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Safety Regulation of Seaborne Tourism in the Arctic

SOLAS, The Polar Code, Soft Law and the Viking Sky

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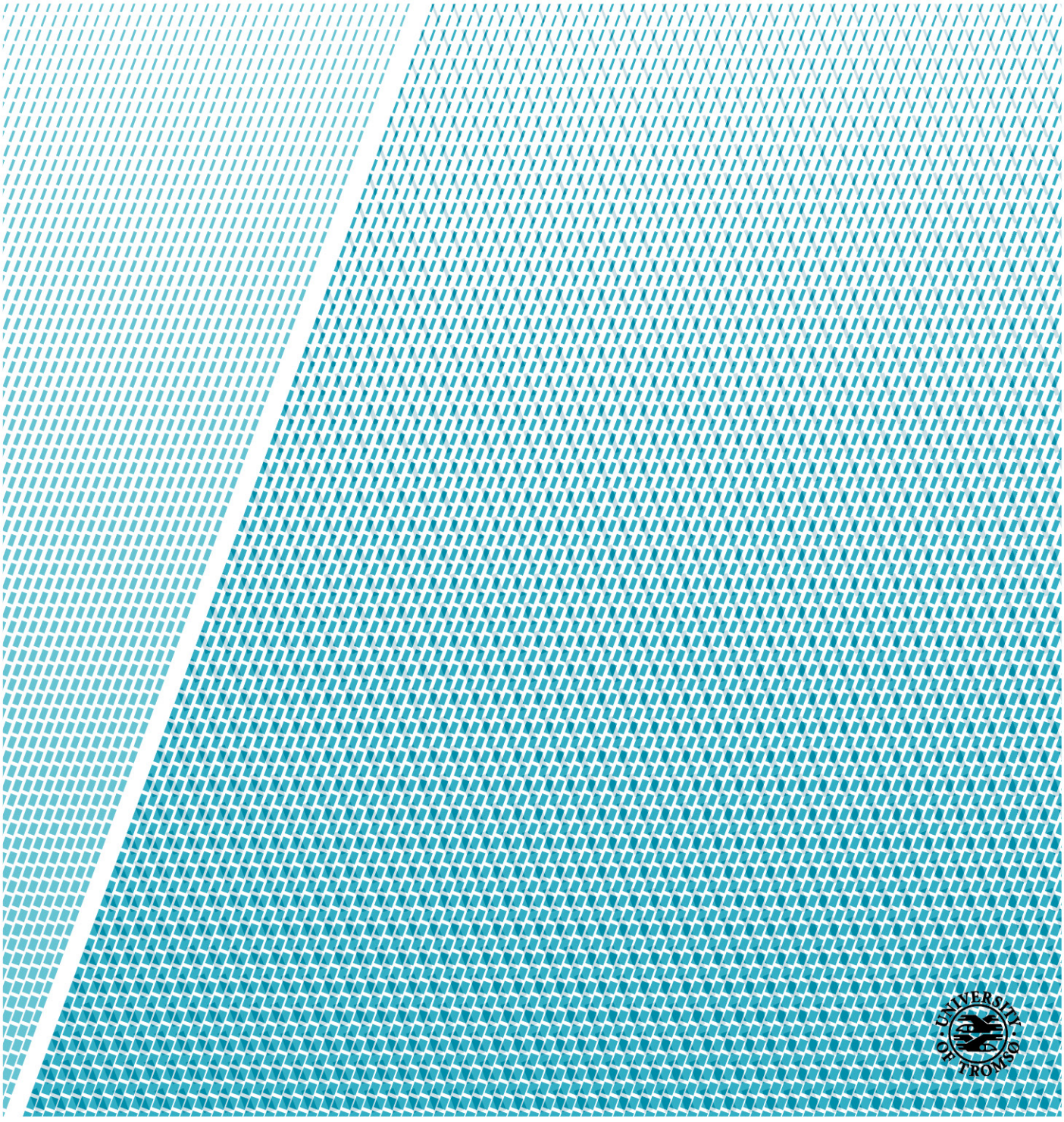

Table of Contents

Abbreviations

ACGF	Arctic Coast Guard Forum
AECO	Association of Arctic Expedition Cruise Operators
AMTP	Arctic Marine Tourism Project
ARCSAR	Arctic and North Atlantic Security and Emergency Preparedness Network
CDEM	Construction, Design, Equipment and Manning
CLIA	Cruise Lines International Association
EEZ	Exclusive Economic Zone
EPPR	Working Group on Emergency Prevention, Preparedness and Response
GAIRAS	Generally Accepted International Rules and Standards
IAATO	International Association of Antarctica Tour Operators
IACS	International Association of Classification Societies
ICJ	International Court of Justice
IMO	International Maritime Organization
LOSC	United Nations Convention on the Law of the Sea
MARPOL	International Convention for the Prevention of Pollution from Ships
MEPC	Marine Environment Protection Committee
MOSPA	Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic
MSC	Marine Safety Committee
NGO	Non-governmental organization(s)
Nm	Nautical Miles
PAME	Working Group on Protection of the Arctic Marine Environment
Polar Code	International Code for Ships Operating in Polar Waters
PWOM	Polar Water Operational Manual
SAR	Search and Rescue (Services)
SOLAS	International Convention for the Safety of Life at Sea
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UNTS	United Nations Treaty Series
VCLT	Vienna Convention on the Law of Treaties
WWF	World Wildlife Fund

1 Introduction

1.1 Safety at Sea in the Arctic

Safety at sea is predominantly governed by the 1974 International Convention for the Safety of Life at Sea (SOLAS).[1] It was adopted through the International Maritime Organization (IMO) and is 'generally regarded as the most important of all international treaties concerning the safety of merchant ships'.[2] SOLAS was first adopted in 1914 as a reaction of the international community to the 1912 *Titanic* disaster. Until the present day, it has, through numerous updates and amendments, evolved into its fifth version and arguably made life at sea safer.[3]

In comparison with other regions, operating ships in polar waters is known to be a lot more challenging, difficult and potentially dangerous. Nevertheless, the SOLAS convention only contains a very limited number of provisions that are specific to the polar areas.[4] However, particularly in the Arctic, maritime traffic for both cargo shipping and tourism-based shipping, has been increasing heavily in recent years.[5] This increase, and related safety concerns, have therefore become heavily discussed topics in mainstream media[6] as well as in international law literature.[7]

The International Code for Ships Operating in Polar Waters[8] (Polar Code) is a regulation instrument addressing safety and pollution related to shipping in polar waters. After being long awaited and debated, its legally binding parts finally entered into force in 2017. But discussions

[1] International Convention for the Safety of Life at Sea, adopted 1 November 1974, entered into force 25 May 1980, 1184 UNTS 2.
[2] IMO, *International Convention for the Safety of Life at Sea (SOLAS)* available at http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Safety-of-Life-at-Sea-(SOLAS),-1974.aspx (accessed 20 June 2019).
[3] See A Chircop, 'The International Maritime Organization' in DR Rothwell et al (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 416, p 436.
[4] H Deggim, 'Ensuring Safe, Secure and Reliable Shipping in the Arctic Ocean' in PA Berkman and AN Vylegzhanin (eds), *Environmental Security in the Arctic Ocean* (Springer Science+Business Media Dordrecht 2013) 241, pp 242-244.
[5] TL Mc Dorman, 'The Safety of Arctic Navigation in the Arctic Ocean and the Role of Coast Guards: The International Legal and Institutional Context' (2014) 2 *Korean Journal of International and Comparative Law* 27, p 28.
[6] See eg The Barents Observer, *A wave of expedition ships set sail towards Svalbard in 2020* (17 June 2019) available at https://thebarentsobserver.com/en/node/5476 (accessed 22 June 2019).
[7] For an up-to-date overview see J Hartmann, 'Regulating Shipping in the Arctic Ocean: An Analysis of State Practice' (2018) 49:3 *Ocean Development & International Law* 276-299.
[8] IMO, *Report of the MEPC on its 68th Session,* MEPC 68/21/Add. 1 Annex 10 (5 June 2015) available at http://www.imo.org/en/MediaCentre/HotTopics/polar/Documents/POLAR%20CODE%20TEXT%20AS%20ADOPTED.pdf (accessed 20 June 2019).

did not end with this, as authors kept on pointing out weaknesses and shortcomings of the Polar Code.[9]

Besides these legally binding instruments, the sector of cruise shipping in the Arctic is particularly governed and influenced by self-regulation of non-state actors, and soft-law instruments are therefore part of the regulation regime.

Additionally, an incident in March 2019 served as a serious wake-up call concerning safety in case of an emergency related to Arctic cruise ship tourism: The passenger cruise ship *Viking Sky*, carrying 1373 people, experienced an engine failure and was floating, unable to maneuver, in stormy waters off the west coast of Norway. Rescue forces realized that they were not trained for incidents of this scale and that they were lucky that there were no fatalities and that, had this kind of incident happened further North, in a remote location in the Arctic, they would not have been able to respond as rapidly.[10]

These points raise the question whether the sector of safety for cruise ship passengers in Arctic waters is regulated adequately. This thesis therefore examines the current international safety regulation applicable to seaborne tourism in the Arctic, identifies possible shortcomings and recommends how and by whom they could be addressed in future regulation. In simple words, this thesis asks: Is the current regulation of cruise ship tourism enough to ensure the safety of passengers in the Arctic?

1.2 Scope

1.2.1 Use of Terms

This thesis employs the following terms according to the definitions indicated hereunder:

- *regulation:* The umbrella term *regulation* is used to refer to the entirety of both legally binding and non-binding regulation instruments (conventions, laws, recommendations, guidelines and others) applicable to a specific sector. While traditionally, law has been thought of as legal rules that are applied by courts, this perception has changed, and

[9] See eg S Kirchner, 'Beyond the Polar Code: Enhancing Seafarer Safety along the Northern Sea Route' (2018) 11(3) *Journal of Siberian Federal University. Humanities & Social Sciences* 365-373.
[10] See The Barents Observer, *The Viking Sky incident – A wake-up call for the Arctic cruise industry?* (26 March 2019) available at https://thebarentsobserver.com/en/travel/2019/03/viking-sky-incident-wake-call-arctic-cruise-industry (accessed 10 July 2019); for an in-depth analysis of the incident see Arctic Council, *Put into reality: EPPR looks into the VIKING SKY incident* (20 August 2019) available at https://arctic-council.org/index.php/en/our-work2/8-news-and-events/539-put-into-reality-eppr-looks-into-the-viking-sky-incident (accessed 28 August 2019).

different forms of regulation are now considered a part of modern law: 'In order to obtain a full understanding of the regulatory framework of a sector, it is necessary to consider non-state regulators that operate within it.'[11] Hereby, both regulation by state actors as well as self-regulation by non-state actors such as companies, large organizations, collective associations, technical committees, and professions are included: 'Self-regulation needs to be recognized as a form of regulation.'[12] As presented in chapter 2, the sector of cruise shipping in the Arctic is particularly governed and influenced by self-regulation of non-state actors, such as industry associations or NGO.

- *soft law:* The term *soft law* is used for instruments of regulation that are done by non-state actors and that have not been enacted as 'unilateral acts of States and international organizations'.[13] While such regulation is not in 'one of the recognised forms in which international law is expressed', its substance can nevertheless constitute a rule of law.[14] Thus, the consideration of soft law instruments as a source of law under Article 38 of the Statute of the International Court of Justice (ICJ-Statute), [15] is illustrated in chapter 1.5 below, and a brief discussion of soft law and its relation to legally binding regulation introduces chapter 2 below.

- *(passenger) safety:* In paragraph 1 of its introduction, the Polar Code sets the goal 'to provide for *safe* ship operation […] by addressing risks present in polar waters'. Further, paragraph 3 of the introduction lists a number of hazards (such as ice, icing, low temperatures, high latitude, remoteness, potential lack of crew experience, and others) that are of high probability to occur in the polar regions. In other words, whenever the hazards listed in paragraph 3 of the introduction chapter are addressed in an adequate manner, the Polar Code deems a ship's operation to be safe. This thesis adopts this definition under the term *safety* (of cruise ship passengers).

[11] B Barton, 'The Theoretical Context of Regulation' in B Barton et al (eds), *Regulating Energy and Natural Resources* (Oxford University Press 2006) 11, pp 15-16.
[12] Ibid p 23.
[13] See A Pellet, 'Part Three Statute of the International Court of Justice, Ch. II Competence of the Court, Article 38' in A Zimmermann et al (eds.) *The Statute of the International Court of Justice: A Commentary (2nd Edition)* (Oxford Commentaries on International Law 2012) 731 p 763 [90].
[14] See O Elias and C Lim, 'General principles of law', 'soft law' and the identification of international law' (1997) 28 *Netherlands Yearbook of International Law* 3, pp 45-49.
[15] Statute of the International Court of Justice, adopted 26 June 1945, entered into force 24 October 1945, 1 UNTS XVI.

– *emergency:* The Polar Code does not provide any definition of the term *emergency*. Rather, from the context this term can be understood in a way that it describes the functioning of a ship in any other way than normal operation.[16] Based on its focus on the Arctic, this thesis uses *emergency* for any incident with a ship where evacuation of passengers is required and/or their survival could become an issue. This could include both an *emergency condition* as well as a *dead ship condition* as defined in SOLAS.[17]

– *Seaborne/cruise ship tourism:* SOLAS defines a passenger ship as 'a ship which carries more than twelve passengers', while a passenger is every person other than the ship's crew members.[18] '[Any] ship which is not a passenger ship' is defined as a cargo ship, while cargo ships of less than 500 gross tonnage do not fall under SOLAS.[19] Based on these legal definitions, this thesis understands *seaborne tourism in the Arctic* as any form of passenger shipping in the Arctic. There is no legal definition of *cruise ship* to be found anywhere. Therefore, this is understood as a larger passenger ship carrying anywhere from several hundred up to several thousands of passengers.

1.2.2 Geographical Scope

Most of the regulation instruments examined in this thesis are applicable either in all international waters around the globe, or at least in both the polar areas (the Arctic as well as the Antarctic). Also, regulation particularly for shipping is strongly interrelated in the two polar regions.[20] However, Antarctic waters are predominantly governed by the Antarctic Treaty[21] and its corresponding agreements (in its entirety referred to as the *Antarctic Treaty System*).[22] In this respect, they follow their own legal regime which is not taken into consideration for this thesis. It rather focuses on the Arctic and only references selected aspects of the legal regime applicable to the Antarctic. An extensive comparison of the legal regimes applicable to the Arctic and the Antarctic is not made.

[16] See eg Polar Code, n 8, Part I-A, para 10.1.
[17] SOLAS, Chapter II-1, Regulation 3 (6.) and (8.).
[18] Ibid, Chapter I, Regulation 2 (f) and (e).
[19] Ibid, Chapter I, Regulation 2 (g) and Regulation 3 (a) (ii).
[20] EJ Molenaar, DR Rothwell and AG Oude Elferink, 'Interactions between Global and Regional Regimes' in EJ Molenaar, AG Oude Elferink and DR Rothwell (eds), *The Law of the Sea and the Polar Regions* (Martinus Nijhoff Publishers Leiden/Boston 2013) 389 p 410.
[21] The Antarctic Treaty, adopted 1 December 1959, entered into force 23 June 1961, 402 UNTS 71.
[22] See SV Scott, 'The Evolving Antarctic Treaty System: Implications of Accommodating Developments in the Law of the Sea' in EJ Molenaar, AG Oude Elferink and DR Rothwell (eds), *The Law of the Sea and the Polar Regions* (Martinus Nijhoff Publishers Leiden/Boston 2013) 17, p 17.

There is no universally valid legal definition of the terms *Arctic* and *Arctic waters*. This thesis refers to *Arctic waters* as defined in SOLAS Chapter XIV Regulation 1.3[23] and visually illustrated by a map in the introduction chapter of the Polar Code:[24]

Arctic waters as illustrated in the Polar Code[25]

1.2.3 Legal Scope

The Polar Code, as the most prominent regulation instrument governing the safety of shipping in polar waters, declares as its goals both 'to provide for safe ship operation and the protection of the polar environment'. It also acknowledges that these goals are interrelated: '[Any] safety measure taken to reduce the probability of an accident, will largely benefit the environment'.[26] This thesis however, as a consequence from the research question formulated below, only examines regulation concerning safety for ship operation. It does not analyse the protection of

[23] IMO, *Amendments to the International Convention for the Safety of Life at Sea, 1974, as amended*, Resolution MSC.386(94), IMO Doc MSC 94/21/Add.1 Annex 7 (21 November 2014).
[24] For the legal relation between the Polar Code and SOLAS, see chapter 2.2.3 below.
[25] Illustration: Polar Code, n 8, Introduction, Figure 2.
[26] Ibid, Preamble, para 5.

the marine environment. Further, this thesis focuses on passenger cruise shipping in the Arctic and does not cover cargo shipping (as defined in SOLAS, Chapter I, Regulation 2 (f) and (g)).

Article 234 of the United Nations Convention on the Law of the Sea (LOSC)[27] allows coastal states to adopt and enforce special environmental laws for ice-covered areas in their EEZ. Based on this provision, several states have adopted domestic legislation applicable to shipping in the respective state's territorial sea and EEZ.[28] However, particularly in the Arctic, this type of unilateral action bears the risk of fragmentation of regulation that might lead to in incompatible rules and standards across different states.[29] This thesis holds the view that for the selected issue of passenger shipping in the Arctic, such fragmentation and complexity should be avoided and it should rather be regulated 'by means of pro-active and all-encompassing frameworks'.[30] It therefore only considers international regulation and does not examine the different domestic legal regimes.

1.3 Research Questions

The research question addressed in this thesis is: *Are the current regulation instruments applicable to seaborne tourism in the Arctic adequate to ensure the safety of passengers on cruise ships?*

More in detail, the Polar Code formulates the goal to 'provide for safe ship operation […] by addressing risks present in polar waters'.[31] This thesis compiles and assesses the current regulation instruments, both of a legally binding and not binding nature. It then examines whether this goal can be achieved in case of cruise ships sailing in remote locations in the Arctic. Where this is found to not be the case, recommendations for future regulation are indicated.

Three specific research subquestions can therefore be formulated:

[27] United Nations Convention on the Law of the Sea, adopted 10 December 1982, entered into force 16 November 1994, 1833 UNTS 397.
[28] For an extensive comparative analysis of such domestic laws see Hartmann, n 7.
[29] L Boone, 'International Regulation of Polar Shipping' in EJ Molenaar, AG Oude Elferink and DR Rothwell (eds), *The Law of the Sea and the Polar Regions* (Martinus Nijhoff Publishers Leiden/Boston 2013) 193, p 214.
[30] Molenaar, Rothwell and Oude Elferink, n 20, p 400; see also J Dawson, M Johnston and E Stewart, 'The unintended consequences of regulatory complexity: The case of cruise ship tourism in Arctic Canada' (2017), 76 *Marine Policy* pp 71-78.
[31] Polar Code, n 8, Introduction, para 1.

1. *What is the current international regulation, of both legally binding and non-binding nature, governing the safety of passengers on cruise ships in the Arctic?*
2. *What are potential gaps and shortcomings of current international regulation governing the safety of passengers on cruise ships in the Arctic?*
3. *How, and by whom, should such gaps and shortcomings be addressed, and how can the current regulation of seaborne tourism in the Arctic be improved?*

1.4 Methodology

In accordance with the research questions formulated above, this thesis mainly applies a doctrinal approach: It first analyses of the international regulation regime currently applicable to the sector of seaborne tourism in the Arctic. Based on this analysis, possible aspects where future regulation should be improved are indicated. Both are done with respect to the overarching regulation goal of passenger safety.

Where needed, interpretation of the regulation sources employed is done according to Section 3 of the Vienna Convention on the Law of Treaties (VCLT).[32] In particular, the provisions of VCLT Article 31 (2.) (b) and Article 31 (3.) are used with regard to soft-law instruments and the treaties they are connected to.

1.5 Sources

The law of the sea and the LOSC do not exist in isolation, but are rather to be understood and applied as a part of the system of international law. The preamble of the LOSC even states that 'matters not regulated by [the LOSC] continue to be governed by the rules and principles of general international law'. This means that for issues not explicitly regulated within the LOSC (such as the law of treaties), one has to refer to more general rules of international law.[33] By these means, ICJ-Statute Article 38 can be referenced. This provision lists the various sources of law that the International Court of Justice (ICJ) shall apply.

ICJ-Statute Article 38, after setting 'international conventions' as the primary source of law (a.), also refers to 'international custom' and 'general principles of law recognized by civilized

[32] Vienna Convention on the Law of Treaties, adopted 23 May 1969, entered into force 27 January 1980, 1155 UNTS 331.
[33] BH Oxman, 'Courts and Tribunals: The ICJ, ITLOS and Arbitral Tribunals' in DR Rothwell et al (eds), *The Oxford Handbook of the Law of the Sea* (Oxford University Press 2015) 394 p 413.

nations' (b. and c.) as well as further subsidiary sources (d.). This list is, however, today regarded as incomplete and there are other valid sources of law:

> In practice, the Court does rely on manifestations of the rights and obligations of the subjects of international law concerned […] other than the sources listed in this provision—at least unilateral acts of States and international organizations.[34]

Based on this finding, depending on the context, other sources than those explicitly specified in ICJ-Statute Article 38 may be applied as 'quasi-sources' of law: '[It] is suggested that recommendations made by organs of international organizations vis-à-vis their members can be analysed as 'quasi-formal sources of law'.'[35]

> And, indeed, as part of 'international *soft law*', recommendations produce legal effects, not only as part of the customary process, but also in and by themselves. First, […] 'while not bound to accept the recommendation, [the addressee] is bound to give it due consideration in good faith. If … it decides to disregard it, it is bound to explain the reasons for its decision.' Second, […] although 'it is in the nature of recommendations that … they do not create a legal obligation to comply with them, … on proper occasions they provide a legal authorization for Members determined to act upon them individually or collectively'.[36]

This thesis therefore considers specific soft law instruments governing seaborne tourism in Arctic waters as sources of law under ICJ-Statute Article 38.

Furthermore, corresponding with the scope set out above, this thesis does not employ any sources of domestic law.

[34] Pellet, n 13, p 763 [90].
[35] Ibid, p 771 [106].
[36] Ibid, p 772 [107].

1.6 Structure

After the introduction in the current chapter, the second chapter of this thesis addresses the first research subquestion: International law and further regulation currently applicable to the safety of seaborne tourism in the Arctic is compiled and the various institutions and bodies and their mandates and roles are described.

The third chapter assesses this regulation currently applicable and examines whether it is adequate to ensure such safety. As the second research subquestion stipulates, potential gaps and shortcomings are hereby identified.

The fourth chapter, in line with the third research subquestion and based on the previous chapter's findings, suggests possible improvements to be taken into account for future regulation.

An overall conclusion completes this thesis as the fifth and final chapter.

2 Current Regulation of Seaborne Tourism in the Arctic

2.1 Introduction

What is the current international regulation, of both legally binding and non-binding nature, governing the safety of passengers on cruise ships in the Arctic?

This chapter examines how the safety of passengers on cruise ships in the Arctic is currently regulated. As a basic principle, a distinction can be made between legally binding regulation instruments and instruments that are technically not legally binding.

On one hand, the category *legally binding* covers regulation instruments that are explicitly listed in ICJ-Statute Article 38 (1.) (a.), i.e. international conventions of either a general or a particular type. On the other hand, regulation instruments by non-state actors that are neither explicitly listed in ICJ-Statute Article 38 nor enacted as 'unilateral acts of States and international organizations' are referred to as non-binding, or *soft law*, instruments.[37]

Before the entry into force of the mandatory part of the Polar Code, seaborne tourism in Polar waters was not regulated in detail by any legally binding instruments. Therefore, this sector was, and beyond the Polar Code still is, particularly relying on regulation in the form of self-regulation by the tourism industry, or *soft law*.[38] However, the distinction between legally binding and non-binding instrument is not always obvious. Soft law can produce a legal effect that is similar to the one of legally binding instruments, and be applied the same way as *hard law* in this case: '[Although] 'soft' law is not really law, […] it nevertheless is not legally irrelevant.'[39] In the *Nicaragua* case,[40] the ICJ relied partly on soft law instruments as evidence of state practice for customary rules of law, and from this perspective, 'most of what is termed 'soft' law is not soft law, but is simply evidence of what the law is on a given matter'.[41]

It must therefore be pointed out that the distinction between legally binding and non-binding regulation cannot be viewed as absolute and that these two categories are highly interrelated.[42] The Polar Code itself, as an example of this interrelation, references soft law instruments

[37] See Pellet, n 13, pp 763-774; see also chapter 1.5 above.
[38] For the situation in the Antarctic see EJ Molenaar, 'Sea-Borne Tourism in Antarctica: Avenues for Further Intergovernmental Regulation' (2005) 20 *The International Journal of Marine and Coastal Law* 247-295.
[39] Elias and Lim, n 14, p 48.
[40] *Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v United States of America) (Merits, Judgement)* [1986] ICJ Rep 14, pp 106-108 [202-205].
[41] Elias and Lim, n 14, p 47.
[42] See B Fløistad, L Lothe and Ocean Futures, 'Ocean law, coastal waters, jurisdictional controversies – indigenous peoples' rights' in W Ostreng et al, *Shipping in Arctic Waters: A comparison of the Northeast, Northwest and Trans-Polar Passages* (Springer Verlag Berlin Heidelberg 2013) 241, p 246.

developed by private actors: Particularly in its provisions regarding ship structure, the Polar Code makes references to standards developed by the International Association of Classification Societies (IACS), 'an organization consisting of 12 global marine classification societies' that, in this respect, has to be regarded as a non-state actor.[43]

2.2 Legally Binding Instruments

2.2.1 The United Nations Convention on the Law of the Sea

Unlike in the Antarctic, in the Arctic there is no central landmass, no Arctic continent, to be found. The major part of what lies inside the area defined as *Arctic waters* by the Polar Code is just that – waters.[44] To this effect, Arctic waters do not differ from any other ocean around the world. There is also no comprehensive regional treaty covering the Arctic waters, as is the case in the Antarctic (with the Antarctic Treaty System).[45] Arctic waters are therefore, on a fundamental level, regulated by the LOSC as a framework convention, but rely on further implementation through more specific regulation instruments:

> Most of the shipping provisions contained in the LOS Convention are of a general nature and need to be implemented through specific regulations in other international agreements. It makes use of a system of 'rules of reference', referring to the 'competent international organizations' and the notion 'generally accepted international rules and standards' (GAIRAS). The 'rules of reference' serve to protect the delicate balance between the rights of coastal States and their environmental interests on the one hand and the exercise of freedom of navigation by flag States on the other.[46]

As a basic principle, under the LOSC, coastal states are entitled to several maritime zones in the waters adjacent to their coastlines: Subject to the exception of archipelagic states, any waters on the landward side of the baselines are generally considered *internal waters* under the LOSC.[47] The baselines are normally defined by the low-water line along a state's coast.[48] Further, coastal states can have a *territorial sea* of a maximum of 12 nm measured from the

[43] Ø Jensen, 'The International Code for Ships Operating in Polar Waters: Finalization, Adoption and Law of the Sea Implications' (2016) 7 *Arctic Review on Law and Politics* 60 p 69.
[44] See illustration map in chapter 1.2.2 above.
[45] Boone, n 29, p 202.
[46] Ibid, p 194.
[47] LOSC, Art 8.
[48] Ibid, Art 5 and Art 7.

baselines,[49] a *contiguous zone* extending to up to 24 nm from the baselines,[50] and an *EEZ* of maximum 200 nm from the baselines.[51] Any other parts of the sea that do not fall under those maritime zones are considered *high seas* under the LOSC.[52]

There are a number of high seas[53] areas to be found in the Arctic. However, large parts of the Arctic waters belong to one of the five Arctic coastal states' (Canada, Denmark/Greenland, Norway, the Russian Federation and the United States) territorial sea[54] or EEZ.[55] The way these maritime zones are arranged results in the fact that the Arctic high seas areas can only be accessed by ships by prior navigation through another state's EEZ. For this reason, the high seas areas in the Arctic are so-called *zone-locked*.[56] Therefore, sailing in Arctic waters, even if eventually meant to be done in one of the high seas areas, cannot be done without at least temporarily 'sailing in waters which are under some form of coastal state jurisdiction'.[57]

Within its internal waters, the 'coastal state's sovereignty equals that of its land territory'.[58] This means that for its internal waters, the coastal state can regulate any matter, including passenger shipping, at its own discretion.

For its 12 nm territorial sea, the LOSC grants the coastal state exclusive jurisdiction to regulate the innocent passage of foreign-flagged vessels as provided for in LOSC Article 21. This includes, amongst other sectors, the safety of navigation. If such regulation concerns construction, design, equipment and manning of vessels (CDEM), it must, however, not be any more stringent than GAIRAS.[59] In its territorial sea, the coastal state also has the right to further regulate shipping traffic by designating sea lanes and traffic separation schemes.[60] For the contiguous zone, the coastal state only has jurisdiction to prevent and enforce infringements of its domestic customs, fiscal, immigration or sanitary laws and regulations.[61]

[49] LOSC, Art 3.
[50] Ibid, Art 33 (2.).
[51] Ibid, Art 55-57.
[52] Ibid, Art 86.
[53] As defined in LOSC, Art 86.
[54] As defined in LOSC, Part II, Sections 1 and 2.
[55] As defined in LOSC, Art 55 ff.
[56] Hartmann, n 7, n 4 (p 292).
[57] Fløistad, Lothe and Ocean Futures, n 42, p 242.
[58] Ibid.
[59] Ibid.
[60] LOSC, Art 22.
[61] Ibid, Art. 33.

In the EEZ, in general the coastal state has sovereign rights to explore and exploit, conserve and manage all kinds of natural resources.[62] At the same time all states enjoy, amongst other rights, the freedom to navigate in another state's EEZ.[63] Nevertheless, the coastal state has certain jurisdictive powers in its EEZ: It may, amongst others, regulate 'the protection and preservation of the marine environment'.[64] Even though it is not its main purpose and object, such regulation might potentially also have an effect on the safety of shipping. In any case, such regulation 'shall have due regard to the rights and duties of other States' and the coastal state 'shall act in a manner compatible with the provisions of the [LOSC]'.[65]

An important exception to this rule exists however in LOSC Art 234, being the only provision of the LOSC that specifically mentions 'ice-covered areas' and hereby refers to a feature only present in the polar regions. While it is debated if this provision is applicable to the Antarctic or not, there is no doubt about its applicability to the Arctic.[66] This provision gives coastal states the right 'to unilaterally adopt and enforce more stringent rules and regulations [than GAIRAS]'[67] in ice-covered areas within their EEZ. A number of further requirements has to be met, and the rules and regulations have to aim at 'the prevention, reduction and control of marine pollution from vessels'.[68] Of all the Arctic states, only Canada and the Russian Federation have enacted domestic legislation explicitly based on LOSC Article 234.[69]

In LOSC Article 94, the concept of *flag state jurisdiction* is established regarding the safety of vessels in the high seas and, by virtue of LOSC Article 58 (2), in the EEZ.[70] This means that a state has the duty to exercise jurisdiction and control over the vessels sailing under its flag. Under LOSC Article 94, it is obliged to do so for the matters of administrative, technical and social matters, but also for safety at sea. The same concept is adopted in most of the IMO conventions, meaning that the flag state has the responsibility to implement and enforce the obligations and standards found in those.[71]

[62] LOSC, Art 56 (1.) (a).
[63] Ibid, Art 58 (1.).
[64] Ibid, Art 56 (1.) (b) (iii.).
[65] Ibid, Art 56 (2.).
[66] See Boone, n 29, p 195.
[67] See ibid.
[68] LOSC, Art 234.
[69] See for a detailed overview of the Arctic states' practice in this regard: Hartmann, n 7.
[70] D Guilfoyle, Article 94, in A Proelss (ed), *United Convention on the Law of the Sea* (CH Beck München 2017) p 709 [1].
[71] McDorman, n 5, p 33.

Finally, also LOSC Article 98 (2.) deals with safety: Under this provision, coastal states are obliged to 'promote the establishment, operation and maintenance of an adequate and effective search and rescue service regarding safety on and over the sea', and to cooperate 'where circumstances so require, by way of mutual regional agreements […] with neighbouring States for this purpose.' [72] By these means, the LOSC codifies the concept of *search and rescue* (SAR) that had before been included in the 1948 iteration of the SOLAS convention.[73]

Furthermore, whenever the LOSC references 'competent international organization(s)' with regard to navigation and shipping, this in general refers to the IMO, which is recognized as the specialized agency for shipping by the United Nations. The IMO is responsible to implement the abovementioned provisions of the LOSC regarding shipping and safety by its own legally binding instruments.[74] The mandate of the IMO covers, amongst others, 'to encourage the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships'.[75]

2.2.2 The SOLAS Convention

The most important of such IMO implementation instruments, and in general the most important international treaty concerning the safety of shipping is the SOLAS convention. It was, in its first version, adopted in 1914 as a reaction to the *Titanic* disaster and has since been through four further versions. The fifth version from 1974, which is still in force today, only contains some general and procedural provisions, while the actual technical provisions are found in an annex of – so far – fourteen chapters. Its main objective is 'to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety'.[76]

However, before the entry into force of the Polar Code, SOLAS contained, much like other IMO conventions, 'few provisions specific to the Arctic and most provided that the sole responsibility to implement and enforce international standards rested with flag states'.[77] Before the Polar Code, 'requirements in the SOLAS Convention that directly relate to polar

[72] LOSC, Art 98 (2.).
[73] D Guilfoyle, Article 98, in A Proelss (ed), *United Convention on the Law of the Sea* (CH Beck München 2017) p 727 [6].
[74] Boone, n 29, p 194.
[75] Convention on the International Maritime Organization, adopted 6 March 1948, entered into force 17 March 1958, 289 UNTS 48, Art 1 (a).
[76] IMO, n 2.
[77] Hartmann, n 7, p 278.

areas [were] contained in [Annex] Chapter V' on the safety of navigation:[78] Among these are Regulation 5 on meteorological services and warnings that includes ice conditions, Regulation 6 on ice patrol services, and Regulations 31 and 32 on danger messages that include the presence of ice as a possible danger to other ships.

Moreover, despite not being exclusively applicable to the polar regions or especially established with those in mind, some of the general provisions in SOLAS Annex Chapter I are of relevance with regard to the Polar Code:[79] On one hand, SOLAS Annex Chapter I Regulation 1 (a) defines the scope of application as 'only to ships engaged on international voyages'. An international voyage for its part is defined as 'a voyage from a country to which the present Convention applies to a port outside such country, or conversely'.[80] By virtue of SOLAS Annex Chapter I Regulation 2 (a), the scope of application defined in Regulation 1 (a) of the same chapter is valid for all present (and future) chapters in the annex to SOLAS, including Chapter XIV on the Polar Code.

On the other hand, SOLAS Article VIII (b.) (vi.) (2.) (bb) on amendments to the convention is of crucial significance for the Polar Code: In short, this provision means that 'amendments come into effect for all State Parties to [SOLAS] unless a State explicitly indicates that the amendment will not be binding upon it' (which it would have to do within a specified period of time).

2.2.3 The Polar Code as amended to SOLAS in Chapter XIV

The Polar Code has come a long way, as the origins of its legislation history date back to 1991: At this point, safer and more environmentally friendly navigation in polar waters were first brought to the IMO's agenda, triggered by the *Exxon Valdez* disaster. This first phase was concluded by the 2002 guidelines for ships operating in Arctic ice-covered waters, an at the time non-binding regulation instrument adapted by the IMO. In a second phase, initiatives were made to expand those guidelines to Antarctic waters. Further accelerated by the sinking of *MV Explorer* in Antarctic waters in 2007, this goal was achieved as the guidelines were expanded to both polar regions in 2009. Ultimately, from 2009 to 2015, the IMO was working on transforming its guidelines into a legally binding regulation instrument. While various working groups and subcommittees were involved in this process, the parent bodies were the

[78] Deggim, n 4, p 243.
[79] See chapter 3.2.3 below.
[80] SOLAS, Chapter I, Regulation 2 (d).

IMO's Marine Safety Committee (MSC) and Marine Environment Protection Committee (MEPC). Several procedural options were outlined for how to make the future Polar Code formally binding. In the end, the option to amend the existing SOLAS and MARPOL[81] conventions with a new chapter referencing the Polar Code was chosen. At its 94th meeting in London in November 2014, the MSC finally adopted the safety-related part of the Polar Code, and in 2015, the environmental part was adopted by the MEPC. 'A historic milestone in the development of international shipping law had been reached.'[82]

The IMO adopted the content of the Polar Code through four resolutions, two for the safety part and two for the part on environmental protection. The provisions related to safety (Introduction, parts I-A and I-B) were adopted through MSC's resolution MSC.385(94) of 21 November 2014. The same day, a new chapter to SOLAS was amended by resolution MSC.386(94). Hereby, the safety provisions of the Polar Code were to become legally binding as *Chapter XIV – Safety Measures for Ships Operating in Polar Waters* of SOLAS with entry into force on 1 January 2017.[83] Resolution MSC.386(94), which now equals SOLAS Chapter XIV, only contains some basic provisions (on definitions, application and more) and references resolution MSC.385(94) for the full text of the Polar Code. Thus, by reference in SOLAS Chapter, 'the safety-related provision of the introduction and […] part I-A' of the Polar Code are now legally binding.[84] On the other hand, the further provisions on safety in Part I-B of the Polar Code remain of recommendatory nature.

According to SOLAS Chapter XIV Regulation 1, Paragraphs 2-4, and Regulation 2, Paragraph 1, the Polar Code's scope of application covers both the *Antarctic area* as well as *Arctic waters*. This makes it the first legally binding instrument to be applicable to both polar regions.[85] While the *Antarctic area* is simply defined as the sea area south of latitude 60°S, the definition of *Arctic waters* is more particular, as is illustrated in a map in the introduction chapter of the Polar Code and depicted above.[86]

Further, the Polar Code shall only apply to ships operating in polar waters 'certified in accordance with chapter I' of SOLAS.[87] As a main rule, SOLAS Chapter I defines its scope of

[81] International Convention for the Prevention of Pollution from Ships, adopted 2 November 1973, entered into force 2 October 1983, 1340 UNTS 61.
[82] Entire section Jensen, n 43, pp 62-64.
[83] Ibid, pp 64-65.
[84] SOLAS, Chapter XIV, Regulation 3 (1).
[85] Molenaar, Rothwell and Oude Elferink, n 20, p 411.
[86] See map in chapter 1.2.2 above.
[87] SOLAS, Chapter XIV, Regulation 2 (1).

application as 'to ships engaged on international voyages'.[88] An international voyage is defined as 'a voyage from a country to which [SOLAS] applies to a port outside such a country, or conversely'.[89]

The Polar Code is composed of a preamble, an introduction and two main parts. The two main parts, Part I on safety and Part II on pollution, are each divided into a mandatory (Parts I-A and II-A) and a recommendations part (Parts I-B and II-B). The first provision of Part I-A indicates the overall structure of the subsequent chapters: Each chapter 'consists of the overall goal of the chapter, functional requirements to fulfil the goal, and regulations'.[90] The same paragraph then defines that a ship shall in general be considered to meet a functional requirement when its design and arrangements comply with all the regulations associated with a functional requirement.

As outlined in its preamble, the Polar Code was developed using 'a risk-based approach in determining scope' and adopting 'a holistic approach in reducing identified risks'.[91] This methodology is also known as goal-based approach, and it has become popular for regulating ship design. This 'regulative approach based on goals places the focus on overall goals rather than prescriptive rules'. However, this methodology has, in case of the Polar Code, also resulted in a 'mix of precise and vague provisions' which will potentially have an impact on interpretation: In accordance with Article 31 (1) of the VCLT, less emphasis can be put on a provision's wording and a purposive or teleological interpretation can be applied in favour of the overarching objectives.[92]

The Polar Code's preamble further describes the overall purpose and objective of the instrument to be to 'supplement existing IMO instruments in order increase the safety of ships' operation and mitigate the impact on the people and environment in the remote, vulnerable and potentially harsh polar waters'.[93] It then, in paragraphs 2 and 3, acknowledges that compared to other waters, there may be additional demands for ship operation, safety and navigation in polar waters. More in detail, the Polar Code's introduction chapter defines its goal as 'to provide for safe ship operation and the protection of the polar environment by addressing risks present in polar waters and not adequately mitigated by other instruments of the [IMO]'.[94] This goal, on

[88] SOLAS, Chapter I, Regulation 1 (a).
[89] Ibid, Chapter I, Regulation 2 (d).
[90] Polar Code, n 8, Part I-A, para 1.1.
[91] Ibid, Preamble, para 7.
[92] Entire section Jensen, n 43, p 70.
[93] Polar Code, n 8, Preamble, para 1.
[94] Polar Code, n 8, Introduction, para 1.

the other hand, is linked to a list of potential hazards in polar waters in paragraph 3 of the Polar Code's introduction chapter: Such hazards include [sea] ice, topside icing, low temperatures, extended periods of darkness or daylight, high latitude, remoteness, lack of crew experience, lack of emergency equipment, weather conditions and the environment. The list further defines in which way each of these hazards could possibly affect shipping in polar regions.

Furthermore, paragraphs 1.3 to 1.5 of Chapter 1 of Part I-A contain three basic minimum requirements that must be met before a ship is allowed to operate in polar waters:[95] Every ship shall have on board a valid Polar Ship Certificate (paragraph 1.3), shall satisfy certain performance standards that meet or surpass the standards of SOLAS (paragraph 1.4) and shall undergo an assessment of its operational ability to sail in polar waters (paragraph 1.5).

In addition, the Polar Code's further safety requirements for ships operating in polar waters are contained in chapters 2-12 of Part I-A. First of all, this includes chapter 2 on a Polar Water Operational Manual (PWOM), a manual that shall be carried on board of ships and that is intended to give the crew information about the ship's capabilities and limitations, as well as procedures for different, normal operation and incident, situations. This is followed by chapters 4 on subdivision and stability, 5 on watertight and weathertight integrity and 6 on machinery installations, before chapters 7 on fire safety and protection and 8 on life-saving appliances and arrangements cover emergency situations. Chapters 9 on safety of navigation, 10 on communication, and 11 on voyage planning follow up, before the ultimate chapter 12 addresses the manning and training of ship personnel.

Even though there are a lot of technical provisions, the Polar Code is one of the few regulation instruments to include a *human dimension*, ie 'a number of elements that centre on human persons rather than only on technology'. Even though such provisions on manning and training of ship personnel are only placed in the last chapters of both Part I-A and I-B, they are reflected in language throughout the entire Polar Code. This begins with the above cited preamble, where the key issue of *safety* is not only related to vessels and to the environment, but also to humans.[96]

[95] Jensen, n 43, p 68.
[96] Entire section: S Kirchner, 'The human dimension of the polar code' (2018) 10:1 *Australian Journal of Maritime & Ocean Affairs* 1, pp 3-4.

2.2.4 The Arctic SAR Agreement

A 2009 report of the Arctic Council's Protection of the Arctic Marine Environment Working Group (PAME) pointed out that in the Arctic, there was limited SAR infrastructure and no dedicated multilateral agreement on SAR for the Arctic ocean.[97] The eight Arctic Council states then cooperated on this matter and eventually adopted the Arctic SAR Agreement[98] in 2011. The Arctic SAR Agreement builds upon the 1979 SAR Convention[99] as well as on the relevant parts of SOLAS and essentially establishes SAR regions in the Arctic ocean and leaves responsibility for those with the Arctic coastal states.

Article 2 defines the Arctic SAR Agreement's objective as 'to strengthen aeronautical and maritime search and rescue cooperation and coordination in the Arctic.' Article 3, still within the scope of application section, contains the main obligation on parties stating that '[each] Party shall promote the establishment, operation and maintenance of an adequate and effective search and rescue capability within its area' and then references the Annex for further definition of such areas. The remaining provisions of the main agreement text are of rather descriptive nature and do not impose any major obligations on the state parties.

2.2.5 The STCW Convention

With regards to maritime safety, vessels navigating in Arctic waters are, besides LOSC, SOLAS and the SAR Convention, also subject to the legally binding STCW[100] convention established by the IMO.[101] This convention was historically the first one to establish basic requirements for training, certification and watchkeeping for seafarers on an international level, making it a minimum/GAIRAS standard on CDEM under LOSC. Before the adoption of the STCW, such standards had only been regulated on a national level, therefore leaving this sector with a high level of fragmentation of regulation. This convention 'prescribes minimum standards relating

[97] Arctic Council, Protection of the Arctic Marine Environment Working Group, *Arctic Marine Shipping Assessment 2009 Report* (2009), available at http://library.arcticportal.org/1400/1/AMSA_2009_Report_2nd_print.pdf (accessed 12 August 2019) p 172; see on the Arctic Council in general chapter 4.3.2 below.
[98] Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, adopted 12 May 2011, entry into force January 2013, available at https://oaarchive.arctic-council.org/handle/11374/531 (accessed 12 August 2019).
[99] International Convention on Maritime Search and Rescue, adopted 27 April 1979, entry into force 22 June 1985, 1403 UNTS 118.
[100] International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), adopted 7 July 1978, entered into force 28 April 1984, 1361 UNTS 190.
[101] Boone, n 29, p 196.

to training, certification and watchkeeping for seafarers which countries are obliged to meet or exceed'.[102]

Through amendments in 1995 and 2010, the STCW convention was restructured and divided into a regulations part and a new STCW Code with a mandatory and a recommendations part, making for easier administration, revision and update of the regulations. By this restructuring, the IMO brought the STCW convention up-to-date and responded to critics who had pointed out its weaknesses before: The 1995 amendment established a system that requires states to report to the IMO the measures that they take to implement and comply with the STCW convention. Also, the 2010 amendment saw dedicated provisions on training guidance for personnel on board ships operating in polar waters added to the convention and code.[103] Further amendments relating to revised training requirements for masters and deck officers onboard ships operating in polar waters were adopted with entry into force on 1 July 2018.[104]

2.3 Soft-Law Instruments

2.3.1 Part I-B of the Polar Code

As outlined above in chapter 2.2.3 and stated in paragraph 4 of its introduction chapter, the Polar Code consists of an introduction and the parts I and II. Parts I and II are subdivided into mandatory and recommendations parts (I-A / I-B and II-A / II-B). Due to its recommendatory, non-binding nature, part I-B of the Polar Code, containing additional guidance regarding the introduction and part I-A, is considered as soft law.

While the recommendatory Part I-B of the Polar Code is less comprehensive than Part I-A and uses *should* instead of the mandatory *shall* throughout, it still 'contains important additional guidance regarding introduction of the Code and Part I-A, including provisions on ship structure (Regulation 4) and navigation safety (Regulation 10)'.[105]

The Polar Code does not set a separate overall purpose or goal for its part I-B. However, as the provisions of this part are still fully integrated into the Polar Code, they therefore fall under the

[102] IMO, International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), available at http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-on-Standards-of-Training,-Certification-and-Watchkeeping-for-Seafarers-(STCW).aspx (accessed 2 August 2019).
[103] Ibid.
[104] See JA Roach, 'The Polar Code and Its Adequacy' in RC Beckman et al (eds), *Governance of Arctic Shipping* (Brill Nijhoff Leiden/Boston 2017) 144, p 148.
[105] Jensen, n 43, p 69.

overall purpose of paragraph 1 of the preamble as well as under the goal set out in paragraph 1 of the introduction chapter.

2.3.2 IACS Standards

As indicated above under chapter 2.1, particularly in its chapter 3 regarding ship structure, the Polar Code makes extensive references to regulation developed by the IACS. It hereby refers to the Polar class classification system of the IACS, although it establishes its own ship categorization system for navigation in polar waters under its introduction chapter. Also, chapter 6 (paragraph 6.3) of the Polar Code on machinery installations references the IACS' ice classes for ships.[106]

The IACS is a non-profit organization consisting of twelve classification societies as its members, and its rules and standards on classification design, construction and compliance cover more than 90% of the world's cargo tonnage.[107]

Labelling itself an NGO of the IMO with a 'crucial role as technical advisor to the IMO', the IACS' most important regulation instruments are called *unified interpretations* and *unified requirements*. The former assist in global and consistent implementation of IMO regulations, while the latter are concerned with design, construction, maintenance and survey of ships and are considered as minimum requirements, and members are free to adopt more stringent requirements. Further, the IACS 'also assists international regulatory bodies and standards organisations to develop, implement and interpret statutory regulations and industry standards in ship design, construction and maintenance with a view to improving safety at sea and preventing marine pollution'.[108]

2.3.3 AECO Guidelines

The Association of Arctic Expedition Cruise Operators (AECO) is an international association for expedition cruise operators operating in the Arctic. It was founded in 2003 and has since become an important organization representing the concerns and views of Arctic expedition cruise operators. AECO is dedicated to managing responsible, environmentally friendly and safe tourism in the Arctic and strives to set the highest possible operating standards. AECO's geographical range covers the area north of 60 degrees North latitude, the core areas being Svalbard, Jan Mayen, Greenland, Arctic Canada, the Russian Arctic National Park and

[106] Jensen, n 43, p 69.
[107] IACS, *About IACS*, available at http://www.iacs.org.uk/about/ (accessed 21 August 2019).
[108] IACS, *Annual Review* (2018), available at http://www.iacs.org.uk/media/5931/iacs-annual-review-2018.pdf (accessed 21 August 2019) pp 11-12.

Iceland. AECO's members include 30 Arctic cruise and tour operators as full members, and a number of provisional, associate and affiliate members, which are categories designed for entities either wishing to become a full member, operating outside AECO's core area, or being associated with the industry in any other way.[109]

AECO obliges its members to operate in accordance with national and international laws and regulations and they have, in addition, agreed to follow an extensive set of guidelines to ensure their operations are in accordance with AECO's objectives. Such guidelines exist in the categories of 'visitor guidelines' for travellers visiting the Arctic, 'yacht guidelines' for private yachts and sailboats, 'vegetation guidelines' on Arctic plant life, 'wildlife guidelines' for encounters with arctic wildlife, 'operational guidelines' that are mandatory for tour operators that are members of AECO, 'clean sea guidelines' on marine plastic pollution, 'community guidelines' on visiting communities in the Arctic, 'cultural remains guidelines', 'biosecurity guidelines' for protection of the environment and 'site guidelines' which are designed for selected and specific sites in the Arctic. Further, AECO offers information posters to be displayed on expedition cruise ships and an online test for Arctic field staff (guides).[110]

The AECO lists a catalogue of objectives and strategies, which all seem to sum up under the first objective listed: to 'ensure that expedition cruises and tourism in the Arctic is carried out with the utmost consideration for the vulnerable, natural environment, local cultures and cultural remains, as well as the challenging safety hazards at sea and on land'.[111]

2.3.4 Instruments Under the Arctic Council

Two of the Arctic Council's working groups are concerned with the safety of shipping in Arctic waters: On one hand, this is the working group on Emergency Prevention, Preparedness and Response (EPPR), on the other hand it is the PAME.[112]

The EPPR's mandate is to 'contribute to the prevention, preparedness and response to environmental and other emergencies, accidents, and Search and Rescue (SAR)', and its working areas include the 'development of guidance and risk assessment methodologies', and the 'exchange on information on best practices with regards to the prevention, preparedness

[109] Entire section: AECO, *AECO*, available at https://www.aeco.no/; AECO, *Members*, available at https://www.aeco.no/members/ ; AECO, *Membership*, available at https://www.aeco.no/membership/ (all accessed 22 August 2019).
[110] AECO, *Guidelines*, available at https://www.aeco.no/guidelines/ (accessed 22 August 2019).
[111] AECO, *About us*, available at https://www.aeco.no/about-aeco/ (accessed 22 August 2019).
[112] See on the Arctic Council in general chapter 4.3.2. below.

and response to accidents […]'.[113] The EPPR was, for example, closely involved during the negotiation of the Arctic Council's Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA)[114] by developing its appendix IV concerning operational guidelines, but also with the abovementioned Arctic SAR Agreement. Further, it is involved with a number of further implementation activities.[115]

The PAME's mandate is 'to address marine policy measures and other measures related to the conservation and sustainable use of the Arctic marine and coastal environment in response to environmental change and from both land and sea-based activities, including non-emergency pollution prevention control measures such as coordinated strategic plans as well as developing programs, assessments and guidelines […]'.[116] While this mandate seems to be mainly aiming at environmental protection, PAME has in several instances also been active with regards to Arctic shipping:

In a 2009 report, PAME included a series of recommendations to 'provide a guide for future action by the Arctic Council, Arctic states and many others'. Such recommendations were, amongst others, also made with regard to the theme of Enhancing Arctic Marine Safety.[117]

Further, in the 2015 concluding report to its Arctic Marine Tourism Project, the PAME published a number of best-practice guidelines aimed at the Arctic Council and the Arctic states. These guidelines cover a wide range of subjects related to tourism in the Arctic.[118]

Finally, in response to the adoption of the Polar Code, the PAME established the Arctic Shipping Best Practice Information Forum. This forum aims 'to raise awareness of [the Polar Code's] provisions amongst all those involved in or potentially affected by Arctic marine operations and to facilitate the exchange of information and best practices between the Forum participants on specific shipping topics'. A website portal has been established

[113] EPPR, *About EPPR,* available at https://www.eppr.org/about-eppr/ (accessed 17 August 2019).
[114] Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, adopted 15 May 2013, entered into force 25 March 2016, available at https://oaarchive.arctic-council.org/handle/11374/529 (accessed 22 August 2019).
[115] See EJ Molenaar, 'The Arctic, The Arctic Council and the Law of the Sea' in RC Beckman et al (eds), *Governance of Arctic Shipping* (Brill Nijhoff Leiden/Boston 2017) 24, pp 55-56.
[116] PAME, *About PAME,* available at https://www.pame.is/index.php/shortcode/about-us (accessed 17 August 2019).
[117] Arctic Council, n 97, pp 6-7.
[118] PAME, *Arctic Marine Tourism Project (AMTP) Best Practice Guidelines* (April 2015) available at https://oaarchive.arctic-council.org/bitstream/handle/11374/414/AMTP%20Best%20Practice%20Guidelines.pdf?sequence=1&isAllowed=y (accessed 17 August 2019).

(www.arcticshippingforum.is), where information on the implementation of each chapter and each provision of the Polar Code is publicly accessible.[119]

2.3.5 CLIA

The Cruise Lines International Association (CLIA) was established in 1975 and is the world's largest cruise industry trade association, representing the interests of more than 50 cruise lines representing over 95% of the global cruise capacity and 40'000 travel agencies and agents, in total serving more than 24 million passengers annually. CLIA sees itself as the leading authority of the global cruise community and supports policies and practices for a safe, secure, healthy and sustainable cruise ship environment. It formulates its own mission as 'advocating, educating and promoting the common interests of the cruise ship community'.[120]

Further, CLIA lists 'providing for the safety of passengers and crew' as the industry's top priority at all times and states that its own policies often exceed the requirements of international law.[121]

2.3.6 The WWF Arctic Programme's Arctic Tourism Guidelines

The World Wildlife Fund (WWF) has been running the WWF Arctic Programme, which focuses on the circumpolar world, since 1992. It is the only environmental NGO that has observer status with the Arctic Council.[122] It has 'worked with tourism operators, governments, researchers, conservation groups and communities from all over the Arctic to create the first arctic specific guidelines for tourism'. These guidelines were published in 2001 and contain ten general principles related to Arctic tourism.[123]

2.3.7 Other

There are a number of other industry associations, organizations and NGO concerned with the sector of shipping in general. While some of them do get involved in the sector's regulation with their own instruments, they are mostly of general, and not specific to the polar or Arctic regions nature, and only some of them apply to the safety of shipping.[124]

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[119] PAME, *The Arctic Shipping Best Practice Forum,* available at https://www.pame.is/index.php/projects/arctic-marine-shipping/the-arctic-shipping-best-practices-information-forum (accessed 17 August 2019).
[120] CLIA, *About CLIA*, available at https://cruising.org/about-the-industry/about-clia (accessed 22 August 2019).
[121] CLIA, *Cruise Industry Regulation,* available at https://cruising.org/about-the-industry/policy-priorities/Cruise%20Industry%20Regulation (accessed 22 August 2019).
[122] WWF, *The WWF Arctic Programme,* available at https://arcticwwf.org/work/team/ (accessed 22 August 2019).
[123] WWF, *10 principles for Arctic tourism,* available at https://arcticwwf.org/newsroom/publications/code-of-conduct-for-arctic-tourists/ (accessed 22 August 2019).
[124] See eg Molenaar, n 38, pp 266-267; Molenaar, n 115, pp 57-59.

One of them that is particularly concerned with safety in Arctic waters and SAR is the Arctic Coast Guard Forum (ACGF) established in 2015: It describes itself as 'is an independent, informal, operationally-driven organization, not bound by treaty, to foster safe, secure, and environmentally responsible maritime activity in the Arctic' and is constituted of all eight Arctic states as members. As its strategic goals, it lists, amongst others, the strengthening of multilateral cooperation and coordination within the Arctic marine domain, and collaboration with the Arctic Council.[125] Further, according to its terms of reference, it aims at 'supporting agreements between Arctic States, such as those made under the auspices of the Arctic Council, related to coast guard functions'.[126]

2.4 Conclusion

There is a comprehensive regulation regime governing the sector of safety for seaborne tourism in Arctic waters, consisting of both legally binding and non-legally binding regulation (soft law). While the two are different with regard to form and means of enactment, they are indeed interrelated and can produce the same effects.

While the LOSC and SOLAS serve as framework conventions in this regard, the Polar Code is the first legally binding instrument to address this sector specifically and with a higher level of detail. It consists of an introduction followed by a part on safety and a part on pollution prevention, each of which is further split up into a legally binding subpart and a subpart providing additional guidance. The legally binding provisions concerning safety have been made legally binding by amending them as chapter XIV to SOLAS. The Polar Code was developed using a risk-based approach.

Other legally binding instruments applicable to this sector include the Arctic SAR Agreement, governing SAR on a regional level for the Arctic, and the STCW convention on training, certification and watchkeeping for seafarers.

Soft law instruments in this sector include the recommendatory part of the Polar Code, standards and guidelines developed by industry actors and NGO (IACS, AECO) and the Arctic Council.

[125] Arctic Coast Guard Forum, *About the ACGF,* available at https://www.arcticcoastguardforum.com/about-acgf (accessed 22 August 2019).
[126] Molenaar, n 115, pp 58-59.

3 Potential Gaps and Shortcomings of Current Regulation

3.1 Introduction

What are potential gaps and shortcomings of current international regulation governing the safety of passengers on cruise ships in the Arctic?

Building on the previous chapter, this chapter identifies potential gaps and shortcomings of the current regulation applicable to seaborne tourism in Arctic waters that governs safety of such shipping. This is done by comparing the safety provisions within regulation instruments with their overarching purpose or goal and determining whether they are adequate to achieve these goals. Or, as the term *adequate* is defined in Black's Law Dictionary, whether they are *legally sufficient* to do so.[127] This method of adequacy has, with respect to the Polar Code, been described as follows, and is hereby applied to other regulation instruments alike: 'To assess the adequacy of the Polar Code, we must understand its purpose.'[128]

Particularly with regard to soft law instruments, interpretation becomes key: 'Regulatory rules are often indeterminate, […] so they must be interpreted or adapted, and the practice of interpretation often becomes more important than the formal legal texts'.[129]

3.2 Assessment of Current Regulation Instruments

3.2.1 The United Nations Convention on the Law of the Sea

Given the LOSC's nature and function as a framework convention, the level of detail of any provisions applicable to the safety of shipping is naturally held very general. In this regard, the LOSC relies on other implementation instruments and the system of rules of reference and GAIRAS. Such instruments and concepts relevant for the safety of shipping in Arctic waters are discussed in the respective chapters.

What is notable with regard to the LOSC though, is that even under implementation instruments like SOLAS, including the Polar Code, 'effective enforcement of shipping rules and standards will be highly dependent on flag states', ie on the concept of flag state jurisdiction as established in LOSC Article 94. An increasing number of flag states is unwilling or unable to effectively exercise their jurisdiction (flags of convenience), though. Such inability of the flag states to effectively exercise their jurisdiction is, due to remoteness and inaccessibility, likely to be even

[127] BA Garner (ed), *Black's Law Dictionary Ninth Edition* (Thomson Reuters 2009) p 45.
[128] Roach, n 104, p 144.
[129] Barton, n 11, p 27.

more of an issue in Arctic waters. Therefore, the system of flag state jurisdiction can be questioned, and port state jurisdiction and control could become a viable alternative.[130] The LOSC does apply this concept, but exclusively in Article 218 with regard to illegal discharges.

With regard to SAR, it can be pointed out that in the final sentence of Article 98 (2.), the LOSC encourages cooperation and possibly also regulation on a regional level, but directly between (neighbouring) states and without a multilaterally or universally binding treaty instrument. This is a concept that could possibly become more important in the future for the safety of Arctic shipping in general.[131]

The relation between LOSC Article 234 and the Polar Code is discussed in chapter 3.2.3 below.

3.2.2 The SOLAS Convention

As stated in chapter 2.2.2 above, SOLAS' main objective is 'to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety'.

Alone the fact that 165 states representing 99.04 % of the world tonnage are parties to SOLAS,[132] and are therefore bound by all of the 14 amended chapters, shows the very high significance and acceptance of this convention. In this regard, the overall objective repeated above can be viewed as achieved.

The few provisions specific to the Arctic contained in SOLAS, outside of Chapter XIV and the Polar Code, do not seem to give reason to any criticism and can therefore be said to contribute their part to safety of navigation.

The Polar Code as the latest amendment to SOLAS has faced a lot of criticism, some of which was touched upon in chapters 1.1 and 2.2.3 above, and some of which is laid out in chapter 3.2.3 below. However, there is one major achievement of the Polar Code, or, technically rather of SOLAS, that has to be pointed out: The IMO and its subcommittees chose the right concept and the right instruments to adopt the Polar Code and make it legally binding. Had this been done by other means (eg by a stand-alone convention), it would, on one hand, have taken much longer and most likely resulted in less states signing it, therefore resulted in a smaller acceptance and significance. By the applied method of a *tacit amendment* to the SOLAS convention, it was made possible that the mandatory parts of the Polar Code are now binding

[130] Boone, n 29, pp 205-206; see for a further discussion of port state jurisdiction chapter 4.2.4 below.
[131] See chapter 4.3.2 below.
[132] IMO, *GISIS: Status of Treaties* available at https://gisis.imo.org/Public/ST/Treaties.aspx (accessed 20 July 2019).

to *all* the state parties to SOLAS.[133] On the other hand, even though the Arctic coastal states could have adopted some kind of a regional agreement similar to what is now the Polar Code under themselves, especially with regard to international shipping through polar waters this would have been problematic due to the *pacta tertiis* principle: While such an agreement would have been binding under the Arctic states as parties thereto, it could not have bound the flag states of ships sailing in Arctic waters, which will often be non-Arctic states.[134]

To a certain extent, the chosen process therefore prevented further fragmentation of regulation for Arctic shipping.

3.2.3 The Legally Binding Parts of the Polar Code

Even though the Polar Code was adopted through the IMO and is therefore generally regarded as this organization's output, the Arctic Council has considerably contributed to its development:[135] Proving the so-called *decision-shaping role* of the Arctic Council, the IMO decided to commence negotiations on a legally binding Polar Code only upon a proposal by three members of the Arctic Council and based on a recommendation in a report by the Arctic Council.[136]

However, not enough attention was paid to the way of implementation of the Polar Code within the legal framework of LOSC, and some issues of fragmentation remain: 'The Polar Code is directed at the flag states and does not necessarily address all hazards',[137] as is shown below.

In general, 'effective enforcement of shipping rules and standards will be highly dependent on flag states' based on LOSC Article 94.[138] This is also still true under the Polar Code:

> A key feature of the Polar Code is that its implementation rests with flag states, which have the responsibility to ensure that their registered vessels comply with the Polar Code's provisions whenever they navigate in "polar waters".[139]

As discussed in chapter 3.2.1 above, such flag state jurisdiction is not always effective. Due to remoteness, this is especially true for shipping in Arctic waters. Even though the Arctic poses

[133] McDorman, n 5, p 44.
[134] See Molenaar, n 115, p 37.
[135] EJ Molenaar, 'Current and Prospective Roles of the Arctic Council System within the Context of the Law of the Sea' (2012) 27 *The International Journal of Marine and Coastal Law* 553 p 571.
[136] Molenaar, n 115, p 54; Arctic Council, n 97, p 6.
[137] T Henriksen, 'Protecting polar environments: coherency in regulating Arctic shipping' in R Rayfuse (ed), *Research handbook on international marine environmental law* (Edward Elgar Publishing Limited 2015) 363-384 p 383.
[138] Boone, n 29, p 205.
[139] K Bartenstein, 'Between the Polar Code and Article 234: The Balance in Canada's Arctic Shipping Safety and Pollution Prevention Regulations' (2019) *Ocean Development & International Law,* p 3.

certain challenges in this regard, a system of port state control, as presented in chapter 4.2.4 below, could be a possible solution. Hereby, the responsibility for the enforcement of shipping rules and standards could, to a certain extent, be left with (Arctic) port states. Thus, the abovementioned issue of flags of convenience could be counteracted and, a more effective system of enforcement could be achieved.

Further, as described above under chapter 2.2.1, coastal states have, according to LOSC Article 234, the right to adopt stricter legislation in ice-covered areas in their EEZ. This raises the question of how this provision interacts with the Polar Code, and whether the Polar Code restricts the coastal states' jurisdiction in this regard or not. 'The exact relationship between [the] Polar Code and Art. 234 [LOSC] is far from clear':[140] On one hand, arguing in favour of the Polar Code would 'strengthen the regulatory framework on a global basis and relieve the Arctic coastal States of their need to unilaterally adopt stricter rules and regulations' and hereby avoid further fragmentation of the regulation.[141] On the other hand, there is no clear basis in the Polar Code to restrict coastal states' extended jurisdiction under LOSC Article 234.[142]

With regards to the safety of shipping, a big issue in the Polar Code is its scope, in several respects: On one hand, there is its limited geographical scope. As outlined above, the provisions of the Polar Code only apply within the area defined as *Arctic waters*. This limited geographical scope however does not mean that Arctic-specific risks such as ice, low water temperatures or remoteness are limited to these *Arctic waters*.[143] This becomes obvious by looking at the *Viking Sky* incident, which occurred far outside of *Arctic waters*: In particular, waters around Iceland and continental Norway, where a lot of seaborne tourism is happening, are excluded. In respect of cruise ship passengers in this area, this represents a major gap in the Polar Code.

On the other hand, also the Polar Code's personal scope gives reason to criticism: The Polar Code only requires special training for polar waters for ships' masters, chief mates and officers, but not for any other members of the crew.[144] Given the remoteness of sailing in Arctic waters, in particular on cruise ships, there is a higher need for a ship's crew's knowledge and skills than in other areas of the world. In this regard, the goal of safety is more likely to be achieved if

[140] E Franckx and L Boone, Article 234, in A Proelss (ed), *United Convention on the Law of the Sea* (CH Beck München 2017) 1568, pp 1584-1585 [42].
[141] Boone, n 29, p 212.
[142] Henriksen, n 137, pp 379-381; see on this issue also D Bognar, 'The elephant in the room: article 234 of the Law of the Sea Convention and the Polar Code as an incompletely theorised agreement' (2018) 8:1 *The Polar Journal* 182.
[143] Kirchner, n 9, p 368.
[144] Polar Code, n 8, Part I-A, para 12.2.

every crew member aboard such a ship is required to have the special training, knowledge and skills for polar waters.[145] Another critical shortcoming of the same chapter is the 'absence of a provision regarding an experienced ice navigator on the bridge when navigating in Polar Waters.'[146]

The Polar Code is, as described above, one of the first regulation instruments for shipping that includes a *human dimension*. This is a step in the right direction, as technical advances and human skills have to go hand in hand to be able to ensure safety at sea. This is especially true when it comes to cruise ship vessels carrying large numbers of passengers. However, it has to be borne in mind that not all risk can simply be trained for: Just like the human body needs acclimatisation in high altitude, the knowledge and skills required to navigate polar waters only come with practical experience.[147] The Polar Code's requirements for manning and training for crew have therefore previously been called 'minimal', but in this regard there has been an improvement in the form of an amendment to the STCW.[148]

Further, as pointed out above, the clear wording in SOLAS Chapter 1 implies the Polar Code's scope of application to be limited to international voyages. However, with regard to the Polar Code's purpose and regulation goals, there is room for an extensive interpretation of its scope:[149]

> The context indicates that whether or not a ship actually calls at a port in another country is not decisive – more important is that such vessels operate in "polar waters." This is supported by the fact that non-international trading voyages in the Antarctic maritime area are similar in nature to "international voyages" and should therefore be considered "international voyages." Importantly too, the purpose of the Polar Code and SOLAS – stated in the preamble of the Code – is to increase the safety of ships' operations […] in polar waters. Obviously, perils of the sea do not distinguish between ships engaged in international or non-international voyages.[150]

While this interpretation only explicitly mentions the Antarctic, the same assessment can be made for Arctic waters: Arctic waters fall under different states' national jurisdiction and therefore, international voyages can and will be made. At the same time, popular tourism cruises

[145] See Kirchner, n 9, p 368; Kirchner, n 96, p 5.
[146] Roach, n 104, p 149.
[147] Kirchner, n 9, pp 366-367.
[148] Roach, n 104, pp 147-148.
[149] See pp 31-32 below; see on teleological interpretation of the Polar Code in general Jensen, n 43, p 70.
[150] Jensen, n 43, p 66.

such as sailing along the coasts of Greenland or Svalbard, might as well also just be conducted as non-international voyages under SOLAS, which would then raise the question whether or not they still fall under the provisions of the Polar Code. To answer this question, the overall purpose of the Polar Code has to be taken into account: As also pointed out in the above quotation, this contains safety of ship's operations in *polar waters*, hereby clearly referencing both polar areas. To avoid any uncertainty, and to effectively make shipping in both polar regions safer, such vagueness needs to be eliminated and a clearer wording needs to be chosen.[151]

The rules established under the provisions of the Polar Code are then, in general, to be regarded as GAIRAS under LOSC, as outlined above in chapter 2.2.1. This is the case mainly because of their adoption through the IMO (as the competent international organization under LOSC) in a legally binding instrument. However, the same assessment will most likely not be valid for the recommendatory parts of the Polar Code, as they are lacking any legally binding nature. Neither can the external guidelines that the Polar Code makes reference to (IACS standards) be viewed as meeting this requirement.[152]

As pointed out above in chapter 2.2.3, the Polar Code in paragraph 7 of its preamble states that a risk-based approach and a holistic approach have been used in its development. It was put forward that hereby, the drafters 'seem to recognize that while there may be certain weak points in the Code, as a whole it is regarded as acceptable'.[153] The assessment that the holistic approach needs to be developed further can also be confirmed with regard to the abovementioned *human dimension* of the Polar Code:

> In the long run, what is needed is a more holistic approach to the governance of the Arctic Ocean, taking into account the needs, rights and interests of those operating on it[.][154]

According to paragraph 3.2 of its introduction chapter, the legislative concept (risk-based approach) behind the Polar Code seems to allow for a certain dynamic interpretation of its requirements:

> Regulation 3.2 introduces a situation-based approach as regards such risks, i.e. that risks vary on the basis of geographical location, the amount of ice-cover, etc. This rule

[151] See chapter 4.2.2 below; see also Roach, n 104, p 150.
[152] See Jensen, n 43, pp 71-74.
[153] Jensen, n 43, p 68.
[154] Kirchner, n 96, p 6.

> provides a basis for interpreting the Code more strictly in some circumstances. For instance, the term "appropriate survival resources" has different meanings depending on whether it is applied to waters that are entirely ice-covered or waters that are not markedly ice-covered.[155]

This argumentation is persuasive, and it makes sense that such requirements can be interpreted more strictly where needed. At the same time this could potentially also serve as a basis to interpret the Polar Code's requirements in a less strict manner, where an opportunity arises. Such an interpretation would rather weaken the Polar Code and would therefore be questionable.

However, the highly technical provisions in the Polar Code often do not even leave room to fall back on the object and purpose and interpret or implement them in a less strict manner. Therefore, it has to be questioned whether the goal-based approach was successful in case of the Polar Code.[156]

With regard to the shortcomings identified in this chapter,

> [the] Polar Code, as it is today, is not enough to ensure that all seafarers operating in the area as well as adjacent regions are fully aware of all risks and trained accordingly.[157]
>
> The Polar code is only one piece of the puzzle. Both its technical and its training requirements form only a minimum standard. A truly effective protection of the Arctic and Antarctic Oceans, their natural environment and of the people who live or work there or who visit the areas, will require far more efforts. […] The creation and implementation of the Polar Code can only have been a first step.[158]

Some updates and revisions to the Polar Code are already being prepared by the IMO, amongst these to extend its scope to non-SOLAS ships. However, 'it must be reemphasized that the Polar Code […] [is] not […] intended to replace existing requirements for ships operating in polar waters. [It is] designed to supplement the existing requirements […]'. [159]

In view of the overall assessments and shortcomings identified in this chapter, it has to be concluded that the Polar Code in its current form is not enough to ensure safe ship operation in

[155] Jensen, n 43, p 68.
[156] Ibid, p 71.
[157] Kirchner, n 9, p 368.
[158] Kirchner, n 96, pp 6-7.
[159] See JA Roach, 'Beyond the Polar Code: IMO Measures for Assuring Safe and Environmentally Sound Arctic Navigation' in L P Hildebrand et al (eds), *Sustainable Shipping in a Changing Arctic* (Springer International Publishing AG 2018) 51, pp 52-68 (quotation p 67).

polar waters: While it does indeed *address* the risks present in polar waters, it does not always do so in an adequate manner. This will, in turn, result in safe ship operation not being fully achieved. Thus, the Polar Code is not fully adequate to ensure safety of shipping and does not completely meet the goals it sets out in its introduction chapter.

More efforts and more than this first step, meaning revisions and further iterations of the Polar Code with stricter and more adequate regulation are needed. It is only in this way that the Polar Code can eventually ensure safe ship operation in polar waters in an adequate manner.

3.2.4 The Arctic SAR Agreement

As summarized in chapter 2.2.4 above, the Arctic SAR Agreement, regarding its substantive provisions, does not have a very high practical significance, and the obligations it puts upon the Arctic coastal states are rather weak: The wording for the actual obligation on the Arctic coastal states is chosen carefully and resembles the one of LOSC Article 98 (2.):[160] There is only an obligation on states to '*promote* the establishment, operation and maintenance of an adequate and effective search and rescue capability',[161] but not to actually have available and utilize the respective infrastructural capacity. Also, there is, consistent with the 1979 SAR Convention, no obligation on states to cooperate on this matter or to provide SAR solely upon request of another state.[162]

With regards to the challenges that SAR faces in the Arctic, this agreement therefore constitutes an effort to improve the situation, but does certainly not resolve those on its own: In particular, the remoteness of the Arctic waters remains a challenge, meaning that 'there will often be no immediate outside assistance in emergency situations'.[163]

On the other hand, the Arctic SAR Agreement was concluded by means of cooperation between the Arctic states. It can therefore be regarded as an implementation agreement under LOSC Article 98 (2.), fulfilling this provision's obligation to promote and adequate and effective SAR service by regional arrangement.[164] This form of in-detail regulation by regional cooperation is encouraged by the LOSC in several areas.[165] It could, in this sense, be a model for future

[160] See chapter 2.2.1 above.
[161] Arctic SAR Agreement, n 98, Article 3 (3.) (emphasis added).
[162] See for entire section Mc Dorman, n 5, pp 36-38.
[163] Kirchner, n 96, p 6.
[164] B Baker, 'The Developing Regional Regime for the Marine Arctic' in EJ Molenaar, AG Oude Elferink and DR Rothwell (eds), *The Law of the Sea and the Polar Regions* (Martinus Nijhoff Publishers Leiden/Boston 2013) 35, p 52.
[165] See ibid, pp 48-52.

cooperation between the Arctic states with regards to regulation on a regional level, perhaps also for the sector of safety of shipping in the Arctic in general.[166]

Further, it is notable that this was 'the first legally binding agreement negotiated under the auspices of the Arctic Council'.[167] This shows the role the Arctic Council can potentially have in the regional implementation of global treaties in the Arctic. Thus, this agreement is an important proof for the importance and the output of the Arctic Council, even though the Arctic Council is in general not intended to be adopting legally binding instruments.[168]

3.2.5 The STCW Convention

After criticism had led to the 1995 and 2010 amendments to the STCW convention, the critics seemed to be satisfied by these amendments. The STCW convention thus no longer seems to be subject to criticism in recent literature. On the contrary, the 2010 amendments have been called 'a step in the right direction': Since these amendments, the STCW convention has not only been addressing the technical aspects of shipping, but also factors like training guidance for personnel on ships. In this regard, it can be viewed as pioneering the abovementioned 'human dimension' of the Polar Code.[169]

Further, the concept established in 1995 under Chapter I, Regulation I/7 of the revised STCW convention, where states have to provide detailed information about their own compliance measures to the IMO is noteworthy: This rather unique concept allows the IMO as the governing body to keep track of all the implementation measures in different states. It seems that on one hand, this model would, to a certain degree at least, prevent fragmentation of such implementation instruments. On the other hand, it gives the IMO the opportunity to detect possible issues and shortcomings in its own instruments and react to them with new amendments or revisions much quicker.

The STCW does not contain a dedicated provision on its goals. Nevertheless, it has contributed to making navigation, amongst other also in Polar waters, safer by being the first international convention to address its main content. Thus, the objective of prescribing minimum standards relating to training, certification and watchkeeping for seafarers which countries are obliged to

[166] See chapter 4.3.2 below.
[167] Arctic Council, *Nuuk Declaration. The Seventh Ministerial Meeting of the Arctic Council* (12 May 2011), available at https://oaarchive.arctic-council.org/handle/11374/92 (accessed at 5 August 2019) p 2.
[168] Molenaar, Rothwell and Oude Elferink, n 20, pp 406-407.
[169] Kirchner, n 96, p 3.

meet or exceed, seems to be met. And, when this was no longer the case in the past, the IMO updated the STCW to keep it up do date.

3.2.6 Part I-B of the Polar Code

Part I-B of the Polar Code consists of a series of additional recommendations with regard to the introduction and each chapter of part I-A. While there are no specific goals listed in the provisions of part I-B, as this part is intended to complement the provisions in the respective chapter of part I-A, the provisions of part I-B are also subject to the goals defined for each chapter in part I-A.

As seen above, the legally binding provisions of the Polar Code are to be considered GAIRAS under LOSC. The same assessment will most likely not be valid for the recommendatory parts of the Polar Code, as they are lacking any legally binding nature. Neither can the external guidelines that the Polar Code makes reference to (IACS standards) be viewed as meeting this requirement.[170]

While the provisions of part I-B do contain important additional guidance for some of the chapters,[171] for others, there is little to no additional guidance: Paragraph 13 of part I-B concerning additional guidance to chapter 12, states that there is 'no additional guidance'. Particularly with respect to the chapter on manning and training, which has some essential shortcomings regarding its regulation content,[172] part I-B could have been a chance to at least include some further requirements on a recommendatory basis. With this in mind, there is, even for the recommendatory part of the Polar Code, still room for improvement.[173]

3.2.7 Other Soft Law Instruments

The IACS rules and standards on classification design, construction and compliance are of a high importance and significance for shipping, and, with regard to the standards on ice classification for example, also for its safety. This is substantiated by the facts that they cover more than 90% of the world's cargo tonnage and that the Polar Code references them as best practice standards.

The effects and significance of AECO guidelines for seaborne tourism in Arctic waters can be compared to the significance of their counterpart in the Antarctic, as the AECO was initially

[170] See Jensen, n 43, pp 71-74.
[171] Ibid, p 69.
[172] See chapter 3.2.3 above.
[173] Kirchner, n 96, p 5.

established after the role model of the International Association of Antarctica Tour Operators (IAATO). However, the IAATO regulation system employs much more stringent implementation and control measures, where provisional and full members have to carry an IAATO observer on board of one of their trips who then reports on compliance with IAATO's regulation. Failure will result in not being admitted to full membership, or being expelled from such.[174] In any case, both of these non-state actors and their regulation instruments contribute to creating awareness of the dangers of Polar shipping among ship operators, crew members and passengers and they 'should be supported by all actors concerned'.[175] In other words, they also can be viewed as best practice standards.

With regard to the soft law instruments established under the Arctic Council instruments, it can be said that while these instruments mostly position themselves as assessments, and were not enacted in the strict form of standards or guidelines, they are in fact more than that: They do often contain 'negotiated policy recommendations' and are therefore expressions of the Arctic Council's role in providing non-legally binding policy and regulatory guidance.[176] Such instruments can therefore be deemed to have *best practice* character.

Finally, the newly established Arctic Shipping Best Practice Information Forum exercises a key function in assisting in implementation of the Polar Code: 'It is of paramount importance that decision-makers have a common understanding of these rules in order to ensure robust application. Operators, flag states, insurers, financial institutions and port state control need to understand the requirements.' In other words, this forum helps to ensure 'that all parties involved have a better understanding of the industry standards and the best information available to ensure best practices are used. The reality at the moment is a lack of understanding, so a major effort is required to help in this process.'[177] In this way, first of all by making sure everyone concerned with it actually understands the regulation addressed at them, this forum contributes to a harmonised implementation of the Polar Code. Particularly with respect to soft law and an increasingly fragmented regulation regime, such a function must not be underestimated and should be considered an option for further instruments and sectors.

[174] Molenaar, n 38, pp 267-268 and 270.
[175] Kirchner, n 96, p 6.
[176] See Molenaar, n 115, p 54.
[177] See M Kingston, *Rules are one thing. Implementation another* (11 December 2017) available at https://www.rivieramm.com/opinion/rules-are-one-thing-implementation-another-26261 (accessed 17 August 2019).

3.3 Conclusion

Potential gaps and shortcomings in the current regulation can be identified by comparing a provision or an instrument of regulation with its overarching goals and purposes. By this method, it can be determined whether a provision, or instrument, is adequate, ie whether it is legally sufficient to achieve a certain goal.

While the LOSC and SOLAS conventions, in this regard, are comprehensive and have been well established for a long time, particularly in the Polar Code, this revealed a number of gaps and shortcomings. The most prominent of those are addressed with recommendations in chapter 4 below. To sum it up:

> The Polar Code is clearly not a perfect instrument to ensure sufficient regulation of shipping in ice-covered waters. Despite the fact that the negotiations that resulted in the Code were founded on good science, the provisions represent a political compromise – as is always the case in international law.[178]

In addition to the assessment of the Polar Code from a legal point of view, an outside perspective can reveal further weaknesses: For example, the Polar Code sets a time window of five days, within which eg passengers of a cruise ship in emergency are expected to be rescued and evacuated. However, SAR experts question the appropriateness of this period with regard to cruise ships in Arctic waters:

> There are no easy answers to how to keep people in stress warm for days in a liferaft when temperatures outside is freezing cold. Few believe a 70-years old person could make it through the five-days required by IMO's Polar Code.[179]

Soft law instruments, on the other hand, seem to be more flexible and able to react quicker (while the Polar Code took more than 25 years in the making, the AECO as the main industry actor was only established in 2003) and to have the possibility of incorporating much more in-detail regulation and addressing, besides only shipping companies and seafarers, also passengers. Such instruments of best practice should therefore be supported and applied by all the actors involved. Further, also in this regard, an outside perspective can contribute to ensure an effective implementation of complex regulation instruments, as shows the example of the Arctic Shipping Best Practice Information Forum.

[178] Jensen, n 43, p 77.
[179] The Barents Observer, n 6.

4 Recommendations

4.1 Introduction

How, and by whom, should such gaps and shortcomings be addressed, and how can the current regulation of seaborne tourism in the Arctic be improved?

This chapter discusses and addresses the most notable gaps and shortcomings of the current regulation based on the findings of the previous chapter. It then suggests possible content for future regulation. Also, future roles and responsibilities of the involved institutions are presented.

4.2 Prominent Issues of Current Regulation

4.2.1 Geographical Scope of Application of the Polar Code

The hazards that the Polar Code tries to address can and will also be present far outside the legally defined Arctic waters, which the *Viking Sky* incident is a pertinent example of. Therefore, to ensure safe shipping even in popular areas like Iceland and Norway, and anywhere in between, the geographical scope of the Polar Code, and with it the definition of *Arctic waters* needs to be extended further towards the South. As an expert in maritime emergency preparedness put it:

> "There should be discussions about expanding the Polar Code jurisdictions to more Arctic areas. […] Most of the polar code is related to vessels going into the ice, but most of these cruise vessels do not go into the ice, they only go very close to the ice."[180]

4.2.2 Factual Scope of Application of the Polar Code

There is an ambiguity within the Polar Code concerning its application to international and non-international voyages (as defined in SOLAS). By an update, the Polar Code's factual scope of application should therefore be extended with unambiguous wording: 'Applying the new provisions to "non-international voyages" would be an important response to the urgent need to enhance the safety of ships and people navigating off Antarctica.'[181] The same can be said for most ship voyages in the high Arctic.[182] From a safety perspective, the Polar Code must therefore be applied to all voyages in Arctic waters, regardless whether they fall under SOLAS'

[180] The Barents Observer, n 10.
[181] Jensen, n 43, p 66.
[182] See above chapter 3.2.3.

definition of an international voyage or not. This requires an update with unambiguous wording. It seems that the MSC is considering such an update for 'the next phase' of the Polar Code.[183]

4.2.3 Personal Scope of Application of the Polar Code

There are qualitative and quantitative shortcomings regarding the Polar Code's requirements for manning and training of ships' crew: On one hand, the content of the requirements is minimal. On the other hand, these mostly only apply to masters, chief mates and officers, but not to the rest of ships' crew. To ensure safety *on board*, particularly with regard to medical emergency preparedness, the Polar Code's personal scope of application regarding manning and training for polar waters needs to be extended to all members of ships' crew. Also, with regard to content, the requirements for manning and training need to be extended. Most notably, presence of an ice navigator on the bridge when navigating in polar waters is missing in today's Polar Code.

4.2.4 Port State Control

While the LOSC only makes use of the concept of port state jurisdiction in Article 218 with regard to illegal discharges, this concept could be favoured in the future with regard to the safety of shipping in Arctic waters: Hereby, further fragmentation of the regulation could be prevented, and the international community would benefit as a whole. A 2010 report by the European Commission suggested to consider a coordinated regime of port state control for Arctic shipping, either through amending existing regional port state control regimes, or by a separate regional agreement. While such a regime would face certain difficulties in the Arctic, as ports within the Arctic waters are rare and lacking adequate infrastructure, examples of existing port state control regimes in the Southern ocean seem to be working well. Finally, even the idea of including a port state control regime into the Polar Code had been discussed.[184]

In the *Nicaragua* case,[185] the ICJ explicitly stated that under customary international law, states enjoy wide discretion in exercising jurisdiction over their ports. This means that states in general have the option to deny access to their ports, should a foreign vessel not comply with certain rules or standards more stringent than GAIRAS.[186]

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[183] Roach, n 159, p 54.
[184] See for entire section Boone, n 29, pp 205-208.
[185] *Nicaragua v United States of America*, n 40, p 111 [213].
[186] See EJ Molenaar, Arctic Marine Shipping: Overview of the International Legal Framework, Gaps, and Options (2009) 18 *Journal of Transnational Law & Policy* 289 pp 308-309.

While these are valid arguments and the concept seems adequate, it is very unlikely that the LOSC will be updated or amended in this regard in the near future. The implementation of such a concept would therefore have to be done within another, existing or new, regulation instrument. The IMO Assembly resolution A.1052(27) (2011), which contains guidance on the conduct of port state control, will most likely be updated with regard to the Polar Code.[187]

4.2.5 Ships' Routeing and Ship Reporting Systems

Among the hazards that the Polar Code acknowledges, there are high latitude affecting navigation and communication systems, and remoteness of Arctic waters with possible lack of accurate and complete hydrographic data and information, and reduced availability of navigational aids.[188]

'There is no comprehensive mandatory or voluntary IMO ships' routeing system for the Arctic marine area in its entirety or large parts thereof.'[189] At a more localised level, both the IMO and the United States have been or are still working on establishing such systems.[190]

SOLAS Chapter V provides the option to establish mandatory ships' routeing and ship reporting systems upon approval by the IMO.[191] Given the hazards mentioned above, this option should be executed to contribute to the safety of shipping in the Arctic.

4.2.6 Search and Rescue

The Arctic Council's EPPR itself admitted that the *Viking Sky* incident put things in perspective with regard to SAR of cruise ships in Arctic waters and that there is room for improvement:

> The VIKING SKY incident illustrated the challenges that arise when a large cruise liner is in distress. "It puts everything into reality," an EPPR delegate stated during the after action discussion. For the Working Group the incident is a reminder of how crucial international cooperation and regular exercises are, and how much Arctic States can benefit from sharing best practices and resources.
>
> The EPPR Chair, Peter Holst-Andersen, does not hesitate calling the VIKING SKY incident a warning about what to expect in the Arctic. "The incident with VIKING SKY was somehow a 'best case scenario'. It happened in a densely populated area with a lot

[187] Roach, n 159, p 59.
[188] Polar Code, n 8, Introduction para 3.1.
[189] Molenaar, n 186, p 312.
[190] A Chircop, 'The IMO, Its Role under UNCLOS and Its Polar Shipping Regulation' in RC Beckman et al (eds), *Governance of Arctic Shipping* (Brill Nijhoff Leiden/Boston 2017) 107, p 137.
[191] See Roach, n 159, p 58.

> of rescue capabilities relatively close to the ship. Had a similar disaster happened in most other places in the Arctic the result would most likely have been catastrophic.", he argues. "No one would have had sufficient resources to react so effectively and promptly in the high North. This is why it is so extremely important that we work and cooperate cross-state on these issues. And there is still room for improvement", says Peter Holst-Andersen.[192]

A project that might work towards this direction exists in the form of the Arctic and North Atlantic Security and Emergency Preparedness Network (ARCSAR) started in September 2018. It addresses security and safety issues, but particularly also SAR challenges, in the Arctic and North-Atlantic regions and prepares to 'cope with the Security and safety threats that will result from increased commercial activity in the region including traffic through the Northern passages, cruise traffic, and offshore oil and gas activity'.[193]

However, with regard to the sheer scale of an incident like the *Viking Sky* and the prospect of this happening in remote Arctic waters, the identified *room for improvement* is rather an urgent *need for action*.

4.3 Future Roles and Responsibilities

4.3.1 The IMO

The central and main responsibility for the development and adoption of global rules and standards for maritime safety lies with the IMO, as it is, as pointed out above, the competent international organization within the context of LOSC: 'The Organization's role cannot be overstated', as the IMO plays a critical role in balancing rights and interests of different states and their interests. It is likely that especially the Arctic coastal states will continue to see the IMO in this role in the future.[194]

However, particularly with regard to the Polar Code, in order to achieve 'adoption of the highest practicable standards in matters concerning maritime safety' as stated in the IMO's mandate, more efforts, in the form of updates of the Polar Code, will be required. To keep up to date with the rapidly growing sector of seaborne tourism in Arctic waters, such updates are needed. The IMO has, in line with its mandate, a responsibility to approach the arising issues promptly.

[192] EPPR, n 10.
[193] ARCSAR, *The Project,* available at https://arcsar.eu/#about-3 (accessed 22 August 2019).
[194] Chircop, n 190, pp 138-139.

This, however, cannot be achieved without involving the Arctic coastal states: 'The further development of the regulatory framework, in particular through the IMO, will depend on the involvement of and initiatives taken by the Arctic coastal states.'[195]

4.3.2 The Arctic States and the Arctic Council

The Arctic Council is a high-level intergovernmental forum established in 1996 by the eight Arctic states (Canada, Denmark/Greenland, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States) by a non-legally binding instrument known as the *Ottawa Declaration*. In line with its establishment by means of a non-legally binding instrument, the Arctic Council was and is not meant to be an intergovernmental organisation. Besides the Arctic states as members, there is the opportunity to participate for other stakeholders as either *permanent participants* or *observers*.[196] It cannot by itself adopt any legally binding instruments, but has taken a so-called *decision-shaping role* on various occasions, and its 'role in providing non-legally binding policy and regulatory guidance has gradually become stronger and more prominent'.[197]

The Arctic Council's mandate, according to Article 1 of the Ottawa Declaration, encompasses 'promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic indigenous peoples and other Arctic inhabitants on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic.'[198]

'The Arctic Council is at present generally accepted by the international community as the principal intergovernmental body for Arctic cooperation.'[199] It could, in this function, potentially be the right forum to develop further regulation for safety of seaborne tourism in the Arctic, as '[the] Arctic Council and its subsidiary bodies, like the different components of the ATS in relation to the Southern ocean, have a potential for contributing to a cross-sectoral approach to the regulation of the marine Arctic.'[200] The Arctic Council has exercised this

[195] Henriksen, n 137, p 383.
[196] Molenaar, n 115, pp 45-47.
[197] Ibid, p 54.
[198] Arctic Council, *Declaration on the Establishment of the Arctic Council* (19 September 1996) available at https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y (accessed 15 August 2019).
[199] Molenaar, n 115, p 60.
[200] Molenaar, Rothwell and Oude Elferink, n 20, p 415.

contributing role on two occasions so far, namely with the Arctic MOSPA and the Arctic SAR Agreement.

With regard to seaborne tourism, the Arctic Council could potentially follow up on these: PAME, in 2015, found that the Arctic Council itself should not be the forum to develop and establish additional overall guidelines for Arctic tourism shipping, but suggested that it should instead identify and endorse best-practice guidance with respect to industry, industry association and NGO guidelines and protocols related to tourism in the Arctic.[201] As pointed out in chapter 3.2.5 above, with regard to seafarer's safety in general, the 1995 amendment to the STCW convention put the IMO as a governing body in exactly such a position. The system enacted in the amended STCW convention might therefore be used as a model approach to govern shipping in Arctic waters. Although it has to be noted that given the tourism industry guidelines lacking a legally binding nature, and the Arctic Council lacking the competence to adopt any legally binding instruments, the way of implementation would in this case have to be adapted. Nevertheless, the Arctic Council, just like PAME suggested, would be the right forum to take such a position with regards to Arctic tourism shipping. This way, further fragmentation of the complex soft law system could be prevented, and a certain level of harmonization could be ensured wherever this is desired.

4.4 Conclusion

The current regulation regime shows some shortcomings that need to be addressed, while others are already in such a process. Amongst the former are, most strikingly, several aspects of the Polar Code's scope of application that need to be modified immediately to be able to effectively ensure safety of seaborne tourism in Arctic waters.

Further, the concept of port state jurisdiction could present both a future model to effectively govern and enforce safety of shipping in the Arctic in the future, and an opportunity for the Arctic coastal states to adopt regional implementation regulation as encouraged in the LOSC.

While the main responsibility to develop and update legally binding regulation instruments is, and also will be in the future, with the IMO, the Arctic states could, through the forum of the Arctic Council, potentially contribute to the further development of safety regulation for Arctic shipping, and seaborne tourism in particular, and hereby also address the issue of fragmentation.

[201] PAME, n 118, p 8.

However, besides the Arctic coastal states, 'also states outside the region, where tour operators etc. are based, are called upon to contribute to protecting the unique Arctic marine environment'.[202]

Finally, with regard to recommendations for future regulation and given the unique circumstances faced in seaborne tourism in Arctic waters, out-of-the-box thinking is needed:

> Given the large distances in the Arctic and the time scale of rescue operations, manned Arctic shipping requires a degree of self-sustainability which goes far beyond what is normal in contemporary shipping along major shipping lines between major urban centres.[203]

In particular, until SAR possibilities are further developed and adequate enough to ensure the safety of seaborne tourism even in remote locations, once more, an outside and non-legal perspective provides a possible solution:[204] The highest achievable level of safety could obviously be ensured by a requirement for (especially larger) cruise ships to sail two-and-two together, or at least at a reasonable distance to each other at all times, providing a fast and simple way for first SAR resources and measures.

[202] Kirchner, n 96, p 7.
[203] Ibid, p 6.
[204] See The Barents Observer, n 6.

5 Conclusion

The safety of seaborne tourism in Arctic waters is, just like in any other waters of the world, governed by the legal framework of the LOSC and SOLAS conventions, together with the STCW convention and the Arctic SAR Agreement. As these instruments contain relatively little provisions particularly addressing shipping in the Arctic, there are more specific instruments of regulation. This is, on one hand, the Polar Code that has been developed based on previous non-binding instruments and is in force since 2017. It has neither been *tested in practice*, nor seen major updates yet. On the other hand, this is a wide system of self-regulation by non-state actors such as industry associations, NGO and others. Such *soft law* instruments do, even though they are technically not legally binding, as *quasi-laws* still produce a certain binding effect.

In this current regulation regime, there are many gaps and shortcomings, some of which are in the process of being addressed, and others that are of major nature but have not yet been addressed. From this perspective, the conclusion can be no other than that the current regulation instruments do not ensure the safety of cruise ship passengers in Arctic waters in an adequate way. This assessment corresponds with professionals' outside perspectives and experiences with regard to SAR that have been put to the test on the occasion of the *Viking Sky* incident.

The measures required might have to go far beyond what regulation has traditionally been doing in other sectors. However, a short insight into the potential for disaster that every cruise ship voyage, be it legally defined as an international voyage or not, in Arctic waters brings, is enough to justify this: Media, but also experts stated that if an incident of similar dimensions like the *Viking Sky* were to happen further up in the Arctic, it would most likely immediately turn into a *disaster*. Original footage captured during the *Viking Sky* incident seems graphic in this regard and thus does nothing but substantiate such an assessment.[205]

As seen above, both the SOLAS convention as well as the Polar Code were triggered by some of the most notable ship disasters in history (*Titanic* and *Exxon Valdez*). One can only hope, that this time, with the *Viking Sky*, a mere *incident* is enough to trigger further improvements of the underlying regulation, and that not yet another *disaster* has to happen before stricter and more effective safety regulation is adopted.

For the issues, that need to be addressed, are widely known today.

[205] See eg Sunday Night, *Mayday | True terror on board the Viking Sky cruise ship | Sunday Night* (16 April 2019) available at https://www.youtube.com/watch?v=9JJY4PLWMHA (accessed 19 June 2019).

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