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A legal assessment of the International Code for Ships Operating in Polar Waters (the Polar Code)

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Photo: F/F Helmer Hanssen in Grønfjorden, Svalbard. By Karine Nigar Aarskog, UiT The Arctic University of Norway.

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List of abbreviations

AMSA Arctic Marine Shipping Assessment

AMSP Arctic Marine Strategic Plan

ATS Antarctic Treaty System

BWM International Convention for the Control and Management of Ships'

Ballast Water and Sediments

CDEM Design, construction, equipment and manning

DE Sub-Committee on Ship Design and Equipment

EPPR Emergency Prevention, Preparedness and Response

GAIRS Generally accepted international rules and standards

IACS International Association of Classification Societies

IAEA International Atomic Energy Agency

ICS International Chamber of Shipping

ILA International Law Association

ILO International Labour Organization

IMO International Maritime Organization

MARPOL International Convention for the Prevention of Pollution from Ships

MEPC Marine Environment Protection Committee

MSC Maritime Safety Committee

NEP Northeast Passage

NSR Northern Sea Route

NWP Northwest Passage

PAME Protection of the Arctic Marine Environment Working Group

SOLAS International Convention for the Safety of Life at Sea

STCW International Convention on Standards of Training, Certification and

Watch keeping for Seafarers

SDC Subcommittee on Ship Design and Construction

UNCLOS United Nations Convention on the Law of the Sea

1 Introduction

1.1. Background and purpose

Climate change has had the effect of opening up new sea areas, and during the last decade particularly, commercial opportunities and the complexity of increasing development in the Arctic region have gained much international attention. The most visible sign of changes to the Arctic climate is the melting of sea ice.¹

The declining sea ice poses challenges to the global community and the marine environment, and at the same time represents opportunities that can benefit both the people living the High North and entities seeking to explore the region. Fisheries, scientific research, energy development and tourism are all trades and undertakings considered of great potential.^{2 3} Whichever activity pointed to, navigation will be key to further developing human activity in the Arctic in relation to communication, transport and logistics.

¹ "Climate change in the Arctic: status and future perspectives", by the Norwegian Polar Institute: http://www.npolar.no/no/tema/klima/klimaendringer/klimaendringer-arktis/ (last viewed 22.8.16).

² In a much cited report by the US Geological Survey, it is concluded that an estimated 13 percent of the world's undiscovered conventional oil resources and 30 percent of its undiscovered conventional natural gas resources are to be found in the area north of the Arctic Circle. Assessment of Undiscovered Oil and Gas in the Arctic, (2009), available at:

http://science.sciencemag.org/content/324/5931/1175.abstract?ijkey=uhqc1jv8QmWt.&keytype=ref&siteid=sci (last viewed 22.8.16).

³ A related issue to navigation in the Arctic, is new fisheries in the Central Arctic Ocean. As the sea ice is melting and new sea areas becomes more accessible, regulating new fisheries has become an important issue on the Arctic agenda. Starting as an initiative among the five Arctic coastal states, signing a declaration on prevention of unregulated high seas fishing in Central Arctic Ocean in Oslo (2015), this spring and summer Arctic countries and representatives from some of the world's largest fishing fleets have met to continue discussions on establishing a science-based regime for high seas fishing in the Arctic. "Nations Negotiate Fishing in Arctic High Seas" by the Arctic Deeply:

https://www.newsdeeply.com/arctic/articles/2016/04/28/nations-negotiate-fishing-in-arctic-high-seas (last viewed 22.8.16)

January 1, 2017 the International Code for Ships Operating in Polar Waters (the Polar Code) will enter into force. The Polar Code is the result of enduring efforts by the international community and the International Maritime Organization (IMO) in particular, and is characterized as a "historic milestone" in the work to establish a unified system for polar navigation.⁴

The purpose of this paper is to submit an assessment of the Polar Code in the context of international law of the sea, preceded by an account of the instrument background and key features. With the Polar Code set to enter into force within few months, a number of legal questions arise in terms of scope and application. What are the legal implications of Polar Code, and how will the instrument interact with the United Nations Convention on the Law of the Sea? Do provisions of the Polar Code qualify as "generally accepted international rules and standards", and the relation between the Polar Code and the extended environmental jurisdiction granted Arctic costal states, are key issues to be addressed.

1.2 Legal method and sources of law

In the following assessment of the Polar Code, a descriptive and analytical method has been applied. Sources of law include those prescribed by Art 38 in the Statute of the International Court of Justice, primarily including international conventions and customs, and general principles of law. Reference is also made to international guidelines as well as domestic legislation. Additionally, research documents as well as political statements addressing development and activity in the Arctic have been surveyed to clarify the state of polar affairs.

1.3 Scope and outline of the paper

The intention of the Polar Code is to address insofar possible, matters relevant for polar shipping in the context of environmental protection and safety of ships. As such, the Code amongst other includes measures on ship design, construction, training and equipment, search

⁴ "See "Shipping in polar waters - Adoption of an international code of safety for ships operating in polar waters (Polar Code)", International Maritime Organization:

http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx (last viewed 22.8.16)

and rescue and pollution prevention.⁵ In this paper, the legal specificities and implications of the Polar Code will be the main focus and research area. Therefore, more technical aspects of the instrument will not be problematized and evaluated more than necessary from a legal point of view.

As implied by its name, the Polar Code covers the two polar regions, therefore, the instrument applies to ships operating in both Antarctic and Arctic. Whereas the Arctic is an ocean surrounded by five coastal states and governed by the United Nations Convention on the Law of the Sea and associated instruments, the Antarctic on the other hand is governed by the specific regime, the Antarctic Treaty and related documents, known as the Antarctic Treaty System (ATS). The ATS applies to the area south of 60 degrees' latitude including waters surrounding the Antarctica.^{7 8} For the purpose of this paper, main emphasis will be on the Polar Code application in Arctic waters. At the same time, legal implication of the Polar Code for Antarctic shipping will be addressed, particularly in relation to notable differences in the regime for the two polar regions.⁹

The paper proceeds as following: In the second part, the history and development the Polar Code will be further presented. In this part, the role of the Arctic Council and navigation in Arctic waters will also be commented on. In the third part, the structure and setup of the Code, relating to safety of ships and environmental protection respectively will be more closely explained. In the fourth and main part of this paper, the Polar Code will be examined with emphasis on the interplay between the Polar Code and UNLOCS and special provisions applying to navigation in the Arctic. The paper finishes off with some concluding remarks.

⁵ Ibid.

⁶ In the Polar Code, Preamble, para. 6 it is emphasized; "While Arctic and Antarctic waters have similarities, there are also significant differences. Hence, although the Code is intended to apply as a whole to both Arctic and Antarctic, the legal and geographical differences between the two areas have been taken into account.".

⁷ Antarctic Treaty, Art VI.

⁸ The waters off Antarctica is also commonly referred to as the Southern Ocean, or the Antarctic Ocean.

⁹ Both in academia and political discourse, there are proponents for considering a similar governance regime for the Arctic Ocean as the treaty system of Antarctic (ATS). Referring to the differences of the two regions, and pointing to the application of the law of the sea, this has been firmly rejected by the Arctic coastal states. In the Ilulissat Declaration (2008) it was stated; "... [we see] no need to develop a new comprehensive international legal regime to govern the Arctic Ocean".

2 Development of a mandatory code for ships operating in polar waters

2.1 Historical background

It has been noted that the process of establishing the Polar Code has been long and demanding.¹⁰ During the early 1990s the distinct challenges to shipping in polar waters emerged on the international agenda, and in 2002 guidelines for Arctic navigation were first established. The years to come, efforts would focus on expanding the geographical scope to include Antarctic waters, leading to a process of establishing binding measures on safety and environmental protection for polar navigation. ¹¹

It is noteworthy how shipping incidents have given momentum to the development of regulating international navigation in polar waters. The *Exxon Valdez* disaster off the coast of Alaska in 1989 in many ways prompted the process of establishing a special regime for shipping in the Arctic. In 2007, the sinking of the cruise ship *MV Explorer* off King George Island emphasized the dangers relating to sea ice in the waters off the Antarctica. The *MV Explorer* disaster also served as an important reminder of the weak marine infrastructure dominating most part of the polar regions as well as challenges following an expected growth in exploration cruises and tourism. Another observation concerns the role of Arctic costal states particularly in introducing and following up new initiatives for navigation in polar waters.¹²

¹⁰ J. Bai. "The IMO Polar Code: The Emerging Rules of Arctic Shipping Governance", in the International Journal of Marine and Coastal Law, 2015, p. 678.

¹¹ According to Ø. Jensen, the history of the Polar Code can generally be divided into three stages of development. See "The International Code for Ships Operating in Polar Waters: Finalization, Adoption and Law of the Sea Implications", Arctic Review on Law and Politics, Vol. 7, No. 1, 2016, sect. 2.

¹² Supported by Denmark and Norway, it was the US that initially proposed turning the guidelines for navigation in Arctic waters into mandatory rules. On a more historic note, domestic policy needs coupled with increasing international attention prompted Canada to initiate the process leading to provision on "ice-covered areas", UNCLOS (Art 234).

The 2002 Guidelines for ships operating in Arctic waters were carried forward by the International Maritime Organization's Committee on Maritime Safety (MSC) and the Marine Environment Protection Committee (MEPC). Effort to include waters off the Antarctica in turn lead to the Guidelines for Ships Operating in Polar Water (2008). Taking form as a non-binding resolution prepared by the Sub-Committee on Ship Design and Equipment (DE), the 2008 guidelines nevertheless provided the necessary momentum, and by the 86th session of the MSC a legally binding regime for navigation in polar waters was formally proposed (2009).

By the time of preparing the Polar Code the IMO was faced with two alternative approaches, either by amending the existing conventions, the International Convention for the Safety of Life at Sea (SOLAS) and International Convention for the Prevention of Pollution from Ships (MARPOL), or by establishing a new international agreement. Whereas the former would entail a time demanding process of ratification by the world's major shipping states, the latter approach ultimately was viewed more advantageous, first and foremost because of the *tacit acceptance* procedure.¹³

The tacit acceptance procedure is an important element to the IMO decision making process, and entails that amendments enter into force at a specific date unless objections are presented by a certain number of state parties before a set due date.¹⁴

2.2 The Polar Code instrument

The main purpose of the Polar Code is to build on existing international instruments regulating navigation "in order to increase the safety of ships' operation and mitigate the

¹³ J. Ashley Roach. "A Note on Making the Polar Code Mandatory", in the International Law and Politics of the Arctic Ocean: Essays in Honor of Donat Pharand, Leiden/Boston: Brill/Nijhoff, 2015, p. 129.

¹⁴ "Adopting a convention, Entry into force, Accession, Amendment, Enforcement, Tacit acceptance procedure", International Maritime Organization: http://www.imo.org/en/About/Conventions/Pages/Home.aspx (last viewed 22.8.16)

impact on the people and environment in the remote, vulnerable and potentially harsh polar waters". $^{15\ 16}$

The Polar Code consists of a preamble, an introduction and two parts. Part I addresses safety measures, and includes mandatory provisions (Part I-A) and optional recommendations (Part I-B). Part II addresses pollution prevention and is based on the same structure, consisting of binding measures (Part II-A) and recommendations on pollutions prevention (Part II-B). The Code is founded on four IMO resolutions. The IMO main committees, the Maritime Safety Committee and the Martine Environment Protection Committee were responsible for adoption of the final instrument and relevant amendments.

The resolution covering safety measures included in the introduction as well as Part I-A and I-B was adopted by the MSC in November 2014.¹⁸ Similarly, the MEPC adopted measures relevant for environmental protection included in the introduction as well as Part I-B and II-B in May 2015.¹⁹

In Resolution MSC.386(94), a new chapter XIV on Safety measures for ships operating in polar waters was amended to SOLAS.²⁰ And finally, the MEPC adopted amendments to MARPOL Annexes I, II, IV and V in Resolution MEPC.265(68).²¹ By adopting the new chapter XIV to SOLAS added with amendments to annex I, II, IV and V to MARPOL, the safety measures and environment-related provisions included in Part I-A and Part II-A will become legally binding part of SOLAS and MARPOL respectively.

2.3 Geographical scope and application

¹⁶ The preparatory work for the mandatory code was principally lead by the IMO Subcommittee on Ship Design and Equipment (DE). Due to a reorganisation the committee was later named the Subcommittee on Ship Design and Construction, SDC.

¹⁵ Polar Code, Preamble, para.1.

¹⁷ Polar Code, Introduction, sect. 4.

¹⁸ Resolution MSC.385(94) adopted on 21 November 2014.

¹⁹ Resolution MEPC.264(68) adopted on 15 May 2015.

²⁰ Resolution MSC.386(94) adopted on 21 November 2014.

²¹ Resolution MEPC.265(68) adopted on15 May 2015.

The Polar Code applies to "ships operating in polar water", meaning Arctic waters and/or the Antarctic area.²² Whereas the Antarctic is defined as "the sea area south of latitude 60° S", Arctic waters includes a more tailored definition taking into account the presence of sea ice.

For illustrative purposes two figures showing the areas of application have been included in the Polar Code introduction:

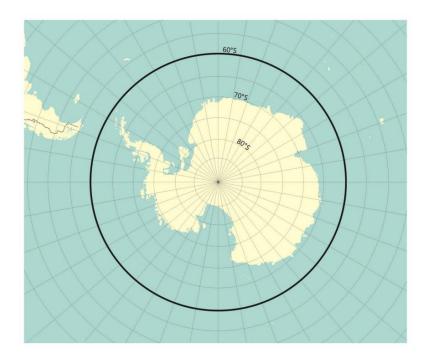


Figure 1 – Illustrating the geographical scope of the Antarctic area where the Polar Code applies.²⁴

²² SOLAS, Chapter XIV, Reg. 1.4. MARPOL, amendments, Annex 1, reg. 47, Annex II reg. 22, Annex IV reg. 18 and Annex V reg. 14.

 $^{^{23}}$ SOLAS, Chapter XIV, reg. 1.2 - 1.4.

²⁴ As defined in SOLAS reg. XIV/1.2 and XIV/1.3, respectively, and MARPOL Annex I, reg. 1.11.7 and 46.2; Annex II, reg. 13.8.1 and 21.2; Annex IV, reg. 17.2 and 17.3; and Annex V, reg, 1.14.7 and 13.2. Inserted in the Polar Code text as adopted, pp. 8 - 9:

http://www.imo.org/en/MediaCentre/HotTopics/polar/Documents/POLAR%20CODE%20TEXT%20AS%20A DOPTED.pdf (last viewed 27.8.16).



Figure 2 – Illustrating the geographical scope of Arctic waters where the Polar Code applies.²⁵

The Polar Code applies to ships certified under the relevant provision of SOLAS and MARPOL. As a starting point this include "ships operating in polar waters". ²⁶ For further presentation of which ships the Polar Code applies to, it is however necessary to address the safety measures and environmental protection measures separately.

2.3.1 The Polar Code and SOLAS

In case of provision as amended to SOLAS, exceptions are made for government owned or operated ships used for non-commercial purposes. Ships operated or owned by governments are encouraged to adhere to established measures, but are not bound to act accordingly. SOLAS does moreover not apply to smaller ships, leisure yachts and fishing vessels.²⁷ However, the MSC has decided on a two-step approach, entailing that application of the Polar

²⁵ Ibid.

²⁶ SOLAS amendments, Chapter XIV reg. 2.1, and MARPOL amendments, Annex I reg. 47.1, Annex II reg. 22.1, Annex IV reg. 18.1 and Annex V reg. 14.1.

²⁷ SOLAS, Chapter I reg. 3 and Chapter XIV reg. 2.

Code in regards to non-SOLAS ships, including fishing vessels, will be addressed at a later stage.²⁸

Whereas the Polar Code is set to enter into force 1 January 2017, ships constructed before this date are requested to meet "relevant conditions of the Polar Code" at the earliest 1 January 2018 or thereafter by the first intermediate or renewal survey. Relevant conditions are not further explained; it is nevertheless assumed that the entirety of the Polar Code because of this only will apply to new vessels. ^{29 30}

As to geographical scope, an interesting limitation concerns international voyages. More specifically, the application of SOLAS is reserved for "ships engaged on international voyage" whereas international voyage is defined as "a voyage from a country to which the present Convention applies to a port outside such country, or conversely".³¹

A natural understanding of the convention text is that domestic navigation falls outside the scope of SOLAS. On this account, a possible issue concerns Antarctic waters. More specifically, the question is whether SOLAS applies to navigation in waters off the Antarctica. Following the Antarctic Treaty System, all claims to territorial sovereignty, and consequently maritime claims, are set aside, therefore ships operating in Antarctic waters will not as such engage in cross border navigation.

It has been argued that the decisive point being whether a ship navigates in "polar waters", thus not emphasising the international dimension of a voyage for the application of the Polar

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²⁸ In any case, the Polar Code should not be applied to pleasure yachts; and the Polar Code should not be applied to fishing vessels until after entry into force of the 2012 Cape Town Agreement. See MSC 96/25 31 May 2016, Report to the Maritime Safety Committee on its Ninety-sixth Session, p. 99: http://www.iadc.org/wp-content/uploads/2016/07/MSC-96-25-Report-Of-The-Maritime-Safety-Committee-On-Its-Ninety-Sixth-Session-Secretariat.pdf (last viewed 27.8.16).

²⁹ Ø. Jensen. "The International Code for Ships Operating in Polar Waters: Finalization, Adoption and Law of the Sea Implications". Arctic Review on Law and Politics, Vol. 7, No. 1, 2016, sect. 3: http://dx.doi.org/10.17585/arctic.v7.236 (*last viewed 27.8.16*).

³⁰ Ibid.

³¹ SOLAS, Chapter 1, Part A, reg. 1, litra a and reg. 2, litra d.

Code provisions of SOLAS.³² Considering the particular character of the ATS, agreed upon by 53 states (2015), it may also be reasoned that navigation in Antarctic waters should be viewed as international navigation. Taking into account the objective of the Polar Code, as stated in the code preamble, "to increase the safety of ships' operation and mitigate the impact on the people and environment in the remote, vulnerable and potentially harsh polar waters", it moreover seems unlikely that navigation in sea areas off Antarctica should be exempt for mandatory measures relating to ships safety.³³ This view becomes particularly relevant considering the increasing shipping activity in the region.³⁴

2.3.2 The Polar Code and MARPOL

Compared to the method used for SOLAS, creating a new chapter XIV addressing safety measures for ships operating in polar waters, environmental protection measures included in the Polar Code will be mandatory by amendments to four different annexes to MARPOL.

Annex I include regulations for the prevention of pollution by oil. Annex II contains regulations for the control of pollution of noxious liquid substances in bulk. Annex IV concerns regulations for the prevention of pollution by sewage from ships, and finally, Annex V regulates prevention of pollution by garbage of ships.

As a starting point, each of the annexes to MARPOL apply to ships operating in polar waters. At the same time, further limitations as to geographical application and qualification of ships are set out in the annexes. For instance, in relation to Annex II Chapter 10 "International Code for International Code for Ships Operating in Polar Waters" application is limited to ships "certified to carry noxious liquid substances in bulk". Similarly, more stringent discharge rules apply in Arctic waters. ³⁶

³⁴ "Tourism and non-governmental Activities", Secretariat of the Antarctic Treaty System: http://www.ats.aq/e/ats_other_tourism.htm (*last viewed 22.08.16*).

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³² Above n. 29.

³³ Ibid.

³⁵ Resolution MEPC.265(68) Amendments to MARPOL, Annex II Chapter 10, reg. 22.1.

³⁶ Ibid. Chapter 10, reg. 22.4.

2.4 The role of the Arctic Council

In 2016, the Arctic Council marks its 20th anniversary as an intergovernmental forum for Arctic cooperation. Formally established by the Ottawa Declaration in 1996, member states include Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States. The Arctic Council primarily focuses on sustainable development issues and environmental protection and the forum organises its work in six main working groups. The work of the Arctic Council is open to broader contributions by indigenous peoples, non-Arctic states and non-governmental organisations in form of Permanent Participants and Arctic Council Observers respectively.

Along with the increasing awareness of and interest in development issues in the Arctic region, the Arctic Council work has gained both prominence and international attention. In turn, this have led to discussions on the future role of the Artic Council. Topical issues amongst other relate to the Arctic Council mandate and organisation, membership and scope of action.

In 2004 the Arctic Council commissioned the Arctic Council working group on Protection of the Arctic Marine Environment (PAME) to carry out "a comprehensive Arctic marine shipping assessment as outlined under the Arctic Marine Strategic Plan (AMSP) under the guidance of Canada, Finland and the United States as lead countries and in collaboration with the Emergency Prevention, Preparedness and Response (EPPR) working group and the Permanent Participants as relevant". The Arctic Marine Shipping Assessment, known as the AMSA report, was endorsed by the Arctic Council Ministerial meeting in Tromsø, Norway in 2009.

In hindsight, the AMSA report has represented a significant contribution to the development of a mandatory code for shipping in polar waters. Based on the report findings, seventeen recommendations were created to provide input to future policy work of the Arctic Council member states and other stakeholders. In relation to "Enhancing Arctic Marine Safety", the

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³⁷ Arctic Council Working Group on Protection of the Arctic Marine Environment (PAME) on the AMSA Report 2009: http://www.pame.is/index.php/projects/arctic-marine-shipping/amsa (last viewed 22.01.16).

report specifically encouraged members to support the work of the IMO to achieve mandatory application of the Guidelines for Ships Operating in Arctic Ice-covered Waters. ³⁸

2.5 Navigation in polar waters

Another relevant backdrop to the issue of regulating navigation in polar waters, is the potential use of sailing routes crossing Arctic water to connect Europe and Asia. Most prominent in this respect are the Northwest Passage (NWP) and the Northeast Passage (NEP).

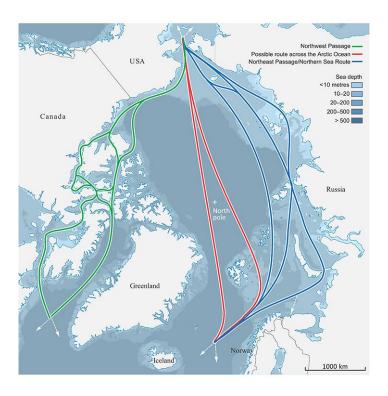


Figure 3: Main routes expected for sailing across the Arctic Ocean present and future.³⁹

Whereas the Northeast Passage is a navigational route between the Atlantic and Pacific Oceans crossing the Arctic by the Norwegian and Russian coasts, the Northwest Passage

³⁸ Arctic Council Arctic Marine Shipping Assessment (AMSA) Report 2009

http://www.pame.is/images/03_Projects/AMSA/AMSA_2009_report/AMSA_2009_Report_2nd_print.pdf (last viewed 27.8.16.)

³⁹ Illustration by the Norwegian Polar Institute as included in the Norwegian White Paper on the Barents Sea-Lofoten Area 20 (2014 – 2015): https://www.regjeringen.no/en/dokumenter/meld.-st.-20-20142015/id2408321/?q=&ch=3 (last viewed 22.8.16).

connects the Atlantic and Pacific Oceans through the Canadian Arctic. With sea ice melting, commercial motivations for sailing through the Arctic relates to distance savings compared to other waterways connecting Europe and the Far East. At the same time, it is worth mentioning that the AMSA report referred to natural resource development and regional trade as key future drives of increased Arctic marine activity.⁴⁰

Both Russia and Canada perform jurisdiction and claim sovereignty over parts of these Arctic navigation routes. Moreover, both countries refer to UNCLOS Art 234 as a legal basis for their extended jurisdiction in their Arctic waters. Among states, there are diverting views as to the scope of control and management of the NWP and the NSR.

Over the course of the years, Canada has made several steps to ensure sovereignty over the Northwest Passage. Following the voyage of *SS Manhattan* from the Beaufort Sea through the Northwest Passage to Davis Strait in 1969, Canada in 1970 adopted the Arctic Waters Pollution Prevention Act.⁴³ The same year Canada also extended its territorial sea from three to twelve nautical miles therefore achieving full sovereignty over these waters. In 1985, Canada drew straight baselines around its Artic Archipelago.

The US has been the strongest advocate for the right to transit passage in the Northwest Passage. In 1988, Canada and the US entered into the Arctic Cooperation Agreement.⁴⁴ The bilateral agreement provides a framework for cooperation between the neighbouring Arctic costal states and specifically establishes a regime for icebreaker navigation.⁴⁵ The agreement nevertheless ensures that the initial positions of the parties remain (clause 4).

The Northeast Passage overlap with the Northern Sea Route. Whereas Russia traditionally has based its claims over Arctic waters on historic rights and circumstances, in 2012 domestic

⁴⁰ In the AMSA report it was estimated that the NSR offer distance savings from 35 percent up to 60 percent. Above n 38, p. 44.

⁴¹ T. Henriksen. "Protecting Polar Environments: Coherency in regulating Arctic shipping.", in Research Handbook on International Marine Environmental Law, Edward Elgar, 2015, p. 379.

⁴² For the purpose of this paper, these issues will merely be referred to and therefore not thoroughly addressed

⁴³ Arctic Waters Pollution Prevention Act (R.S., 1985, c. A-12).

⁴⁴ Agreement on Arctic Cooperation. Signed at Ottawa on 11 January 1988.

⁴⁵ Ibid., clause, 3.

legislation was amended and the Law on the Northern Sea Route more clearly provides reference to UNCLOS Art 234 for control over the area. 46 47 Contrary to this stand, there are views that the route should be considered an international waterway and therefore regulated in accordance with international agreement. 48

The Northern Sea Route was officially launched for international navigation in 1991 and have since been promoted as a viable shipping route.⁴⁹ In the three-year period 2010 – 2013 number of voyages rose markedly, whereas cargo volume peaked in 2012.⁵⁰ The last couple of years, the NSR has experienced a notable reduction in shipping traffic. Business insiders attribute an economic complexity as reason for the decline, yet emphasis polar navigation still to be reckoned with, "Arctic shipping is not dead, but it's been put on ice temporarily".⁵¹

3 The Polar Code key features

3.1 Mandatory safety measures

Safety provisions of the Polar Code are included in Part I. Part I is divided into two parts, whereas the first part (Part I-A) includes mandatory safety measures, part two (Part I-B) contains safety recommendations.⁵² All of the chapters included in Part I-A are structured the same way, starting with the overall goal of the chapter, functional requirements to fulfil the goal, and regulations.

⁵¹ "Is Northern Sea Route Shipping in a Deep Freeze?", in the Arctic Deeply (6 June 2016): https://www.newsdeeply.com/arctic/articles/2016/06/06/is-northern-sea-route-shipping-in-a-deep-freeze (last viewed 27.8.16).

⁴⁶ Federal Law on amendments to specific legislative acts of the Russian Federation related to governmental regulations of merchant shipping in the water area of the Northern Sea Route, 2012.

⁴⁷ Henriksen, above n 41, p. 379.

⁴⁸ A. Moe. "The Northern Sea Route: Smooth Sailing Ahead?" Strategic Analysis, Vol. 38, No. 6, 2014, pp. 785.

⁴⁹ Ibid. p. 787.

⁵⁰ Ibid.

⁵² Polar Code, Introduction, sect. 4.

The first chapter of Part I-A includes general safety provisions. A key feature of ships sailing under the Polar Code regime, is the requirement to have on board a valid Polar Ship Certificate (1.3.1). The certificate will be issued based on the initial or renewed survey of the ship to ensure that it complies with the relevant conditions of the Code (1.3.2). In order to establish a ship's capabilities, an operational assessment of the ship and its equipment is required (1.5.1).

Chapter 2 to 12 of Part I-A addresses various safety measures. Chapter 2 concerns the polar water operational manual. The goal of the manual is to provide the ship owners and operators with a tool in their decision-making concerning the operation of the ship, and includes information regarding the ship capabilities and limitations based on the above mentioned assessment (2.2.2). The manual shall for instance prescribe how to react and operate in case of incidents in polar waters (2.2.4). To achieve the set goal, the manual must be kept on board (2.3.1).

Chapter 3 addresses ship structure, more specifically the goal of the chapter is to ensure that material and scantlings are adjusted the particular environmental conditions of polar waters (3.1). Chapter 4 aims to ensure adequate subdivision and stability in both intact and damaged conditions (4.1) whereas chapter 5 addresses watertight and weathertight integrity.

In chapter 6, requirements as to machinery installations are set out in order to safeguard the necessary functionality for operations in polar waters (6.1). The goal of chapter 7 is to certify sufficient fire safety protection, whereas chapter 8 addresses life savings appliances and arrangements to ensure safe escape, evacuation and survival (8.1). Chapter 9 concerns safety of navigation and chapter 10 deals with communication. The last two chapters of Part I-A addresses voyage planning (chapter 11) and manning and training (chapter 12).

One prominent feature of the Polar Code part on safety measures, is the reliance on the International Association of Classification Societies (IACS) for ship classification. This particularly becomes apparent in relation to ship structure (chapter 3) whereupon ships are required et.al. to take into account standards set by the IACS in order to comply with the functional requirement concerning suitable material for operations in low temperatures (3.2.1, ref. 3.3.1).

Another, more general feature of the Polar Code is the reference to other treaties. First and foremost, SOLAS and MARPOL are referred to throughout in relevant parts.⁵³ In relation to the safety measures, the International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW, Introduction 2.14) is referred to in relation to training of personnel (chapter 12), more specifically key personnel in charge of navigation are required to be qualified and certified in accordance with the STCW Convention and the STCW Code (12.3.1).

3.2 Safety recommendations

The Polar Code recommendations on ship safety are founds in Part I-B. More specifically, this part prescribes best practices and guidelines for each of the chapters included in Part I-A. For instance, in the case of life-saving appliances and arrangements (chapter 8), Part I-B includes a specified list of person as well as group survival equipment that should be taken into account (9.1 and 9.2).⁵⁴

3.3 Mandatory pollution prevention measures

Mandatory measures on pollution prevention are included in Part II-A of the Polar Code. This part includes five chapters of which four are operational and linked with the amended annexes of MARPOL.⁵⁵ Whereas Part I-A sets out goals, functional requirements and regulations, the mandatory part on environmental protection is organised in another way, prescribing operational requirement (and in case of chapter 1, structural requirements). Chapter 4 and 5 also include relevant definitions.

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⁵³ Polar Code, Introduction, 2.7 "MARPOL means the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto as amended by the 1997 Protocol". Introduction, 2.13 "SOLAS means the International Convention for the Safety of Life at Sea, 1974, as amended".

⁵⁴ The change of character from mandatory to provisions to guidelines is apparent by the Code's wording, from "shall" to "should".

⁵⁵ Polar Code, Part II-A, Chapter 3 on "Prevention of pollution by harmful substances carried by sea in package form" is kept blank intentionally.

The first chapter contains measures on prevention of pollutions by oil and includes a ban on discharge of oil or oily mixtures from any ship in Arctic waters (1.1.1). Moreover, double hull and double bottom is required for all oil tanker (1.2). Chapter 2, addresses control of pollution by noxious liquid substances in bulk and prohibits any discharge into the sea of noxious liquid substances in Arctic waters. Chapter 4 concerns prevention of pollution by sewage and sets out a ban on discharges of sewage in polar waters (4.2.1). Lastly, chapter 5 prohibits garbage disposal in Arctic waters relating specifically to plastics, food wastes, animal carcasses and cargo residues (5.2.1) As to Antarctic waters, discharge of garbage is allowed under certain circumstances as prescribed by MARPOL Annex V (5.2.2).

3.4 Pollution prevention recommendations

Guidelines corresponding to the mandatory pollution prevention measures are included in Part II-B of the Polar Code. Of particular interest is the ban on heavy fuel oil in the Antarctic (regulation 43 of MARPOL Annex I) which ships are encouraged to apply in Arctic waters (1.1).

Particularly two issues, concerning control and management of ship's ballast water and sediments and risks associated with invasive aquatic species, are hitherto only addressed by form of guidelines. Until the International Convention for the Control and Management of Ships' Ballast Water and Sediments enters into force, the Polar Code refers to the Guidelines for ballast water exchange in the Antarctic treaty area for consideration together with other relevant guidelines (4.1). In relation to minimizing risk of invasive species, the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species is referred to (4.3).

3.5 Some observations on the Polar Code

It has been noted that the environmental part of the Code gives "impression...of [a] strict regime regarding pollution from oil and noxious liquid substances in bulk". ⁵⁶ Moreover, in relation to pollution by garbage, stricter rules applies for the Arctic than for the Antarctic. ⁵⁷

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⁵⁶ Jensen, above n 29, sect. 3.

⁵⁷ Ibid.

At the same time, the Code has received criticism for not imposing a ban on heavy fuel oil in Arctic waters as applicable for the Antarctic. ⁵⁸ A primary environmental concern to increasing shipping in the Arctic relates to accidental oil spills. In the AMSA report is was noted that "[r]elease of oil into the Arctic marine environment, either through accidental release, or illegal discharge, is the most significant threat from shipping activity".⁵⁹ Environmental organisations and NGOs particularly, have engaged heavily on the matter and made proposals on banning carriage and use of heavy fuels in the Arctic. However, this was not included in the final instrument.⁶⁰

Application of the goal-based approach 3.6

The Polar Code is developed in line with the principles of a risk-based/goal-based approach. By addressing risks of polar shipping not adequately relieved by other instruments, the goal is to achieve safety of ships and environmental protection.⁶¹

Sources of hazards which may lead to various levels of risk to navigation in polar waters are noted and includes inter alia ice and icing, low temperature and darkness, rapidly changing and severe weather conditions, and remoteness and possible lack of experienced ship crews.⁶² Furthermore, the interrelation between safety measures and environmental protection is specifically acknowledged and mentioned in the Polar Code preamble.⁶³

The use of a goal-based approach, also referred to as goal-based standards (GBS), was introduced by the IMO and the Maritime Safety Committee specifically in the 1990s. As ship designs have become increasingly sophisticated and technological challenges more advanced, the traditional method of prescriptive-based regulations no longer sufficiently responded to the need of international navigation. Goal-based standards therefore represented a new and

⁵⁸ B. Gunnarsson, "Impact of IMO's Polar Code on NSR Future Shipping", Centre for High North Logistics (2015), p. 16: http://www.chnl.no/publish_files/IMO_Polar_Code_and_NSR.pdf (last viewed 21.8.16).

⁵⁹ AMSA 2009 Report, above n 38, pp. 152.

⁶⁰ Henriksen, above n 41, p. 371.

⁶¹ Polar Code, Introduction, sect 1.

⁶² Polar Code, Introduction, sect 3.1.

⁶³ Polar Code, Preamble, para 5.

additional way of regulating ship safety, entailing that new developments and changing circumstances could be regulated by "[b]road, over-arching safety, environmental and/or security standards".⁶⁴

Goal-based standards might be referred to as a top-down approach. On the top level, the overarching goal is established, followed by functional requirements in support of the goal. Finally, rules and regulations will be developed to meet the functional requirements. Commonly, this will be delegated to classification societies and/ or national administrations.⁶⁵

Increasingly applied in the context of IMO regulations, the Sub-committee on ship design and equipment in 2010 determined that the goal-based approach should be used in relation to ship design in the Polar Code (Part I-A).⁶⁶

The Polar Code chapter on ships structure serves as an illustration of the application of the goal-based approach (chapter 3) whereupon alternative designs and arrangements may be used as long at the set goals are achieved.⁶⁷ Firstly, the goal concerning ships structure is clearly set out; to retain the structural integrity of materials and scantlings applied for ships operating in polar waters (3.1). In order to achieve this, two functional requirements are established, aimed at ships intended to operate in low temperatures and ice-strengthened ships. In case of the latter, ships shall be designed to handle both global and local structural loads to be anticipated under foreseeable ice conditions (3.2.2). To comply with the functional requirements and ultimately achieve the set goal, flag states are required to approve scantlings of category A and B ships as well as ice-strengthened ships taking into account "standards acceptable" to the IMO (3.3.1).⁶⁸

http://www.imo.org/en/OurWork/Safety/SafetyTopics/Pages/Goal-BasedStandards.aspx (last viewed 21.8.16). 65 Ibid.

⁶⁴ "IMO Goal-based standards", International Maritime Organization:

⁶⁶ DE 54/WP.3 27 October 2010, Report of the Working Group on Development of a Mandatory Polar Code, p

^{5:} http://folk.uio.no/erikro/WWW/Polar_Code/ArbeidsgruppeWP%202010.pdf (last viewed 27.8.16)

⁶⁷ Henriksen, above n 41, p. 370.

⁶⁸ Ibid.

Yet, not all of the Polar Code's provisions on safety measures are equally flexible and broadly defined. For instance, the safety part on stability and subdivision (chapter 4) clearly establishes calculations for icing allowances, therefore leaving little room for alternative approaches or discretion of national authorities.⁶⁹

Considering the Polar Code "interplay of vague and substantive rules", have led some to question the real value of utilizing a goal-based approach for the Polar Code provisions.⁷⁰ Whereas goals and functional requirements in accordance with the Vienna Convention on Law of Treaties Art 31 (1) will provide relevant input in terms of interpretation of object and purpose, several of the Polar Code safety measures are neither general nor vague, with the consequent that flag states' ability to establish national arrangements maybe minimal.⁷¹

A related issue concern enforcement. Referring to the Polar Code mixture of "open" and prescriptive regulations and guidelines, control and enforcement of the Polar Code rules and standards have been identified as a possible challenge.⁷² On this account, one of the main criticisms of the Polar Code is the lack of a joint enforcement mechanism to control measures adopted and ensure compliance. The Polar Code as such does not include a specific instrument to ensure compliance, instead flag states, port states and coastal states are relied upon to ensure enforcement and control of the new regime.⁷³

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⁶⁹ See Polar Code, Part I-A, Chapter 4, 4.3.1.1 where the following is prescribed; "In order to comply with the functional requirement of paragraph 4.2.1, for ships operating in areas and during periods where ice accretion is likely to occur, the following icing allowance shall be made in the stability calculations: .1 30 kg/m2 on exposed weather decks and gangways; .2 7.5 kg/m2 for the projected lateral area of each side of the ship above the water plane; and .3 the projected lateral area of discontinuous surfaces of rail, sundry booms, spars (except masts) and rigging of ships having no sails and the projected lateral area of other small objects shall be computed by increasing the total projected area of continuous surfaces by 5% and the static moments of this area by 10%".

⁷⁰ Jensen, above n 29, sect. 4.

⁷¹ Ibid.

⁷² T. Henriksen. "Legal consequences of the Use of goal-based norms in the Polar Code", A-LEX seminar 11 December 2014. See https://uit.no/Content/400312/Polar%20Code%20Goal-based%20norms_Henriksen.pdf (last viewed 28.8.16).

⁷³ Considering the interdependence between the Polar Code and the collaboration and work of the Arctic states, have led some to suggest that a reasonable next step would be for the Arctic Council, in partnerships with the IMO, to accept a more defined role in enforcing the Polar Code. See R. Wanermann. "Freezing Out

The Polar Code certificate shall be issued either by the administration or organisation recognized. In any case, the flag state administration has full responsibility for the certificate. The control of the Polar Code certificate, inspections and possible detention, ports of contracting governments shall verify that vessels do in fact have valid certificates. Only where there are "clear grounds for believing that the condition of the ship or of its equipment does not correspond substantially with the particulars of that certificate" are port states required to "take steps to ensure that the ship shall not sail until it can proceed to sea or leave the port". The Polar Code certificate is possible detention, and possible detention, ports of contracting governments shall verify that vessels do in fact have valid certificates.

4 The Polar Code in the context of international law

4.1 International legal framework

The United Nations Convention on the Law of the Sea (UNCLOS, 1982), is commonly referred to as the constitution of the world oceans and provides a "framework within which most uses of the seas are located". Joined by a majority of the world states, the regime introduced by UNCLOS is viewed "almost universally accepted, and moving closer to universal subscription". Value of the Sea (UNCLOS, 1982), is commonly referred to as the constitution of the world oceans and provides a "framework within which most uses of the seas are located". Value of the world oceans and provides a "framework within which most uses of the seas are located". Value of the world oceans and provides a "framework within which most uses of the seas are located". Value of the world oceans and provides a "framework within which most uses of the seas are located". Value of the world oceans and provides a "framework within which most uses of the seas are located". Value of the world oceans and provides a "framework within which most uses" of the world states, the regime introduced by UNCLOS is viewed "almost universally accepted, and moving closer to universal subscription".

Noncompliant Ships: Why the Arctic Council Must Enforce the Polar Code", Case Western Reserve Journal of International Law, Vol. 47 No. 1 (2015), p. 431.

⁷⁴ Polar Code Part I-A, Chapter 1, 1.3.

⁷⁵ SOLAS, Chapter 1, Part B, reg. 19 and Annex XIV, reg. 3.

⁷⁶ A further legal basis for ensuring that the Polar Code provisions are respected, is found in UNCLOS Art 219. The provision more generally addresses "measures relating to seaworthiness of vessels to avoid pollution". Following this, states discovering that vessels in one of their ports are "in breach of international rules and standards relating to seaworthiness", and because of this threatens damage to the marine environment, are requested to take administrative measures to prevent the vessel from sailing.

⁷⁷ R.R. Churchill and A.W. Lowe. "The Law of the Sea", third edition, Juris Publishing, Manchester University Press,1999, p. 24.

⁷⁸ Ibid. p. 22.

⁷⁹ As of June 2016, 167 states have ratified the convention in addition to the European Union. Today, the US is the only mayor state not party to UNCLOS.

More than two decades after entering into force (1994), part of the convention has entered into customary law whereas other elements refer to pre-existing customary law.⁸⁰ Although UNCLOS establishes a general legal framework in relation to maritime zones and jurisdiction, in certain areas and matters regulatory arrangements are depending upon international organisations or regional cooperation. In the following, the Polar Code will be assessed the context of international law of the sea and provisions of UNCLOS specifically.

4.2 Polar Code provisions in relation to GAIRS

4.2.1 Generally accepted international rules and standards

The purpose of "generally accepted international rules and standards", commonly referred to as GAIRS, is "to make compulsory for all states certain rules which ha[ve] not taken the form of an international convention in force for the states concerned, but which [are] nevertheless respected by most states".⁸¹

The method of GAIRS can be tracked back to the 1958 Geneva Convention on the High Seas, and essentially means that more technical rules established by accepted regulatory bodies become binding by means of rules of reference.⁸²

In UNCLOS, rules of reference specifically apply in relation to pollution from vessels.⁸³ ⁸⁴ ⁸⁵ Mainly involving prescriptive and enforcement jurisdiction, in the case of flag states jurisdiction, GAIRS have been noted as a "mandatory minimum", whereas in relation to

⁸⁰ Churchill and Lowe, above n 77, p. 24.

⁸¹ International Law Association London Conference (2000), Committee on Coastal State Jurisdiction Relation to Marine Pollution, p. 33: http://www.ila-hq.org/download.cfm/docid/C52ADCAF-E925-4BD4-8159B588EFD02597 (last viewed 27.8.16).

⁸² E. J. Molenaar. "Options for Regional Regulation of Merchant Shipping Outside IMO, with particular Reference to the Arctic region." Ocean Development and International Law, Vol 45, No. 3, 2014, p. 274.

⁸³ Fisheries is another area regulated by GAIRS.

⁸⁴ International Law Association London Conference, above n 81, pp. 31-32.

⁸⁵ In relation to pollution from vessels, the technique of rule of reference is applied four times in the 1982 LOSC Convention: Arts. 211 (2), 211 (5), 211 (6), 226 (1)(a). Art. 21 (2).

coastal states, the concept is referred to as a "facultative maximum". ⁸⁶ The difference may be illustrated by looking at two of the UNCLOS provisions applying rule of reference. ⁸⁷

Art. 21 (2) concerns coastal states right to adopt law and regulations on safety of navigation and environmental protection in the territorial sea ("laws and regulations of the coastal State relating to innocent passage"). The reference to GAIRS in this case represent a limitation on the coastal state powers;

"Such laws and regulations shall not apply to the design, construction, manning or equipment of foreign ships unless they are giving effect to generally accepted international rules or standards"

Regulations on design, construction, manning or equipment of ships (also referred to as CDEM requirements) concerns the structure and building of vessels. These are features and qualities not easily mendable and adjusted. If every coastal state were allowed to operate with separate CDEM requirements, freedom of navigation would potentially be significantly hampered. Thus, coastal states are not permitted to enforce domestic law on design, construction, manning or equipment of foreign flagged vessels, if these laws goes beyond what is internationally accepted.

The second illustration concerns pollution from vessels (Art 211 (2);

"States shall adopt laws and regulations for the prevention, reduction and control of pollution of the marine environment from vessels flying their flag or of their registry. Such laws and regulations shall at least have the same effect as that of generally accepted international rules and standards established through the competent international organization or general diplomatic conference"

In this case, the application of rule of reference is set to ensure that regulations adopted by states for the prevention, reduction and control of pollution from vessels flying their flag are

⁸⁶ International Law Association London Conference, above n 81, p. 31.

⁸⁷ Jensen, above n 29, sect. 5.

in fact meeting the internationally accepted (or required) level of protection. Both in relation to flag states and coastal states, the concept of GAIRS, therefore, aims to ensure that international rules and standards are given priority over domestic laws at the same time as technicalities are left to more specialized instruments and conventions.⁸⁸

A noteworthy consequence of applying rules of reference, is how the integrity of UNCLOS is maintained and safeguarded by continuously referring to and relying on the latest rules and standards accepted by the international community. ⁸⁹ On this account, it has also been suggested that the application of GAIRS, to some extent, outmanoeuvre the process of international law making. ⁹⁰

Since the technique of using GAIRS to secure the applicable level of regulations and specific requirements, certain international matters may be kept in harmony on the basis of acceptance and practice of states and not so much formal regulatory efforts and processes. At the same time, to qualify as GAIRS the relevant rule or standards must be established through "competent international organization" or "general diplomatic conference", therefore including a formal involvement of states.

4.2.2 The application of GAIRS in relation to the Polar Code

The application of GAIRS by mean of rules of reference entails that states parties to UNCLOS are bound by and have competence to enforce internationally accepted rules and standards. As noted by the ILC Committee on Coastal Jurisdiction over Marine Pollution (2000):

"By becoming a party to the 1982 Convention, states ipso facto accepts the legal technique of law-making by reference inherent in the very notion of generally accepted international rules and standards. [...] Consequently, flag states, coastal states and port states can enforce concrete international rules and standards which are generally accepted irrespective of the form they have taken. In the hypothesis that a concrete international rule or standard is

⁸⁸ Ibid.

⁸⁹ C. Redgwell. "Mind the Gap in the GAIRS: The Role of Other Instruments in LOSC Regime Implementation in the Offshore Energy Sector", The International Journal of Marine and Coastal Law Vol. 29, 2014, p. 617.

contained in a convention, it is therefore not only irrelevant whether the coastal state is party to that particular convention in order to prescribe such rule or standard, but it is equally irrelevant for the coastal or port state implementing such a rule or standard whether the flag state of that vessel committing the violation is party to it. This Conclusion does not infringe the pacta tertiis principle, since the consensual nature of international law is satisfied by the fact that states, party to the 1982 Convention, did agree to accept the rule of reference".⁹¹

Based on this, provisions of the Polar Code considered to quality as GAIRS will be subject to enforcement regardless of whether the state prescribing the rule is party to the Polar Code and similarly irrespective of whether the state under which flag the vessel performing or causing a violation is party to the instrument. ⁹² In the following, whether provisions of the Polar Code qualify as "generally accepted international rules and standards", and therefore may be enforced by coastal states, port states and flag states will be further assessed.

4.2.3 International rules and standards

The first issue is whether the Polar Code falls within "international rules and standards"? As previously described, the Polar Code consists of both mandatory measures and recommendations on ship safety and environmental protection. The scope of norms that qualify as GAIRAS therefore needs to be further assessed.

Considering that both "rules and standards" may qualify as GAIRS, a natural understanding suggests that legally binding rules found in treaties or customary law as well as non-legally binding instruments such as guidelines or recommendations may meet the requirement.⁹³ Therefore, as a starting point, it may be argued that recommendatory provisions for both sections of the Code (parts I-B and II-B) may qualify as GAIRS.

⁹² In cases where a state is not party to UNCLOS, application depends on whether the relevant rule of reference is considered part of international customary law. Alternatively, the state must be member of the relevant instruments.

⁹¹ International Law Association London Conference, above n 81, p. 45.

⁹³ I. Jakobsen and T. Henriksen. "Report: Norway and Arctic Marine Shipping", Fram Centre Report Series No. 2, 2015, p 44: http://www.framsenteret.no/norway-and-arctic-marine-shipping.5750739-146437.html#.V8F5oZh942w (last viewed 27.8.16).

The mandatory provisions of the Polar Code become binding by amendments to SOLAS and MARPOL. Both instruments are legally binding and therefore falls within the scope of relevant norms.

Two additional requirements apply; firstly, the regulation in question must be associated with the subject matter. For instance, GAIRS in relation to pollution from vessels (UNCLOS Art 211 (2)) must be related to and include efforts on environmental protection. A further requirement concerns precision. Remembering the overriding objective of establishing rules of reference, to give primacy to international rules and standards and thereby contributing to consistency of shipping regulations, vague and unclear provisions posing a risk of conflicting interpretation and application will probably not suffice to qualify as rules of reference.

On this account, it has been submitted that it is uncertain whether Polar Code provisions on CDEM (Part I-A) will qualify as rules of reference. By granting flag states discretion on how to fulfil functional requirements on matters such as electrical installations and machinery, uniformity may become hard to achieve, "[i]n these cases, there are no specific rules or standards to prescribe, much less enforce". Page 100

4.2.4 Competent international organization

The next issue concerns the legal capacity to establish GAIRS. More specifically, the question is by whom "international rules and standards" may be developed.

⁹⁴ Jensen, above n 29, sect. 5.

⁹⁵ Henriksen, above n 41, p. 378.

⁹⁶ International Law Association London Conference, above n 81, p. 32.

⁹⁷ Henriksen, above n 41, p. 378.

⁹⁸ Ibid.

⁹⁹ Ibid.

¹⁰⁰ Areas where flag states may choose alternative design to achieve set goals include structure, machinery, electrical installations, fire safety, life-savings appliances, ice classification, stability and subdivision.

In relation to the application of rules of reference, UNCLOS specifically refers to "competent international organization", or alternatively "general diplomatic conference". 101 The former has come to include several international organisations, including amongst others the International Labour Organization (ILO) and the International Atomic Energy Agency (IAEA).102

The international code of safety for ships operating in polar waters has been adopted by the International Maritime Organization. The IMO is acknowledged as the United Nations specialized agency "with responsibility for the safety and security of shipping and the prevention of marine pollution by ship". 103 In the context of the Polar Code, the IMO therefore clearly falls within "competent international organization".

To this end, it has however been problematized that the Polar Code assigns authority to further define structural requirements to the International Association of Classification Societies (IACS). 104 The IACS is an international organisation consisting of twelve marine classification societies. From the outlook the IACS does not qualify as neither "competent international organisation" nor "general diplomatic conference". By delegating certain powers to an international yet private organisation, the direct involvement of states is absence and association between the IMO and relevant requirements weakens. In relation to the Polar Code, the IACS has nevertheless been appointed by the IMO and states have therefore given it a role in prescribing structural requirements, which in turn supports that its contributions will conform to GAIRS.¹⁰⁵

4.2.5 Generally accepted

¹⁰¹ For instance, see UNCLOS Art 211 (1).

¹⁰² In Annex IX to the LOS Convention, "international organisation" is defined as "an intergovernmental organization constituted by States to which its member States have transferred competence over matters governed by this Convention, including the competence to enter into treaties in respect of those matters" (Art 1). ¹⁰³ "Introduction to IMO", the International Maritime Organization:

http://www.imo.org/en/About/Pages/Default.aspx (last viewed 24.8.16.)

¹⁰⁴ Jensen, above n 29, sect. 5.

¹⁰⁵ Ibid.

So far is assumed that provisions of the Polar Code may qualify as GAIRS. The final requirement concerns whether provisions of the Polar Code may be considered "generally accepted". In other words, when a "«international rule or standard» is accepted by so many states that it is "generally accepted".

An immediate understanding of the wording suggests that the rule or standard in question must be acknowledged and respected by a large number of states. ¹⁰⁷ GAIRS is generally assumed to differ from customary law, understood that the threshold for qualifying as "generally accepted" is less strict than for customary law, thus generally accepted has a broader application then customary law. ¹⁰⁸ In the 2000 report issued by the International Law Association Committee on Coastal State Jurisdiction Relating to Marine Pollution, the scope of GAIRS was extensively dealt with. Addressing the meaning of generally accepted international rules and standards, the Committee concluded that "[g]enerally accepted international rules and standards cannot be equated with customary law nor with legal instruments in force for the states concerned". ¹⁰⁹

If the same conditions were to apply to generally accepted international rules and standards as for customary international law, the former would in fact be redundant "since states would be bound by customary international law anyway". ¹¹⁰ As to the criteria of "generally accepted", the Committee more specifically noted:

"... in order to attain the threshold of generally accepted. quantitative as well as functional majorities appear to be important."

In order to further clarify the scope of "generally accepted", «widespread and representative participation» has been upheld as a likely threshold. To this end, geographical distribution has been noted as a relevant factor. 112

108 Ibid

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¹⁰⁶ Jakobsen and Henriksen, above n 93, p. 44.

¹⁰⁷ Ibid.

¹⁰⁹ International Law Association London Conference, above n 81, p. 33.

¹¹⁰ Ibid. p. 36.

¹¹¹ Jakobsen and Henriksen, above n 93, p. 45.

¹¹² Ibid.

The Polar Code has been adopted by the IMO. The IMO currently consist of 177 member states which suggests that a sufficiently large number of states have accepted the instrument for it to be considered "generally accepted". The condition of "generally accepted" does however not merely refer to acceptance, rather it is the "practice of states" that determines whether a rule or standard has become generally accepted. 113

In relation to the binding parts of the Polar Code, the tacit acceptance procedure applied in relation to SOLAS and MARPOL includes a process whereby states either notify objections to the new provisions within a set date, or the relevant amendments will become accepted on 1 July 2016 and enter into force 1 January 2017. 114 115 More specifically, both instruments deem amendments to become accepted, unless "prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet object the amendments". According to the IMO status of multilateral Conventions and instruments, one objection to both instruments had been received by the set due date. Accordingly, amendments to both SOLAS and MARPOL will enter into force on 1 January 2017. 116

If an instrument is largely accepted, it is assumed that this will make a stronger case for rules or standards potentially qualifying as generally accepted. Thus, the number of states accepting the provisions of the Polar Code included in SOLAS and MARPOL supports that these are "generally accepted". 117 What remains to be seen, is the compliance with the Polar Code by states. Insofar the new regime has not yet entered into force, it can only be presumed that states will adhere to the requirements and procedures introduced by the Polar Code. 118

¹¹³ International Law Association London Conference, above n 81, p. 37.

¹¹⁴ Resolution MSC.386 (94) adopted on 21 November 2014, para 2.

¹¹⁵ Resolution MEPC.265 (68) adopted on15 May 2015, para 2.

¹¹⁶ Due to national procedural requirements, Finland forwarded objections to these amendments on 24 May 2016. See "Status of multilateral Conventions and instruments in respect of which the International Maritime Organization or its Secretary-General performs depositary or other functions" As at 2 August 2016., p. 65 and p. 159": http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202016.pdf (last viewed 24.8.16).

¹¹⁷ International Law Association London Conference, above n 81, p. 39.

¹¹⁸ Jensen, above n 29, sect. 5.

A final issue concerns the general acceptance of the Polar Code recommendatory parts. The starting point for the non-binding parts of the Polar Code is that these are mere guidelines for navigation in polar waters and not binding upon states. Since states presumable have accepted these parts in consideration of their "non-binding nature", it may be argued these cannot qualify as GAIRS.¹¹⁹

As prescribed above, the premise of GAIRS is nevertheless not so much the intention behind the relevant regulation or standard, but the authority behind it and degree of international acceptance, "[t]he key question when determining whether a rule or a regulation qualify as GAIRAS, is when the rule or standard is «generally accepted »". Theoretically, if a large number of states adhered to regulation 43 of MARPOL Annex I on navigation in Arctic waters, and therefore in fact impose a ban on to transport and use heavy fuel oil in this region, the consideration might prove different. Therefore, it should not be excluded that non-binding parts of the Polar Code may become generally accepted and therefore qualify as GAIRS.

4.3 The interplay between UNCLOS Art 234 and the Polar Code

4.3.1 The special traits of UNCLOS Art 234

The history and finalizing of UNCLOS Art 234 in many ways follows Canada's pursue of international acceptance for its legislation over Arctic waters. ¹²¹ Coined the "Arctic exception" and characterised as a unique provision, Art 234 was agreed upon in the early

¹¹⁹ Ibid.

¹²⁰ Jakobsen and Henriksen, above n 93, p. 10.

¹²¹ The 1970 Arctic Waters Pollution Prevention Act extended Canada's jurisdiction to 100 nm (in waters north of 60 N) and provided a legal basis to regulate all shipping and prescribe standards on design, construction and manning for ships navigating in the area.

negotiating rounds of UNCLOS, after talks primarily involving Canada, the US and the Soviet Union. ¹²² ¹²³

Art 234 addresses "[i]ce-covered areas" and grants Arctic coastal states a right to adopt and enforce laws and regulations for the prevention, reduction and control of marine pollution from vessels within their exclusive economic zone:

"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 such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major 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".

Prescribed as the most ambiguous provision of UNCLOS, in order to apply the extended environmental jurisdiction, Arctic costal states must act non-discriminatory, have due regard to navigation and the protection of the environment and base any actions on best scientific evidence. Moreover, the right only applies in areas where harsh climate conditions and presence of ice most of the year create exceptional hazard to navigation, and pollution of the marine environment pose the risk of causing "major harm or irreversible disturbance of the ecological balance". 125 126

. . .

¹²² M. McRae. "The Negotiation of Article 234" in Politics of the Northwest Passage, McGill-Queen's University Press, 1987, pp. 98 – 114.

¹²³ T. McDorman. "A Note on the Potential Conflicting Treaty Rights and Obligations between the IMO's Polar Code and Article 234 of the Law of the Sea Convention" in International Law and Politics of the Arctic Ocean: Essays in Honor of Donat Pharand, Leiden/Boston: Brill/Nijhoff, 2015, p. 143.

¹²⁴ Stated by C. Lamson: "Article 234 - ice-covered areas - is probably the most ambiguous, if not controversial, clause in the entire treaty". See C. Lamson. "Arctic shipping, marine safety and environmental protection", Butterworth & Co (Publishers) Ltd (1987), p. 4.

¹²⁵ UNCLOS, Art 234.

¹²⁶ Henriksen, above n 41, p. 374.

Whereas "...most of the year..." is not defined, a natural understanding of the wording suggests that the area must be covered in ice more than six months. ¹²⁷ Changing climate and melting of sea ice, inevitable will change the circumstances in which the provision applies, which again has prompted discussions on its future application. ¹²⁸ On this account it has been suggested that the Polar Code may prove a basis for interpretation of Art 234. More specifically, the Polar Code addresses hazards of navigation in light of thickness and concentration of sea ice. ¹²⁹

4.3.2 Alternative legal basis

The "potential collision" between the right of Arctic coastal states following Art 234 and the Polar Code has been problematized from various holds. With the entering into force of the Polar Code, it may be argued that Arctic coastal states get an alternative legal basis to prevent pollution from vessels within their EEZ. Should Art 234 be interpreted in light of the Polar Code provisions on environmental protection? Or, will Art 234 remain an alternative legal basis for the prevention, reduction and control of marine pollution from vessels in ice-covered areas?

Insofar Polar Code provisions are considered to quality as generally accepted international rules, coastal states may apply UNCLOS Art 211 (5), the general provision of UNCLOS to prevent pollution from vessels, to adopt and enforce law and regulations for the prevention, reduction and control of marine pollution from foreign vessels.¹³¹

¹³⁰ McDorman, above n 123, p. 144.

¹²⁷ Considering how Arctic water becomes ice free for longer periods, the International Chamber of Commerce in 2014 called for a clarification on the scope of Art 234; "[q]uestions need to be resolved about the rights of coastal States to enforce unilateral laws and charges when Arctic waters are indeed "ice free", the definition of "ice free", and the extent to which hazards to navigation may be regarded as "exceptional" during ice free periods". "Position Paper on Arctic Shipping (2014)", the International Chamber of Commerce: http://www.ics-shipping.org/docs/default-source/resources/policy-tools/ics-position-paper-on-arctic-shipping.pdf?sfvrsn=20 (last viewed 24.8.16).

¹²⁸ Henriksen, above n 41, p. 380.

¹²⁹ Ibid. p. 381.

¹³¹ UNCLOS, Art 211.

More specifically, Art 211 (5) gives costal right to "adopt laws and regulations for the prevention, reduction and control of pollution" from vessels "conforming to and giving effect to generally accepted international rules and standards established through the competent international organization", thus Arctic coastal state may not have to look to the requirements of Art 234, but may instead turn to the general provision on pollution prevention in UNCLOS to adopt stricter environmental standards and rules in Arctic waters.

An immediate advantage of applying the Polar Code through Art 211 to establish pollution prevention measures, is that the criteria on due regard and best scientific evidence no longer directly applies. As long as measures conform to generally internationally accepted standards, domestic legislation will be recognized.

On the other hand, Art 234 make no mention of generally internationally accepted rules. Whereas several provisions in UNCLOS make use of the method to refer to internationally accepted rules and standards for further elaboration and scope of action, no mention of such consideration is included in the provision on "ice-covered areas". Therefore, expecting Art 234 to harmonize with generally accepted rules and standards on the basis of the requirement to have "due regard" seemingly goes against the provision wording.¹³²

The relation between Art 234 and the Polar Code was specifically addressed by Canada and the Russian Federation in the negotiations of the Polar Code. ¹³³ Canada and Russia are the only Arctic coastal states that up to this point have enacted national legislation pursuant to Art 234, and in their line of arguments, the need to recognise that domestic rules and legislation under certain circumstances should be granted priority has been emphasised. ¹³⁴

Portraying another view, the International Chamber of Shipping (ICS) in the 2014 Position Paper on Arctic Shipping, under the heading "Full market access and freedom of navigation", underlined the importance of avoiding "[u]nilateral, national or regional regulations governing ship safety, environmental protection and other shipping matters". ¹³⁵ Moreover,

¹³² Jensen, above n 29, sect. 5.

¹³³ McDorman, above n 123, p. 144.

¹³⁴ Ibid. p. 145.

¹³⁵ The International Chamber of Commerce, above n 127, sect. 3.

ICS promoted that "the status of Arctic waters needs to be clarified at the United Nations level". 136

According to the 1969 Vienna Convention on Law of Treaties, later treaty provisions will supersede earlier treaty provision in cases where the same signatories are parties to both treaties and provisions in the two treaties are conflicting.¹³⁷ ¹³⁸ On this account, it has been noted that "[i]f the Polar Code is set up as treaty, it will be binding for the states that accept it. Such states can no longer invoke as a basis for regulatory jurisdiction beyond what would be permitted under the Polar Code".¹³⁹ Based on this reasoning, the Polar Code would replace any rights presumed by Arctic coastal states following Art 234.¹⁴⁰

Considering this, a question that needs to be examined is whether there exists a conflict of law between the Polar Code and Art 234. The Polar Code will become binding by amendments to MARPOL and SOLAS. It is therefore necessary to assess how these conventions are intended to interact with other instruments.

SOLAS originally did not include a relationship clause. With the adoption of a new chapter XIV, a formulation was included in the last stages of negotiations, addressing rights arising from other instruments. Regulation 2 (5) states:

"Nothing in this chapter shall prejudice the rights or obligations of States under international law".

A natural understanding of the wording supports that rights and duties of states following other instruments such as Art 234 of the UNCLOS shall not be affected by the entering into force of the Polar Code. ¹⁴¹

¹³⁶ Ibid. sect. 5.

¹³⁷ Vienna Convention on Law of Treaties, Art 30 (3).

¹³⁸ McDorman, above n 123, p 145.

¹³⁹ O. K. Fauchald "Regulatory Frameworks for Maritime Transport in the Arctic: Will a Polar Code Contribute to Resolve Conflicting Interests?", Maritime Transports in the High North, The Norwegian Academy of Science and Letters (NASL) and Norwegian Academy of Technological Sciences (NTVA) 2011, p. 83.

¹⁴⁰ McDorman, above n 123, p.145

¹⁴¹ Jensen, above n 29, sect. 5.

A similar formulation has already been included in SOLAS Chapter XI-2, Regulation 2 (4) on special measures to enhance maritime safety. A non-typical relationship clause, it has still been concluded that the legal consequence of including such a provision will be that "other treaties binding on the parties would take precedence over the content of [the chapter]". 142

As regards MARPOL, no special provision has been established for the amendments of the Polar Code. It is therefore necessary to turn to the general provision addressing other treaties and interpretation, Art 9 (2):

"Nothing in the present Convention shall prejudice the codification and development of the law of the sea by the United Nations Conference on the Law of the Sea convened pursuant to Resolution 2750C (XXV) of the General Assembly of the United Nations nor the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag State jurisdiction".

Similar to the formulation included in SOLAS, the relationships clause seemingly supports that states' rights as well as obligations following UNCLOS shall not be affected by the Polar Code provision made binding by amendments to MARPOL. 143 Therefore, no conflict exists between the binding parts of the Polar Code and Art 234.

4.3.3 Does the Polar Code restrict the application of Art 234?

Although the Polar Code as such does not dismiss Art 234, it has been argued that the set conditions, that laws and regulations should have "due regard to navigation and the protection and preservation of the marine environment" and be based on the "best available scientific evidence", essentially entail a limitation on Arctic coastal state powers to enact legislation in ice-covered areas. 144

¹⁴² McDorman, above n 123, p.153.

¹⁴³ Jensen, above n 29, sect. 5.

¹⁴⁴ Henriksen, above n 41, p. 381.

More specifically, this issue becomes apparent in matters where provisions of the Polar Code have a different approach or character than domestic laws and regulations established in accordance with Art 234.

One example of this concerns depositing of waste in Arctic waters. Whereas Canada in accordance with the Arctic Waters Pollution Prevention Act has a general ban on waste of any type, the Polar Code establishes a more nuanced system whereby discharge of certain categories of waste is permitted. 145 146 Ice classification of vessels operating in polar waters is another area where regulations set by national authorities of Arctic coastal states, in this case both Canada and Russia, may result in stricter rules for ice-covered areas within these state's EEZ than polar waters in general. 147 148

In any case, domestic legislation following Art 234 must have due regard to navigation and be based on best scientific evidence. Whereas due regard entails balancing between navigation on one hand, and protection and preservation of the marine environment on the other, the condition regarding best scientific evidence implies a careful consideration of available data and at the same time, a continuous surveillance of whether requirements actually meet set objectives.

By establishing a mandatory Polar Code, a level playing field for ships operating in harsh polar waters has been south - "to increase the safety of ships' operation and mitigate the impact on the people and environment". It has been suggested that Art 234 might be viewed as a "safety-net" for Arctic coastal states that deem it necessary to establish a higher protection level than provided by the Polar Code. 150

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¹⁴⁵ Ibid.

¹⁴⁶ Arctic Waters Pollution Prevention Act, Section 4. In comparison to the Polar Code, Part II-A, Chapter 5.

Rules of navigation in the water area of the Northern Sea Route (Annex 2) in compliance with Code of commercial navigation of the Russian Federation and the Arctic Shipping Pollution Prevention Regulations Section 6 in compliance with the Arctic Waters Pollution Prevention Act.

¹⁴⁸ Henriksen, above n 41, p. 382.

¹⁴⁹ Polar Code, Preamble, para 1.

¹⁵⁰ Jensen, above n 29, sect. 5.

The Polar Code, as most international treaties and conventions, is the result of political compromises and a balancing act of protection and safety on the one side and freedom of navigation on the other side. Because of this, it is hardly surprising that some elements ended up vaguer or less strict than expected or hoped for.¹⁵¹

By still accepting that Arctic coastal states still have the possibility to employ stricter standards to environmental protection than what is introduced by the Polar Code, the international community acknowledges that the regulatory regime introduced by the mandatory Polar Code has not been finally concluded.

5 Concluding remarks

As the 2000s had just ended, a commentary in *Foreign Policy* addressed some of the then believes and assumptions about a coming, seemingly unavoidable gold rush in the Arctic. ¹⁵² Among issues pointed to, was whether or not the Arctic would soon become a "shipping superhighway". ¹⁵³

Despite advantageous prospects of reduced sailing time, cost savings and fewer security concerns, it was argued that the majority of voyages in the Arctic the coming years would probably be destinational, and that the key challenge to navigation should concern developing rules that safeguards the environment and people living in the region.¹⁵⁴

Six years on, it can be concluded that the author was right on (at least) two accounts. Firstly, since a peak in 2013, neither the Northern Sea Route nor the Northwest Passage can show for a great number of voyages. The second point, the necessity of establishing rules regulating polar navigation in 2017 reaches a historic milestone.

¹⁵¹ Ibid.

 $^{^{152}}$ L.W. Brigham, "Think Again. The Arctic", 181 Foreign Policy, Sep./Oct. 2010:

http://foreignpolicy.com/2010/08/06/think-again-the-arctic/ (last viewed 20.8.16).

¹⁵³ Ibid.

¹⁵⁴ Ibid.

By august 2016 it is clear that the International Code for Ships Operating in Polar Waters will enter into force January 1, 2017. After some twenty years in the making, the Polar Code is the result of political compromises and a balancing act of protection and safety on the one side and freedom of navigation on the other side.

The Polar Code represents a new addition to the regulatory regime of international navigation. Whereas mandatory provisions of the Polar Code may qualify as generally accepted international rules and standards, and therefore secure application by means of rules of reference in UNCLOS, the recommendatory parts of the Code for now is considered to be limited to providing guidance and best practices on polar navigation.

The Polar Code does not dismiss the extended environmental jurisdiction granted Arctic costal states, nonetheless, in matters where provisions of the Polar Code have a different approach or character than domestic laws and regulations, established in accordance with Art 234, there might be need for adjustments to ensure a coherent and navigable regime.

The future of polar shipping is difficult to foresee and therefore difficult to regulate. The Polar Code offers no quick fixes or ultimate solutions. Instead, the success of the instrument will rely on how states adhere to and implement prescribed measures on ships safety and environmental protection. The risk-based/ goal-based approach is an acknowledgement of the fact that polar navigation still, is an endeavour connected with uncertainty and risks.

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