship springs a leak whilst afloat, he has the further burden of proving that the loss is not attributable to unseaworthiness."

Seaworthiness is not actually defined in the NMIP[105], as it is in the English provision. The provision here would seem to serve more as a rule of evidence than as a definition of seaworthiness. For example, in the event of an unexplained sinking, §45(2) sets out a presumption of law that the sinking was due to unseaworthiness, which presumption is rebuttable by the assured producing evidence to show that it was due to some other cause. There is still the requirement of fault on the part of the assured in the ship being in an unseaworthy state, and there must still be a causal link between that fault and the loss. If a court finds on the facts that the ship was unseaworthy, however, there will not be much room in which to argue about causal link, as causal factors will have already come into consideration in the process of determining

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103 See Kjerstad (Navigasjon), at 134.

104 See MIA s. 40(2):
"In a voyage policy on goods or other moveables there is an implied warranty that at the commencement of the voyage the ship is not only seaworthy as a ship, but also that she is reasonably fit to carry the goods or other moveables to the destination contemplated by the policy."
See also Arnould, §§732, 735.

105 Even the Seaworthiness Act (Sjødygtighedsloven) of 1903 defines seaworthiness in negative terms:
"§2. A ship is considered unseaworthy when, due to vices in the hull, machinery or crew or due to overloading or faulty loading or other reasons, it is in such a condition, in light of the navigation contemplated, that it must be considered as posing a greater danger to human life, were it to sail immediately, than it should according to custom and trade." (unofficial translation by the author)

unseaworthiness[106]. Put another way, the things that make a ship unseaworthy are the things that can make it sink.

As in English law, there is no doubt that seaworthiness is a relative concept[107].

Norwegian rules do see an intimate link between seaworthiness and compliance with safety regulations. The fact that NMIP §45, relating to unseaworthiness, and §48, respecting safety regulations, are placed in the same sub-division cannot be coincidental. One can therefore postulate that a violation of the *Regulations for Navigation on the Seaways of the Northern Sea Route*, in particular §6 pertaining to inspection and approval of the vessel by the Russian authorities, §8 dealing with control of navigation, and §9 allowing for suspension of navigation in the interest of safety, would lead *ipso facto* to legal unseaworthiness for the purposes of the NMIP and thereby the consequences set out further in the Plan[108]. These include the insurer not being liable to the extent that the loss is attributable to the violation, burden of proof being on the assured[109]; and the right of the insurer to terminate cover upon seven days' notice where there are certain, unrepaired defects in the vessel, the ship has been damaged, or a safety regulation of material importance has been violated[110]. The same could apply, for that matter, to a violation of any special safety regulations the insurer set out in the contract, or any special conditions imposed by an Administration or classification society[111].

Norwegian insurance does not have a "seaworthiness by stages" doctrine[112], relying instead on the presumption in NMIP §45 that the ship shall *always* be seaworthy[113]. How far Norwegian insurance could go in "nuancing" its policy or premiums, as discussed above, remains unclear. The effect of a breach of the warranty of seaworthiness then, will have a different impact, depending on which market cover is obtained. Under English rules, unseaworthiness will not void the contract *ab initio*, cover will only be lost as of the time of unseaworthiness. If this happened to be at the beginning of the voyage, then that would void the contract from the

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106 Bull, at 116.

107 Motiver, at 49; Bull, at 110 *et seq.*; also ND 1973.450 RAMFLØY.

108 The Motiver, at 52, state that a foreign State's, and not just Norwegian, regulations must be complied with for the purposes of the paragraph, provided they relate to navigation safety and not, say, tolls or customs and excise. Where there is a conflict between Norwegian and another State's safety regulations, an assessment of the individual case must be made. Where the assured had reasonable grounds to believe the regulation was not applicable in the particular case, cover may yet be upheld.

109 NMIP §49, para. 1.

110 NMIP §50.

111 NMIP §48 *in fine*.

112 Lecture notes from course on marine insurance, Scandinavian Institute of Maritime Law, Oslo, Autumn 1992.

113 Bull, at 117.

beginning[114]. Under Norwegian rules, the outcome will turn on when the assured acquired *knowledge* of the unseaworthiness, as there must be subjective knowledge of the unseaworthiness, i.e. fault, and a causal connection between the knowledge and the loss. Under NMIP §45, the insurer will be free from liability only if the assured "was or ought to have been aware of the ship's defects", and this must have been "at such a time as it would have been possible for him to intervene". There is some allowance made for "stages", i.e., if a ship is seaworthy for a certain part of a voyage, but requires repairs for another stage and those repairs can be carried out beforehand, the ship will be considered seaworthy[115].

If insurers wanted to get an idea of what would be seaworthy for the NSR, it is submitted they could draw inspiration from Canada's AWPPA and pursuant ASPPR. The Regulations set out very specific, detailed requirements about how a ship is to be outfitted and navigated in the area subject to the AWPPA. For example, Schedule V to the ASPPR sets out "Construction Standards for Types A, B, C, D and E Ships", while Schedule VI discusses in detail "Hull Design for Arctic Class Ships", and Schedule VII lists "Machinery Requirements for Arctic Class Ships". Schedule VIII is perhaps the key portion for the present purposes, in that it sets out a table specifying which classes if ships can navigate in which zones at which times of the year. Tankers receive special, i.e. extremely strict, treatment. In addition to the general time limitations on vessels set out in Schedule VIII, oil-carrying vessels are given a more restricted navigation season[116]. Although the system presents many advantages, Canada is currently in the process of reviewing its approach to regulation in the Arctic and ship classifications, as part of an ongoing updating and adapting to changing circumstances[117].

Insurers on the Canadian market use Schedule VIII as a guide in underwriting. It is submitted that insurers could follow this type of model in establishing, first of all, whether or not to underwrite the risk and, secondly, in the affirmative, at what premium and on what terms (warranties) they will do so.

The case of the 1970 crossing of the *Manhattan* through Canada's Northwest Passage gives an idea of what can be imposed by authorities in relation to oil transport in Arctic areas. The list of special requirements[118] comprised three pages and included such items as hull specifications, machinery specifications, and navigation and personnel requirements. Interestingly, with regard to personnel, it did not require more than an officer "experienced in navigating in ice" and crew

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114 Arnould, §468.

115 Bull, at 121-122.

116 Sections 6 and 7 set out detailed, stringent requirements for oil-carrying vessels. For example, s. 6(4) restricts Class B ships to a three-week period in Zone 6, between August 1 and 24, unless accompanied by an ice-breaker.

117 Personal communication with Capt. Norvald Kjerstad, Møre og Romsdal Fiskeritekniske Høgskole.

118 Reproduced in Spears, at 219-221.

"competent to maintain the navigation aids and equipment". The ASPPR have tightened things up considerably in this respect.

Unfortunately, not everyone can afford a super-reinforced tanker. The Russians, while known for their expertise in building and operating ice-class vessels, have a somewhat less illustrious reputation in Western perception with regard to matters of environmental protection and things petroleum-related or nuclear. It would therefore be sagacious of an insurer, be the oil carrier Russian or otherwise, to take the initiative and impose specific requirements regarding the transport of oil through the ice-infested waters of the NSR.

The general seaworthiness of the vessel is also of paramount importance in cargo insurance, which *prima facie* does not cover in the event of the vessel being unseaworthy[119]. This point and the details of cargo insurance are discussed *infra*.

5.4.2 Vessel Type and Class

The importance of ship classification in relation to insurance for the NSR can not be overstated. As a practical matter, it is crucial that the ship be fit to withstand the rigours of navigating in some of the world's most extreme conditions. It is also an area that insurers as yet know little about. Consequently, they must rely almost blindly on information from Administrations and classification societies. The information received from these sources thereby takes on crucial importance. The greater detail of the rules in the NMIP regarding ship classification are perhaps a reflection of more experience in navigation in ice areas, and an understanding of the greater risk that entails. As Norwegian rules have generally not been used in Arctic navigation, however, the time-of-season element is not included as, for example, under the Canadian rules.

§30 NMIP imposes a duty on the assured to provide the insurer with all available information from the ship classification society regarding the condition of the ship, both prior to the conclusion of the insurance contract and during the course of the policy[120]. The consequences of a breach of this duty can be severe: §33 allows the insurer to terminate the insurance on fourteen days' notice in the event of non-compliance.

§31 NMIP, second paragraph deems loss of ship classification or change of classification society to be an alteration of the risk, although this can really be seen as an ongoing part of the

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119 Cf. MIA s. 40(2), which holds the assured to a strict warranty of seaworthiness unless the contract provides otherwise.

120 A practical example is Cefor Form. 235 A, which incorporates NMIP §30 and also allows the insurer to contact the classification society directly, provided notice is given to the insured.

duty of disclosure as contemplated in §26[121]. Moreover, the classification is seen as an *implied condition* of the contract. It is doubtful that this constitutes a *condition* in the Common Law sense of the term, but it does undoubtedly go to the root of the contract.

The consequence of breach of this duty to inform about changes in the risk is as follows: if the insurer would not have taken on or would have ceased to cover the risk had correct information been given, no compensation is due, regardless of whether there exists a causal link between the breach and the loss[122]. Note that this is an exception to the general rule.

English rules deal in a more limited manner with ship classification. Institute Time Clauses - Hulls provides that the insurance terminates automatically when there is a change in the vessel's classification society or a change, cancellation or withdrawal of her class, although if the vessel is at sea at the time of the disqualifying event cover will continue until the vessel arrives in port. Classification would also appear to go to the issues of disclosure and representations discussed in MIA s. 18 and 20, respectively, and of the implied warranty of seaworthiness of the ship, MIA s. 39, and could be considered pertinent where the voyage clauses were used. In any event, an insurer would probably insert a clause similar to Clause 4.1 just mentioned. An insurer would be, of course, free to stipulate a given class as a condition of the contract, breach of which condition would result in either the risk not attaching or in the coverage ceasing upon loss of the class. More express wording would be required than in a Norwegian contract, though, as less explicit provision has been made for in the framework legislation, and as Common Law will not read anything into the contract that is not there, especially not something so fundamental as a warranty.

One possibility would be for English insurers to base themselves on Canadian rules stipulating classifications and navigation times. This is done by Canadian insurers. An insurer could, for example, require not less than Canadian Arctic Class B (CAC B) or equivalent, with navigation restricted to between August 1 and October 1. The advantage of referring to the Canadian arrangement is that it combines the ideas of sailing time with type of vessel. In NSR navigation the two factors are essential, and interdependent. A clause simply requiring "compliance with all applicable laws and regulations" would not achieve this, as the Russian *Regulations for Navigation on the Seaways of the Northern Sea Route* do not go into this kind of detail.

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121 Cefor Form. 235 A replaces this with a more stringent provision. Clause 23 simply cancels the insurance as of the time the classification is lost. There may be a constructive loss of classification if a request is made by the shipowner or someone on the shipowner's behalf for cancellation of class; if the class is suspended or stopped for reasons other than a casualty covered by the policy; or if the required periodic surveys of the vessel are not carried out.

122 Bull, at 98-99.

Apparently, insurers, like classification societies, distinguish between ice-strengthened and ice-breaking vessels. They do not, however, distinguish between classes within these broad categories. Translated this means they will not offer lower premiums for a higher class of vessel, once a vessel of sufficient class is provided for the voyage. For example, if a DNV Class 1A is required for a particular voyage and the assured offers to use a class 1A*, this will not *ipso facto* entitle the assured to a lower premium. Nor will using a higher class of ice-breaker, where one is required, e.g., Sealer vs. ice-breaker class, give a discount in premiums[123]. It does not work the other way, however, in favour of the assured, who cannot simply switch to a lower class at will.

5.4.3 Competence of Master and Crew, and of Specialists on Board

Competence of the master and crew can be a condition or warranty of the insurance contract, as well as a legal requirement set out by legislation. If not set out in an express warranty in the insurance contract, for example as to number of hands on board, it is an implied warranty as part of the general seaworthiness of the vessel, on an equal footing with requirements for suitable hull and machinery. How much weight underwriters give this aspect in determining their premiums is not certain, but arguably it could be more[124].

Arnould sets out the general rule:

> "Every ship at the time of sailing must be properly manned, with a master of competent skill, a crew sufficient and competent to navigate her on the voyage insured, and a pilot on board whenever there is an establishment of pilots at the port and the nature of her navigation requires one."[125]

As with seaworthiness, what is "competent" is a function of the individual voyage.

Firstly, with respect to the master: the general rule is that the master must be someone capable of guiding the vessel through the ordinary perils to be encountered on the voyage insured[126]. Minimum requirements for a master for the NSR would include: experience in ice navigation, and possibly experience in operating in convoy in ice. While the *Regulations for Navigation on the Seaways of the Northern Sea Route* require, in §4, that the master of the vessel

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123 Telephone communication with Capt. Jan Christiansen, Chriships Shipbrokers, Sortland, Norway. See also Veritas Ice Classification Rules.

124 Lensky, and many other sources, maintain that the most common cause of accidents and damage in the NSR (arguably, as elsewhere) is human error and not, for example, equipment failure. See Lensky, Tromsø Conference.

125 Arnould, §738. See also Ivamy (Marine Insurance), at 297.

126 Arnould, §738.

shall have experience in operating in ice, no specific certificates or qualifications are stipulated. One may assume that a *de facto* competency would therefore be sufficient for Russian legal purposes, with generous allowance for the discretion of the NSR Administration. A Western insurer would probably set out specific requirements, for example, a specific time period of experience in ice navigation or the like.

In the past, in specialised risk areas such as whaling, it was apparently common to place a great deal of weight on the experience of the master in assessing the risk[127]. Russian shipowners might argue that their masters' and ice pilots' extensive experience in ice navigation should be taken account of in the assessment of their risk and determination of their premium.

Secondly, with respect to the crew: as with the master, the crew must be one generally able to take the vessel through the voyage insured[128]. Note that the seaworthiness by stages doctrine is equally applicable here[129]. While it is more common for regulations to set out specific requirements relating only to the master and pilot, they may do so in relation to the crew. When this is done, it becomes part of the implied warranty of seaworthiness that these shall be complied with.

The *Regulations for Navigation on the Seaways of the Northern Sea Route*, §4, require only that the master have experience in ice navigation, while §4, para. 2 and §7 deal with State-assigned ice pilots. It is submitted that it would be wise to navigate with a crew which has experience in ice navigation, insofar as possible. Depending on the client and the situation, underwriters may wish to make this an express warranty of the policy. Even where the ship is a Russian vessel on charter to a Western interest, it would be wise to include this, for the sake of certainty. Where the vessel is not Russian, it may still be possible to have an ice-experienced crew, say from Canada or Norway. In other situations, the underwriter will have to assess the need in light of the overall situation. The underwriter would presumably be free to stipulate a certain nationality of crew, but it is submitted that specific qualifications should also be set out, to avoid ambiguity.

Norwegian law offers an interesting case on this point. It may be stated as a general rule in Norwegian insurance that lacking or under-qualified crew can make a ship unseaworthy[130].

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127 Dover, at 148.

128 Arnould, §740; Ivamy (Marine Insurance), at 297.

129 Arnould, §739.

130 Bull, at 113.

There is a close link between seaworthiness and safety regulations[131]. How the nationality of the crew can be interpreted was discussed in the *Ormlund* case[132].

The facts of the *Ormlund* case are as follows: The ship *Ormlund*, which had earlier sailed under a Norwegian flag, switched to a Cypriot flag in the fall of 1973. Insurance cover was continued with the same insurer, who stipulated that there would continue to be Norwegian officers on board. Under the heading "Particular Terms" was the clause: "Warranted Norwegian officers". When the flag was changed, the ship had one machine officer on board, a Norwegian with an exemption as a second machinist from the Norwegian consulate. When he left on holiday in the spring of 1974, another Norwegian came on board, and was designated machine officer, but this second man did not have any certificate or exemption relating to machine qualifications. He continued as machine officer until the vessel was a total loss in the fall of 1974. The insurer denied liability, based on the breach of duty to inform, as contemplated in NMIP §24, para. 2. The court found for the insurer, and found that the insurer would not have entered into the contract had it known of the lack of qualification, NMIP §26, para 1, and was therefore free from liability.

It is submitted that it would be more consistent with insurance rules generally and, as a minor point, more in keeping with how other legal systems treat crew qualification, to deal with this as an aspect of unseaworthiness[133]. Often crew number and qualification are covered by safety regulations, precisely because they go to the seaworthiness of the vessel. It is submitted it also would have been more in keeping with the structure of the NMIP for the court in the *Ormlund* case to have dealt with the non-qualification of the machine officer as a breach of seaworthiness rules, covered by NMIP §§45 and 49, in the absence of some solid basis in the contract establishing it as part of the duty to inform. It may be noted in the *Ormlund* case that even the assured acknowledged that both Norwegian and Cypriot crew regulations had not been complied with. Why the court did not then place the issues within the domain of seaworthiness or, if they had to have another possible set of rules, as an alteration in the risk, is difficult to comprehend.

The *Ormlund* case may be used as good law, however, until another case turns up which lays down that the issue of nationality and qualification of officers goes to the issue of seaworthiness (or alteration of risk).

There is no implied warranty as to the nationality of the ship, nor that the nationality will not be changed during the risk, at least under English law[134]. Nor is there any express warranty

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131 Compare NMIP §§45 and 48-49.

132 ND 1978.31 Sandfjord *Ormlund*; cited in Bull, at 103-104, and at 148-150.

133 This is the position maintained by Bull, *ibid.*, at 150-151.

134 MIA, s. 37; see also Arnould §680.

created by designating a ship as being of a certain nationality, for example, "the good British brig called the *John*"[135], as this in theory will not enter into the underwriter's assessment of the risk. No equivalent rule was found in the Norwegian rules. *Quaere*: how will this be applied where the ships are often Russian vessels under charter, and where in some instances the Russians have a quasi-monopoly on sufficiently ice-strengthened ships?

Thirdly, with respect to the pilot, the necessity of having a competent [ice] pilot aboard, as required by either custom or regulation, relates back to the general seaworthiness of the vessel, and is also a function of the doctrine of seaworthiness by stages, both of which are discussed *supra*. The *Regulations for Navigation on the Seaways of the Northern Sea Route* lay down that the Marine Operations Headquarters, actually part of the NSR Administration, may assign a State Pilot to a vessel where the master has no ice experience, or where the master so requests[136]. The Marine Operations Headquarters furthermore has power to impose one of several forms of assistance, at its discretion and depending on conditions. Assistance may take the form of: leading along recommended routes up to a certain geographical point (shore-based pilotage); aircraft-assisted leading; conventional pilotage; ice-breaker leading; or ice-breaker assisted pilotage, which entails an ice-breaker leading the vessel, with a pilot on board the latter[137]. It would not necessarily be a breach of implied warranty if a harbour pilot were not on board when the vessel entered into port[138], provided that the pilot was on board at other stages when required for the purpose of seaworthiness.

By way of comparison, Canada sets out specific requirements pertaining to ice navigators for operations in its Arctic regions. The *Arctic Shipping Pollution Prevention Regulations*[139], enacted pursuant to the AWPPA, require that an ice navigator be on board most vessels navigating in Arctic waters, at most times[140]. Tankers must *always* have an ice navigator on board[141]. The Regulations set out specific competency requirements for the ice navigator: they must be qualified to act as master or the person in charge of the deck watch; they must have at least five days' experience as a master, person in charge of the watch or helmsman while the ship was in ice conditions which required the ship to make extraordinary manoeuvres or be

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135 *Mackie* v. *Pleasants* (1810) 2 Binn. 363, cited in Arnould, §681, n. 18.

136 Section 4, para. 2.

137 See Section 7.4 of the *Regulations*.

138 Arnould, §741.

139 ASPPR, *supra*, note 122.

140 ASPPR, s. 26(2).

141 ASPPR, s. 26(1).

assisted by an ice-breaker[142]. In addition, two deck watches are required[143]. Special equipment, including gyro-compass, is also required.

The reason the Canadian regulations are mentioned here is that they can provide inspiration to an insurer looking for a way to impose sufficiently stringent requirements on a vessel, in addition to the pilotage opportunities provided by the Russian regulations. Especially in regard to tankers, one cannot be too careful.

Finally, the competence of the pilot can also be a part of the compliance with legal requirements, for which the reader is referred to the discussion below.

5.4.4 Route and Limits on Navigation

The route set out in the policy is of fundamental importance to the contract, all the more so in the NSR, where a few different routes are possible, and the consequences of choosing a particular route are magnified. For example, it is possible to go north of Novaya Zemlya in order to avoid the "bottleneck" in Kara Gates Strait between that archipelago and mainland Siberia. Ice conditions are, surprisingly, often easier than through the strait, even though the latter lies more to the south of the permanent ice massif. In short, the choice of route can make the difference between completing the voyage or not, with all the inherent consequences on such issues as possible constructive total loss, both for ship and cargo; on the reasonability and feasibility of salvage efforts; and on liability should bunkers or cargo leak into the ocean, either as a result of ice hitting the hull or of leakage after the vessel has been sitting caught in the ice for awhile.

Perhaps the best place to begin is with a discussion of the usual warranties as to limits of navigation.

English law sets out its limits through the Institute Warranties[144], which principally provide that navigation will not extend to specified areas north or south of certain latitudes, either at all or at certain times of the year, where the risk to navigation is likely to be greater than underwriters are generally prepared to accept without special premium. The Institute Warranties belong more properly to the realm of time policies, where they operate as a limit on an otherwise unrestricted freedom of navigation during the period of the policy, much the way similar clauses

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142 ASPPR, s. 26(3)(a) and (b). It can get stricter: s. 7(b) requires any tanker entering certain areas between Sept. 16 and 30 in 1991, 1992 and 1993, and carrying over 453 cubic metres of oil to have a master and ice navigator with not less than *100 days each* experience in navigating in ice-covered Arctic *waters on board ships* of Arctic class 3 or higher.

143 ASPPR, s. 21(1).

144 Reproduced in Arnould, at p. 1994; and in Ivamy (Marine Insurance), at 561-562.

operate in time charter-parties. Voyage policies, by definition, impose specific geographical limits. It is possible to achieve a mixed type of policy covering both time and voyage aspects[145]. It has been maintained in this report that voyage policies are the likely scenario for the foreseeable future, at least until underwriters become more comfortable with underwriting risks for the NSR. Because of the possibility of mixed - and ambiguous - policies, however, the discussion of trading warranties is pertinent to the present discussion.

Courts have generally held, or rather assumed, that Institute Warranties constitute warranties in the strict sense of the term, and they have held assureds to other types of geographical and sailing time warranties absolutely[146]. While it has been argued by some authoritative sources[147] that the Institute Warranties should be read in the context of the individual policy to ascertain whether they amount to a full-fledged warranty, and while a forsaken assured could always try to build an argument on the ambiguity of a clause limiting navigation, it is submitted that the courts will probably continue their traditional approach until faced with a very ambiguous clause, or until they follow a more graduated approach, as was adopted by the Supreme Court of Canada in the *Bamcell II* case, cited *supra*.

Norwegian insurance achieves the same thing with its Worldwide Trading Limits[148]. Norwegian law does not have strict equivalents to the Common Law notions of condition and warranty, preferring instead to treat breaches of the undertaking not to navigate outside certain areas as an alteration of the risk[149]. Navigation outside the prescribed area is dealt with in separate sections, however[150].

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145 This is permitted by MIA s. 25(1).

146 *Colledge* v. *Harty* (1851) 6 Exch. 205; 20 L.J.Ex. 146: "Warranted not to sail from any port on the east coast of Great Britain to any port in the Belts between December 20 and February 15."

Simpson S.S. Co. v. *Premier Underwriting Association Ltd.* (1905) 10 Com. Cas. 198: "Warranted not to proceed east of Singapore."

Provincial Insurance Co. of Canada v. *Leduc* (1874) L.R. 6 P.C. 224: "Not allowed under this policy to enter the Gulf of St. Lawrence before the 25th day of April, nor to be in the said Gulf after the 15th day of November; nor to proceed to Newfoundland after the 1st day of December or before the 15th day of March without payment of additional premium and leave first obtained."

Birrell v. *Dryer* (1884) 9 App. Cas. 345: "Warranted no St. Lawrence between October 1 and April 1." Despite the ambiguity in this clause as to whether it denoted the St. Lawrence Gulf or the River, or both, it was not construed *contra preferentes*, and the insurer escaped liability, even though the loss occurred after the vessel had left the St. Lawrence Gulf.

147 Notably, in Arnould, at §692.

148 Norwegian Trading Warranties. See also Cefor Form 235 A, Part II: The trading area. The Norwegian rules allow navigation a bit farther north than the English rules, but do not encompass any portions of the NSR.

149 NMIP §§31 *et seq.*

150 NMIP §§37-39.

Where the ship proceeds outside the prescribed trading area, the insurance will be suspended for the time the ship is outside that area. It will then become operative again, upon the ship re-entering the permitted area. Note the difference from English insurance, under which cover would simply stop and remain out of effect, and any subsequent loss, however caused, would not be covered[151]. The insured does have the possibility of retaining cover, upon proving that the transgression was attributable to some other party or reason[152]. It is possible for the assured to notify the insurer of a planned transgression of the prescribed trading area, and negotiate an additional premium[153].

The point of the foregoing is to illustrate that both sets of rules take the area of navigation very seriously, as it has a direct impact on the subject-matter of the policy. One could expect that insurers would be very vigilant in drafting the parameters of the allowed areas for the NSR. Where there is more than one possibility, for example, around Novaya Zemlya where it is possible to go past this archipelago either to the north or the south, insurers will likely stipulate one way and one way only. The stipulation will undoubtedly be construed as a warranty of the contract. It is conceivable, however, that a court would take a tolerant attitude towards a vessel which took the alternative route if it meant getting through, saving the vessel, etc., in light of the sue-and-labour principle and the general duty to mitigate one's losses.

Turning to deviation, it may be stated that both systems take an "abhorrent" view of deviation from the stipulated route. A deviation in the NSR stands to be judged more harshly than in other areas; in all likelihood courts would find a breach or alteration more easily than elsewhere. This is because it takes less of a deviation to make a big difference on the fate of the ship, due to the physical conditions. It may also be partly related to a lack of knowledge and general apprehension about the area. Again, if the ship deviated for the purpose of self-preservation, this may well be tolerated.

The case of *Temple* v. *V/O Sovfracht*[154] is one of very few pertinent Western cases to be found on the issue of deviation (or even navigation!) in the NSR region. In that case, the combination time/voyage charter-party provided in its Clause 1 for "one round voyage to the

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151 At least this is true for a voyage policy. A time policy allows cover to go out of effect upon the transgression, and to become operative again when the vessel re-enters the permitted area.

152 NMIP §38.

153 NMIP §39.
Cefor Form 235 A sets out a slightly different arrangement in Part III: Transgression of the limits of the trading area. A slightly more onerous duty is imposed on the assured. When notification of an eventual transgression is given, and the insurer and assured are unable to agree upon new terms, the insurance will become inoperative as of the time of the transgression. So far, this is the same as under the NMIP. The difference lies in that the assured must inform the insurer when a vessel has re-entered the permitted area for the policy to become effective again, and not simply let the insurance become operative once more.

154 *Temple* v. *V/O Sovfracht* [1944] 77 Lloyd's Rep. 257.

Kara Sea", indicating a voyage charter yet, like a time charter, allowed trade "within the following limits: (...) Murmansk, (...) and Igarka, Yenisey River, Kara Sea ...", the last two being points lying beyond the Kara Sea when entry is made from the European side. The charterer, V/O Sovfracht of Moscow, sent the ship in ballast to Igarka, where it took on a cargo of timber bound for Durban. The ship was ordered by USSR authorities to put in at Murmansk and discharge her cargo. Subsequently, British authorities overtook the ship on a sub-charter (without the shipowner's knowledge or consent, which was in violation of the main charter-party) and ordered the ship loaded with a cargo of pitprops, and sailed to Garston, UK. The charter-party provided for redelivery of the vessel at a port in South Africa. The court found that the contract was, in essence, a voyage charter-party. The charterer was held liable to the shipowner-charteree for a fundamental breach of the charter-party in not ordering the vessel to proceed immediately to South Africa following the discharge in Murmansk. The case also contains a discussion of the relationship between trading limits in a charter party and the Institute Warranties[155].

Under English law, deviation from the voyage set out in the policy constitutes a breach of implied condition entailing automatic cessation of coverage as of the time of deviation[156]. It is possible for cover to continue on modified terms, normally a higher premium, through use of a "held covered " clause, for example, Institute Voyage Clauses - Hulls Clause 2. This is held by the insurance market to include delay[157]. Note that this clause also covers the situation where a ship is towed or salved, contrary to the warranty in the policy. Cover will not cease pending payment of the new premium, but it is an assumption that a reasonable premium is owing[158].

It is common for a voyage policy to indicate only the starting point (*terminus a quo*) and final destination (*terminus a quem*)[159]. *Quaere*: is the ship then free to take whichever route it deems to be the "safest, most direct and most expeditious mode of proceeding" within the NSR without penalty? There is some room to manoeuvre a regards route, albeit limited. The vessel could, for example, travel north or south around Novaya Zemlya or Severnaya Zemlya. An insurer would be advised to set this out explicitly in the policy. Where the policy does allow the liberty to "touch and stay", this would probably include ports such as Tiksi and Pevek, which lie

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155 Curiously, Clause 34 of the charter-party in that case was drafted on the assumption that navigating outside the limits of the Institute Warranties would only suspend the owner's insurance cover. It stipulated that the charterer was to obtain proper insurance and pay additional premiums for the period the vessel was outside the limits.

156 Arnould, §465, as contemplated in MIA s. 46. The English rationale for cessation of coverage is alteration of the risk, as more explicitly expressed in the Norwegian rules, *ibid.*

157 Arnould, §466.

158 MIA s. 31(2).

159 See MIA s. 25 (1).

more or less along the direct course of the Route[160]. Ports located down the various rivers would probably have to be negotiated either separately, or covered by an extra premium.

Both deviation and delay are excused, *inter alia*, where authorised by a special term in the policy; where caused by circumstances beyond the control of the master and his employer, which could conceivably include harsh conditions; where reasonably necessary to comply with an express or implied warranty[161], which could include a whole host of actions; where reasonably necessary for the safety of ship or subject-matter insured, which can also relate to weather and ice conditions or could include putting into a port for necessary repairs; or for the purpose of saving human life, which is always allowed[162].

Norwegian insurance views a change of route as an alteration of the risk, subject then, to termination upon 14 days' notice by the insurer[163]. Norwegian rules do not go into the same explicit detail as the English rules, possibly because it is not needed in light of Norwegian legal interpretation and methodology. It is sufficient to set out the general principles in the rules and let the parties adapt them as needed from there. Note the difference between Norwegian and English rules relating to deviation: in light of the discussion *supra* on warranties generally, the insurer under English rules need do nothing for the insurance to cease, while an insurer under Norwegian rules would have an active duty to inform of the termination. A practical difference arising in the NSR which will have a definite legal impact, will be the question of how soon the insurer finds out about the deviation. Under English law, this would make no difference; the insurer would have no liability as of the time of the deviation. Under Norwegian rules, cover would not cease until 14 days after notice was given to terminate. Note also that a deviation does not necessarily imply going outside the trading limits set out in the policy, whatever they may be framed to include, and there would therefore be no right to automatic, immediate cessation of cover.

Norwegian rules allow the assured some reprieve, including when the assured acts to save human life, or the ship or insured goods[164]. On a generous reading this could include when the assured acts to comply with the terms (equivalent to warranties) of the policy, as this would be in the spirit of the assured duty to avert or minimise loss as contemplated in NMIP §§68-73. Additionally, it would appear to be implicit in NMIP §32 that where the assured has not caused

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160 See MIA s. 46(2)(a) and Rule 6 of the Rules of Construction of the MIA. See also Arnould, §486.

161 In *Bouillon* v. *Lupton* (1863) 33 L.J.C.P. 37. it was held that a delay at the end of a river stage of a voyage to fit the ship out for the sea portion of the voyage was justifiable. There is no reason why this would not hold true for voyages encompassing the rivers that feed into the NSR and then along the NSR proper.

162 See, generally, MIA s. 49(1).

163 As contemplated in NMIP §§31 *et seq.*, and implicitly in §§37-39. See also the discussion in Bull, at 137 *et seq.*

164 *NMIP §35, para. 2.*

or agreed to an alteration of the risk, i.e., it is beyond the assured's control, deviation would be excused.

Quaere: would these allowances for deviation, delay and alteration of risk apply when there is an actual change of voyage, for example, when the ship has to turn around because of adverse ice or weather conditions and return to the starting port? It is submitted the answer should be in the affirmative, as coming within an event beyond the control of the assured[165], although most of the rules do not seem to have contemplated this scenario. It would seem most illogical not to allow such an action, as the assured has a duty to make every effort to attempt to preserve the insured property. The vessel would, of course, have to resume the voyage towards the original destination - which may or may not be along the original route, depending on where the conditions have driven the vessel - once the weather or other hindrance had subsided[166].

5.4.5 Time of Season

It may be stated that once a time of sailing is set out in the insurance contract, it becomes an express warranty thereof[167]. In *De Maurier (Jewels) Limited* v. *Bastion Insurance Company Limited*[168], Donaldson J. stated, by way of *obiter dictum* in a non-marine insurance case:

> "... In the marine field "warranted free from capture and seizure" is a warranty of the former character [i.e. an exclusion] leaving the contract effective in respect of loss by other perils. "Warranted to sail on or before a particular date" is, however, of a promissory character ... The commercial reasoning behind this legal distinction is clear, namely, that breach of the former type of warranty does not affect the nature or extent of the risks falling outside the terms of the warranty; breach of a promissory warranty may, however, materially affect such risks."

A fortiori is the latter part of this statement true for the NSR.

There is, in any event, an implied condition that the voyage will commence within a reasonable time[169] which, in the case of the NSR, would doubtless be construed according to the exigencies of the time of sailing season.

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165 See MIA, s. 49(1) (b) and (d), and Arnould, §§494, 496 and 499.

166 MIA s. 49(2),

167 See, generally, the discussion in Ivamy (Marine Insurance), at 282 *et seq.*

168 *De Maurier (Jewels) Limited* v. *Bastion Insurance Company Limited* [1967] 2 Lloyd's Rep. 550.

169 MIA s. 42(1).

If the policy contains, for example, a clause stating "warranted to sail on or before August 15", this will have to be strictly complied with, or the cover will be lost. It is not likely, in light of the rapid ice build-up towards the end of the short sailing season, *viz*, from mid-September onwards, that this will be construed by a court anywhere as being anything less than a promissory warranty. It is not like in more southerly voyages, where a delayed sailing may have an economic impact but the ship can still get through. A delayed sailing in the NSR increases the risk substantially, and in some cases can transform it beyond what was agreed to by the insurer. Conversely at the beginning of the season, there could be a clause stating "warranted not to sail before June 15", and this would likewise be construed a promissory warranty.

If the policy is stated to begin "from Murmansk", the risk will only attach as from the time the ship actually sails from that port[170]. If the policy is "warranted to sail on or before August 15", and applies "at and from", for example, "at and from Murmansk", the risk will attach while the ship is in good safety at that port or even a roadstead[171]. This is consistent with seaworthiness by stages doctrine discussed earlier. The result would probably be different under Norwegian insurance, for the same reasons as discussed earlier.

Norwegian rules do not contain any specific provisions relating to the time of year, either. It is submitted that contract clauses relating to the permitted sailing season would come under the general duty-to-inform provisions found in NMIP §24 *et seq.*, that is, they would be an integral part of the terms on which the insurer would agree to underwrite the risk. Thus, if the underwriter would not have agreed to underwrite the risk had it been disclosed that the ship would sail in mid-October, and the ship sails in mid-October, then there would be no insurer liability, NMIP §26, para. 1. If the insurer would have accepted to underwrite the risk, but only on condition that the ship was of a certain class higher than the one it in fact was, then there will only be liability as can be attributed to the lack of sufficient ice class. If it can be shown that ice conditions were roughly the same, say, in mid-August (usually the best sailing time) and mid-October, and that the hull damage was due to the ship not being sufficiently ice-strengthened, this will tend to augment the liability of the insurer.

5.4.6 Compliance with Requirements Set by Law or the Public Authorities

Compliance with this type of condition could take many forms, depending on weather, ice conditions, what the Russian authorities in charge of the Route required, and so on. Legal

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170 Arnould, §463. The issue of whether a ship has actually sailed, for the purposes of attaching the risk, has been the subject of a number of lawsuits, but will not be dealt with here. See Arnould, §695 *et seq.*

171 Ivamy (Marine Insurance), at 115-116. See also Rules for Construction of Policy set out in the First Schedule to the MIA 1906. Rule 3(a) states: "Where a ship is insured at and from a particular place, and she is at that place in good safety when the contract is concluded, the risk attaches immediately."

requirements can include rules relating to either number of crew or to having certain specialists on board, e.g., an ice pilot. In light of the implied warranty under English law that the operation be a legal one carried out in a legal manner[172], loss of coverage would be a certainty if one were tempted to ignore Russian requirements of accompaniment or pilot supply, *even if there were in fact no ice at the time of sailing.* The Norwegian rule[173] mentions only "illegal purposes" without going into the manner in which the navigation is carried out, although it does put a duty on the assured to intervene once it is known that the vessel is being used for illegal purposes, or else lose the cover. Whether the Norwegian NMIP rule would be extended to compliance with such things as the Regulations just mentioned is a matter of conjecture. Insurers remain, of course, free to stipulate this, and most likely would once they were made aware of the Regulations[174]. Another example is Canada, where insurers use the standards of the ASPPR in setting their requirements.

We have seen how a pilot may be required by law; this goes to seaworthiness. For example, §7.4 of the *Regulations for Navigation on the Seaways of the Northern Sea Route* stipulate:

> "Compulsory icebreaker-assisted pilotage is established in the Proliv Vil'kitskogo, Proliv Shokal'skogo, Proliv Dmitriya Lapteva, and Proliv Sannikova due to adverse navigational situation and ice conditions and for the purpose of ensuring safe navigation."

For other areas, the Marine Operations Headquarters is free to impose what arrangements it sees fit, in light of ice conditions. Icebreaker-assisted pilotage is defined in a footnote as an ice-breaker leading a vessel, with a [Russian-supplied] pilot on board the latter. There are times, albeit infrequently, when these straits are ice-free. Nonetheless, due to shallowness and other considerations, the NSR Administration has deemed it important enough to require all vessels to receive assistance.

Legal requirements are legal requirements. An English court, in true Common Law fashion, would likely leave it up to the Russian law-making body to make any amendments. Put another way, while the unaccompanied ship might be technically, *de facto* seaworthy, it would be legally unseaworthy[175], or at least in violation of Russian law.

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172 MIA s. 41.

173 NMIP §40.

174 Personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

175 Compare Norwegian rules, which view seaworthiness and safety regulations as intertwined concepts: NMIP §§ 45-51.

It has been held in English law that where a ship warranted to sail with convoy in fact sailed without it and went down in a storm, the underwriter was held not liable for this loss[176]. This may well happen in the NSR, for example, when the Russian authorities so required under the *Regulations for Navigation on the Seaways of the Northern Sea Route*. It is also a common method of travel through ice-filled passages, even in the absence of legal requirements. Conversely, it could be concluded from these cases that where a ship was warranted *not* to sail in convoy, breach of the clause would discharge the insurer from liability, even in the absence of a link between the fact of sailing in a convoy and a subsequent loss. *Quaere*: what if the ship sailed in convoy in an emergency and damage occurred either during or after (note: not *because* of) the transit in convoy? It is submitted that the insurer would not be discharged from liability in this instance, as it would go against the spirit of the "sue and labour" clause. It is furthermore submitted that cover would not be lost even if damage was caused by some factor in the transit in convoy, for the same reason. Thus, if there was a collision, normal collision rules and liability would apply.

Legal requirements relating to certificates on board relate more to P&I, and are therefore not discussed here.

176 *Hibbert* v *Pigou* (1783) Marshall, *Ins.*, at 292; also *Yorkshire Ins. Co. Ltd.* v. *Campbell* [1917] A.C. 218; cited in Arnould §683.

5.4.7 Equipment on Board

This element, again, goes back to the issue of seaworthiness[177]: the ship must be properly equipped with stores, provisions, and all other things which the custom of trade has made requisite for the voyage. The draft *Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route*, mentioned earlier, recommend that all vessels navigating the NSR have on board a 30-day supply of fuel, a 60-day supply of food and a distilling plant[178]. Insurers, once they become familiar with such documents, will probably start requiring whatever is recommended as a matter of course[179]. The items required will likely come to be considered as part of the implied warranty of seaworthiness. Under Norwegian rules, they will likely come in as part of the duty to inform, and the terms on which the insurer agrees to underwrite the risk.

At a more technical level, at least the following equipment would likely be required on board: GPS (global position system); gyro-compass; marine radar and echo-sounding devices; VHF (very high frequency) and MF (medium frequency) radio; area-specific charts and publications; and *English*-language communications systems[180]. Where these things are "warranted on board", on can expect that they will be *prima facie* read as strict warranties, in light of their importance in an area such as the NSR. The possibility is always open, where cover is on the Canadian market[181], to have them read as mere exceptions to cover, but a client should not be advised to rely on this kind of reasoning and thinking.

Individual insurers stand free, of course, to modify this list and to classify the stipulations as they wish.

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177 See Ivamy (Marine Insurance), at 297.

178 Mikhailichenko, Tromsø Conference.

179 See the Canadian ASPPR, §27, which require the vessel to have sufficient fuel and fresh water on board for the voyage, according to the intended zones, and a 30-day supply of food.

180 Personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

181 This would be in light of the *Bamcell II* case, discussed earlier.

5.4.8 Services

Services, drydocks and facilities would be required along the Route. An absence of these would probably not lead to a loss of coverage, since an underwriter would simply not take on the risk in the first place without this requirement satisfied.

Nonetheless, it is submitted that the presence of services along the Route would probably not be considered a warranty in the promissory sense of the term, but rather a suspensive condition, in the meaning contemplated in the *Bamcell II* case. If, for example, a repair facility were out of stock of a given part in Tiksi when a ship required it, it would hardly be in the spirit of the insurance policy simply to cancel cover, without there being any fault or knowledge on the part of the ship's master or owner before she arrived in Tiksi. Conversely, if several of the repair facilities along the Route were chronically out of commonplace spare parts, traffic was routinely halted and delayed for this reason, and the shipowner knew this yet represented to the insurer that satisfactory repair facilities were present along the Route, *this* could lead to a loss of cover as from the time the shipowner became aware of chronic losses or misrepresented this fact to the insurer, whichever were earliest. This scenario would go to the issue of misrepresentation on the part of the assured, under English law. Norwegian rules would treat this as part of the duty to inform.

By way of reminder, note that where repairs are required along the Route, the shipowner would have to disburse the funds for the repairs and then receive reimbursement from the insurer, up to the insurance value.

5.5 The Role of the Accidents/Loss Record

This goes back to the duty of disclosure, an essential element of the trust relationship between insurer and assured.

As a general proposition, the most important factor in risk assessment for underwriting purposes is the shipowner's previous record[182]. If a company is new to the type of trade, i.e., Arctic shipping, or new to the insurance market, as the Russian companies will be, it will take time before the underwriters can get a "feel" for how the shipowners operate in their field. Consequently, in the beginning, shipowners can expect high premiums, even where state-of-the-art ice-breaking technology is used. Once the shipowner has built up a good track record, the premiums can, logically, come down. It is in the shipowner's interest to invest in preventive measures so as to keep the loss rate as low as possible; this will translate into savings in the form of reduced insurance premiums. Market forces would dictate a reduction in premiums following

182 Spears, at 147. Personal comunication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

an acceptable performance during a policy period, especially where the shipowning customer is a large interest and source of premiums.

5.6 Exceptions and Limitations on Cover - the Nuclear Issue

Damage caused by nuclear sources have traditionally been excluded from cover as a matter of course, under both English and Norwegian rules. Since the backbone of the Soviet Arctic fleet is its nuclear ice-breakers, this is an issue that will have to be addressed up front when Russian shipping interests and Western insurers sit down to draft their insurance agreements. This section will argue that the systematic avoidance of anything nuclear has more to do with perception than fact, and that vessels should not be financially penalised in premiums for receiving assistance from a nuclear-powered vessel. There are two principal sides to be addressed in the statement of the problem: hull cover for Russian or foreign cargo-carrying vessels which are led through the NSR by a nuclear-powered ice-breaker; and hull cover for the nuclear ice-breakers themselves. Their legal status and contractual treatment differ.

First of all, the vessels which will be led by nuclear-powered ice-breakers: Western insurers seem to take a blanket, "no thank-you" attitude to anything nuclear. On the English side, Clause 23 of the Institute Voyage Clauses - Hulls states:

> "**23. Nuclear Exclusion.** In no case shall this insurance cover loss damage liability or expense arising from any weapon of war employing atomic or nuclear fission and/or fission or other like reaction or radioactive force or matter."

In addition, Institute Voyage Clauses - Hulls, Clause 4.1.6, cited above, goes only so far as to cover loss of or damage to the vessel caused by "breakdown of or accident to nuclear installations or reactors". A reading of the clause on its construction would not appear to include nuclear-powered ice-breakers, as these would not naturally be considered an "installation" within the meaning of the clause. The placing of the term "reactors" alongside "installations" would appear to indicate that fixed, as opposed to floating, nuclear facilities were what the drafters of the clause had in mind, that they meant to include a situation, for example, where a vessel sailed too close to a nuclear installation located near the water.

Norwegian Cefor Form 235A is even more categorical:

"1. Nuclear exclusion.
This insurance does not cover loss directly or indirectly caused by or arising from the release of any kind of atomic/nuclear energy from any kind of source.
If a peril as mentioned above has contributed to a loss, the whole loss shall be deemed to be caused by such peril.
The assured has the burden of proving that the loss is not caused by a nuclear peril."

This clause, then, is even more limited than the English Clause 4.1.6, as it would not even appear to cover loss of or damage to the vessel caused by "breakdown of or accident to nuclear installations or reactors"; it excludes atomic or nuclear energy *from any kind of source*. The NMIP does not contain any specific provisions on nuclear perils. Indeed, one may speculate that they were not contemplated in 1964, although they may make the list when the Plan is revised in the mid-1990s. One may be fairly sure, in any event, that an insurer would insert a clause similar to the Cefor provision, in light of the general knowledge about the use of nuclear ice-breakers by Russian interests.

If one takes these types of provisions at face value, there is an impediment with respect to the NSR in this connection, since so many of the ice-breakers used there are nuclear-powered[183]. Thus, while the *Moskva*, *Yermak* and *Kapitan Sorokin* classes of non-nuclear ice-breakers would *prima facie* be acceptable to Western underwriters, all nuclear ice-breakers of the *Lenin*, *Arktika* and *Taymyr* classes would have to be negotiated.

In fact, so long as the fault does not lie on the part of the led vessel, there should not be a problem. The most common scenario for the NSR will be a Russian or foreign vessel following an ice-breaker, which may be conventionally- or nuclear-powered, depending on area of navigation, availability of vessels, etc. If the vessel being led incurs nuclear damage due to fault on the part of the leading vessel, it correctly falls to be covered by the P&I insurance of the ice-breaker, so the hull clause of the led vessel does not even come into play. Likewise, on the P&I side, any damage caused to third parties will be the problem of the ice-breaker, not the led vessel. Thus, cargo-carrying vessels, Russian and foreign, should not be subjected to any additional hull premium on the grounds that they may be led by a nuclear ice-breaker.

A problem can arise if the led vessel is at fault in a collision. If the led vessel should collide with an ice-breaker due partially or entirely to the fault of the led vessel, the hull cover will not

183 See Brigham (Transportation), at 125 *et seq.*

cover nuclear damage to the led vessel, as evidenced by clauses such as the one above. By extension, no running down clause (under which the hull insurer would cover 3/4 liability) becomes applicable, either, at least as regards nuclear-source damage. Liability belongs to the domain of P&I but, as will be demonstrated in that section, nor will P&I cover enter the picture unless special terms are negotiated with the P&I club. Non-collision damage caused to the ice-breaker or other vessels by or due to the fault of the led [cargo] vessel likewise becomes a P&I problem, regardless of the source of damage, but much will turn on the terms of the P&I cover.

The main point of the foregoing is to illustrate that from a legal, technical and insurance-related standpoint, hull cover *is* possible for vessels which will be led by nuclear-powered ice-breakers in the NSR. In the absence of fault on the part of the led vessel, the nuclear-powered ice-breaker is left holding much of the expense and collision liability if nuclear-source damage occurs. The question then becomes: what type of hull cover is obtainable for a nuclear-powered ice-breaker?

There are no precedents for this on Western markets. Nuclear-powered ice-breakers have traditionally been self-insured by the governments which owned them. In the case of the USSR, this was the solution under the old system, since everything was government-owned in any event. The various shipping companies have now become privatised, however, and have inherited the partially nuclear fleet of their old State enterprises. The necessary streamlining they have undergone has put limits on their ability to self-insure. One possibility might be for a combination of Russian State insurance specially set up to help the companies with nuclear ice-breakers, with part of the cover being ensured there and another portion on a Western market. This could be envisaged as a transitory measure, to remain in effect until conversion over to a non-nuclear fleet can be completed.

Conceptually speaking, hull cover for nuclear-powered ice-breakers is the same as for conventionally-powered vessels. The same factors discussed above for cargo-carrying vessels also apply to nuclear-powered vessels, with the necessary adaptations, of course. The general seaworthiness of the vessel is a basic requirement for any vessel. Vessel type and class relate to technical standards, as for non-nuclear vessels. The competence of the master, crew and specialists on board will likely be the subject of special requirements; management classes discussed earlier may become relevant in this connection. The route planned and limits on navigation may be of greater or even lesser import, according to the circumstances and risk of accident, as a nuclear vessel has more leeway as to where it will navigate. The time of season will be significant, but again will be more flexible for a higher-powered nuclear vessel. The equipment on board will of course be as essential as for conventionally-powered vessels. Likewise, service along the route will carry the same importance as for conventionally-powered vessels. Insurers will have an interest in being informed of the ongoing maintenance of the vessel, which will probably be achieved through regular inspections and certificate issuances from an Administration or classification society.

There are good reasons to allow cover for vessels being guided through the Route by nuclear-powered ice-breakers. Perhaps the most fundamental argument to be made is that in some parts of the Route at certain times, it is the only way to get through. Surely arriving at destination, even using nuclear power, is more advantageous than getting caught in the ice, with all the implications of loss of use of the vessel, possible constructive total loss, lost profit, etc. That being so, there are also environmental considerations. If nuclear-powered ice-breakers must be used, they must be used in a manner which puts the chances of environmental damage at a minimum. Safety, maintenance and proper crewing must be top priorities. A good track record will translate into lower premiums.

Russian shipping companies do have other, more long-term options, the first being to focus on developing its non-nuclear fleet, drawing on the example of Canada. The technology is available for a non-nuclear Polar Class 8 vessel, corresponding roughly to somewhere between Russian Ship Registry Classes LL2 and LL1. The advantages would pan out on many fronts: lower premiums due to greater acceptability of the vessel by insurers, lowered hazard for the environment, less exposure to liability to cargo shipowners and cargo owners.

Canada uses a conventionally-powered fleet to monitor its Arctic. While Canadian sources lament the lag behind the Russians in Arctic ice-breaking technology, plans for a nuclear-powered Polar Class 8 were shelved in 1981, after a five-year feasibility study, and no new projects have surfaced[184]. Even plans for a conventionally-powered Polar Class 8 ice-breaker were cancelled in 1987, due to budgetary constraints, leaving Canada with a number of Class 4 conventionally-powered ice-breakers, and several lower-class vessels[185]. The issue of insuring nuclear-powered vessels for the Arctic has therefore not arisen in Canada. Other Arctic-rim countries such as Norway or Finland have not ventured into such construction, either. This is not to say that Russia should downgrade its ice-breaking fleet, simply contemplate a shift in technological focus.

What type of cover that could be obtained either for these ice-breakers or for vessels being escorted through the Route by them is, at this juncture, unclear. The case is stronger for cargo-carrying vessels being led. One scenario which, it is submitted, will probably never happen is a tanker with oil cargo being escorted by a nuclear-powered ice-breaker. The legal, practical and environmental consequences are simply more than anyone - insurer, shipowner, cargo owner - would probably want to take on. Already, opinions are divided as to whether oil should even be carried through the Route[186]. The best advice, then, would be to avoid this type of cargo where a nuclear ice-breaker is involved.

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184 Lamson, VanderZwaag, at 136 *et seq.*

185 *Ibid.*

186 See Wergeland, at 191.

5.7 Some Conclusions Regarding Hull Insurance

The question most would ask at this point is: is hull insurance possible for the NSR? *Prima facie* the answer must be yes. Insurers are, as a starting premise, willing to insure anything. Some case-law and nuancing would go a long way to clearing up just what is covered under the various types of policies on the various markets, but the framework legal machinery is in place for cover, at least in the countries where the markets are. If the Russians wish to establish more elaborate requirements, these will still come under the heading of "compliance with all legal requirements" as far as an insurer is concerned.

Some more nuanced rules with regard to ice and time of season might be desirable, but are simply not in existence. Either the legislation and markets involved have not had to deal with them extensively as yet, or such factors have not been a high priority in the overall scheme of things. With a bit of development in this market, perhaps premiums could one day be "nuanced" to reflect better the actual time frame of greater risk.

The issue of nuclear-powered ice-breakers will have to addressed specifically and in detail by all players. At present, it is a very new area and Western insurers are justifiably concerned with the use, safety and management of nuclear ice-breakers. The road to a workable solution for all is to be found via communication and airing of all concerns, as well as through continuous efforts at improving technology.

What it will really boil down to in reality is whether it is *commercially* feasible, i.e., whether premiums can be kept low enough to make the savings in time and distance competitive as against, say, the Suez Canal Route, for trade between Europe and the Far East. Only time and the markets can answer this question. The problem is not unique to the NSR:

> "At present, one of the major impediments to increased Arctic shipping [in Canada] is the high cost of insurance through Arctic waters. An analysis of the risk exposure in such travel and the consequent adoption of appropriately worded clauses might allow the risk to be tailored so that the cost of Arctic transport can be more reasonable. This is also an area in which the Federal Government may wish to provide reinsurance to a fledgling market, much as it is forced to do in times of crisis, such as wartime, when risks are too great for underwriters to absorb alone[187]. If Canadian policy in the North increases shipping activity there, this shipping can only take place on a commercial basis once the cost of marine insurance is factored into the cost of shipping. This can only be accomplished once it is possible to predict what the true

187 This is something the Russian government might consider doing for a transitory period, in light of the very high tentative premiums being quoted by some Western insurers.

liabilities are. If expertise relating to Arctic shipping is gained by Canadian underwriters, then they may be able to provide that risk analysis function for other Arctic shipping outside Canada."[188]

188 Letalik, Gold, at 275-276.

6.0 Cargo Insurance

6.1 General

Much of the foregoing discussion about hull insurance is equally applicable to cargo insurance, that is, cover relating to goods, property or merchandise carried on board the vessel[1]. Indeed, when it is the two that are together on the seas, their respective fates, and consequently legal treatment, can often be intertwined. Cargo insurance, like hull insurance, is primarily targeted at protecting the owner's interest in the capital value of the subject-matter insured. Consequently, the basic structure of cargo insurance is the same as hull insurance[2]. Who takes out a separate policy on cargo will usually hinge on the terms of the [usually] sales contract: CIF, FOB, etc.

English law deals with cargo insurance through the MIA and a series of Institute Cargo Clauses[3], which cover transport by land and sea, with air transport being dealt with in separate clauses. There is a close interaction in the ICCs with hull insurance.

With respect to seaworthiness, for example, while MIA s. 40(1) states that there is no implied warranty regarding the seaworthiness of the goods being shipped, MIA s. 40(2) holds the assured to a strict warranty regarding the seaworthiness of the vessel[4], unless the contract provides otherwise[5]. "Otherwise" can be provided for via use of the Institute Cargo Clauses. Clause 5 of all three sets of Institute Cargo Clauses sets out that there is no seaworthiness admitted with respect to the vessel, unless the assured was privy to the unseaworthiness[6]. This implies a different warranty vis-à-vis the insurer than is usual in marine insurance. In the case of a warranty the insurer need not prove that the assured knew of the unseaworthiness, only as a fact that the vessel was unseaworthy, in order to avoid liability. ICC Clause 5.1 requires the insurer to prove knowledge of unseaworthiness on the part of the assured.

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1 Brown, at C6.

2 Brækhus, Bull, Wilmot, at 111.

3 Institute Cargo Clauses (A), (B), and (C), (hereinafter ICC); reproduced in Ivamy (Marine Insurance), at 516 *et seq.* ICC (A) is an all-risk insurance, while (B) and (C) are on a named perils basis. See also Institute War Clauses (Cargo) and Institute Strikes Clauses (Cargo), reproduced in *ibid.*

4 This is consistent with implied warranty of seaworthiness of the vessel, contemplated in MIA s. 39.

5 MIA s. 34(3) allows the insurer to waive a breach of warranty, thereby allowing for this type of dispensation.

6 ICC Clause 5.2.

Norwegian cargo rules do not contain any provision relating to unseaworthiness, although Cefor Form 222 §17.2 does exclude coverage in case of the cargo not being in condition to withstand the normal stress of the voyage contemplated; §17.3 excludes coverage in case of inadequate marking or packing. A high standard of care would be imposed on a party shipping goods through the NSR.

6.2 All-risk Cargo Insurance

All-risk insurance is possible, even under English law, through ICC (A), with the principle set out in Cl. 1:

> "1. Risks Clause. This insurance covers all risks of loss or damage to the subject-matter insured, except as provided in Clauses 4, 5, 6 and 7 below."

The principles applicable to the all-risk concept were considered in *British and Foreign Marine Insurance Co* v *Gaunt*[7]. The assured claimed for damage to wool which had become wet on a voyage from Patagonia, Chile to Bradford, England. The policy stated: "Including all risk of craft, river coasters, hulks, transhipment and inland carriage by land and for water and all risks from the sheep back and/or station, while awaiting shipment and/or forwarding and until safely delivered (...) with liberties as per bill of lading." The insurer argued, firstly, that the assured had not proven affirmatively some casualty or fortuitous occurrence and, secondly, that the cargo had been carried on deck, contrary to Rule 17 of the Rules of Construction of the MIA. The actual cause of the damage was unknown. Nonetheless, the assured succeeded in the claim. The case stands for the principle that under all-risk insurance in English law, where all risks are covered by the policy and not merely risks of a specified class or classes, the plaintiff discharges his special onus when he has proven that the loss was caused by some event covered by the general expression, and he is not bound to go further and prove the exact nature of the accident or casualty which caused the loss. Furthermore, as regards a cargo being carried on deck, an insurer is bound to know the usages of trade, and if he knows that carriage on deck is likely, specific disclosure of that fact is not required, and separate coverage is not necessary.

While this second point may not become pertinent in NSR navigation, the first point is of greater import, as it will ease evidentiary difficulties. This is not a negligible factor when one considers how difficult it may be to secure information in some instances.

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7 *British and Foreign Marine Insurance Co* v *Gaunt* [1921] 2 A.C. 41

Insurance on a named-perils basis may not be as disadvantageous in relation to all-risk as it sounds, especially when one considers ICC (B) Cl. 1.1.4:

"[1. Risks Clause. This insurance covers (...)]
1.1.4 collision or contact of vessel craft or conveyance with any external object other than water"

This has been interpreted to include collision with ice[8]. Presumably, this could include pack ice, ice floes, and jetties built on the permafrost, used in some parts of Siberia[9].

Norwegian rules treat cargo separately, with a *Norwegian Insurance Plan for the Carriage of Goods of 1967*[10], which covers goods under transport of all kinds: air, land and sea. The basic coverage is all-risk, as per NCIP §17. The Plan is, however, no longer of practical interest, as a major review is under way to harmonise the Norwegian clauses with the English[11]. Thus in future it will make less difference on which market a cargo owner obtains insurance.

A more useful reference for the moment might be Cefor Form 222, which sets out typical terms for Norwegian all-risk cargo insurance[12]. Many of the terms can be matched with provisions of the NMIP. §13 sets out the general all-risk principle, while §14 spells out the limitations for deck cargo. Section §18 exempts the insurer from liability in the case of containers, etc., being unsuitable for the transport in question. This should be kept in mind by a party wishing to insure cargoes for passage through the NSR, where conditions are generally much harsher than in more southerly areas.

§17 contains the exceptions from coverage. The ones of most interest for the present purposes include §17.8, which exempts the insurer from liability in the case of a nuclear accident. This could become relevant if a nuclear-powered ice-breaker were used and there was an accident during passage. Liability would *prima facie* be covered by the ice-breaker owner's P&I insurance. If there were a collision caused by the fault of both the cargo-carrying vessel and the ice-breaker, the most usual scenario, the latter or the latter's P&I would have to cover, as the contract of carriage between the carrier and the cargo owner would most likely contain a both-to-blame collision clause exempting the carrier from liability. If the collision were solely the fault of the carrier, the both-to-blame clause would free the carrier from liability vis-à-vis the cargo owner, although normal tort liability would lie vis-à-vis the ice-breaker for damage caused to it.

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8 Brækhus, Bull, Wilmot, at 117.

9 See Watson, at 172-173.

10 *Norwegian Insurance Plan for the Carriage of Goods of 1967* (NCIP).

11 Brækhus, Bull, Wilmot, at 109-110.

12 Sjøassurandørenes Centralforening Form nr. 222, Desember 1989 (Cefor Form 222).

A clause such as Cefor Form 235A, Clause 1, would leave the cargo-carrying ship in the position of having to bear the loss. The both-to-blame collision clause would not apply in situations of non-collision which nonetheless caused an accidental release of nuclear energy. To be on the safe side, the carrier would be wise to insert an exoneration clause in the contract of carriage stipulating no liability of any sort in connection with damage caused by the release of nuclear energy, thereby leaving the entire risk on the ice-breaker owner. In the absence of such a clause, whether the carrier's hull or P&I insurance would cover would depend on what had been negotiated with the hull underwriter or P&I club.

It would be up to the insurer whether or not to cover goods being carried on deck. Under English law, these must be covered under a separate policy[13], while under Norwegian rules, the all-risk coverage is reduced[14].

6.3 Exclusions From Cargo Coverage

With respect to exclusions from the policy, these would appear to be similar under both all-risk and named perils cover.

The first and principal exclusion concerns wilful misconduct of the assured and is self-evident[15].

The second exclusion relates to inherent vice of the cargo[16]. This is a relative concept; what can be damaging to one cargo may be harmless to another, and how the damage occurs is of relevance. Sea water getting into metals would be a definite example of harm to a cargo, but it would not necessarily be due to an inherent characteristic of metal. If the metals were stored by the shipper (the person shipping the cargo, not the ship operator) in an unsuitable manner for a voyage across the NSR, that would be inherent vice. Conversely, if the metals were properly stored but the ship's crew left certain passages to the hold open thus allowing water in, the harm would not be due to an inherent vice in the cargo. This concept ties in with the exemption from coverage of loss due to improper packaging or improper preparation of the goods for transport[17]. English and Norwegian clauses would appear to meet on this point in that they are

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13 MIA, Schedule 1, Rule 17, paragraph 2. Brækhus, Bull, Wilmot, at 112.

14 This flows from the wording of NCIP §23, and is treated as an alteration of the risk as contemplated in NCIP §42 *et seq.* See Bull, at 139.

15 See MIA s. 55(1), ICC Cl. 4.1, NCIP §61. Cefor 222 allows the insurer to cancel the cover in the event of the assured bringing about the casualty: §§56 and 57.

16 ICC Cl. 4.4, NCIP §22, Cefor Form 222, §17.2.

17 ICC Cl. 4.3, NCIP §22(c), Cefor Form 222, §17.3.

both objective, i.e., they apply irrespective of whether the consignor, the assured or anyone else has been at fault in respect of the improper packaging[18].

A very important exclusion for NSR purposes relates to delay: loss caused by delay is excluded from the standard cover in most systems[19]. ICC Cl. 4.5 excludes loss "proximately caused by delay, even though the delay is caused by a risk insured against (except expenses payable under Clause 2 above)"[20]. NCIP §68 sets out that physical damage to the cargo, e.g., rotting bananas, due to delay caused by a specified peril, is covered where there has been a delay of at least 30 days[21]. *A fortiori* consequential loss due to delay is not compensated[22]. This includes loss due to a fall in market price of the commodity, and the like.

A fourth exclusion relates to unseaworthiness of the vessel. This point is discussed *supra.*

One last category of exclusions relates to deliberate destruction of the subject-matter by the assured[23], and loss caused by nuclear weapons[24]. As mentioned above, it is the exception in Cefor Form 222, §17.8 that is of greater interest, in connection with nuclear-powered ice-breakers.

6.4 What is Covered Under Cargo Insurance - Scope of Loss

Basically, the losses covered under a cargo policy are the same as under a hull policy, with some modifications.

To begin with, the cargo policy covers physical loss of the subject-matter insured. The loss can be total or partial. Total loss occurs when the assured is deprived of the subject-matter insured or it is destroyed[25]. Norwegian rules go a step further by providing that the cargo is to be considered a total loss if its value has been decreased by 90 percent[26]. The MIA has no such rule. However, while both MIA and NCIP provide that there is a total loss where the assured is

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18 Brækhus, Bull, Wilmot, at 125.

19 Brækhus, Bull, Wilmot, at 125.

20 ICC Cl. 4.5; also MIA s. 55(2)(b).

21 NCIP §68, 1. This is now dealt with more practically in, e.g., Cefor Form 222, §17.7.

22 Excluded by ICC, NCIP §70 and Cefor Form 222, §29. ICC Cl. 4.5 could be interpreted as excluding capital loss: "loss damage *or expense* caused by delay ..." (emphasis added).

23 Excluded by ICC Cl. 4.7, although this is not found in ICC (A).

24 Excluded by ICC Cl. 4.8, Cefor Form 222, §17.9.

25 MIA s. 57, NCIP §65 (a) and (b), Cefor Form 222 §32.

26 NCIP §65(e), Cefor Form 222 §32.4.

deprived of the goods and there is no possibility of recovering them[27], the English provision is supplemented by a rule that there is a constructive total loss even when the assured is only *unlikely* to recover the goods[28]. NCIP and Cefor Form 222 contain no such rule.

Here arises a slight difference as compared with hull insurance in that there can be a total loss without any physical damage of the goods whatsoever, due to loss of the adventure. This occurs when the transport is interrupted and it would be prohibitively expensive or impossible to bring the goods to the proper destination within a reasonable time. Where the cost of forwarding the goods to the final destination exceeds the value of those goods on arrival, which the insurer normally covers[29], it is termed a *constructive total loss*[30]. The chances of a constructive total loss occurring on the NSR can be greater than in other areas, due to the presence of ice and severe weather conditions[31]. There is also the issue of sufficiently developed loading and unloading facilities, as the Route adjusts to larger volumes of traffic. Finally, the sheer distance from spare parts and equipment that may be needed in the event of mechanical difficulties with the ship, will add to the waiting period, thus increasing the chances of constructive total loss of the cargo. Some insurers have gone so far as to express the intention to require evidence of sufficient parts and equipment at regular intervals along the route as a term of the contract[32], albeit this would be more related to hull insurance than to cargo insurance.

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27 MIA s. 57, NCIP §65, Cefor Form 222 §32.2.

28 MIA s. 60(2)(i).

29 ICC Cl. 12.

30 MIA s. 60(2)(iii), ICC Cl. 13. Both are specific applications of the general rule laid down in MIA s. 60(1). See also NCIP §65, which defines both actual and constructive total loss, and refers back to §§57 and 58. §57 gives the insurer the right to avoid further liability by simply paying for a total loss, in the event that continuing the voyage would subject the cargo to undue risk, or the insurer to undue expense, or if it will take more than six months. §58 gives the insurer the right to demand that the transport be completed unless further undue damage is likely. Cefor Form 222 §32, referring to §§22 and 23 echo these provisions, except that the time period for completing the voyage is reduced to 30 days.

31 ICC Cl. 12. NCIP §65 (c) requires the assured to wait up to year before claiming constructive total loss when the transport is delayed by weather conditions, snow or ice, *viz*, the usual six-month waiting period plus an extra six months because of the ice, etc.. Cefor Form 222, §32.3 does not mention ice, and gives a more practical waiting period of 30 days. Presumably an insurer would extend this period to accommodate NSR conditions, e.g., an extra 30 days.

32 Personal communication with Anders Cleve, Gjensidige Forsikring, Lysaker, Norway.

Partial loss is any damage to the goods that is not a total loss[33], and includes total loss of parts of the consignment[34]. The basic rule is that the insurer will pay *pro rata* for the loss or depreciation on the portion of the shipment destroyed[35].

General average is covered by all systems[36], as are sue and labour expenses[37]. Salvage charges are recoverable under general average, if incurred for the benefit of both ship and cargo, or as sue and labour, if incurred for the benefit of the cargo only[38].

Special problems can arise when the contract of affreightment contains a both-to-blame collision clause. Under such a clause, the cargo owner must pay the shipowner a certain amount where there has been a both-to-blame collision governed by American law. To deal with this, some systems, including English law, provide for the cargo owner to recover this amount from the cargo insurer[39]. NCIP does not contain a section dealing specifically with both-to-blame, but does state that certain types of costs are recoverable, e.g., the cost of providing security for general average and the legal costs of claiming from third parties for damage covered by the insurance[40].

6.5 The Issue of Causation

The principles of causation are basically the same as for hull insurance, subject to interpretation of the clause in question. Causation is a complicated area of the law. It is treated differently under English and Norwegian insurance.

Among the possible scenarios to consider are various perils spread across various coverage periods. Problems arise in determining which policy will cover which loss.

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33 MIA s. 56(1). See also Brækhus, Bull, Wilmot, at 142.

34 MIA s. 56(4), NCIP §66.

35 MIA s. 71, NCIP §66, Cefor Form §33.

36 ICC Cl. 2, NCIP §79, Cefor Form 222 §37.

37 ICC Cl. 16, NCIP §77, Cefor Form 222 §36.

38 Brækhus, Bull, Wilmot, at 132.

39 ICC Cl. 3.

40 Brækhus, Bull, Wilmot, at 132; and Falkanger, Bull, at 127-128.

Under English law the basic rule is found in MIA s. 55, which holds the insurer liable for loss "proximately caused" by a peril insured against. This has been held to mean the dominant cause[41]. Some problems unique to cargo insurance arise with interpretation of the ICCs. If one examines ICC (B) and (C), the lists of risks under 1.1 provide for cover for loss "reasonably attributable" to the perils named on the respective lists. This would impose a lower burden of proof on the assured than the usual "proximate cause" standard, as is required under the all-risk coverage in ICC (A). It is perhaps not inappropriate that a higher standard of proof be required where the coverage is expansive and all-risk, and a lower standard allowed where the assured must link the loss to a limited list of named perils. Cl. 1.1 has also been interpreted to mean that the assured may recover for some of the more remote consequences of the perils named in the clause[42]. In contrast, ICC (B) and (C) Cl. 1.2 requires that those losses be "caused" by the perils thereinafter named, bringing us back to the usual standard.

Under Norwegian insurance the causation rules are the same for cargo as for hull cover[43]. Where there are several causes behind a loss one of which is not covered, the losses are to be apportioned according to the degree of influence each has had[44], and the insurer will only be liable for the portion attributable to the perils covered by the insurance. By analogy from the rules on hull insurance, it may be stated that the principle of free apportionment applies[45].

The parties stand, of course, free to choose the causation principle they wish, be it the dominant cause rule, the apportionment rule, the last-cause-in-time-rule, or the contributing cause rule. For example, if the insurer wishes to offer wide cover for everything that can be "reasonably attributed" to one of the perils covered, that is possible. A more likely and usual choice is "reasonably caused", "directly caused", or something equally more limitative.

Since insurance for the NSR will most likely be on a voyage basis, with inspection after each crossing of the Route, causation and evidentiary problems will be reduced somewhat. The task will be more one of connecting a specific loss to a specific peril.

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41 Brækhus, Bull, Wilmot, at 56.

42 Brækhus, Bull, Wilmot, at 133.

43 Compare NMIP §§18-23 and NCIP §§24-29.

44 NCIP §26. The exception is NCIP §27, which provides that where the loss has been caused by a combination of marine and war perils, the whole loss shall be attributed to the dominant of the two. Cefor Form 222 §16 echoes NCIP §26.

45 Motiver, at 27-30.

6.6 Period of Coverage

Time-wise, the basic rule of coverage is the same in all systems: the warehouse-to-warehouse principle, *viz*, that the goods are covered from the time they leave the storage place at the beginning of the transport until they arrive at the destination storage place[46]. This would include where, for example, the goods travelled beyond the port limit into the interior, thereby bringing security considerations into play. The warehouse-to-warehouse principle will often mean that the cargo risk will attach long before the goods are actually traversing the Route, and may remain after they have left the Route. Whether premiums will come down as a reflection of this "only part-time heightened risk" on the Route, or go up in the case of goods completing partial transit remains to be played out on the market.

It is also conceivable that entirely new clauses may have to be drafted to deal with the situation. It is difficult, as a logical matter, to hold an assured cargo owner to something so serious as a warranty with respect to security, in an area where security is, at this point, doubtful. Some type of "compromise clause" may be in order.

6.7 Change of Voyage or Deviation From the Planned Route

Much of the discussion earlier on deviation under hull cover is applicable, *mutatis mutandis*, to cargo insurance. Again, the rules take on added importance in the NSR, where the possibility, some might argue likelihood, of deviation from the planned course of navigation, is much greater than for southern navigation.

As mentioned earlier, under English law, deviation from the voyage set out in the policy constitutes a breach of implied condition, the normal consequence of which is loss of coverage as of the time of the breach[47]. ICC Cl. 8.3 provides some relief, in that coverage continues at no extra premium where the deviation or other departure from the planned route is beyond the control of the assured[48]. This would not include harsh weather conditions, as the deviation must arise from "the exercise of a liberty granted to shipowners or charterers under the contract of affreightment"[49].

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46 ICC Cl. 8-10, NCIP §§30, 31, 46 and 49, Cefor Form 222 §9-12. See also Brækhus, Bull, Wilmot, at 134.

47 Arnould, §465.

48 This clause counteracts MIA ss. 45 and 46.

49 ICC Cl. 8.3

Where the assured voluntarily chooses to deviate from the stipulated transport, any one of the following may result[50]:

1) If the assured chooses to use a warehouse for the purposes of storage other than in the ordinary course of transit, the insurance automatically terminates: ICC Cl. 8.1.2.1.

2) If the assured chooses to use a warehouse for the purposes of allocation and distribution, the insurance automatically terminates: ICC Cl. 8.1.2.2.

3) If the assured is responsible for an unreasonable delay, the insurance terminates, as of the time the delay becomes unreasonable: MIA s. 48.

4) If the assured chooses to send the goods by a different route or by a different means of transport, the insurance terminates, as of the time the deviation commences: MIA ss. 46 and 47.

5) If the assured chooses to send the goods to a different destination than the one named in the policy, the policy will continue on a "held covered" basis: ICC Cl. 10.

ICC Cl. 10 is an example of a typical "held covered" clause: the assured will be "held covered" in the event of a change of voyage[51], pending prompt notice to the underwriters and subject to additional premium[52].

6.8 Cargo Insurance for the NSR - Some Real-Life Experience

There have been some instances of Western cargo insurance provided for actual transit on the NSR. In such cases, the insurer set strict requirements as to the seaworthiness of the vessel, time of sailing etc.

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50 See generally Brækhus, Bull, Wilmot, at 137.

51 Note the absence of mention of deviation. In keeping with Common Law rules of interpretation then, deviation would not be "held covered", even if notice were given. Cl. 8.3 allows for deviation, in any event. Note also that the change must be effected "by the Assured". This could be interpreted as including change of voyage in which the Assured acquiesced, in the event that the Assured was not the party operating the vessel.

52 See Brækhus, Bull, Wilmot, at 137, where they maintain that ICC Cl. 10 renders Cl. 8.2 superfluous.

The Russian ship *Kapitan Danilkin* sailed through the NSR on a voyage charter in August-September, 1991, with a cargo of steel rebars being shipped from Mo i Rana, Norway to Hong Kong on board. Charterer of the ship and seller of the cargo was Fundia Norsk Jernverk. The buyer of the rebars, CMC Trading of Switzerland, insured the cargo pursuant to an FOB stipulation in the sales contract. Prior to the voyage, UNI Storebrand of Norway was approached for coverage and issued conditions, although the policy wound up not being used. Extra stipulations for the all-risk policy comprised three pages, and included: the owners complying with national regulation concerning oil pollution and financial responsibility therefor (Rider Cl. 30); the charter party to be governed by English law and subject to arbitration (Rider Cl. 32); any damage to the vessel caused by ice was not to be considered as general average (Rider Cl. 39). In other words, any costs relating to damage caused by ice or was to be borne by the ship alone; the cargo would not contribute. Actual coverage was ultimately obtained by the buyer on the Japanese market, on almost identical conditions[53].

6.9 Some Conclusions Regarding Cargo Insurance

A cargo insurer, in considering cover for the NSR, would likely first consider the risk like any other, *viz*, taking into account the goods, the packing, containerisation, the vessel, the exact voyage on risk, the extent of cover required and previous record. The major differences will come in relation to what the vessel is facing differently, and the passage through an iced-up zone would definitely figure in the calculations. Much of what has been said about vessels, warranties, etc., would likely be interpreted in a similar fashion in relation to the cargo. As regards the cargo itself, security seems to be an important concern[54].

As with the other types of insurance, it will basically come down to a question of cost. In this connection consider the ill-fated Arctic Pilot Project in Canada. The mammoth project, begun in the early 1980s, had as a goal to gather natural gas from development wells in Canada's Arctic, transport it by pipeline, liquefy it and transport it on ocean-going, ice-breaking LNG carrier to southern regasification terminals. After millions of dollars of feasibility studies and preliminary field work the project died on the drafting table. Reason: it was simply too costly. One element was the high cost of insurance for the venture[55].

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53 Information provided by Frederik Lervik, Fundia Norsk Jernverk, Mo i Rana, Norway, and M.C. Foong, CMC Trading, Zug, Switzerland. Reasons were not given for the switch.

54 The author is grateful to Malcolm Sawkins, Alexander Howden Reinsurers, London, for insights on this section.

55 Arctic Pilot Project.

7.0 Protection and Indemnity Insurance (P&I)

7.1 P&I Clubs - Mutuals

A P&I "Club" is just that, a collection of shipowners with common interests, banded together to mutually protect each other against legal liability incurred in operating their ships. Liability can be towards other ships, cargo owners or third parties. Each member of a club is part and parcel of the Club, and thus takes on one burden and one benefit upon joining. The benefit: insurance cover as set out in the club rules. The burden: to contribute to the losses of the fellow members[1]. Consequently, assured and insurer, in many ways, stand on the same side of the fence. This is in contrast to the general situation with hull and machinery insurers, who stand quite separate from their assureds.

A Club is constituted by its memorandum and articles of association, or some equivalent documents. The supreme body of the P&I club is its annual meeting, at which voting power of the various members is linked to the entered gross tonnage, which is also used in calculating the premium rating and level of calls.

Each club is largely free to draw up its own rules, subject to some restraints in the Pooling Agreement, an international arrangement through which the various clubs agree to certain standards respecting cover, limits of exposure and so on. Thus, in Norwegian clubs, one sees less use of the NMIP among P&I insurers than among hull insurers. This was noted above, in relation to Gard. English clubs are more subject to the *Marine Insurance Act* due to the legal status of that act, but remain free to draw up rules as they see fit which do not offend mandatory legislative provisions. This leaves room for creativity in creating tailor-made cover for the NSR.

Technically, members do not pay premiums, but rather, contributions or "calls" as they are known in the trade[2]. The calls both determine and reflect the losses - or, in a good year, surpluses - of a given year. This is another contrast with hull insurance. Contrary to hull insurance, which bases its premium-setting on past experience in a given trade or with a given vessel or company, each P&I case is to be assessed on its own merits. Additionally, each year[3] is to stand on its own feet and pay for itself.

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1 Hill, Robertson, Hazelwood, at 24.

2 This is allowed, *inter alia*, under English law by the MIA, s. 85(2), which states: "The provisions of the Act relating to the premium do not apply to mutual insurance, but a guarantee, or other such arrangements, as may be agreed upon, may be substituted for the premium."

3 Each year runs from noon, February 20 to noon, February 20 of the following year. This is standard for the industry. See Hill, Robertson, Hazelwood, at 36; and Gard Statutes, Rule 1, in Brækhus, Rein, Kingsley, at 39.

By way of advance calls, the Club asks its members to contribute based on the expected disbursements for that year. If the calls turn out to be more than the actual disbursements (an infrequent occurrence), the committee or other appropriate body takes the decision as to whether to distribute the surplus back to the members, retain the surplus in reserve or for investment so as to earn income to cover future losses, or some combination of the foregoing. If the losses for the year turn out to be heavier than expected, supplementary calls are levied on the members.

The crux which determines whether a member gets to continue being a member of the club comes down to an acceptable loss ratio, which is calculated by subtracting from the total calls paid by the member the costs which the club has to pay for that member's share of excess reinsurance, pool claims and administration[4]. Since calls are calculated based on tonnage, and since there is a lot of Russian tonnage in use on the NSR, Russian interests looking to enter sizeable portions of their tonnage with Western clubs must examine what is viewed as an acceptable loss ratio. Viewpoints on this matter differ. Note that when a loss occurs, the assured will be held to act as a "prudent uninsured" party, which includes the duty to "sue and labour" to avoid a loss or increased loss[5].

While P&I clubs were in their origins groups of personal acquaintances, in practice nowadays all clubs have become corporations, the better to deal with the magnitude and transnational character of modern operations. For that matter, many of the members have become corporations as well. Through various amalgamations for the purposes of re-insuring each other's risks, the clubs have come to form what is now known as the "International Group"[6]. One point that does remain, though, and which sets a P&I club apart from 'market' insurers, is that at its base the Club is still a *not-for-profit* organisation[7].

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4 Hill, Robertson, Hazelwood, at 40.

5 Hill, Robertson, Hazelwood, at 61-62.

6 It could be said that because of the truly - and necessarily - international nature of P&I nowadays that it would not make a critical difference where cover were obtained, since a major catastrophe would have a ripple effect around the globe anyway. The Clubs around the world are: Assuranceforeningen Gard; Assuranceforeningen Skuld; The Britannia Steamship Insurance Association Limited; The Japan Ship Owners' Mutual Protection and Indemnity Association; The Liverpool and London Steamship Protection and Indemnity Association Limited; The London Steamship Owners' Mutual Insurance Association Limited; Newcastle Protection and Indemnity Association; The North of England Protecting and Indemnity Association Limited; The Standard Steamship Owners' Protection & Indemnity Association Limited; The Standard Steamship Owners' Protection and Indemnity Limited Association (Bermuda) Limited; The Steamship Mutual Underwriting Association (Bermuda) Limited; The Sunderland Steamship Protecting and Indemnity Association; Sveriges Angfartygs Assuransforening (The Swedish Club); The United Kingdom Mutual Steamship Assurance Association (Bermuda) Limited; the West of England Ship Owners' Mutual Protection & Indemnity Association (Luxembourg); and the American Steam Ship Owners' Mutual. Cited in Hazelwood, at 314-315.

7 Hill, Robertson, Hazelwood, at 12.

An additional point which distinguishes P&I from hull insurance is the *omnibus rule*, perhaps P&I's most distinguishing feature, in virtue of which a member's claim will be brought within the cover even though it does not fall neatly into one of the specifically listed risks. This could come in handy for a member who came up against a totally unexpected situation in the NSR. Another facet of this rule is that each claim is examined strictly on its own merits and not by reference to a previous similar situation. P&I is less bound by a *stare decisis* type of rule than is hull insurance. The flexibility implicit in this type of rule could become crucial in a member successfully recouping disbursements.

This flexibility does not extend to payment of calls, however. Failure to pay outstanding calls may result in the member being taken off risk and the insurance cover withdrawn, not only from the date of the failure to pay but also in respect of any claims which have arisen prior to the date of non-payment[8]. Nor can a member set off amounts owed by the club against the call owing to the club[9].

In the event of a dispute between the member and the club, the most usual dispute mechanism is arbitration, which in many cases is set as a condition precedent to a member bringing court action against the club[10]. Russian members would therefore most likely be subject to English arbitration rules, as well as the applicable English law. A Norwegian club (Skuld or Gard) would most likely stipulate that arbitration take place under Norwegian law. Arbitration "case-law" in both jurisdictions is quite extensive, although analogies would have to be drawn in most cases involving the NSR.

So far, the discussion of P&I has not presented any marked differences from what might be discussed in relation to cover for more southerly operations. The differences lie in how liability would arise, and the potential amounts involved. In contrast to what one might spontaneously expect, and in contrast to hull cover, P&I premiums or calls for the NSR may or may not be higher[11]. Time will tell.

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8 Hill, Robertson, Hazelwood, at 55.

9 *Ibid.*, citing the case of *Williams* v. *The British Mutual Marine Insurance Co.* (1887).

10 This is known as the "Scott and Avery clause", after the case which upheld its validity: *Scott* v. *Avery* (1876); cited in Hill, Robertson, Hazelwood, at 64.

11 The reader will recall the Arctic Pilot Project in Canada, mentioned earlier, in which P&I cost estimates were not high at all, especially in relation to the potential risks involved.

It could be argued that while potential liability exposure could be high indeed for the NSR, it need not be the highest in the world, nor even disproportionately higher than other coverage. Indeed, it could be argued that there is much greater liability exposure in the United States, where the ease of direct action and sky-high damage awards by juries make that area a much greater risk, from a P&I point of view.

Western insurers see cover for the NSR as an academic question now. If traffic in the NSR becomes more frequent or even usual, however, they will have to re-evaluate this view. It comes down to: is there an increased risk or not? Because of the mutual nature of P&I insurance, it will not be possible for one insurer to decide independently whether to offer coverage and at what rate. Mutuality implies that the *whole* International Group will have to assess the risk to determine whether there is, in fact, a new risk and, if so, how much greater a risk it is. What one member takes on, the whole group takes on. Nonetheless, if the International Group decides that the exposure is not significant in relation to overall exposure, it may allow one or two specialist segments to cover this market, for example, the Gard Club in Norway and the West of England Ship Owners' Mutual Protection & Indemnity Association. The same effect can also be achieved through differentiating in deductibles, i.e., charging higher deductibles for high-risk activities, thereby reducing the mutuality factor. It would come down to which of the clubs were willing to cover an NSR risk, as the loss would be restricted by arrangement to that segment. If the NSR were to become a more widely-used route, then one could begin to contemplate more common conditions and acceptance of the risk.

A major question for P&I insurers is: *who* will be operating ships in the NSR? Will it be Russian ships offering their services to Western charterers? Ice-classed Western ships? Western interests operating Russian ships under a bareboat charter?[12] What will the technical specifications of the ships be? Russian shipowning interests, in particular the Murmansk Shipping Company, would appear to be a quasi-monopoly with regard to available ship technology, although there are some super-reinforced tankers owned by Neste in Finland.

Please note that throughout this section where reference is made to rules of particular clubs and sometimes to legislation, it is by way of example only. Coverage is largely the same world-wide, due to mutuality and the international character of the various clubs. Clubs do remain free to draw up their own rules subject, of course, to the Pooling Agreement. Where possible and appropriate, this is pointed out.

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12 The implications of this type of scenario are complex. While there may be qualified crews in some countries, notably Canada and Norway, it is not certain what understandings would be reached, across different cultures and different legal systems, between Russian shipowning interests and Western interests with crews. A discussion of the potential contract law of such a scenario is beyond the scope of this discussion. Suffice it to note that the nationality of the crew is of importance to both hull and P&I insurers.

7.2 Considerations in Establishing P&I Cover

When Western clubs examine the possibility of underwriting risks for the NSR, they will have in mind the various areas for which they now provide cover elsewhere, and think in terms of applying these by analogy to the NSR. They will be looking mostly at how the shipowner is especially prone to casualty in the NSR. Ice is the first danger that comes to mind, yet clubs will also have to be alert to the possibility of new dangers and new categories of liability arising in what really is "a whole new ball game". They will then consider what can be done or required to prevent an insurance incident occurring, and what kind of exposure the club is ultimately facing.

While much of the foregoing discussion has focused on the differences between hull insurance and P&I, there are points at which the two converge. These include some of the points taken into consideration in establishing cover, although the information is used in different ways in the two types. The basic considerations for underwriting in P&I then, include the following[13].

1. *The nature and extent of existing cover* is important, particularly with regard to the member's hull and machinery insurance. Club underwriters need to know, for example, about 4/4 collision liability cover, which can lead to a reduced P&I premium to reflect the reduced exposure, as compared with if the member has 3/4 hull collision cover under a running down clause, thereby requiring 1/4 cover on the P&I side. It may be stated as a starting presumption for P&I insurance generally, and *a fortiori* in the NSR, that there must be adequate hull cover before a P&I club will take on the risk. In other words, the ship must be insured at full value under the hull policy. In the case of ships in the Russian fleet which have been self-insured or insured with Gostrakh or Ingosstrakh up to this point, there will be the issue of exactly what has been covered under these policies, and how.

2. *The nature and size of deductibles under other insurances*, which could cause a corresponding increase in the exposure of the club, will have an impact. This point operates, in fact, subsidiarily to point 1.

3. *Whether cover is likely to be required to include or exclude cargo liability, passenger and/or crew liability* is another factor. This will depend on such factors as where possible action might be taken by passengers, and the legislation governing the employment contract with the crew. A both-to-blame collision clause regarding the cargo would *prima facie* be valid.

4. *The nationality of the crew* will be taken into account, particularly with regard to national legislation governing social welfare insurance and special contractual obligations. If, for example, the crew is Russian and is paid in rubles, exposure will be significantly reduced. Conversely, if

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13 See generally, Hill, Robertson, Hazelwood, at 38 *et seq.*

the crew is, say, Norwegian, exposure in this area can be relatively high. This aspect is not discussed in detail below, as it was believed to be substantially the same as for southerly ship operations. Suffice it to mention one point which may lead to increased liability: the additional hazards posed to personnel from working in extreme cold and long periods of darkness.

5. *Complete details on the type of vessel or vessels to be entered*, which shall include such items as type, flag, age, size, design and class. On this point P&I must look at the soundness of the vessel, just like a hull insurer. Ice class would appear to be the central element here.

6. *Areas of trade* will be another crucial element, including the geographical trading pattern routes and periods of the year. Here, the P&I insurer is likely to follow the hull insurer. If the vessel is restricted by the hull insurer to trading no further in than, say, Dikson from the European side and only between July 1 and October 15, the P&I insurer will likely also include this as a warranty in the P&I contract.

7. *Types of cargo* on board will matter, and also whether there will be any passengers. This latter group especially increases the types and potential amounts of exposure greatly, due to the possibility of injury, sickness or death. Liability for oil cargoes cannot exceed the USD $500 million limit in any one incident. The chances of reaching this limit, more often and each time an incident occurs, will make a P&I insurer pause before taking on the risk, most likely with an increased call.

8. *Quality of the vessel's management* is a vital point, which includes the experience of the vessel's management, the level of crew training and evidence of the ship's continuing maintenance.

9. *The vessel's previous claims record* will be examined, usually for at least the previous five years. While hull insurers give this much greater weight in the determination of their premiums, it also plays a certain role in P&I risk assessment. Attempts to obtain this type of information about NSR navigation have been fraught with problems and uncooperativeness; this will hardly encourage Western underwriters to take on the risk. Since correct information is so material to the insurance contract[14], or the equivalent thereof regardless of which legal system one operates in[15], cover will be nullified in the event of it being incomplete or incorrect.

14 MIA s. 16. See also the discussion earlier on *uberrimae fidei*.

15 See, for example, NMIP §24 and following.

7.3 Scope of Coverage

P&I is often seen, not entirely accurately, as a "catch-all" type of insurance, that is, all liability not covered under hull insurance is covered by P&I. One consequence flowing from this is that P&I, in principle, provides unlimited coverage, that is, it is an unvalued policy. The principal exception to the unlimited coverage is the USD $500 million limit on liability for oil pollution, imposed by clubs generally.

The principal groupings of cover offered by the various clubs are: protection and indemnity; freight, demurrage and defence (FD&D), war risks and freight war risks; and charterer's liability. This last type of cover could become especially pertinent in the Arctic, as it covers the liability of a charterer of a ship where a port used turns out to be unsafe, for example, due to ice conditions. The club will indemnify the owner of the ship for damages incurred to the vessel. Only the principle categories of liability of pertinence to the present discussion will be discussed here.

7.3.1 Collision Liability

Collision liability coverage by the hull insurer is usually governed by a running down clause, which extends cover to 3/4 of the liability incurred by the ship, while excluding altogether liabilities arising from death or injury, cargo damage or loss (for cargo on the assured's vessel) and wreck removal[16]. P&I has responded by grouping to contribute the final 1/4. It is now up to each club to decide whether to take on 4/4 of the collision risk. In any event, clubs do generally offer full 4/4 coverage for items excluded by the running down clause: raising and/or removal of wrecks; real and personal property except other ships or vessels and property on other ships or vessels; and pollution and contamination[17]. Figure 6 shows what some clubs have decided to cover.

16 The historical rationale was that leaving the final 1/4 of the loss to fall on the assured would encourage more prudent conduct. See Hill, Robertson, Hazelwood, at 81 *et seq.*

17 Hill, Robertson, Hazelwood, at 87.

Figure 6

Collision liability - comparison of cover

Collision with other vessels Type of liability Liability for:	English Conditions* (Institute Time Clauses - Hulls 1983)	Norwegian Conditions (The Norwegian Plan 1964)	United States Conditions (American Institute Hull Clauses)	German Conditions (DTV Hull Clauses)	Japanese Conditions	French Conditions
Damage to other vessel and cargo on board the other vessel	■	■	■	■	■	■
Loss or damage to property (other than cargo) on board other vessel	■	■	■	■		■
Personal injury and loss of life						
Oil pollution, except to other vessel						
Oil pollution to the other vessel and cargo on board the other vessel	■	■	■	■	■	■
Oil pollution damage to property (other than cargo) on other vessel	■	■	■	■		■
Delay or loss of use of other vessel	■	■	■	■	■	■
Loss or damage resulting from entanglement of anchors (no contact between the hulls of the two vessels)	■		■	■	■	■
Collision with another vessel which causes collision between that vessel and another ship	■	■	■	■	■	■
Damage to third party property (other than a vessel)		■		■		■
Removal of wreck of own Ship						
Removal of wreck of other vessel or property on same (as consequence of collision)		■		■		■

Key: shaded areas indicate where hull policy covers.

* Note: under an English hull policy containing the Running Down Clause (RDC) or the Collision Liability Clause, the hull cover of collision liability is limited to three quarters of the insured liability (with a maximum limit of three quarters of the insured value of the ship).

Source: Sjur Brækhus, Alex. Rein, Jeremy Kingsley, ed., *Handbook on P&I Insurance* (Arendal: Assuranceforeningen Gard, 1988) 197.

In the vast majority of cases, both vessels are to blame for a collision. Legal liability as between the owners of the colliding ships is based on the principle of single liability as between the two ships, pursuant to the 1910 convention covering collision liability[18]. The UK, Norway, Canada and Russia are all parties to the 1910 convention[19]. By contrast, the assured-insurer adjustment is made on the basis of cross liabilities[20], that is, without setting off the lesser liability against the greater. In addition to the 1/4 collision, P&I clubs cover excess liabilities. This means, for example, that where a small ship with a modest (although fully) insured value collides with a large ship of considerably greater value[21], the liability towards the larger ship over the 3/4 insured value of the smaller ship will be covered by the club[22].

Norwegian conditions encompass "near" collisions in the definition of collision for the purposes of cover, whereas English conditions do not[23]. This could include, for example, liability for damage caused when one ship causes an ice floe (or worse, small iceberg!) to wash up against or into the hull of a passing vessel. Another example would be when ships pull up along side each other in the Route to exchange cargo, commonly mail[24].

As regards collision liability for cargo on the assured's ship, which is not covered by hull insurance in any event, the problem of the validity of "both-to-blame" collision clauses should not arise, as in the United States, in light of Russia's participation in the Collision Convention. P&I protection would therefore not be required for this type of action, and carriers would be expected to insert a both-to-blame collision clause into any contract of carriage. Thus, the ice-breaker's P&I cover would have to compensate the cargo owner in "usual" collision situations and also, for example, when the cargo suffered nuclear-source damage in the event of a nuclear-powered ice-breaker guiding the cargo-carrying vessel.

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18 *Brussels Collision Convention of 1910* [hereinafter Collision Convention]; cited in Brækhus, Rein, Kingsley, at 184. In national legislation the principle finds expression in, *inter alia*, the Norwegian *Maritime Code*, §235, para. 2; UK *Maritime Conventions Act*, referred to in Hill, Robertson, Hazelwood, *supra*, note 141, at 82; *Canada Shipping Act*, R.S. 1985, c. S-9, as am. to 1989, Part IX, s. 567. The Russian *Maritime Code* does not formulate the concept in exactly these terms, although Art. 255 sets out the principle of liability according to degree of fault.

19 Brækhus, Rein, Kingsley, 185.

20 NMIP §75. The rule is the same for hull cover in the UK; Hill, Robertson, Hazelwood, *ibid.*, at 82-83. The principle of cross liabilities may not apply in all cases, however, notably where either of the shipowners is entitled to limit liability towards the other shipowner, cf. UK Institute Time Clauses-Hulls. Where the policy provides that the cross liability principle does not apply, both the hull and P&I settlements take place on the basis of single liability; Brækhus, Rein, Kingsley, at 193. NMIP applies cross liability in all cases, even where one of the shipowners is entitled to limit liability. In such cases, the insurance settlement is simply adjusted to reflect the reduced liability of the shipowner, *ibid.*

21 An example would be where a tug collided with a tanker during towing operations in the ice.

22 Hill, Robertson, Hazelwood, at 84.

23 Brækhus, Rein, Kingsley, at 194.

24 See Kjerstad (East Bound), at 10.

7.3.2 Damage to Fixed or Floating Objects

Conceptually but not legally similar to a collision with another ship, this occurs when the assured vessel strikes and damages fixed property, generally: harbours; docks; piers; jetties; structures; buoys; submarines or other cables; and fixed or moveable objects, including land or property thereon. This would include, for example, the jetties built on the permafrost which are used in Siberia. The importance of experienced, qualified personnel on board reemerges. Oil pollution caused by damage to such a jetty, however, would be covered under the club's oil pollution rule; clubs are very careful not to have overlap between their different types of coverage.

The general rule is that the law of the place where the damage occurred is the applicable law; *lex loci delicti commissi*[25]. This is true both for claims in tort and claims arising out of the contract for use of a berth or facility[26]. In the latter case, it is common for such contracts to impose strict liability on the shipowner for any damage caused to the facility, meaning that the shipowner will be liable even in the absence of fault. Since a club will usually over cover contractual liability where the port's contract has been approved by the club or the terms are customary in the trade concerned, it would be necessary to have the contracts for the ports along the NSR: 1) translated into at least the working language of the club; 2) approved by the club. Even where the contracts for NSR ports were to hold the shipowner to a fairly high standard of care or impose strict liability, it is *prima facie* hard to see why they could not be approved like any other.

Under English rules, the club in such instances bears the full 4/4 risk, since this type of collision is excluded from hull policies[27].

Under Norwegian rules, the extent of the hull cover in these instances varies widely. P&I can begin cover were the hull policy leaves off, or it can cover entirely where the hull policy gives no cover, in other words, 4/4 as under English rules[28]. Where hull does cover liability up to hull value, P&I will cover excess loss, assuming that the hull insurance is on standard terms[29].

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25 Cheshire, North, Fawcett, at 514. The rule is in fact more nuanced and maritime law carries its own idiosyncrasies. In addition, each jurisdiction has its own rules with respect to conflicts of laws. If the tort is committed or damage suffered within the territorial waters of a State, as would be the case along a good portion of the NSR and if the vessel hit a dock or pier, then the law of the littoral State applies, *ibid.*, at 544. Various other rules incorporating flag State jurisdiction, etc., can apply when a tort is committed on the high seas, but a detailed discussion is not necessary here. The reader is referred to the learned work by the aforementioned authors.

26 Brækhus, Rein, Kingsley, at 199.

27 Hill, Robertson, Hazelwood, at 89.

28 See, for example, Gard 1993 Rule 37.

29 Brækhus, Rein, Kingsley, at 201.

A table showing liability for damage to fixed or floating objects under conditions in different jurisdictions is reproduced in Figure 7.

Figure 7

Cover for damage to fixed or floating objects - comparison of P&I cover

Fixed or floating objects *Type of Liability* Liability for:	English Conditions (Institute Time Clauses - Hulls 1983	Norwegian Conditions (The Norwegian Plan 1964)	United States Conditions (American Institute Hull Clauses)	German Conditions (DTV Hull Clauses)	Japanese Conditions	French Conditions
Collision with a fixed or floating object (FFO)		■		■		■
Damage to FFO without physical contact with the Ship (e.g. surge damage)				■		
Damage to FFO resulting from use of the Ship's anchor, mooring or towing lines, gangways, etc., not caused by the movement of the Ship						■
Damage to FFO resulting from contact with anchor, mooring or towing lines, gangways, etc. (whilst in use), caused by the movement of the Ship				■		■

Key: shaded areas indicate where hull policy covers.

Source: Sjur Brækhus, Alex. Rein, Jeremy Kingsley, ed., *Handbook on P&I Insurance* (Arendal: Assuranceforeningen Gard, 1988) 203.

7.3.3 Pollution Liability

Pollution can become more problematic than in the south because of the fragile Arctic ecosystem. The general rule may be stated that the P&I insurer covers liability, fines and loss arising as a consequence to the escape of any hazardous substances from the ship[30]. All of the countries relevant to the present study are parties to MARPOL 73/78[31]: Norway, United Kingdom, Canada and Russia. It will be recalled that MARPOL 73/78 addresses all areas of marine pollution, as opposed to exclusively oil pollution. It covers such areas as: sewage and garbage from ships; and noxious liquid substances in bulk; and harmful substances carried in packaged form or in containers. Annex 1 of MARPOL deals with oil pollution. It covers not only pollution by tankers, but also discharge of bunkers by non-tanker vessels. There are limits to what can be claimed, however, and the discussion of pollution is further developed below, under limitation of liability.

Because of its importance, oil pollution liability is discussed in its own section below. It is mentioned here simply to place it in context with the other types of things covered by P&I.

7.3.4 Deviation

There is an implied undertaking that the ship will follow the most usual route and manner in the performance of the contractual voyage. This is often understood to be the most direct geographical route.[32]

Deviation may be defined as the geographical diverting of a ship deliberately from its contractual routing for some particular purpose[33]. Deviation can also be non-geographical, for example, as when a cargo is carried on deck, without such carriage having been expressly provided for in the contract, or where this is not part of the custom in the particular trade[34]. On-deck cargo, as a general rule, is not advisable in the NSR; no sources were found indicating any such custom in the region.

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30 Hazelwood, at 170-171; Brækhus, Rein, Kingsley, at 204.

31 *International Convention for the Prevention of Pollution from Ships*, 1973, plus *Tanker Safety and Pollution Protocol*, 1978 [hereinafter MARPOL 73/78]. See Gold (Pollution Handbook), at 39 *et seq.*; Brækhus, Rein, Kingsley, at 212 *et seq.*

32 Brækhus, Rein, Kingsley, at 293; Hill, Robertson, Hazelwood, at 94-95.

33 Hill, Robertson, Hazelwood, at 76.

34 Brækhus, Rein, Kingsley, at 293.

The general rule is that there shall be no recovery in respect of claims which have arisen proximately as a result of a deviation from a contractual voyage[35]. The general legal effect of deviation is loss of cover as from the time of the deviation[36]. The basic exclusion is where the member informs the club in advance of the deviation, and the club agrees to hold the member covered, on terms determined by the club[37]. In addition, general maritime law always allows for deviation to save human life. Usually club rules will provide for recovery of net expenses relating to bunkers, insurance, wages, stores, provisions and port charges; net denoting those expenses which would have been incurred but for the diversion.

In the NSR, deviations could be many, and costly. Ice conditions, sudden shifts in weather, climatic changes can all contribute to making the physical setting in which the contract is carried out markedly different from that which was originally agreed upon. There have been instances of convoys being frozen in the ice and having to winter in the NSR before being able to manoeuvre out the following spring. Whether this will lead to issues such as frustration of contract will depend on the individual situation. In any event, technology is available to inform club correspondents quickly about changes in conditions. It is submitted that the club and member should include a paragraph in the insurance contract allowing for short notice of deviation[38].

More fundamentally, the question could arise eventually as to whether the NSR was the route agreed upon in the contract of carriage[39]. Where the contract has not expressly stipulated, for example, the Suez Canal, it could be argued by a carrier in defence that using the NSR over the Suez was not a deviation; that it was, in fact, the most expedient route. This is more a question of interpretation of the contract of carriage. Presumably the P&I insurer would not get involved here since the assured carrier would be presumed to have sought protection in an appropriate clause in the contract of carriage.

Cargo liability resulting from deviation is discussed below.

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35 Hill, Robertson, Hazelwood, at 94; Brækhus, Rein, Kingsley, at 292.

36 Hill, Robertson, Hazelwood, at 94, reflecting MIA s. 46. Gard takes the same approach: Brækhus, Rein, Kingsley, at 292, 1988 Rule 34, although in its 1993 rules would appear to treat deviation as a more general alteration of the risk: Art. 7. NMIP treats deviation as an alteration of the risk: § 31, although the consequences are graduated as set out in NMIP § 26. Note the difference again between English and Norwegian approaches. English coverage simply ceases, and because it is a breach of warranty there need be no causal connection between the deviation and the loss, cf. hull insurance, above. Gard Rules have moved closer to the English approach, by simply halting coverage as of the time of the breach, although there must be causal connection between the alteration and [non-covered] loss.

37 Hill, Robertson, Hazelwood, at 94; Brækhus, Rein, Kingsley, at 296.

38 Clubs take a different approach to deviation and notice. Gard, for example, provides for notice to the club and eventual payment of an extra premium: Brækhus, Rein, Kingsley, at 296. Skuld insists on separate deviation insurance being taken out once notice has been received of the deviation: Skuld Assuranceforeningen, at 164.

39 This is not an issue in the present-day context. The thought is offered, contemplating one day in the future when the NSR becomes a usual route of navigation.

7.3.5 Cargo Liability

Only those aspects which the author believed required special discussion for the NSR are canvassed here. Forms of liability, such as for delivery without production of bill of lading, false descriptions in the bill of lading, refrigerated cargo, etc., were not seen to be any different nor to require any special treatment.

Of central importance in cargo liability is the Hague-Visby Rules[40]. The starting principle of the Rules is that the carrier is liable for loss, damage or delay caused by the carrier's own fault or negligence that of the carrier's servants, as listed in the Rules. In other words, it is liability based on fault with a reversed burden of proof. The cargo owner, or other party effecting the contract of carriage with the carrier, must demonstrate that the goods became damaged or lost while in the carrier's custody. This is usually done by referring to the description of the goods in the bill of lading. The burden will then be on the carrier to demonstrate that both carrier and servants have acted with due diligence. This often means that insofar as it is not proven otherwise, the carrier becomes liable based on a presumption of fault.

There are two key defences afforded the carrier by the Hague-Visby Rules: "negligent navigation defence", and the "fault in the management of the ship defence"[41], subject to the ship being seaworthy at the outset of the voyage[42]. In practice, these cover most situations, and would become invaluable in the NSR context, where the master and crew would experience some very tough conditions. In addition, the *Regulations for Navigation on the Seaways of the Northern Sea Route*, as a matter of law, require a Russian ice pilot to be on board the vessel being guided by the ice breaker during certain parts of the voyage through the NSR[43]. Since ice-breaker assistance will be required for a good part of the voyage in any event, it is important to have a fairly solid defence such as this one applying to all who assist in the navigation of the ship.

It is submitted that the Hague-Visby defences would be sufficient to free the assured carrier in cases where, for example, a state-imposed pilot on board committed a nautical error. One interpretation of the provision would allow the pilot or other NSR officials working on board or in leading vessels to be considered as pilots or servants, respectively, of the carrier. Since the

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40 The Rules are reproduced in Brækhus, Rein, Kingsley, at 458 *et seq.*

41 *Hague-Visby Rules*, Art. IV, para. 2(a):
"2. Neither the carrier nor the ship shall be responsible for loss or damage arising or resulting from:
(a) Act, neglect, or default of the master, mariner, *pilot or the servants of the carrier* in the navigation or in the management of the ship." (emphasis added)
A "catalogue" of further defences is listed in para. 2, which are of lesser interest here.

42 *Hague-Visby Rules*, Art. IV, para. 1.

43 Section 7.4 sets out the procedure for "icebreaker-assisted pilotage".

pilots work right on board, and since officials in leading vessels make crucial nautical decisions, there is a fairly strong argument to be made here[44]. Even if the paragraph is not read as including these people, i.e., they are considered to be an "independent enterprise" for the purposes of the law, then liability would fall on that independent enterprise, and not on the carrier.

Clubs restrict their members whose vessels carry cargo to obtaining terms not less favourable than the Hague-Visby Rules in their contract[45]. Liability incurred in excess of the Hague-Visby standard is only covered where it was legally impossible for the member to restrict liability commensurate with that standard, for example, in the courts of a state which did not recognise the validity of the rules. No known Russian legislation or case-law exists to this effect.

Russia is not a party to the Hague-Visby Rules[46]. For shipments of goods to or from ports along the NSR, the Rules would still apply as long as the bill of lading was issued in a Hague-Visby state, the carriage was from a Hague-Visby state, or the bill of lading provided that the Hague-Visby Rules were to apply[47]. Most of the European countries have adopted the Rules, but note that Japan, at the other end of the NSR, has not. Cargo coming from Japan to Europe would therefore not be subject to the Rules unless the bill of lading specifically provided so. It is possible to incorporate the Rules into any contract of carriage through use of a paramount clause, regardless of whether it is a bill of lading or not. Charter-parties are not subject to the Rules.

A charter-party may take the form of:

- the lease of the ship itself, i.e., bareboat or demise charter:
- the lease of the ship for a time, i.e., a time charter;
- the lease of the ship for a certain voyage, i.e., a voyage charter; or
- the lease of part of the cargo-carrying capacity, i.e. a space or slot charter.

Liability under the charter-party will differ according to whether the charterer is the owner of the cargo or not. Where the charterer is the owner of the cargo, liability under English or Norwegian law will be determined according to the terms of the charter-party. Where the owner of the cargo is not the charterer, the carrier, i.e., either the charterer or the shipowner as the case

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44 See Falkanger, Bull, at 174-175. The provision incorporating the Hague-Visby Rule into the Norwegian Maritime Code (*Sjøloven*), §118, para. 2(a), excludes liability for error in navigation or management of the ship committed by the captain/master, crew, pilot *or tugboat*, or others perform work in the service of the ship. (emphasis added). This would include a ship leading or towing the cargo ship through the Route.

45 Hill, Robertson, Hazelwood, at 92 *et seq.*; Brækhus, Rein, Kingsley, at 174-175.

46 Brækhus, Rein, Kingsley, at 149.

47 *Hague Visby-Rules*, Art. X.

may be, will be liable under the bill of lading. Ultimate liability between the charterer and the shipowner will be determined according to the charter-party.

Tanker charter-parties tend to place liability for cargo loss or damage on the shipowner[48]. Conversely, charter-parties for dry goods allocate liability based on which of the two parties is responsible for the loss. In the case of a time charter using the New York Produce Exchange form, the Inter-Club Agreement[49] sets out loss allocations for various incidents. The only one of these which might raise eyebrows is the third allocation in para. 1 (ii)(c), which allots loss due to short delivery claims, including pilferage, 50% - 50% between the owners and charterers. Some parties may wish to amend this[50].

It is not likely that total freedom of contract will prevail, however, even in charter-parties. Because of the popularity of the Hague-Visby defences, insurers will almost certainly require a paramount clause as a matter of course, particularly in the case of tanker voyage charter-parties. It is also likely that they will require a general exoneration clause with respect to nuclear-source damage caused by ice-breakers, thereby shifting the burden of compensation from the cargo-carrying vessel to the nuclear ice-breaker.

Delay in delivery of the cargo, particularly delay due to difficult weather conditions, ice blockage of the route, etc., would generally be covered by a disclaimer in the contract of carriage, be it a bill of lading or otherwise. P&I insurance generally does not extend to liability for delay, as the club expects the member to have such a clause in the contract of carriage. Delay can amount to deviation, if it is so long as to transform the voyage into a different from that contemplated by the contract of carriage[51]. *Quaere* would this apply when a ship has to winter in the route? It is submitted this would be answered in the affirmative.

Deviation can prove to be onerous to a carrier. As mentioned above, the possibilities for delay and deviation in the NSR are many. The extent of the legal effects of a deviation vary according to jurisdiction. Under Russian law or if the contract of carriage does not incorporate the Hague-Visby Rules, the offending carrier would lose all right to limit liability, including the right of package or unit limitation. The P&I club would probably not cover this as the carrier would be expected to subject the contract to at least the equivalent of the Hague-Visby Rules and also include an extensive disclaimer for delay, ice, etc. The Hague-Visby Rules give the carrier two additional grounds for justifying a deviation: 1) in order to save or attempt to save property at sea; or 2) if it is in some other way a reasonable deviation, although this is generally

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48 Brækhus, Rein, Kingsley, at 166.

49 *Inter-Club New York Produce Exchange Agreement* (As amended May, 1984); reproduced in Brækhus, Rein, Kingsley, at 474-477.

50 As permitted by para. 1(vii).

51 Brækhus, Rein, Kingsley, at 292.

understood that it must be to the benefit of both the ship and cargo, as opposed to just the ship. A test has been devised for "reasonable deviation":

> "what departure from the contract voyage might a prudent person controlling the voyage at the time make and maintain, having in mind all the relevant circumstances existing at the time, including the terms of the contract and the interests of all parties concerned, but without obligation to consider the interests of any one as conclusive."[52]

7.3.6 Towage

The ice conditions in the NSR mean that at most times the ship will be being at least guided by an ice-breaker; at other times, the ship may be operating in convoy; and at still other points, the ship may be being physically attached to and towed by the ice-breaker. Different legal consequences flow from each of the three situations, impacting directly on the distribution of liability. All three are discussed under the one heading of [ocean] towage because they all involve the ship receiving outside assistance to get through the Route.

Unfortunately for the present purposes, there are no established provisions dealing with what will be the most common operating scenario on the NSR: an ice-breaker leading a vessel through the Route. The *Regulations for Navigation on the Seaways of the Northern Sea Route*, Section 7, require all vessels navigating in the NSR to have an ice-breaker escort and, in certain portions, to have icebreaker-assisted pilotage, meaning that a Russian ice pilot is to be on board the guided vessel.

The P&I rules canvassed do not mention ice-breakers specifically, much less nuclear ice-breakers. Nonetheless, it is submitted that the elements are present in both English and Norwegian insurance to cover the above-mentioned situations.

52 Brækhus, Rein, Kingsley, at 294.

Towage can be interpreted widely:

"Towage is a term used to describe the services rendered by a ship employed to expedite the progress of another vessel or water-borne object. Such services may include the physical operations of pulling, pushing, holding, moving, *escorting or guiding* the towed vessel or object."[53] (emphasis added)

English rules regarding ocean towage use the United Kingdom Standard Towage Conditions, which place most of the liability of the tow owner. The possibility is open, however, for coverage where the entered ship is under contract to be towed under terms other than the standard UK terms as conditions of towage[54]. Cover would, of course, be contingent upon prior approval by the club and payment of an additional call, where applicable.

In contrast to the English rules, the Baltic and International Maritime Council's (BIMCO) TOWCON and TOWHIRE contracts, used in Scandinavian countries, operate on a knock-for-knock basis, allocating loss between the tug and the tow. Under BIMCO rules, the tug and tow are individually responsible for the loss or damage to their own property and for injury or death of their own servants or agents.

The only restriction would appear to be that the towage contract be one approved by the Association. This would mean either a TOWCON or TOWHIRE contract, or some other contract approved by the club. The standard UK conditions would *not* qualify for cover with a Scandinavian club, due to the different approach in loss allocation between tug and tow[55].

If the guiding and guided ships were to collide, it is submitted that the usual collision rules would apply. Thus, the cargo owner could claim against either of the ships, subject to a both-to-blame collision clause in the contract of carriage.

Likewise, in the case of ships travelling in convoy, the usual collision liability rules would apply. The cargo owner could claim against either or any ship involved in the collision, subject to a both-to-blame collision clause in the contract of carriage.

The second situation, where a Russian pilot is aboard the guided vessel and working for and with the ice-breaker, comes a step closer to the usual idea of [physical] towage. Whether it would be covered would be a matter of negotiation with one's club.

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53 Brækhus, Rein, Kingsley, at 239.

54 Hill, Robertson, Hazelwood, at 100.

55 Brækhus, Rein, Kingsley, at 246.

The third situation, where the ship is being physically towed by the ice-breaker, would easily fall within the definition of towage. If the towing ice-breaker is nuclear-powered, however, the member's P&I simply will not cover. Cover for any damage caused would have to come instead from the ice-breaker's own liability insurance. The towed vessel's P&I club will likely insist that the member negotiate a towage contract based on the knock-for-knock principle.

7.3.7 Obstruction and Wreck Removal

Removal of wrecks will most likely be more difficult and costly due to the physical conditions, especially shallow waters, but a lot will depend on the authorities.

Generally under English cover, P&I will cover "costs or expenses relating to the raising, removal, destruction, lighting or marking of the wreck of the entered vessel", but this is only to be "when those listed activities are compulsory by law or the costs of the same are legally recoverable from the member"[56]. Liability incurred as a result of failure to mark or remove the wreck will also be covered, as will liability incurred because of the escape of oil from the wreck[57].

Norwegian rules cover removal, destruction, and lighting or marking, as well as liability to third parties incurred when the ship, as a result of a covered casualty, creates an obstruction[58]. To qualify as a casualty, the event must be caused by a marine peril which may be the matter of a claim under a standard hull policy, such as a grounding, collision or fire[59]. As under English rules, the cover is limited to when the removal, etc., is required by law[60].

In practice, it is only after every effort has been made to salve the vessel that the rule on wreck removal will come into play.

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56 Hill, Robertson, Hazelwood, at 100-101.

57 *Ibid.*

58 Brækhus, Rein, Kingsley, at 221 *et seq.*

59 *Ibid.*

60 See, for example, Gard 1993 Rule 40.

7.3.8 Salvage

Both English and Norwegian clubs use the Lloyd's Standard Form of Salvage Agreement (LOF 1990). While other forms do exist, such as the Scandinavian Tug Owners' *Standardvilkår* (Standard Terms), it is the Lloyd's Form which most likely will be used for the NSR.

The starting principle of LOF 1990 is "no-cure, no-pay", that is, if the salvage operation is not successful, the salvor receives nothing; if the operation is successful, then the salvor receives over and above the going market price for the work done, by way of reward[61]. There exists a duty, both in general maritime law and in conventional law[62] to render assistance to people and vessels in distress at sea. The "no-cure, no-pay" principle is now mitigated somewhat by measures relating to safety expenses and environmental protection initiatives.

The factors taken into account in determining the amount of the salvage award are:

(a) the salved value of the vessel and other property;
(b) the skill and efforts of the salvors in preventing or minimising damage to the environment;
(c) the measure of success obtained by the salvor;
(d) the nature and degree of the danger;
(e) the skill and efforts of the salvors in salving the vessel, other property and life;
(f) the time used and expenses and losses incurred by the salvors;
(g) the risk of liability and other risks run by the salvors or their equipment;
(h) the promptness of the services rendered;
(i) the availability and use of vessels or other equipment intended for salvage operations;
(j) the state of readiness and efficiency of the salvor's equipment and the value thereof[63].

Salvage is expected to be borne by general average, that is, paid for on a pro rata basis by the various property interests, i.e. ship- and cargo-owning, in proportion to their respective salved

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61 See, generally, Falkanger, Bull, Chap. 18, Bergning (Salvage), at 260 *et seq.*

62 *Convention for the Unification of Certain Rules of Law Relating to Assistance and Salvage at Sea*, Comité maritime international (CMI), Brussels, 1910; and the new *International Convention on Salvage*, London, April 28, 1989, IMO Document Leg/CONF. 7/26, reproduced in (1989) 20:4 J. Mar. L. & Comm.

589 (1989 Salvage Convention), Article 10. The author presumes Russia is at least a signatory to this latter Convention, since Russian is mentioned as one of the official languages of the Convention, in Article 34. The Convention has entered into force.

63 1989 Salvage Convention, Art. 13.1; also reproduced *verbatim* in LOF 1990.

values[64]. Hull insurance is expected to cover the ship's general average contribution, including salvage, up to the insured value of the ship[65]. P&I comes in with the remaining contribution only after all hull cover has been exhausted[66]. The amount of the salvage award shall in no case exceed the salved value of the vessel and other property[67].

Whether a party would actually *want* to take on the chance of salving in the NSR is an open question. The chances of failure are much greater than in more southerly navigation. Perhaps this can be offset somewhat by the prospect of greater reward, since the reward can be set partially according to degree of danger[68], and since the LOF 1990 Clause 1(e) allows the parties to set which currency they wish the award to be in. The most likely choice will be US dollars. Even if this space is left blank, Clause 1(f) provides for the award to be in Pounds Sterling. Choice of law is invariably the law of England, pursuant to Clause 1(g), and disputes are to be settled by arbitration in London, in accordance with Clause 1(c).

The one notable exception to the "no-cure, no-pay" principle that has emerged in recent years is the "safety net" provision, whereby the salvor is entitled to compensation for reasonably incurred expenses, even where the operation has not been successful, where the salvage operations are undertaken in an effort to avert or minimise damage to the environment[69]. The rule presupposes no negligence on the part of the salvor and the salvor's agents. The rationale for such a rule is obvious: to encourage intervention, notably in the case of oil pollution. This should remove hesitation that might otherwise be present along the NSR, where conditions would be difficult and where a master might not be sure of applicable local legislation, etc. The only potential problem area here would be the determination of costs for clean-up and other mitigating measures; but this is more an issue for arbitration, which would take place in London. It is the P&I insurer who covers this category of expense.

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64 1989 Salvage Convention, Art. 13.2. See also the York-Antwerp Rules, in particular Rule G.

65 See, for example, Institute Voyage Clauses - Hulls, Clause 9. On the Norwegian side, see NMIP §70 and Cefor Form 235 A §15.

66 For the English rule, see Hill, Robertson, Hazelwood, at 99. The Norwegian rule is found in 1993 Rule 41, while the NMIP mentions only irrecoverable general average: NMIP §229.

67 1989 Salvage Convention, Art. 13.3.

68 1989 Salvage Convention, Art. 13 1(d) codifies this general principle of maritime law.

69 As reflected in Art. 13, 1(b), and in the provision for "special compensation" in Art. 14 of the 1989 Salvage Convention; and in LOF 1990 Clause 1(a)(ii), and Clause 2. See also, by way of example, Gard 1993 Rule 42.

Norwegian rules appear to allow a bit more leeway in cover. Liability by the entered ship towards a salving ship or some other party will be covered by P&I in such instances as: where there has been an attempt to save human life[70]; where the salvage expenses form part of a general average contribution which is irrecoverable because of a breach of the contract of carriage[71]; and where attempts have been made to prevent or minimise oil pollution.

The above concerns where the entered ship is being salved. Where the **entered ship** does the salving, not an altogether unlikely scenario on the NSR, clubs are loath to expose themselves and the International Group to cover for negligence in such operations, largely as a consequence of *The Tojo Maru* case in 1971. Tugs operating as professional salvors in the area may be able to persuade a club to let them enter that club, on very restricted conditions. For one, they most likely will require that the salvor use the LOF 1990. Since Clause 1(g) of that form subjects the salvage contract to English law and the English law of salvage, a salvor would be entitled to limit liability if things should go wrong. Salvors operating according to the law of other jurisdictions, such as Canada or Russia, are not entitled to general limitation of liability based on the tonnage of the ship, as are shipowners involved in other activities, but in practice virtually all salvage contracts are governed by English law[72].

7.3.9 General Average and Irrecoverable General Average

As stated above, the hull policy is the primary source covering general average expenses. P&I comes in where hull leaves off or, rather, runs out.

If the ship suffers very serious damage to the point where it is unable to continue transporting the cargo, but the cargo is still in a transportable condition[73], a valuable alternative may be transhipment of the cargo. In the NSR, where harsh conditions force ships to cooperate, perhaps even more than in southerly areas, this should be kept in mind. The shipowner, in such cases, will usually use a form such as the British Standard Form of Non-separation Agreement, which preserves the legal relationship between the shipowner and cargo owner, transhipment agreement notwithstanding. It also preserves the cargo owner's duty to continue contributing to the general average of the adventure[74].

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70 See, for example, Gard 1993 Rule 33.

71 See, for example, Gard 1993 Rule 41.

72 A discussion of this omission in the 1989 Salvage Convention is found in Kerr. The limitation of liability based on tonnage derives from the 1976 Convention on the Limitation of Liability, discussed below.

73 This would not be likely or possible in the case of an oil cargo. For other cargoes, however, the idea is pertinent.

74 See generally, Brækhus, Rein, Kingsley, at 232-233.

In certain cases, the shipowner will lose the right to claim general average from the cargo owner. P&I will cover where the ship is unable to recover the cargo portion of general average by reason only of a breach of the contract of carriage. This is true of both English and Norwegian rules[75]. The breach must be of a fundamental nature, e.g., unseaworthiness of the vessel. Moreover, the fault must be one for which the shipowner would be legally liable. If the fault of the shipowner is one for which no responsibility lies under the contract of carriage, for example, a nautical error covered by the Hague-Visby Rules, this will not qualify as irrecoverable general average. The cargo owner will still be liable for the general average contribution, and a P&I insurer would set this up against an unfounded claim by a shipowner.

Irrecoverable general average appears to be a particular point of concern as regards shipping in Arctic areas, as is the issue of transhipment, due to both costs and uncertainties surrounding the eventual legal relationship created[76]. Great care would have to be taken to ensure that the shipping activity was taking place in accepted shipping zones under approved terms and conditions.

7.4 National Regulatory Provisions

There are various regulatory provisions in force in Russia, some aimed at protecting the marine environment off the coast of Siberia[77], others aimed at controlling shipping operations[78], and yet others specifically aimed at compensation for oil pollution[79].

Russian authorities appear to consider that several more legal sources besides these three are relevant. Besides the three just mentioned, they include at least:

- Instruction about the procedure of certificate issuance about availability of proper security in a sense of item 7 of the International Convention on Civil Liability for Oil Pollution Damage, 1969.

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75 Hill, Robertson, Hazelwood, at 98-99. Under Norwegian rules, see, for example, Gard 1993 Rule 41.

76 Telephone and written communication with James B. Wooder, Commercial and Legal Manager, LASMO, Halifax, Canada. Personal communication with Terje Holte, Assuranceforeningen Gard, Arendal, Norway.

77 For example, the Edict of the Presidium of the USSR Supreme Soviet of 26 November 1984 *On Intensifying Nature Protection in Areas of the Far North and Marine Areas Adjacent to the Northern Coast of the USSR*, *Vedomosti SSSR*, 1984, No. 48, 863 and 856; translated in Butler (USSR Sea Law), at J.4.

78 *Regulations for Navigation on the Northern Sea Route.*

79 *Edict on the Amounts of Compensation by Ship-owners for Losses Caused by Pollution of the Sea by Oil and Other Substances Harmful for the Life of People and for Living Resources of the Sea (1981)*, *Vedomosti SSSR (1981)*, no. 11, 284; translated in Butler (USSR Sea Law), at J.3. The Edict is of limited relevance, or rather economic threat, as the limits are set in rubles. A revision is apparently in the offing: Soyuzmorniiprojekt, note 44, at 18-19.

- Certificate on secured civil liability for oil pollution damage.

- Certificate on insurance or other financial security of civil liability for oil pollution damage along the shipping lanes of the Northern Sea Route[80].

These are discussed *supra*, in the section relating to certificates required on board. Ship operators would be advised to obtain a complete, translated package of the rules the Russians believe apply before navigation in the Route is begun, as there can conceivably arise misunderstandings as to the applicable regulation. In fact, almost all of the above-mentioned rules and regulations could be questioned as to their applicability to Western traffic.

The instruction, for example, would appear to be an internal document for Russian authority employees regarding the issuance of the CLC certificate. If the ship were Russian, then this would apply, insofar as the P&I would issue a "Blue Card" to the Russian Ship Registry, who would then issue the CLC certificate. If the ships were Western, then this rule would not be relevant, as the certificate would be issued either by the club or by the flag state shipping authority.

As to the second certificate mentioned above, it was not clear from the source whether this was the TOVALOP certificate. In the affirmative, then it is relevant for Western P&I purposes. In the negative, its relevance is uncertain.

The "Certificate on insurance or other financial security of civil liability for oil pollution along the shipping lanes of the Northern Sea Route" is not relevant at all, as explained *supra*.

All this is not to say Russian authorities will not raise the issue, which is why they are mentioned here.

Practice has shown, however, that legislative attempts to impose additional requirements regarding insurance certificates, over and above what the industry has set for itself, have simply not worked. Jurisdictions such as the state of California have attempted to impose requirements on foreign and other ships in an effort to curb pollution. The P&I sector's response was as follows:

> "On several occasions during the last twenty years the Clubs have been asked to provide certificates of financial responsibility in respect of their Members' potential liabilities under Oil Pollution legislation not based on the CLC and Fund Conventions. The Clubs have consistently refused to provide such

80 All of the six rules just cited, including those mentioned in the preceding three footnotes, are listed the Soyuzmorniiprojekt report.

certificates as to do so would inhibit the general acceptance of the CLC/IOPC Fund regime and lead to administrative chaos.[81]

"As far as the certification is concerned, Members will be aware that the Clubs will not issue certificates of financial responsibility for by oil or other substances to enable Members to comply with the requirements of individual States."[82]

Canada is another example. Section 7 of its *Arctic Waters Pollution Prevention Act* contained a provision which basically offered no defence to a party charged for a ship-generated marine pollution incident. Under the AWPPA, vessels must show proof of financial coverage for civil liability before entering "Canadian Arctic waters" as defined by the Act. The problem was, no P&I club was willing to let its vessels venture into waters where they might be held absolutely liable for damages arising out an oil pollution incident. The clubs prefer internationally-agreed limits, which allow them to predict with greater certainty their potential exposure and arrange financial coverage accordingly. Subsequent regulations included the limits set by the CLC and Fund Convention. It has been observed that without this softening in approach, Arctic shipping in Canada would have come to a halt, as no ship would have been able to show proof of financial coverage from a P&I club[83].

In light of the two examples just given, one can expect that this last certificate pertaining to the NSR would probably receive similar treatment in practice[84].

What we are left with then, is garden-variety Western P&I certificate requirements. The certificates of relevance for P&I insurers are the ones under TOVALOP and CLC, for oil tankers. Moreover, Section 5 of the *Regulations for Navigation on the Seaways of the Northern Sea Route* merely echoes at the national level what is already required by the CLC. What is different is how the requirements can apply in relation to the NSR.

Turning now to *Norwegian* regulatory provisions, it should be pointed out that the *Forsikringsavtaleloven*[85] (Insurance Contracts Act) is largely inapplicable to large-scale marine

81 Circular No. 4/89 from Gard to its Members.

82 Circular No. 3/90 from Gard to its Members.

83 See generally, the discussion in Spears, at 174 *et seq.*, and accompanying notes.

84 Personal communication with Terje Holte of Assuranceforeningen Gard, Arendal, Norway.

85 *Lov om forsikringsavtaler* (Insurance Contracts Act), 1989-06-16, nr. 69 (FAL).

insurance, as the equal bargaining-power parties draw up their own terms and rely on the NMIP as needed[86].

There is one mandatory section of FAL that cannot be opted out of: §7-8 allows an injured party *direct action* against the insurer, much like that allowed in the United States, against large-sized operations, including ships subject to the provisions of the Norwegian *Maritime Code*[87]. Furthermore, this direct action is allowed *before* there has been any disbursement to the assured for the purpose of reimbursing the injured third party. This is significant from a practical and legal standpoint. Practically, it exposes the insurer to lawsuit more easily by creating the extra, artificial legal relationship. Legally, it distorts somewhat the use of the insurance contract which is, after all, one of *indemnity*, not *liability*, i.e., the principle is to indemnify the assured for liability claims that have been paid out. To come back to practicalities, however, large liability claims are what have sometime rendered the assured insolvent, thereby preventing the injured third party from recovering. The industry and lawmakers have recognised this and responded.

One may speculate as to how this provision would play out on NSR cover. Given the [presumed] increased chances of a liability incident occurring, one could anticipate an at least proportional increase in the chance of direct action. In practice, apparently, the provision is rarely used by those entitled to invoke it[88]. Shipowners could hope that a new area of navigation would not spark a "discovery" of the section.

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86 By way of illustration of the optional character of the NMIP, one may consider the example of Assuranceforeningen Gard in Arendal, Norway. Gard no longer bases its cover on the NMIP at all, nor on English law, but rather relies completely on its own set of rules.

87 FAL §7-8. §1-3, para. 2(c) brings ships mentioned in the Norwegian Maritime Code, §33, para. 1 within the definition of "larger enterprise" for the purpose of FAL.

88 Personal communication with Terje Holte, Assuranceforeningen Gard, Arendal, Norway.

7.5 Limitation of Liability

7.5.1 International Measures Relating to Non-oil Pollution

In the case of a non-oil cargo, a ship owner/operator wishing to avoid liability would be wise to stipulate as part of the contract of affreightment that the cargo owner obtain his or her own insurance. Thus in the event of a disaster, the loss of the cargo would fall on the cargo owner, as would liability caused by the loss of the cargo. Even then, it is not always possible to avoid direct action, however, as will be pointed out presently. In the case of an oil cargo, the ship owner/operator has no choice but to obtain insurance in an effort to head off exposure, as discussed *infra*.

7.5.1.1 Conventions of 1957 and 1976 Relating to Limitation of Liability

The *International Convention Relating to the Limitation of the Liability to Owners of Sea-going Vessels*[89] set common liability limitation standards, which were revised upwards in the 1976 *International Convention on Limitation of Liability for Maritime Claims*[90]. The 1976 Convention explicitly excludes claims for oil pollution from its provisions; however, claims for pollution damage from other substances would be included.

Limitation standards are now as follows. For personal claims, the minimum is 330,000 Special Drawing Rights (SDRs)[91]; for ships from 501 to 3000 tons, 500 SDRs per ton; 3001 to 30,000 tons, 333 SDRs per ton; 30,001 to 70,000 tons, 250 SDRs per ton; and over 70,000 tons, 167 SDRs per ton. For property damage claims, the minimum is 167,000 SDRs; for ships from 501 to 30,000 tons, 167 SDRs per ton; 30,001 to 70,000 tons, 125 SDRs per ton; and over 70,000 tons, 83 SDRs per ton. Claims may be directed against shipowners, charterers[92], managers and operators.

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89 *International Convention Relating to the Limitation of the Liability to Owners of Sea-going Vessels*, signed at Brussels, 1957; cited in Spears, at 192, note 27.

90 *International Convention on Limitation of Liability for Maritime Claims*, 1976 IMCO No. 77.04E; cited in Spears, at 192, note 28.

91 The Special Drawing Right is a unit of account set by the International Monetary Fund (IMF), based on a basket of five major currencies. The value of the SDR is adjusted daily and is reported in the financial press. Most conventions now use the SDR system. One notable exception is the Fund Convention, discussed *infra*, which uses poincarés francs, and whose 1976 Protocol adopting the SDR unit has not yet come into force. Countries which are not members of the IMF also use the poincaré franc.

92 This opens the door to claims against cargo owners.

It is possible to break the limitation, upon proving a personal act or omission carried out intentionally, or recklessly and with knowledge that loss would result[93].

Russia is not a party to either convention[94]. Their application as regards NSR traffic is therefore unclear. Claimants would probably be advised to bring their claim in a State which was a party to the Convention(s), and where direct action was allowed[95].

7.5.1.2 Draft Convention on Hazardous and Noxious Substances

The various shipping liability schemes, discussed herein *passim*, relate mostly to oil pollution, although some complement is provided by MARPOL 73/78. A number of actors in the international community deplored the two just-mentioned conventions on limitation of liability, on the grounds that they were grossly insufficient and that a convention dealing specifically with noxious substances was required. A conference was held prior to the conferences on the Civil Liability and Fund Protocols, but no consensus could be reached, although a draft document was produced[96].

Because agreement could not be reached and this convention has not entered into force, claims arising from these substances have to be met out of the ordinary P&I coverage carried by vessels. Larger claims may, however, result in limitation of liability by shipowners under either of the limitation conventions just mentioned. Additionally, a new convention may be in the offing within a few years[97], and naturally will impact on operations in the NSR. How far P&I insurers would be willing to go in offering cover for noxious substances in the NSR is a market question.

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93 Gold (Pollution Handbook), at 124.

94 Brubaker (Pollution), at 176, note 127. Neither the USSR nor Russia are included in the list of participating States.

95 This would include Norway, which is a party to the Convention and which allows direct action through FAL, at least for personal injury. It would also include the UK, although not Canada or the United States. List of participants in Brubaker (Pollution), at 176, note 127.

96 *Draft Convention on Liability and Compensation in Connection With the Carriage of Noxious and Hazardous Substances*, 1984, 23 Int. Leg. Mats. 150; cited in Brubaker (Pollution), at 162 and 176, note 132. Also referred to as the *HNS Draft Convention*.

97 Gold (Pollution Handbook), at 125, is optimistic, as is Brubaker (Pollution), at 162.

7.5.2 Particular Liabilities Arising in Relation to Oil Pollution

7.5.2.1 The International Picture

Most of the liability and compensation schemes in force relate to oil pollution, although in fact most of the total amount of marine pollution comes from other sources[98]. One should keep in mind, however, that in the NSR a single oil-related disaster can have disproportionately disastrous effects, due to the colder temperature and fragility of the Arctic marine environment. This implies higher liability exposure, due to the distances involved in getting emergency forces up to the area, and the greater resources required to clean up a spill. This in turn means higher costs for a liability insurer which, according to market logic, should drive up P&I premiums.

7.5.2.2 TOVALOP and CRISTAL

The *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* (TOVALOP)[99], operates with the *Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution* (CRISTAL)[100].

TOVALOP is administered by the International Tanker Owners Pollution Federation (ITOPF)[101] and is underwritten by the International Tanker Indemnity Association (ITIA) in cooperation with various P&I clubs. TOVALOP and CRISTAL were intended to be an interim measure until sufficient acceptance of the CLC and FUND had occurred. Accordingly, TOVALOP applies in cases where states which have not accepted the CLC have suffered damage and where the polluting vessel is a party to TOVALOP[102]. Although Russia is a party to both CLC and Fund, the TOVALOP and CRISTAL schemes would still be important where

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98 Gold (Pollution Handbook), at 18. Exactly how much comes from shipping activities is a point of contention, but most sources agree that vessel-source is not the biggest problem: see Birnie, at 234; and that the largest share of marine pollution originates from land-based sources: see Marakrishna, at 18.

99 *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* (TOVALOP). Reproduced in (1969) 8 *Int. Leg. Mats.* 497. Entered into force September 18, 1969 and revised February 20, 1994. The TOVALOP Supplement entered into force February 20, 1987.

100 *Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution* (CRISTAL). Reproduced in (1971) 10 *Int. Leg. Mats.* 137. Entered into force January 14, 1971 and revised February 20, 1994.

101 Care should be taken not to confuse private-sector schemes, such as TOVALOP, and public-sector schemes, such as CLC, discussed below.

102 It is estimated by some that TOVALOP covers virtually the entire world tanker fleet, over 90%: Churchill, Lowe, at 267; Ganten, at 3. Hill, Robertson and Hazelwood, at 77-78, put the figure at 98%. The TOVALOP Supplement applies worldwide. Thus, claimants in states which have ratified the CLC may avail themselves of the extra compensation which that Supplement provides. See Wilkinson, at 73-75.

the damaging vessel's flags State is not a party to CLC and Fund, but where the vessel is a party to TOVALOP and the cargo subject to CRISTAL.

Pollutants covered by TOVALOP are persistent hydrocarbon oils. Coverage extends to pollution damage caused by oil discharges as well as to preventive measures, subsequent losses arising out of such measures, and costs in removing a threat without any discharge occurring[103]. The agreement also covers tankers sailing in ballast. This is not presently covered under the CLC[104], although the 1992 CLC Protocol, not yet in force, will also cover tankers in ballast. The TOVALOP Standing Agreement covers only clean-up costs[105]. However, the TOVALOP Supplement covers economic loss such as loss of income of fishers or other locals along the NSR.

Liability limits under the original TOVALOP are USD $160 per GRT (Gross Registered Ton) of the ship's total tonnage, up to a total of USD $16.8M per polluting incident[106]. TOVALOP members are required to maintain financial liability coverage, in the form of insurance or security; this is usually done through the shipowner's P&I insurance. The defences are largely the same as under CLC, *infra*, with one notable difference. Unlike the CLC, the shipowner has an extended right to limit liability, which implies that under TOVALOP the shipowner can limit liability even where personal fault or privity were the cause of the pollution. Wilful misconduct would, however, not be covered[107]. The 1987 TOVALOP Supplement provides additional coverage as follows: in respect of a tanker of 5,000 gross tons or less an amount not exceeding 3 million SDRs and for a tanker over 5,000 gross tons, 3 million SDRs plus an additional 420 SDRs for each gross ton in excess of 5,000 gross tons, up to a maximum of 59.7 million SDRs (approximately USD $70M).

CRISTAL acts as a supplement to TOVALOP, and was developed by the principal oil companies who own tanker-transported oil. It is administered by the CRISTAL administration. Because it is the creature of oil companies and not tanker companies, amounts paid out under CRISTAL are of no concern to the P&I Clubs[108]. Like the Fund Convention with the CLC, *infra*, CRISTAL operates to create a two-tier system with TOVALOP. As with the interaction between TOVALOP and the CLC, CRISTAL does not apply where the Fund Convention does. Pollutants covered are the same as under the Fund Convention, i.e. persistent hydrocarbon mineral oils carried as cargo, or as bunkers as long as the ship is carrying oil in bulk as cargo.

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103 Brubaker (Pollution), at 159; Hill, Robertson, Hazelwood, at 78.

104 Hill, Robertson, Hazelwood, at 78.

105 Spears, at 167.

106 TOVALOP, Article VII.

107 As observed in Brubaker (Pollution) at 159, and accompanying note 112; Hill, Robertson, Hazelwood, at 78.

108 Hill, Robertson, Hazelwood, at 78.

To trigger compensation eligibility under CRISTAL, the oil must have been carried in a ship covered by TOVALOP, and the oil must be owned by a party to CRISTAL[109].

Total CRISTAL compensation available, inclusive of that paid by the tanker owner, is dependent on the size of the tanker involved in the pollution incident: up to 5,000 gross tons, an amount of 32 million SDRs; for a tanker over 5,000 gross tons, 32 million SDRs plus an additional 652 SDRs for each gross ton in excess of 5,000 gross tons, up to a maximum of 120 million SDRs (approximately USD $135M)[110]. CRISTAL also provides reimbursement of reasonable costs incurred by a tanker owner or any other person for threat removal measures, preventive measures or through having sustained pollution damage[111].

7.5.2.3 CLC and Fund Convention

The *International Convention on Civil Liability for Oil Pollution Damage*[112] is very pertinent to a discussion of the NSR, in light of the potential for catastrophic damage to the Arctic environment, and of the resulting liability for shipowners. Basically, the CLC is an inter-governmental agreement, spearheaded by the International Maritime Organisation (IMO). It is a vast insurance set-up to which flag ship States subscribe, usually through their P&I schemes. The CLC covers *oil* pollution from any escape or discharge from a "seagoing vessel (or) any seaborne craft" carrying bulk oil in cargo, within the territory including the territorial waters of a Contracting State[113]. For the CLC to apply in a given situation, the cargo must be: i) *persistent* oil, and ii) transported *in bulk.*

"Oil" encompasses "any persistent oil such as crude oil, fuel oil, heavy diesel oil, lubricating oil and whale oil[114], whether carried on board ship as cargo or in the bunkers of such a ship"[115]. Pollution damage is defined as "loss or damage caused outside the ship carrying oil

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109 CRISTAL Clause V. See also Gold (Pollution Handbook), at 117-118.

110 CRISTAL Clause IV(5). See also Gold (Pollution Handbook), at 118; Brubaker (Pollution), at 160; Hill Robertson, Hazelwood, at 78.

111 CRISTAL Clause IV(A), (B). See also Gold (Pollution Handbook), at 116.

112 *International Convention on Civil Liability for Oil Pollution Damage* (CLC) (1969) 9 Int. Leg. Mats. 45 (CLC). Entered into force June 19, 1975.

113 *Ibid.* Definitions are found in Articles I and II.

114 Whale oil is removed by the 1984 Civil Liability Protocol, not yet in force: *Protocol of 1984 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969* (1984) 15 J. Mar. L. & Com. 613.

115 CLC Article I(5). The definitions of "persistent" oil in conventions such as these are problematic in that they are not sufficiently specific with respect to the dissipative properties of the oil in question. A guideline has apparently been issued to deal with the problem, but it will have a weaker influence on judicial interpretation than, say, adoption in a convention.

by contamination resulting from the escape or discharge of oil from the ship ... and includes the costs of preventive measures and further loss or damage caused by preventive measures"[116]. Worthy of note is that the shipowner need not be a national of a Contracting State, nor need the ship be a flag ship of a Contracting State.

The requirement that the oil be transported in bulk means that general cargo ships, bulk carriers other than oil carriers and tankers on ballast voyages are excluded from coverage under the CLC[117].

The owner of a ship registered with a State which is a Party to the CLC and carrying over 2000 tons oil cargo in bulk must carry insurance or some other form of security covering the maximum liability under the Convention[118]. A certificate must be issued by the flag State authorities attesting as to the existence of said insurance or financial security must carried on board ship. States Parties must ensure that ships lacking the certificate are not allowed to trade, and all ships in their ports, wherever registered, must be insured or secured in accordance with these requirements[119].

The Convention's principal feature is that the shipowner is held *strictly liable*, subject to a few exceptions[120], burden of proof of which is on the shipowner. Liability is set in Special Drawing Rights, and currently stands at 133 SDRs per GRT, with a ceiling of 14 million SDRs (approximately USD $16.8M), whichever is lesser[121]. If fault or privity is established, the right to limit liability is lost[122].

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116 CLC Article I(6).

117 Gold (Pollution Handbook), at 114-115. The 1992 Protocols to the CLC and Fund Conventions do bring them in line with TOVALOP.

118 CLC Article VII.

119 *Ibid.*

120 These include war, hostilities and the like; act or omission of either a third party (wholly) or the injured party (wholly or partially) done with intent to cause damage; negligence or wrongful act wholly caused by government or other competent authority responsible for the maintenance of lights or other navigational aids; exceptional, inevitable and irresistible natural phenomena. See Article III. It is *not* likely that extreme, harsh Arctic conditions would fall within these exceptions, due to the lack of unusualness and inevitability.

121 Article V. The 1976 Protocol changed the unit of account from the poincaré franc, adopted in the original CLC, to the Special Drawing Right: *Protocol to the International Civil Convention on Liability for Oil Pollution Damage 1969* (1976) 16 Int. Leg. Mats. 617.

122 *Ibid.*, Article V(2).

The *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971)*[123] was drafted with the goal of stepping in with additional compensation where the CLC left off. The Fund Convention provides strict liability compensation for oil pollution where the pollution damage exceeds the shipowner's liability under the CLC[124], where the shipowner cannot meet its liability under the CLC[125] or where no liability arises under the CLC[126]. It gives rise to a two-tiered system: States Parties to the Fund Convention are, by definition, Parties to the CLC[127]. The pollutants covered are persistent hydrocarbon mineral oils carried as cargo, or as bunkers as long as the ship is carrying oil in bulk as cargo[128]. "Pollution damage" is the same as under the CLC[129].

The Fund is administered by the International Oil Pollution Compensation Fund (IOPCF) and provides a régime for compensating oil pollution victims when the CLC is inadequate. The compensation payable by the Fund for any incident is limited to 450 million gold francs (60 million SDRs - approximately USD $84M). A 1976 Fund Protocol converting the gold franc standard to SDRs is not yet in force, although the IOPCF uses SDRs as a damage measure already. The IOPCF also indemnifies the owner of a ship registered in or flying the flag of a Fund state for a part of the total liability amount under the CLC. The maximum indemnity payable to the shipowner is 33 SDRs (USD $46) for each ton for ships under 83,333 tons. For ships above that tonnage, the indemnification payable for each ton of the vessel's tonnage increases until a maximum of 5,667,000 SDRs (approximately USD $7.9M) is reached.

Attempts have been made to revise liability limits under the CLC and Fund Convention still further upwards. The 1984 Protocols to the CLC and Fund Conventions[130], under which liability would have been increased to 59.7 million SDRs (approximately USD $84M) under the CLC alone, and to an aggregate figure of 135 million SDRs, around USD $194M, did not receive sufficient ratification to enter into force.

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123 *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971)* (Fund Convention) (1971) 11 Int. Leg. Mats. 284. Entered into force October 16, 1978.

124 Fund Convention Article IV(1)(c).

125 Fund Convention Article IV(1)(b).

126 CLC Article III, Fund Convention Article IV(1)(a).

127 *Ibid.*, Article V.

128 Fund, Article I(2). The same gaps as pointed as pointed out by Professor Gold (Pollution Handbook), would therefore continue to exist under the Fund Convention.

129 Fund, Article I(2).

130 *Protocol of 1984 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969*, IMO Doc. LEG/CONF 6/66; *Protocol of 1984 to Amend the International Convention on the Establishment of an International Fund for Oil Pollution Damage 1971*, IMO Doc. LEG/CONF 6/67.

A fresh initiative has been launched in the form of the 1992 Protocols to the CLC and Fund Conventions[131]. The 1992 Protocols, once they receive sufficient ratification, would create an entirely new regime: the CLC, read together with the 1992 Liability Protocol, would become the *International Convention on Civil Liability for Oil Pollution Damage 1992*; the Fund Convention, read together with the 1992 Fund Protocol, would become the *International Convention on the Establishment of an International Fund for Oil Pollution Damage, 1992*. Liability limits would be increased to levels which would provide full compensation for all foreseeable pollution incidents. In addition, the definition of "pollution damage" has been greatly expanded in the Protocols, to the point where cargo vessels, bulk carriers and other types of vessels currently excluded would come within the ambit of the provisions. Damage to the environment *per se* is also covered, although compensation is limited to what is "reasonable" and then only where measures are actually undertaken or are to be undertaken. At the time of writing, these Protocols had not entered into force.

Russia is a participant in both the CLC and Fund Conventions[132], as are the UK, Japan, Norway[133], and now Canada[134], so coverage would be like in most Western and southern contexts. The difference in the NSR lies in the increased chance of a disaster occurring, at which point it is up to the insurer to set out requirements to be met before the risk is underwritten, and to charge premiums commensurate with the risk. In light of incidents such as the *Amoco Cadiz*[135] and, more recently, the *Exxon Valdez*[136], underwriters are understandably nervous. The national provisions dealing with the requirement to carry a CLC certificate on board have been discussed *supra*.

A second difference lies in what the parties perceive as compensable under the conventions. The *Antonio Gramsci* incident occurred only two weeks after the Fund Convention entered into force in February 1979. The Soviet tanker grounded off Ventspills in the [then] Soviet Union,

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131 *Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage 1969* (1992 Liability Protocol), IMO Doc. LEG/CONF.9/15; and *Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971* (1992 Fund Protocol), IMO Doc LEG/CONF.9/16.

132 Soyuzmorniiprojekt.

133 Brækhus, Rein, Kingsley, at 206-207.

134 Canada acceded to the CLC in 1987; the provisions of the CLC find expression in the amended Part XVI of the CSA, which entered into force in 1989.

135 Damages claimed from the *Amoco Cadiz* incident totalled approximately USD $2 billion. See *In re Amoco Transport Co.* [1979] A.M.C. 1017 (N.D. III); *In Re Oil Spill by the Amoco Cadiz off the Coast of France on 16 March 1978*, 491 F. Supp. 161, 190 (1979 N.D. III), 699 F. 2d 909 (1983, 7 Cir); Amoco Cadiz Lim. Procs. [1983] A.M.C. 925, 938, 945, 947 (1982, N.D. III), 659 F. 2d 789 (1981, 7 Cir); 676 F. 2d 698 (1982, 7 Cir); [1984] 2 Lloyd's Rep. 304; cited in Spears, at 157 and 190, note 7.

136 Claims from the *Exxon Valdez* are still being pursued, and have already topped the USD $1 billion mark, not counting the $2.5 billion spent by Exxon on clean-up. See Olav Carlsen, Tromsø Conference.

spilling 5,500 tons of crude oil which caused heavy pollution of the Latvian coast[137], the Finnish Åland Islands and the Swedish Archipelago near Stockholm. The Soviet authorities lodged a rather large claim in respect of ecological damage, and the Fund was obliged to consider the difficult issue of compensability of environmental damage in its very first case. Without going into a detailed description of the calculation methods proposed, it may now be stated that the Fund will not allow claims based on theoretical mathematical models, regardless of any approval or homologation by a Soviet or Russian, or indeed any other, court. It will stick to quantifiable losses which can be positively attributed to a particular incident[138]. As regards the substantive issue of whether environmental damage is compensable under the Fund, the answer is affirmative, albeit only insofar as it has an effect on economic interests[139]. It may be noted that the case involved also a competing claim by the Swedish government, and was ultimately negotiated, to the severe detriment of the Swedish claim. It is hard to predict how the Fund would settle claims in the future. Geographically, there would be less chance of competing claims arising from incidents in the NSR. Conceivably Norway or Finland might have competing claims in the event of a serious incident, but otherwise the effects would be on the Russian coast alone. Just the same, the issue would arise of what would be compensated.

137 While this is not in the NSR, the applicable legal system is the same as that now governing the NSR.

138 See generally, the discussion in E.D. Brown, at J.6; also Ganten.

139 Ganten, at 10. Not everyone seems to think this is laudable, as pointed out towards the end of the article.

7.5.2.4 Limitation of Liability - the Case of Canada

Turning briefly to the situation in Canada, the purpose of the present section is to give an idea of how limitation of liability is handled in one country with respect to its Arctic. Unlike Canada, Russia does not have a "north of 60°N/south of 60°N" divide in its law-making practice, so it is a fairly straightforward CLC and Fund situation in the latter country.

The main source of limitation of liability in relation to oil pollution in Canada's Arctic comes from the CLC and the CSA, transposed to the AWPPA. TOVALOP and CRISTAL apply where CLC and Fund do not, in waters both south and north of 60°N. Following lengthy reflection, Canada ratified the CLC and Fund Conventions, which now find expression in Part XVI of the CSA. The provisions of the CLC apply to all Convention ships, everywhere in Canada, including the Arctic:

> "675. (2) For Convention ships, this Part applies, subject to subsection (3), in respect of actual or anticipated oil pollution damage
> (a) in any place in Canada,
> (b) in Canadian waters, and
> (c) on the territory or in the territorial sea of a state other than Canada that is a party to the Civil Liability Convention,
> irrespective of the location of the actual or expected discharge of the oil and irrespective of the location where any preventive measures are taken."

In the event of inconsistency between the CSA and the AWPPA, the CLC-related provisions contained in the CSA are to prevail:

> "676. Where, in relation to a [Civil Liability] Convention ship, there is an inconsistency between the provisions of this Part and the *Arctic Waters Pollution Prevention Act* or any regulations made thereunder, the provisions of this Part prevail to the extent of the inconsistency."

The problem is, the provisions of Part XVI expressly exempt *non*-Convention ships in waters north of 60°N, although not in waters south of 60°N[140]. This is a major lacuna. Legislative steps are under way to eliminate this dichotomy[141]. Express mirror provisions are also on the way in the AWPPA to make it clear that the CLC applies systematically in Canada's Arctic:

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140 CSA s. 675(1).

141 Bill C-121 received royal assent on June 24, 1993 and was proclaimed into force on . S. 13 amends s. 675(1) to establish that the CLC will also apply to non-Convention ships in waters north of 60°N.

"**2.1** Where there is an inconsistency between the provisions of this Act, or any regulation made under this Act, and Part XVI of the *Canada Shipping Act*, the provisions of Part XVI of the *Canada Shipping Act* prevail to the extent of the inconsistency."[148]

One implication of the foregoing is that the limitations on liability contained in regulations adopted pursuant to the AWPPA, including the AWPPR, no longer apply, at least as regards Convention ships. The standardisation effort continues.

Noteworthy for the present purposes is that Canada signed on to the CLC and Fund after a number of years of deliberation. For a long time, Canada believed the international limits to be too low in relation to actual costs, and therefore refused to become a party to the Conventions. As was mentioned earlier, the absolute liability provisions of the AWPPR were proving to be a disincentive to traffic in the Arctic, and Canada found as a practical matter that it was best to fall in line with accepted international standards. But it retained a means of ensuring extra funds to compensate parties harmed by oil pollution, and to cover unexpectedly high clean-up costs.

The *Ship-source Pollution Fund (SOPF)*, formerly the *Maritime Pollution Claims Fund*, was established pursuant to the CSA at a time when Canada was not a party to CLC or Fund. It was financed by way of a 15 cent-per-tonne levy on each tonne of oil imported into Canada, but discontinued when reserves became substantial. The retained fund, plus compounding interest, are now held in a special account administered by the Administrator of the SOPF. Canada has since ratified these two conventions, but has nonetheless opted to retain an independent, supplementary fund to cover: amounts in excess of CLC and Fund claims, up to $100 million per incident; meeting claims which might not be covered by the International Fund, which covers only laden tankers; meeting claims against a shipowner who is financially incapable of paying the limited liability portion of the damages; paying Canada's contribution to the International Fund; and meeting claims resulting from oil pollution damage suffered outside the territorial sea, but within Canada's fishing zones. SOPF has its limits in the Arctic: it does not yet cover non-Convention ships (as it does south of 60°N)[149], and would therefore not encompass tankers sailing in ballast, either[150]. It may be noted that even without Bill C-121, claims to SOPF for lost fishing

148 Bill C-121, s. 14, relating to amendments to the AWPPA. S. 14 of the same bill removes the words "in relation to a Convention ship" from the above CSA s. 676.

149 CSA s. 709 makes SOPF moneys available for liability under s. 677(1) which is, pursuant to s. 675(1), not applicable to non-Convention ships north of 60°N. As discussed above, steps are being taken to eliminate this problem.

150 A discussion of SOPF is found in Tanker Safety Panel.

income, etc., due to oil pollution, are admissible even when the pollution is caused by a non-Convention ship in the Arctic[151].

Looking at Canada's example then, we see that Canada has not really had much choice except to adapt its Arctic legislation as closely as possible to international standards. While environmental protection and full cover of clean-up costs are of crucial importance, it is to be expected that Russia might encounter the same types of problems were it to be overly enthusiastic in regulating its NSR. If Russia wished to ensure extra funding for eventual clean-up operations, it may have to employ a method like Canada's SOPF.

7.6 Exceptions and Limitations on Cover

As with scope of cover above, only the most pertinent aspects of the topic are dealt with here. It was believed the carriage of live animals, illegality of the adventure, etc., did not present any special interest in regard to the NSR.

7.6.1 Nuclear Perils

As earlier, the problem must be seen from a dual perspective: that relating to a nuclear-powered ice-breaker and that relating to a vessel being led by a nuclear-powered ice-breaker. Hull and P&I rules have traditionally excluded or severely limited any risk relating even remotely to nuclear risk, nuclear-powered vessels, nuclear cargo, and so on. An example is Gard 1993 Rule 73:

"*Rule 73.* **Nuclear perils**
The Association shall not cover any liabilities, losses, costs or expenses directly or indirectly caused by or contributed to by or arising from:

a ionising radiations from or contamination by radioactivity from *any nuclear fuel* or from any nuclear waste or from the combustion of nuclear fuel; or

b the radioactive, toxic, explosive or other hazardous or contaminating properties of any nuclear installation, reactor or other nuclear assembly or nuclear component thereof; or

c any weapon of war employing atomic or nuclear fission and/or fusion or other like reaction or radioactive force or matter,

151 CSA s. 712. The CLC does not apply to fishing zones, and CSA s. 709 retained this exclusion. With respect to SOPF, s. 712 seems to contemplate compensation where it cannot be obtained elsewhere. It also gives the Fund Administrator a fair amount of discretion in decisions on compensation.

provided that this Rule 73 does not exclude liabilities, losses, costs and expenses arising out of or in consequence of the emission of ionising radiations from or the other toxic, explosive or hazardous properties of the material listed below, when carried as cargo on the Ship:

i isotopes prepared for use for industrial, commercial, agricultural, medical or scientific purposes;

ii natural or depleted uranium;

iii other radioactive cargo, the carriage of which has been approved by the Association.

(emphasis added)[152].

The rules regarding nuclear exclusions were primarily drafted contemplating the carriage of nuclear cargoes. Even so, a ship *carrying* nuclear material is only covered in a very few situations, and this provision will no doubt be interpreted restrictively. More of import to the present discussion is the fact that the above paragraph can be construed as excluding a ship following a nuclear-powered ice-breaker, as it refers to "*any* nuclear fuel". In the latter case, liability would not primarily fall on the guided ship anyway, as the harm would have come from the ice-breaker. This includes cargo liability, for which the carrier would be expected to insert an appropriate exoneration clause in the contract of carriage. We come back to the question of whether insurance cover, in this instance P&I, can be obtained for a nuclear-powered ice-breaker.

It is obvious from the above clause, a typical enough provision, that P&I cover in relation to the NSR will have to be the subject of new, creative negotiation and drafting. This is so not only in respect of the nuclear ice-breakers themselves, but in relation to the vessels which will be following them. Owners of the cargo-carrying vessels will have to be vigilant in drafting exoneration clauses, to ensure that they are not left with nuclear-related liability. Ice-breaker owners will have to draw on each other and on new ideas to secure cover. Here again, the idea of Russia setting up State insurance or assisting the shipping companies in setting up a form of self-insurance, may be worth considering.

Clubs have shown themselves to be remarkably flexible in extending cover to new situations, and a number of specialist clubs have appeared on the market in response to specific needs: defence associations; strike clubs; war risks clubs; through transport clubs and so on. Obtaining P&I cover for a particular risk like the operation of nuclear-powered ice-breakers no doubt qualifies for specialist cover, so much so that this type of risk would probably not be considered "mutual" and would have to be placed in its own category. A possibility in this connection might be for the various shipping companies involved in NSR navigation to approach a P&I club together, with a view to setting up a category for the benefit of those companies, eventually

152 Gard 1993 Rule 73. On the hull side, Cefor Form 235A, §1, cited above.

other, non-Russian shipping companies with nuclear-powered vessels, if that became an option. This could be combined with the Russian State fund mentioned above, or cover could be spread through the International Group. A shipping company and club could, by agreement, set a limit on the liability to which the club would be willing to expose itself, with the rest perhaps being covered by the Russian State fund. The possibilities are many. An advantage in the P&I sphere as compared with the hull market is that in P&I, the club and the member are "on the same side", and thus a solution for one works necessarily to the advantage of the other.

7.6.2 War Risks

Clubs will generally exclude cover in respect of liabilities, costs and expenses arising from any of the risks enumerated in the Lloyd's Free of Capture and Seizure Clause or some equivalent thereto[153]. The only exception relates to the payment of fines where a vessel is seized, arrested or made subject to some similar measure[154].

It is possible to protect oneself against the hazards of war risks, by negotiating separate cover[155]. Cover is for the basic risks excluded from the hull policy, and can encompass items excluded by "war exclusion", "strikes exclusion" and "malicious acts exclusion".

The "basic" cover in this category usually includes liability arising from detention and detainment:

1) to avoid loss or damage arising from a war risk;
2) to comply with orders, directions or recommendations by the directors or by any legitimate government department or even a military authority, be it in the country of ownership, registry or simply current location of the ship;
3) by persons engaged in war, civil war or rebellion;
4) by persons acting from a political motive[156].

As can be seen, the cover can be read widely so as include a situation where there may not actually be a declared war, but hostilities and damage-causing acts going on nonetheless. Acts of terrorism are still considered on the borderline, but the category is under constant development.

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153 See, for example, Gard 1993 Rule 58, for an example of the Norwegian approach to this. Brækhus, Rein, Kingsley, at 301 *et seq.*, gives a more detailed description of the exclusion.

154 Hazelwood, at 182.

155 See generally, Hill, Robertson, Hazelwood, at 157 *et seq.* The International Group has offered this type of cover as from February 20, 1987 policy year.

156 Hill, Robertson, Hazelwood, at 159-160.

Risks covered include such categories as loss of life, personal injury, illness, expenses consequent upon shipwreck, expenses in respect of captured or detained crew, collision, damage to fixed and floating objects, wreck removal and cargo claims[157].

One can hope that this category will not become relevant for the NSR. However, some parties may believe it prudent to take out extra cover in the event of civil unrest or other instability in Russia. As no mention of this extra cover was found in the materials canvassed, it would appear necessary to approach the London to obtain it. The reader is also referred to the discussion of war risks, *supra*.

7.6.3 Specialist Operations

This category includes claims relating to such activities as drilling, boring, core sampling, and oil or gas production[158]. Some activity of this type is going on in the Barents Sea Region and in the Kara Sea. Special cover is required, and would be a point of negotiation between development interests and the clubs, but it is of limited interest for the present study on shipping.

7.7 Some Conclusions Regarding P&I Insurance

Russian authorities already seem somewhat familiar with Western P&I coverage. They seem to be aware of the need to develop their own regulation in tandem with international agreements, such as the CLC. To that end, new limits have been proposed, in line with the 1984 CLC Protocol. Mariners should also be aware that stronger implementational measures are under consideration, including a warrant similar in form to the existing certificates; a cash deposit, which could be recovered if no incident occurred; and seizure of certain property. Mariners and P&I clubs would be advised to keep periodically abreast of changes in Russian legislation, as a club may well be called in to cover a new type of liability.

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157 Hill, Robertson, Hazelwood, at 160.

158 For the English rule, see Hazelwood, at 182. For the Norwegian rule, see, for example, Gard 1993 Rule 59.

As regards premiums, it is submitted that premiums would not necessarily have to be higher immediately, although they would follow the assured's track record afterwards. *This* could lead to higher premiums, although in proportion only to the individual assured's performance and burden on the pool of funds.

For Western P&I insurers, it comes down to: is this a risk which is or can be considered "normal" for most shipowners, or is it a special risk with which the collectivity should not be burdened? If the decision is made to cover, it will be made on conditions deemed to bring the risk within the range of "acceptable" for the club.

8.0 Conclusions and Recommendations

As can be gleaned from the preceding pages, marine insurance is a world unto itself, with its own rules and ways. An attempt has been made to clarify it somewhat to the non-insurance expert. The first broad conclusion to be drawn, then, is that marine insurance for the Northern Sea Route is possible.

The legal differences in marine insurance for the Northern Sea Route relate largely to what will be interpreted as a warranty and what as a lesser term of the insurance contract. As regards English and Canadian law, these can only be tested out through case-law, which as a practical matter takes some time. Norwegian rules can operate somewhat more freely of case-law, but as with any system, they must be tried out in practice before one sees some of the particularities which can arise. It is submitted that developments in Canada be followed as much as possible, as that country offers the combination of Common Law and Arctic experience. One should keep an eye out for legislative changes in Russia, however, which may affect the contract when the insured vessel and cargo enter Russian waters.

Hull insurance faces perhaps the most different situation, in that factors such as ice class, ice-competent master, crew (including ice pilots, crew with ice experience and the like), equipment on board, all take on added, crucial importance. Clauses must be gone over with a fine-tooth comb, both by insurers and assureds. In the same manner that many of the clauses we find in insurance contracts today grew out of specific, particular situations, and have come to have their own unique legal meaning and identity, so too will there probably emerge "ice clauses" or "Arctic-style clauses" drafted to deal with the unique situation in the North.

Since the fate of the cargo is inextricably tied to the fate of the ship, cargo owners and other parties insuring same will most likely face higher premiums. Additionally, there may be many instances where the cargo alone suffers damage, for example, due to the extreme temperatures, while the ship remains unharmed. This will lead to both higher premiums and more stringent warranty requirements on the part of insurers.

P&I in one way faces a somewhat calmer time of it, in that principles will be less ruffled. Conversely, exposure stands to run high in some instances, in light of the distances and added expense in getting, for example, oil cleaning equipment to the scene of a spill. Also, the fragility of the Arctic environment and slowness to self-clean means that environmental damage stands to be greater, thereby driving up P&I amounts.

There is a lot of groundwork to be done before marine insurance for the Northern Sea Route can assume anything like a usual business magnitude. Traditional legal categories need to be expanded, and in some cases entirely new ones created to deal with the unique situations that

will arise. Additionally, the implementation and post-implementation phases will call for constant modification and refining.

The following is a collection of conclusions and recommendations for use in the NSR. They are not listed in order of importance; indeed, the author believed them all to be of some import. Problems at various levels are addressed, including legislation, policy and practicalities. The suggestions are intended as subject-matter for discussion by interested parties.

8.1 General, Legislative and Administrative

Recommendation 1: The NSR should be divided into zones along the lines of what Canada has done, based on class of ship and time of year.

The zones in Canada's Arctic have been mapped out based on extensive research into ice conditions, weather patterns, etc. A table has been set up, indicating "allowed" zones according to time of year and class of vessel, cf. the discussion earlier on the Canadian market. Ideally, some form of Russian legislation or regulation could be enacted or adopted to implement this idea. At the moment, the NSR has been divided into zones, but these would appear to be more for administrative purposes, and not based on scientific - much less insurance - considerations. Even in the absence of such legislation, zones could be drawn up jointly by parties such as CNIIMF or Murmansk Shipping Company, insurers and scientists specialising in Arctic conditions, for example, at the Norwegian Polar Institute. The zones would be based on information which the Russian party almost certainly has or to which it has access.

The benefit of this would be lower premiums for voyages covering only part of the NSR, e.g., southern point through the Barents Sea, and in as far as Dikson. It would also allow for more "nuanced" premium-setting, based on a more accurate assessment of the risks. In Canada the table of dates, zones and ship classes is used by insurers in drawing up policies and rates. The same type of table should be elaborated for the NSR, for easy reference by insurers. Note that not less than a Det norske Veritas Class 1A vessel (or equivalent) should be taken through the NSR in any event. Canada is currently reviewing its approach to regulation of its Arctic waters, notably with a view to making the system of zones and ship classes more adapted to actual ice conditions at the time of voyage. It may therefore be advantageous for the two countries to collaborate in drawing up similar types of rules.

Recommendation 2: *Any and all* legislation and regulation affecting foreign vessels travelling through Russian waters must be made available at least *in English*, and Russian players, especially ice pilots and others who will be working on and around ship with foreigners, must be or become fluent in English.

With regard to legislation and regulation, it should also be made available in other widely-used languages such as German, French, Spanish and Japanese, if possible. Mariners need to know which rules are being applied to them. Up-to-date information should be a top priority. This could be achieved through a binder service to facilitate updating (if this is not the planned format for the Guide to Navigation). This service could include current information on ice conditions, ice-breaker deployment, upcoming closures of parts of the Route, and research and development activities.

The question of language competency of Russians who will be working with people from the West has been raised by both hull and P&I insurers. Good communication can be a challenge at the best of times; in an emergency it is crucial.

Recommendation 3: Russian authorities involved in the operations and decision-making with respect to the NSR must take marine insurance considerations into account in their contingency planning and concrete actions.

Short-term gains for the Administration can spell long-term costs for shipowning interests and the insurance industry, with the ensuing effect on the new business relationship between East and West. As an example, if a vessel becomes icebound towards the end of a shipping season and the decision is made by the NSR Administration to leave it in the Route until the following spring, this may result in a pay-out under a hull policy as a constructive total loss, or under a loss-of-use policy. This in turn would entail higher premiums for the shipowner and a cost to the industry generally. On the P&I side, when clean-ups are made, care must be taken to do the job properly while not incurring disproportionately high costs.

Recommendation 4: The authorities administering the NSR must take environmental considerations into account at all stages of administering the NSR: at the developmental planning stage; at the contingency planning stage; at the operations stage; at the disaster stage, and especially when making decisions about clean-up, etc.

In addition to the obvious need to protect the environment, there is the resulting impact of a badly handled disaster on insurance and other costs. International agreements such as the 1989 Salvage Convention have recognised this and have moved towards making the environment a higher priority in their approach. Consider, for example, that the first break with the time-honoured salvage principle of "no-cure, no-pay", has arisen in connection with environmental protection measures. Shipping interests, cargo owners, hull underwriters, P&I clubs, and many others have realised the importance of an integral approach which incorporates concern for the environment. It is only logical that NSR authorities follow suit.

Shipowners may wish to spearhead their own initiative, by incorporating into their annual cost estimates that of posting a bond to fund clean-up of any environmental damage caused by their vessels. This was contemplated in Canada by the developers of the Arctic Pilot Project, to the tune of CAN $1.372M per year.

Recommendation 5: Very clear provision must be made, preferably by way of a standard contract, that the NSR Administration is not liable for damage or loss sustained by ships or cargo travelling through the NSR, in the absence of fault on the part of the Administration or someone acting on its behalf.

As regards the legal relationship between the ship and the Russian authorities, to wit, the Northern Sea Route Administration, with respect to liability, it should be noted by way of comparison that ships going through the Panama and Suez Canals do so at their own risk; even where canal officials are at fault, they are not liable for anything. At the same time, a State cannot simply "opt out" of all forms of liability. At the very least, authorities must provide reliable charts, navaids, pilot licensing systems and so on. This would be the minimum that would have to be met for the NSR.

Section 11 of the *Regulations for Navigation on the Seaways of the Northern Sea Route* state that neither the NSR Administration nor the Marine Operations Headquarters are liable for any damage to a vessel caused by leading in ice conditions unless it is proved they bear "guilt" for the damage inflicted. Whether this corresponds to the Western legal notion of "fault" is not clear. It is submitted in any event that this is insufficient self-protection on the part of the Russian authorities. It is suggested that a standard contract, perhaps based on the ones used for the

aforementioned canals, be drafted and signed with each vessel proposing to navigate in the NSR. An individual contract is much stronger legally than a general provision.

With respect to the use of nuclear-powered ice-breakers, the practical problem arises that if the Russian authorities exclude *all* liability towards ships and cargo, even where there is fault, people may not wish to use the Route. Normally, when a party is at fault, that party must compensate. There is also a general principle that if a party wishes to engage in a hazardous activity, that party must be ready to compensate for harm caused by the activity. On the face of it then, nuclear-related damage caused to the led vessel would be covered by the ice-breaker's P&I club. An accident need not be caused by someone on board the ice-breaker, however. Negligence could be committed by someone on board the led vessel, for example, in following too closely behind the ice-breaker. The cargo-carrying vessel would normally *not* be expected to bear its own losses, in the absence of fault on its own part. A choice on loss distribution will have to be made on this issue.

Recommendation 6: The powers and policies of inspectors of foreign vessels, acting pursuant to the Regulations for Navigation on the Northern Sea Route, should be clearly defined, so that mariners can know what to expect. This should be included in the promised *Guide to Navigation in the Northern Sea Route.*

Such powers must of course be in line with international rules governing these matters, so that foreign ships are not faced with unexpected national rules when they enter the NSR.

Recommendation 7: Russian players, be they commercial shippers or government authorities, should make statistics on previous shipping and use of the NSR available to players on the insurance markets, including underwriters, brokers and hull committees.

There may be a painful initiation phase, when premiums are set quite high. It would be, after all, an entirely new market and insurers are cautious creatures by nature. Then again, the statistics could have precisely the opposite effect and drive initial premiums down, were insurers to discover that damages and accidents were not as bad as feared. Complete, honest and accessible information can only lead to better business for all parties involved. Mutual trust is a time-honoured cornerstone of the insurer-assured relationship. Even if the release of previous statistics did drive up premiums during the initial phase, it is quite conceivable, and even likely, that rates would come down after a period. Russian vessels and crews already have a reputation

for excellence in Western perception. The odds are that a good track record of operations would cause Western insurers to revise their rates downwards within a few years.

8.2 Ship Classification and Safety

Recommendation 8: Every effort should be made through international fora to harmonise standards on ship classification and clear up ambiguities and redundancies in current standards.

There is a need for international harmonisation of ship classification. The existing situation is a confusing array of categories, and it is difficult for a non-engineer, e.g., ship captain, functionary or other pertinent party, to decipher all the information. Actors such as The Northern Forum have called for the gamut to be reduced to five internationally recognised classifications, with a view to serving hull, cargo and liability insurance purposes. While it is acknowledged that this type of measure falls outside the exclusive competence of the Russian authorities, the proposal is put forth for the purpose of raising the issue, perhaps for eventual consideration by the Russian Ship Registry.

A meeting of ship classification experts in Helsinki in February 1993 failed to produce consensus on technical matters of substance. Attended by representatives from such organisations as Det norske Veritas, Canadian Coast Guard Ship Safety Branch, the Russian Ship Registry, Lloyd's Registry of Shipping and many others, the meeting, like many before it, blocked on matters of technical content.

Until such time as there is a single set of ship classifications, it is recommended that the competent Russian authorities accept the equivalencies suggested by tables such as the one included in this report, which are considered reliable by most sources. This would avoid costly duplication of inspection and certificate issuance. There would appear to be enough discretion left to NSR officials to turn back vessels they do not believe are safe for the voyage through the Route. Explicit authority to this effect could be given in legislation to the Russian Ship Registry if it was believed necessary to do so.

Recommendation 9: A vessel traffic management system (VTM) should be implemented by the NSR Administration, on a compulsory basis.

Such a system would work like an air traffic control system, with all vessels being monitored on radar and issued a traffic clearance before being allowed to navigate through the NSR. Obviously, this would require quite sophisticated communications systems. Russia seems determined to control the NSR quite closely, however. Canada has the NORDREG system which is, at the moment, voluntary, but there have been calls for it to become mandatory, *inter alia* from the Beaufort Sea Environmental Assessment and Review Panel. Underwriters in both Canada and the UK have made it mandatory for all vessels insured in their respective markets to participate in the system, as part of the terms of the insurance contract, thus achieving *de facto* mandatory compliance with the system. While the Regulations for navigation on the NSR do provide for detailed control of traffic, it is submitted that a more technically advanced system would be needed to handle larger flows of traffic and ensure uniformity of monitoring throughout the Route. Additionally, such a system would preferably comply with rules laid down by organisations such as IMO, so as to ensure international uniformity. Russian authorities may wish to establish contact with Coast Guard Northern in Ottawa to find out more about the NORDREG system.

8.3 Hull and Machinery

Recommendation 10: Insurance policies must be developed which set out specifically which ice damage and other types of damage unique to the Arctic are covered. "Arctic clauses" must be developed to cover adequately and specifically the kinds of situations that will arise in the NSR.

English legislation does not deal with it specifically. Nor do either the Institute Cargo Clauses or the Institute Voyage Clauses - Hulls, which gets no more specific than to include "perils of the seas" in its cover. A review of the related case-law and literature does not give any indication that this general phraseology would be extended to ice. Norwegian rules deal with some types but do not address all ice situations that would arise in the NSR, and specifically exclude certain types of ice damage. Canadian rules mirror English rules, although they have developed somewhat in the direction of insuring Arctic risks. In particular, Canadian insurers seem willing to consider ice risk as falling within "perils of the sea".

It is common for a policy to contain a clause forbidding navigation in ice-infested waters, hardly much help for the NSR. Russians, for their part, consider ice navigation as routine. This

point should be cleared up by being dealt with explicitly and in detail in the insurance contract, so that there truly is a "meeting of the minds", a constitutive element of a contract in most legal systems.

Recommendation 11: The NSR authorities should ensure that accurate, up-to-date information is regularly made available to insurers and other players on the insurance markets, so as to enable accurate assessment of the hull risk.

It is important also that this information is widely distributed throughout the insurance market, to promote awareness of the Route as a viable shipping alternative; cf. also the above suggestion on making information available in a widely-understood language. Documents such as the *Guide to Navigation on the Northern Sea Route*, the *Requirements for the Design, Equipment and Supply of Vessels Navigating the Northern Sea Route* and the *Rates of Charge for Leading Foreign-Flag Vessels Through the NSR* are all of interest to insurers, as it helps them to determine what kind of vessels are permitted on the Route, what standards are imposed, what potential liability levels might be, etc. *A fortiori* because it is a new type of trade, information, and plenty of it, is what is required to get the market moving. The *Regulations for Navigating on the Seaways of the Northern Sea Route* should also be made widely available, so that parties can obtain an idea of what is required of them. It might be an idea to draft an annotated version of these Regulations, i.e., each section set out with a note underneath giving some detail on what is meant by the terms of each of the sections. This will probably be of more interest to the legal departments of insurance companies than to the underwriters themselves, but they play a vital role in the overall assessment of the risk.

8.4 Protection and Indemnity

Recommendation 12: Limits for liability for oil pollution should be expressed in Special Drawing Rights (SDR) in any new Russian legislation on the matter.

The Soyuzmorniiprojekt report mentions liability limits being expressed in rubles. While it correctly suggests that the limits should be revised upwards from those set out in the 1981 *Edict on the Amounts of Compensation by Ship-owners for Losses Caused by Pollution of the Sea by Oil and Other Substances Harmful for the Life of People and for Living Resources of the Sea*, it fails to suggest that these limits should be expressed in a more stable currency. Even Western nations find it necessary to resort to the use of the SDR to avoid the impact of significant

fluctuations in currency values; *a fortiori* should Russia do this. How the ruble would be connected to the SDR and subsequently used is a matter of financial and economic expertise, beyond the scope of this study.

Recommendation 13: A network of P&I correspondents should be present along the entire Northern Sea Route.

There are Ingosstrakh representatives present in, *inter alia*, Murmansk and Arkhangelsk. These contacts could be used as correspondents by Western P&I clubs and, in fact, are by such clubs as Gard. It is submitted that representatives would be needed at more locations along the NSR so as to build up the P&I infrastructure to a point where it would be effective. Additionally, formal connections would need to be established between these offices and the Western clubs.

8.5 Nuclear-powered Vessels

Recommendation 14: Special arrangements must be made for the insurance of the nuclear fleet, both as regards hull and P&I. The Russian government must step in and work with the private sector, with a view to providing impetus for the market to gradually absorb the risks on its own.

Rightly or wrongly, the Western markets are quite leery about nuclear-powered vessels. It is submitted that a combination of initiatives from the Russian government and the Russian shipping companies would do much to give the market the impetus to begin underwriting these risks.

As discussed earlier, one possibility might be for a combination of Russian State hull insurance specially set up to help the companies with nuclear ice-breakers, with part of the cover being ensured there and another portion on a Western market. This could be envisaged as a transitory measure, to remain in effect until the market was willing to underwrite the total risk of the nuclear fleet, or until conversion over to a non-nuclear fleet could be completed. On the P&I side as well, the idea of Russia setting up State insurance or assisting the shipping companies in setting up a form of self-insurance, may be worth considering. Clubs have shown themselves to be remarkably flexible in extending cover to new situations, and a number of specialist clubs have appeared on the market in response to specific needs: defence associations; strike clubs; war risks clubs; through transport clubs and so on. Obtaining P&I cover for a particular risk like the operation of nuclear-powered ice-breakers no doubt qualifies for specialist cover, so much so that

this type of risk would probably not be considered "mutual" and would have to be placed in its own category. A possibility in this connection might be for the various shipping companies involved in NSR navigation to approach a P&I club together, with a view to setting up a category for the benefit of those companies, eventually other, non-Russian shipping companies with nuclear-powered vessels, if that became an option. This could be combined with the Russian State fund mentioned above, or cover could be spread through the International Group in some form of "superfund". A shipping company and club could, by agreement, set a limit on the liability to which the club would be willing to expose itself, with the rest perhaps being covered by the Russian State fund. Regardless of the approach adopted, the Nuclear Convention and the International Atomic Energy Agency will figure in the technical considerations and in every step of the process of putting together an insurance structure for nuclear-powered vessels.

It is important to keep in mind that Western insurers have suffered heavy losses in recent years. They are not likely to come looking for high-risk business like nuclear ice-breakers. Part of capitalism and markets is creating and fostering one's own opportunities. This will be the case here.

By way of closing, the preceding recommendations are intended as a starting point for discussion by the various players involved. This report is not intended as a final word on marine insurance for the Northern Sea Route. Rather, it was aimed at identifying opportunities for cooperation between Russian players and Western insurers and shipping interests. Vigorous discussion and open lines of communication between all involved will play a crucial role, as will a positive attitude towards new ways of thinking.

APPENDIX 1

In addition to the people mentioned in the Foreword, I wish to thank the following individuals, organisations and corporations for the guidance and assistance they have provided for this study, yet point out that they bear no responsibility for the final content of the study, nor have they bound themselves in any way:

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Appendix 2

Advisory Hull Rates for Arctic Voyages (Canada)

Dated January 15, 1985

RE: Canadian Arctic Voyages - Advisory Rates Etc.

The Canadian Scale of advisory rates, deductibles, warranties etc. applicable to Canadian vessels navigating to Eastern Arctic Waters of Canada was first introduced in 1973. In the intervening period there have been several rounds of high inflation resulting in substantial increase in the ship repair costs. Furthermore, the losses (Partial and total) experienced during Arctic voyages in past several years have made it necessary to update the scale. Following are the main changes introduced in the revised scale:-

Vessels - (Clause 2)

Tugs, Barges, Scows, Dredges and similar craft are excluded. (The previous advisory terms were not intended to apply to these excluded craft and therefore would continue to be considered on application prior to sailing).

/... 2

Revised January 1, 1985

CANADIAN ARCTIC VOYAGES - ADVISORY RATES ETC.

1. Voyages - To Canadian Eastern Arctic.

2. By - Self - Propelled vessels but excluding tugs, barges, scows, dredges & similar craft.

   Canadian Flag, owned, managed, or chartered.

3. Season and Areas permitted - Warranted;

   (a) between dates (b.d.i.) and in areas set out in the latest schedule under the Arctic Waters Pollution Prevention Act and Regulations and Orders thereunder; the said schedule having as coordinates (a) the Arctic Class or Type of vessel and (b) the Zones set out in The Shipping Safety Control Zones Order.

   - ALL AS MODIFIED BY -

   (b) any suggestions or advice given by the Master of the Canadian Coast Guard icebreaker in the area, or

   (c) Ice or Pollution Control Officer for the area.

4. Itinerary & Payment Of Premium - The expected itinerary to be submitted for rating and the premium due thereon is payable <u>in advance of sailing</u>.

   The expected itinerary submitted to be reasonable in the

/... 2

(ii) BASIC PREMIUM (See Grid Presentation - Page 6)

PREMIUM PER GROSS TON (Lloyds Register) PER DAY OF LOGGED TIME IN EACH AREA.

AWPPA 16; 15; 14; 10 - comprising approximately - Hudson's Bay and Strait, James Bay, Ungava Bay, Frobisher Bay, Resolution Island, and East Coast Baffin Island not North of Cape Mercy, nor the extension on Latitude 66' 35° to Greenland, but including Cumberland Sound.

Lloyds Ice Class I or I*	-$ .20
Lloyds Ice Class II	-$ .22
Lloyds Ice Class III or Strengthened for Navigation in ice	-$ .25
No Ice Class	-$ .30

AWPPA 8 - comprising approximately Foxe Basin and Roeswelcome Sound.

Lloyds Ice Class I or I*	-$ .325
Lloyds Ice Class II	-$ .35
Lloyds Ice Class III or Strengthened for Navigation in ice	-$ .375
No Ice Class	-$ .45

AWPPA 13;9 - comprising approximately Baffin Island East Coast North of Cape Mercy, Devon Island South Side and Lancaster Sound not beyond Resolute Bay, but not north of the projection of the line from Devon Is. to Greenland North of Thule.

/... 4

limits as above.

(2) Vessel Class and Type equivalents for this purpose;

AWPPA Type A 10	-Lloyds Ice Class I*
AWPPA Type B 11	-Lloyds Ice Class I
AWPPA Type C 12	-Lloyds Ice Class II
AWPPA Type D 13	-Lloyds Ice Class III
AWPPA Open Waters	-Lloyds 100 A 1

Other Classification Society Equivalents are set out in the AWPPA Regulations.

(3) Thule is permitted as a way port at the Baffin Scale AWPPA 13;9.

(B) TOTAL LOSS, INCREASED VALUE ETC.

To pay 50% of H & M rate as calculated per (A) (i) (ii) & (iii) above.

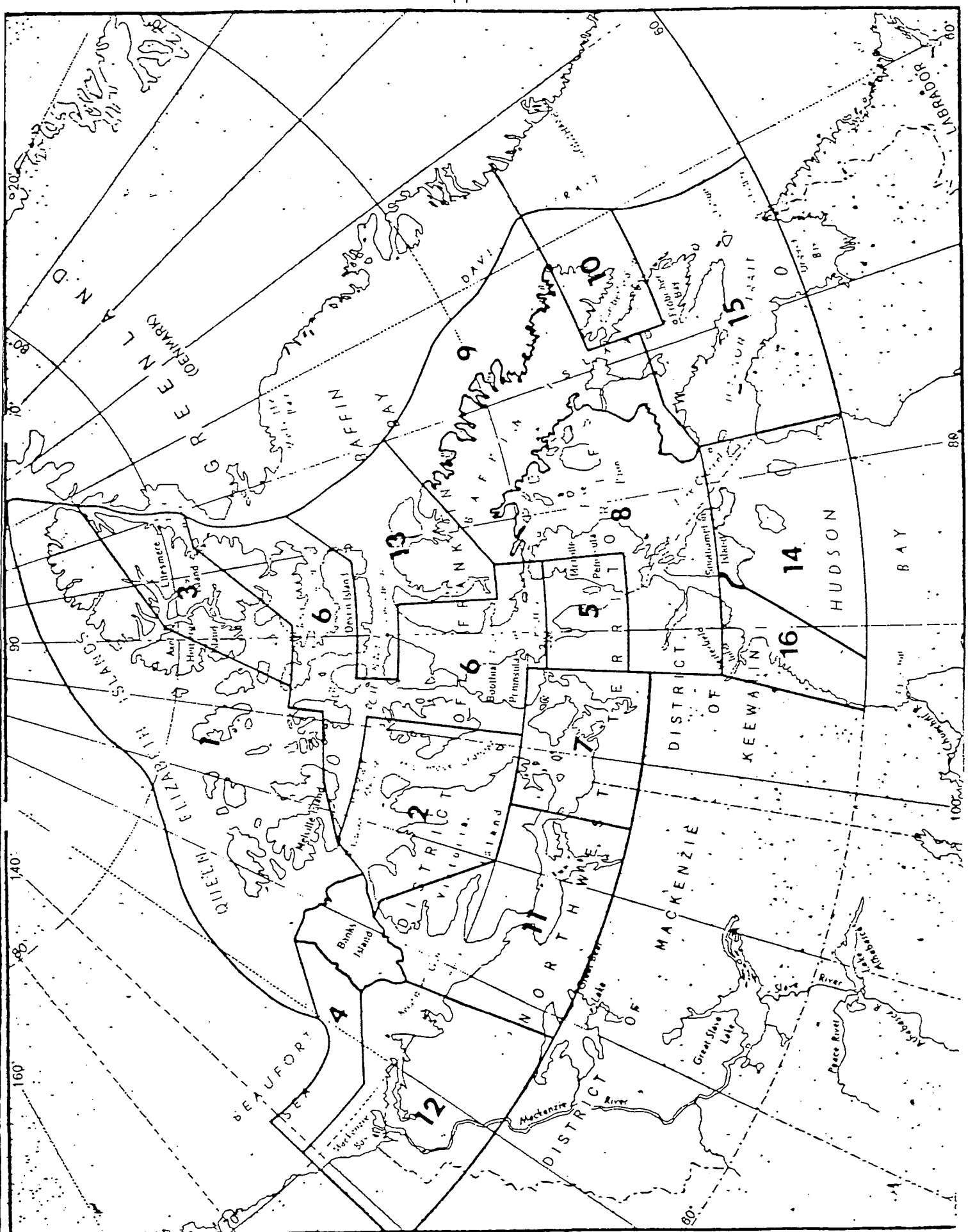
8. Warranties - (i) Season and area warranties as per 3. above

(ii) That the insured vessel shall not navigate in any of the permitted areas unless there is on board an ice navigator who

(a) is qualified to act as master of person in charge of the deck watch while in such areas.

(b) has served in the capacity of master, person in charge of the deck watch or helmsman for a period of at least five days while the ship on which he was serving was in ice conditions that required the ship to make extraordinary manoeuvers or to be assisted by an icebreaker.

/... 6



Source: Canadian Board of Marine Underwriters

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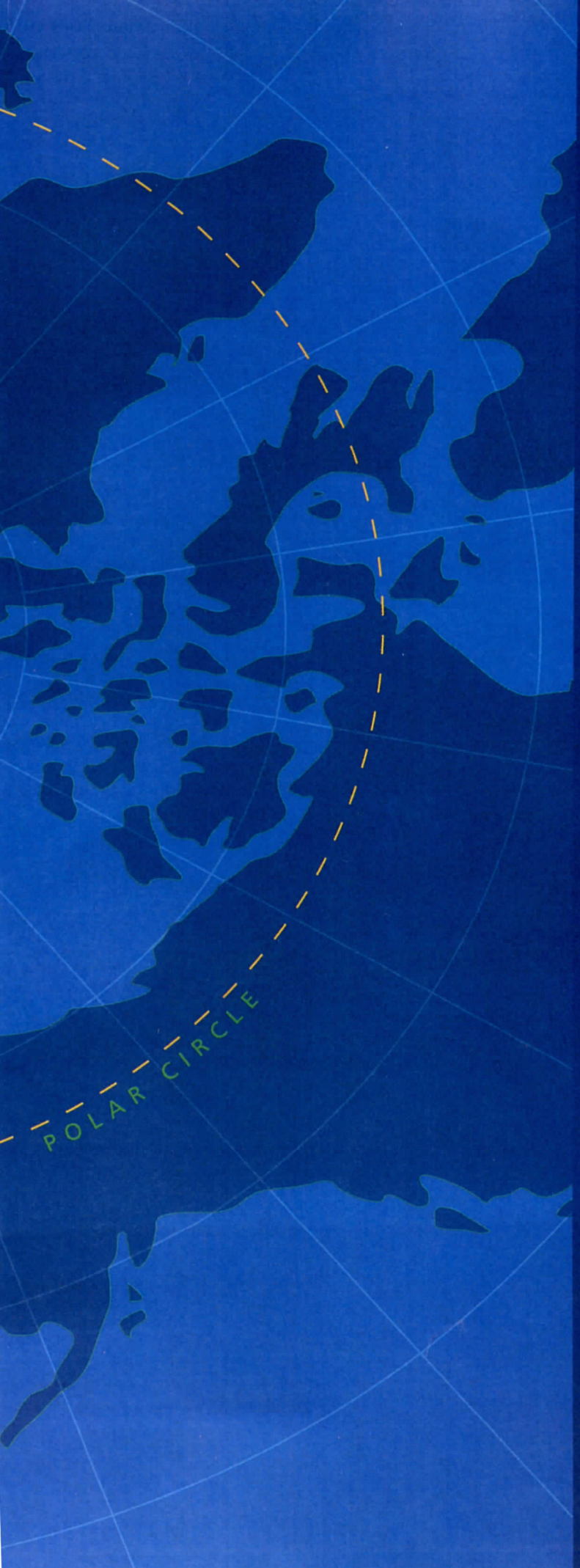

The three main cooperating institutions of INSROP

Ship & Ocean Foundation (SOF), Tokyo, Japan.

SOF was established in 1975 as a non-profit organization to advance modernization and rationalization of Japan's shipbuilding and related industries, and to give assistance to non-profit organizations associated with these industries. SOF is provided with operation funds by the Sasakawa Foundation, the world's largest foundation operated with revenue from motorboat racing. An integral part of SOF, the Tsukuba Institute, carries out experimental research into ocean environment protection and ocean development.

Central Marine Research & Design Institute (CNIIMF), St. Petersburg, Russia.

CNIIMF was founded in 1929. The institute's research focus is applied and technological with four main goals: the improvment of merchant fleet efficiency; shipping safety; technical development of the merchant fleet; and design support for future fleet development. CNIIMF was a Russian state institution up to 1993, when it was converted into a stock-holding company.

The Fridtjof Nansen Institute (FNI), Lysaker, Norway.

FNI was founded in 1958 and is based at Polhøgda, the home of Fridtjof Nansen, famous Norwegian polar explorer, scientist, humanist and statesman. The institute spesializes in applied social science research, with special focus on international resource and environmental management. In addition to INSROP, the research is organized in six integrated programmes. Typical of FNI research is a multi-disciplinary approach, entailing extensive cooperation with other research institutions both at home and abroad. The INSROP Secretariat is located at FNI.