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WORKING PAPER ON THE LEGAL FRAMEWORK FOR CIVIL LIABILITY FOR VESSEL-SOURCE OIL SPILLS IN POLAR REGIONS

EXECUTIVE SUMMARY

The legal infrastructure in the Arctic is very good in the sense that the coastal states have legislation in place that deals with pollution, liability, calculation of losses, responsible parties, and funding.

The vastness of the Arctic region potentially poses great challenges from a response perspective and in many parts there is currently a lack of adequate response resources and infrastructure to meet a severe spill.

It is unclear as to whether or not a major oil spill in the Arctic will stress the current monetary limits of the CLC and Fund Convention regime, although the Supplementary Fund may be expected to be sufficient in most instances where it applies. However, this is also likely to be the case in other marine areas as well as in the polar regions.

Russia and Iceland would benefit from participating in the Supplementary Fund Protocol to the Fund Convention 1992 should a major oil pollution incident occur.

There is a gap with respect to the pollution liability regime for the high seas in the Arctic, but this is not considered problematic at this time. In due course, the issue should be addressed in the interest of the international community.

Until the Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty enters into force, Antarctica is exposed to legal uncertainty if a pollution incident occurs. Therefore, it is specifically recommended that the Antarctic Treaty Protocol states ratify the Liability Annex.

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1. INTRODUCTION AND SCOPE

The Comité Maritime International (CMI)'s International Working Group (IWG) on Polar Shipping agreed at CMI Hamburg (17 June 2014) to produce a working paper on how the existing pollution liability regimes¹ and adjacent relevant conventions actually apply (or do not apply) to the polar regions. The scope of the work concerns oil spills from all ships (i.e., not simply tankers), but does not extend to pollution from exploration and production from offshore oil and gas installations and pipelines.

There are three actual or potential international shipping routes in the Arctic, as represented in Figure 1. At this time, the most active international shipping route is the Northern Sea Route, through Russian Federation waters, followed by the Northwest Passage, mostly through Canadian waters.² The routes are navigated during the summer season. The transpolar route across the North Pole is not feasible at this time, but that may change in the future.

Figure 1: International Navigation Routes in the Arctic



Source: Norsk Polarinstitut, 2010

This report describes the international regimes for compensation, limitation, and liability with reference to the polar context, and reviews applicable national law with regard to

¹ Referring to the national marine pollution legislation and international conventions.

² For a discussion of the routes, see W. Østreg et al., *Shipping in Arctic Waters: A comparison of the Northeast, Northwest and Trans Polar Passages* (Springer, 2013).

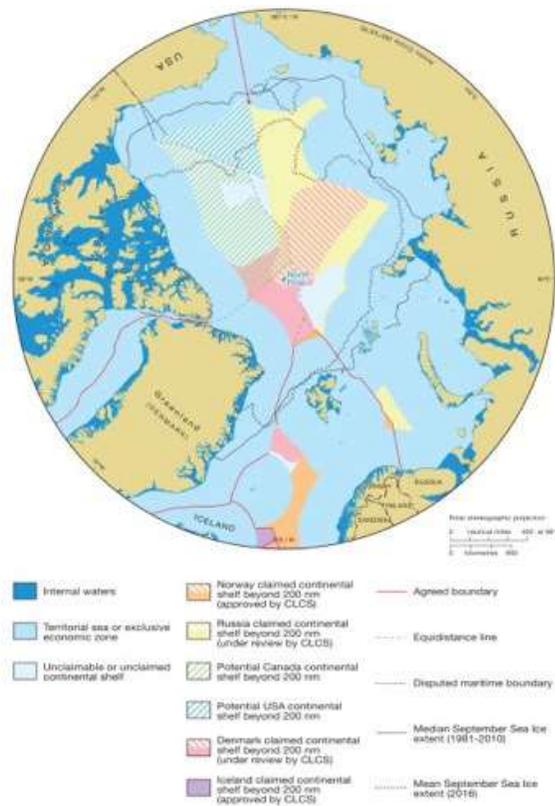
environmental protection, emergency response, and liability applicable to polar regions. Further, the report explores any potential gaps that may exist with regard to compensation and liability, and emergency response, regimes in the event of pollution damage in these remote regions.

2. OVERVIEW OF CONVENTIONS³

2.1 UNCLOS

The United Nations Convention on the Law of the Sea, 1982 (UNCLOS)⁴ has been described as the constitution for the world’s oceans. Accordingly, it has a very wide scope, providing a framework for the application of the international maritime conventions and customary law. UNCLOS applies a so-called zonal approach under which the marine areas within national jurisdiction are divided in different parts: internal waters, archipelagic waters, the territorial sea, the EEZ, and the continental shelf.

Figure 2: Status of Arctic waters beyond 200 NM from shore



Source: IBRU, Durham University, U.K., 2016

Briefing notes on the map are available online: <www.durham.ac.uk/ibru/resources/arctic/>.

³ Contributed by Kiran Khosla (International Chamber of Shipping, London), Lars Rosenberg Overby, Hafnia Law Firm (Copenhagen), Nigel H. Frawley (Toronto), and Professor Aldo Chircop (Dalhousie University, Halifax).

⁴ *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 UNTS 3 [UNCLOS].

Arctic coastal states claim a range of maritime zones under national jurisdiction as described in Figure 2. The 200 nautical mile (NM) limit includes the territorial seas (12 NM) and exclusive economic zones (EEZ, 188 NM) declared in the region by Canada, Denmark (Greenland), Norway, the Russian Federation, and the United States. Beyond the limits of the EEZ, these Arctic Ocean coastal states are entitled to make submissions to define the outer limits of their continental margins to the Commission on the Limits of the Continental Shelf by virtue of Article 76 UNCLOS. Norway is the first state to receive recommendations from the Commission that will enable it to define the outer limits. The Russian Federation was the first to make a submission and recently made a revised submission. Denmark has made a partial submission. Neither Denmark nor the Russian Federation have received recommendations to enable definition of outer limits. Canada is expected to make its submission in the near future. It is expected that the U.S. (which is not a party to UNCLOS) will claim entitlement to the continental shelf in the Arctic on the basis of customary international law, but it is unclear whether it will benefit from the procedure established in UNCLOS to enable it to determine the outer limits of the continental shelf. The rights of the coastal state over the continental shelf do not affect the legal status of the superjacent waters as high seas. UNCLOS protects the right of international navigation through the territorial seas, straits used for international navigation, EEZs and high seas of the Arctic.

The rights and obligations of coastal states depend on the zone at stake. The international community enjoys rights of innocent passage, archipelagic sea lane passage, transit passage (through straits used for international navigation), and freedom of navigation. The duty to protect the marine environment accompanies the exercise of international navigation rights. A coastal state can establish an EEZ up to 200 NM where, in addition to resource rights, it has a general duty to protect the marine environment. Furthermore, UNCLOS provides for the global commons, namely high sea areas and the international seabed area.

Article 234 of UNCLOS is particularly relevant to the Arctic region because it provides coastal states with an exceptional power not enjoyed by states in other marine regions. It provides that coastal states bordering ice-covered waters have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction, and control of marine pollution from vessels in ice-covered areas within the limits of the EEZ where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation and pollution of the marine environment. Article 234's power is subject to "due regard" to international navigation considerations; its exercise must be non-discriminatory and on the basis of the best available scientific evidence.

Article 234 contains ambiguities such as whether its application "within the limits" of the EEZ includes the territorial sea and, if so, what relationship there is between this power and the rights of innocent and transit passage.⁵

⁵ K. Bartenstein, "The 'Arctic Exception' in the Law of the Sea Convention: A contribution to safer Navigation in the Northwest Passage," 42 *Ocean Development & International Law* (2011); A. Chircop: "The Growth of International Shipping in the Arctic: Is a regulatory Review Timely?" 24 *International Journal of Marine and Coastal Law* (2009), at 372.

2.2 CLC 1992

The scope of the *Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969*, 27 November 1992, 1956 UNTS 255 (CLC 1992)⁶ covers actual or threatening oil pollution by persistent oil from tankers in the national territory and EEZ of state parties.⁷ “Persistent oil” refers to hydrocarbon mineral oil such as crude oil, fuel oil, heavy diesel oil, and lubricating oil. Damage caused by non-persistent oil, such as gasoline, light diesel oil, kerosene, liquefied natural gas (LNG), and liquefied petroleum gas (LPG), is not covered by the CLC 1992.

In geographical terms, the regime covers pollution damage in the coastal waters, including the territorial sea and waters up to 200 NM from the coastline of the participating states, and preventive measures, wherever taken, to prevent or minimize such damage. It is therefore unnecessary for the coastal state to establish an EEZ to be covered by the regime, but the zone must be determined “in accordance with international law.”⁸

All areas of the Arctic where shipping takes place will normally be covered by the CLC 1992.⁹ Also, the convention is relevant to adjacent areas beyond the 200 NM zone if oil is spilled there and threatens areas within the 200 NM zone.

The CLC 1992 provides for strict liability on the part of the registered owner of the tanker to pay compensation for “pollution damage.”¹⁰ The liability only applies to losses due to damage (or threat thereof) outside the tanker caused by contamination by oil from the tanker.¹¹ “Pollution damage” is defined in article I. 6 and means:

- (a) loss or damage caused outside the ship by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, provided that compensation for impairment of the environment other than loss of profit from such impairment shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken;
- (b) the costs of preventive measures and further loss or damage caused by preventive measures.

The definition of “pollution damage” also encompasses what is often referred to as “pure environmental damage” (although this is not defined in the convention). This category of claim is subject to the stipulation that compensation for impairment of the environment, other than for loss of profit from such impairment, shall be limited to costs of reasonable measures of reinstatement actually undertaken or to be undertaken.¹² Accordingly, loss of use and similar losses are not recoverable under the convention.

⁶ *Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969*, 27 November 1992, 1956 UNTS 255 [CLC 1992].

⁷ *Ibid* at Art. II. This is basically the area within 200 NM of the coastline.

⁸ UNCLOS, *supra* note 3, Arts 55-57.

⁹ An exception could be certain areas near Svalbard, to which Norway has given status as “fishery protection zone.”

¹⁰ CLC 1992, *supra* note 6, Art. III, 1.

¹¹ *Ibid*, Art. I, 6 and 8.

¹² *Ibid*, Art. I, 6(a).

Such reasonable reinstatement measures that fall within the scope of the convention are aimed at accelerating natural recovery of the damaged components of the environment. These may include measures taken at some distance from — but still within the general vicinity of — the damaged natural resource, so long as it can be demonstrated that they would actually enhance recovery. This approach is intended to encourage innovative approaches to reinstatement. Contributions may also be made to the costs of post-spill studies, including studies to establish the nature and extent of environmental damage caused by an oil spill and to determine whether or not reinstatement measures are necessary and feasible. The IOPCF Manual (2013 Edition)¹³ explains compensation for reinstatement measures:

Environmental damage

“1.4.12 Compensation is payable for the costs of reasonable reinstatement measures aimed at accelerating natural recovery of environmental damage. Contributions may be made to the costs of post-spill studies provided that they relate to damage which falls within the definition of pollution damage under the Conventions, including studies to establish the nature and extent of environmental damage caused by an oil spill and to determine whether or not reinstatement measures are necessary and feasible.”¹⁴

As it will be normally impossible to recreate the ecological position prior to a spill, the purpose of reinstatement measures has been described as creating a biological habitat where organisms that were characteristic for the habitat as it was before the spill can live.¹⁵ The costs incurred in this regard must be reasonably proportionate considering the extent of the environmental damage and the expected positive effect of the measures.

It is notable that the definition of “pollution damage” and in particular the “loss of profit” arising from the impairment of the environment creates rights for recovery of economic losses that are otherwise not recoverable under, for example, English law. The IOPCF practice as confirmed in the IOPCF Manual 2013 is that loss of earnings caused by oil pollution suffered by persons whose property has not been polluted (i.e., pure economic loss) may be covered.¹⁶ In particular, the manual suggests the following as permissible claims: loss of earnings by fishers whose nets were not contaminated by the spill, but who may be prevented from fishing because of the pollution of the area they normally fish; loss of income by hotel owners located close to a contaminated public beach; and costs of marketing campaigns to prevent or reduce economic losses by counteracting the negative publicity arising from a major pollution incident.

¹³ International Oil Pollution Compensation Fund, *Claims Information Pack* (October 2013) [IOPCF Manual 2013]. The Manual is accompanied by the Guidelines for Presenting Claims for Environmental Damage. See Information for Claimants, Guidelines for Presenting Claims for Environmental Damage, Note by the Secretariat, IOPC/APR17/4/1, 8 March 2017, IOPC Funds, online: <documentservices.iopcfunds.org/meeting-documents/download/docs/4150/lang/en/>.

¹⁴ *Ibid* at 16.

¹⁵ Jacobsson Mans, *Miljöfarlige sjötransporter – Internationella skadeståndsregler* (Stockholm Centre for Commercial Law, 2015), at p.142.

¹⁶ IOPCF Manual 2013, *supra* note 13 at 16.

Compensation is also available for preventive measures “wherever taken.”¹⁷ Notably, expenses incurred for preventive measures are recoverable even when no oil spill occurs, provided there was “a grave and imminent threat” of pollution damage.¹⁸ There is no restriction regarding the jurisdictional zone in which the preventive measures have to be taken in order fall under the CLC 1992.

The liability is channelled to the registered owner and as such, an operator or bareboat charterer has no liability (except if the damage resulted from their personal act or omission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result) but may, however, be subject to recourse claims.¹⁹ A claimant is entitled to bring an action in tort against other persons liable outside the framework of the Civil Liability Convention, but it is not possible to bring an action against other persons in the “tanker’s” sphere, such as servants and agents of the registered shipowners, and also pilots, charterers, managers, operators, salvors, and persons who take preventive measures and their agents and servants enjoy protection.

Although the basis of the liability is strict, there are a few defences available to the registered owners: a) damage resulting from war, etc. b) damage wholly caused intentionally by third parties, and c) damage caused by negligence of a government or other authority responsible for maintenance of lights and navigational aids in the exercise of that function.²⁰

The registered owners’ liability may, however, be limited to sums calculated by reference to the tonnage of the vessel: < 5,000 GT max. SDR 4.51 million and > 5,000 GT max SDR 89.77 million.²¹ The maximum amount currently is SDR 89.77 million, which at current exchange rates, would result in a USD limitation amount of USD 123 million.

In rare circumstances, the limit of limitation may be breached. Still, that requires the incident to result from the owner’s act or omission committed with intent to cause pollution damage, or recklessly and with knowledge that such damage would probably result.²² This is only likely to occur in exceptional circumstances.

The convention requires the registered owner to insure its liability.²³ This compulsory insurance (or other financial security) must be for the maximum amount of the particular ship’s liability under the convention; such insurance must be verified by a certificate of insurance issued by a state party to the convention and which the ship is required to carry on board. The convention also provides a direct right of action by third-party claimants against the provider of financial security for the owner’s liability under the convention. This ensures that recovery will be available even if the owner is not financially capable of paying.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

¹⁹ CLC 1992, *supra* note 6, Art. II, 4 and 5.

²⁰ *Ibid* at Art. III, 2.

²¹ *Ibid* at Art. V, 1 and 9.

²² *Ibid* at Art. V, 2.

²³ *Ibid* at Art. VII.

The CLC 1992 prohibits general direct action against the insurer in cases where the damage resulted from the shipowner's personal act or omission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result.

The liability regime described above is not exhaustive. If the loss exceeds the said limitation amount or if the owner is exempt from liability, the International Oil Pollution Compensation Fund(s) will provide additional funding to the claimants (see below).

2.3 Fund Convention

The *Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971* (Fund Convention 1992),²⁴ which is supplementary to the CLC 1992, establishes a regime for compensating claimants when the compensation due under the 1992 CLC is inadequate or unavailable. The oil industry contributes to the fund with levies calculated on the basis of the imported quantity of qualifying oil. A Protocol to the Fund Convention 1992 was agreed on 27 May 2003 for the creation of a third tier of liability for oil pollution. This third tier, the Supplementary Fund, came into force in 2005. This was agreed in recognition of the fact that the maximum compensation available under the CLC 1992/Fund Convention 1992 regime might be insufficient to meet compensation needs in certain circumstances in some contracting states to that convention. The Supplementary Fund does not affect what damage is compensated or the criteria for compensation, rather, it raises the maximum compensation available from SDR 200 million to SDR 750 million and thus reduces the risk of incomplete compensation or delays in compensation due to pro-rating of claims. Membership of the Supplementary Fund is optional and any state that is a member of the 1992 Fund may join it. The level of compensation available for oil tanker incidents in the Arctic would therefore be improved if all the Arctic coastal states became party to the Supplementary Fund.²⁵

The oil industry in the member state parties also contribute to Supplementary Fund. The Supplementary Fund is available only to those states that are party to it, the rationale being that it provides higher levels of compensation to states that choose to become parties, while enabling states that do not wish to burden their oil importers with the higher levels of contribution involved to remain outside. The Supplementary Fund currently has 31 contracting states.

While the International Oil Pollution Compensation Fund(s) is intended to assist claimants when the CLC 1992 regime is inadequate to cover the damage (where the damage exceeds the shipowner's maximum liability), it also offers recourse where the shipowner can invoke any of the defences allowed in the CLC 1992, or where the shipowner (and the insurer of the shipowner's liability) is financially incapable of meeting the obligations. It is therefore closely linked to the CLC 1992 Convention and has the same scope, definitions, and geographical coverage as the CLC 1992.

The total amount of compensation available under CLC 1992 and the Funds is SDR 750 million (approx. USD 1.3 billion) per incident.

²⁴ *Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971*, 27 November 1992, 1953 UNTS 330 [Fund Convention 1992].

²⁵ Russia and the U.S. do not contribute to the Supplementary Fund.

2.4 Intervention Convention

The *International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties* (Intervention Convention) enables coastal states to enact the necessary measures to “prevent, mitigate, or eliminate danger” that could affect its coastline or other related interests resulting from oil pollution (or potential oil pollution) following a maritime casualty.²⁶ This convention applies to all seagoing vessels, with the exception of vessels owned or operated by a state that are used for non-commercial government services (e.g. warships).

Any action a state undertakes under this convention must be necessary in order to protect the coastline from any damage from a vessel within the EEZ or on the high seas that could or does occur after a real pollution incident, or damage that could or does occur resulting from a potential pollution incident that gives rise to a “grave and imminent” threat of pollution.²⁷ Such actions can include removing cargo, fuel, or other hazardous materials from a stricken ship, and taking charge of or sinking a stricken ship. Note, the coastal state is only empowered to take action after consulting with appropriate parties, which include the flag state of the ship involved and the owner(s) of the ship or cargo in question; further, the coastal state may only take such action as is deemed necessary. If a coastal state takes measures beyond those permitted under the Intervention Convention, it is liable for any damage caused by those measures and any consequent compensation. The convention has provisions regarding the settlement of disputes that arise from its application.²⁸

The Intervention Convention has no provisions limiting its geographical scope or applicability. This means that it applies in the Arctic Ocean; due to the absence of coastal states, it likely does not apply in the Antarctic Ocean. That said, Annex IV to the Protocol on Environmental Protection to the Antarctic Treaty outlines basic obligations in this area, which bind parties to this treaty.²⁹

Originally, the 1969 Intervention Convention applied only to incidents arising from oil pollution. Recognizing further protection was necessary due to the increasing quantity of other chemical pollutants and hazardous substances carried by ships that could cause severe damage to the marine environment, the 1969 Brussels Conference extended the convention to cover additional substances.

²⁶ *International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties*, 29 November 1969, 970 UNTS 211 at Art. I [Intervention Convention]. Norway, Russia, and the U.S. are parties to both the Intervention Convention and the 1973 Protocol. Denmark is only a party to the former while Canada is not a party to either. There is a similar provision in UNCLOS, Part XII.

²⁷ *Ibid* at Art. I.

²⁸ *Ibid* at Art. VIII, Annex Ch 1.

²⁹ *Protocol on Environmental Protection to the Antarctic Treaty*, 1991, Secretariat of the Antarctic Treaty [Environmental Protection Protocol]. For example, Art. 1.1 of the protocol says: “Parties to the Convention may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave or imminent danger to their coastline or related interests from pollution or threat of pollution of the sea by oil following a maritime casualty . . . which may reasonably be expected to result in major harmful consequences.”

The 1969 Intervention Convention was further extended by the 1973 London Conference on Marine Pollution, which adopted the Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil (Intervention Protocol).³⁰ This protocol expanded the 1969 Intervention Convention to include substances that are either listed in the Annex to the Protocol or those that have substantially similar characteristics to the enumerated substances. The 1973 Intervention Protocol has been amended multiple times since it came into force in 1983 in order to update the list of substances attached to it.

2.5 OPRC

The International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC)³¹ deals with coastal states' preparedness and response to oil pollution incidents. Its parties "undertake, individually or jointly, to take all appropriate measures ... to prepare for and respond to an oil pollution incident."³² This convention puts obligations on states in their capacity as flag states (e.g. ships flying their flag must have emergency plans and reporting procedures), and in their capacity as coastal states (e.g. requiring contingency plans, notification, cooperation with other states).³³ A Protocol from 2000 extends the regime to other hazardous and noxious substances.³⁴

The OPRC Protocol 2000 does not contain any provision with respect to geographical scope or applicability. It thus applies in the Arctic, but, in the absence of coastal states, it probably does not apply in Antarctica.

There is a specific Arctic instrument implementing the OPRC: The Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic was agreed in 2013 by the members of the Arctic Council.³⁵ It includes some more detailed obligations for the Arctic states, taking into account the remoteness of the areas and the difficulties involved with recovering oil in cold circumstances. The agreement is not yet in force.

2.6 Bunker Convention

Liability and compensation for damage and losses following oil spill damage from bunkers on board ships are covered by the Bunker Oil Pollution Convention 2001 (Bunker Convention),³⁶ which came into force on 21 November 2008.

³⁰ *Protocol Relating to Intervention on the High Seas in cases of Marine Pollution by Substances other than Oil, 1973*, 2 November 1973, 1313 UNTS 3 [Intervention Protocol].

³¹ *International Convention on Oil Pollution Preparedness, Response and Cooperation*, 30 November 1990, 1891 UNTS 51 [OPRC].

³² *Ibid* at Art 1(1).

³³ *Ibid* at Art. 6.

³⁴ *Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000*, 15 March 2000 [OPRC-HNS Protocol].

³⁵ *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*, 2013 Kiruna, Sweden, 15 May 2013, Arctic Council, available online: <www.arctic-council.org/eppr/agreement-on-cooperation-on-marine-oil-pollution-preparedness-and-response-in-the-arctic/>.

³⁶ *International Convention on Civil Liability for Bunker Oil Pollution Damage 2001*, 23 March 2001, Can TS 2010 No 3 [Bunker Convention].

This convention also follows the CLC 1992 model in that it establishes strict liability for the shipowner, coupled with compulsory insurance and direct action against insurers. Unlike the CLC 1992/Fund/Supplementary Fund system, the Bunker Convention is a single-tier regime and does not provide for a separate stand-alone limitation fund for additional compensation. It also does not contain an express limit of liability to the shipowner, but it preserves existing rights to limit liability, which the shipowner might have under national or international law. The channelling provisions are also not quite the same as in the CLC 1992/Fund Convention regime, as claims against persons other than the shipowner who are involved in the vessel's operation are not excluded under the Bunker Convention. The geographical scope of the convention for compensation for damage costs and for the costs of preventive action is the same as in the CLC 1992/Fund Conventions.

The shipowner and the insurer are exempt from liability under the Bunker Convention where the pollution damage is wholly caused by the intentional act of a third party.

As noted above, there is no expressly specified limit of liability amount under the Bunker Convention. Instead, the right to limit liability and the amount is subject to the applicable national or international legislation such as the Convention on Limitation of Liability for Maritime Claims, 1976,³⁷ as amended (see below in section 2.8 0). The term “shipowner” is defined as the owner, charterer, manager, and operator of the ship; all these persons are entitled to limit their liability.

As in the case of the CLC 1992, the Bunker Convention provides for a system of compulsory insurance by the registered shipowner of a vessel of more than 1,000 GT, to be verified by a certificate of insurance from a state party. The Bunker Convention also provides that claimants are entitled to bring action directly against the insurer, but the direct liability of the insurer is limited to “the amount equal to limits of liability under the applicable national or international limitation regime but in all cases, not exceeding an amount calculated in accordance with the Convention on Limitation of Liability for Maritime claims, 1976, as amended.”³⁸ The claimant is effectively entitled to bring direct action against the insurer up to this limitation amount. The insurer may not invoke, in defence of a claim under the convention, any defence that could be invoked under the insurance policy (in defence of a claim for an indemnity under the insurance policy) save for wilful misconduct of the assured.

2.7 HNS Convention

This International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea Convention (HNS Convention 1996) was adopted in 1996 to provide compensation to claimants following accidents involving hazardous and noxious substances carried on board ships, including bulk cargoes (solids, liquids, or liquefied gases) and packaged goods.³⁹ This convention also covers oil substances that do not fall within the

³⁷ *Convention on Limitation of Liability for Maritime Claims, 1976*, 19 November 1976, 1456 UNTS 221 [LLMC 1976].

³⁸ Bunker Convention, *supra* note 36 at Art. 7.1.

³⁹ *International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea*, 2 May 1996, 35 ILM 1406 [HNS Convention 1996].

definition of “persistent oil” under the CLC 1992 and 1992 Fund Convention, such as gasoline, light diesel oil, etc.

The HNS Convention is modelled on the CLC 1992 and Fund Conventions in that there is a two-tier system of compensation: the first tier paid by shipowners and the second by a fund financed by contributions from HNS receivers when the first tier is insufficient to meet the claims. However, unlike the CLC 1992/Fund Convention regime, both tiers of compensation are contained in a single convention.

As with the CLC 1992/Fund Convention regime, the HNS Convention provides for strict liability on the part of the registered shipowner, up to an amount limited by reference to the ship's tonnage, along with compulsory insurance and claimants' right of direct action against the insurer.

The 1996 HNS Convention has been ratified by 14 states, but has not entered into force due primarily to the difficulties of setting up systems to report the quantities of hazardous and noxious substances (contributing cargo) that are received by sea transport in their respective territory, and the difficulties in setting up a reporting system for packaged goods.

The HNS Convention was amended by a Protocol in 2010 to overcome some of the identified obstacles to the entry into force of the HNS Convention 1996.⁴⁰ The substantive provisions of the 1996 HNS Convention are unchanged, although the liability scheme under the first tier has been changed (and the shipowner's limits of liability increased) and the concept of contributing cargo has been amended. Despite these amendments, the HNS Convention remains difficult for states to implement.⁴¹

2.8 LLMC 1996

The Convention on Limitation of Liability for Maritime Claims (LLMC)⁴² establishes shipowners' and certain other parties' rights to limit their liability for maritime claims.

The limits under the 1976 LLMC Convention were set at 333,000 SDR for claims for loss of life or personal injury for ships not exceeding 500 GT, plus an additional amount based on tonnage. For other claims, the limit of liability was fixed under the 1976 Convention at 167,000 SDR plus additional amounts based on tonnage on ships exceeding 500 GT.

The LLMC 1976 provides for what is intended to be a virtually unbreakable limit of liability whereby shipowners (and other protected parties) may limit their liability, except if “it is proved that the loss resulted from his personal act or omission, committed with the intent to cause such a loss, or recklessly and with knowledge that such loss would probably result.”⁴³

⁴⁰ *Protocol of 2010 to Amend the International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996*, adopted on 30 April 2010, IMO Doc LEG/CONF.17/10, 4 May 2010 [HNS Convention 2010].

⁴¹ For information about the status see the IMO website at: <www.imo.org/en/OurWork/Legal/HNS/Pages/HNSConvention.aspx>.

⁴² LLMC 1976, *supra* note 37; *Protocol of 1996 to Amend the Convention on Limitation of Liability for Maritime Claims, 1976*, 3 May 1996, Can TS 2008 No 18 [1996 Protocol].

⁴³ LLMC 1976, *supra* note 37 at Art. 4.

The LLMC 1976 was amended by the protocol of 1996⁴⁴ which came into force in 2004. Under the 1996 protocol, the amount of compensation payable in the event of an incident is substantially increased and it also introduces a tacit acceptance procedure for updating these amounts.

New increased limits came into force on 8 June 2015 under the tacit acceptance procedure.⁴⁵

The limit of liability for claims for loss of life or personal injury for ships not exceeding 2,000 GT is 3.02 million SDR (up from 2 million SDR). For larger ships, the following additional amounts are used in calculating the limitation amount:

- For each ton from 2,001 to 30,000 GT, 1,208 SDR (up from 800 SDR)
- For each ton from 30,001 to 70,000 GT, 906 SDR (up from 600 SDR)
- For each ton in excess of 70,000 GT, 604 SDR (up from 400 SDR)

The limit of liability for property claims for ships not exceeding 2,000 GT is 1.51 million SDR (up from 1 million SDR). For larger ships, the following additional amounts are used in calculating the limitation amount:

- For each ton from 2,001 to 30,000 GT, 604 SDR (up from 400 SDR)
- For each ton from 30,001 to 70,000 GT, 453 SDR (up from 300 SDR)
- For each ton in excess of 70,000 GT, 302 SDR (up from 200 SDR).

3. NATIONAL OIL POLLUTION REGIMES AND ENVIRONMENTAL LAWS

3.1 Denmark (Greenland)⁴⁶

Introduction

First, it is worth observing that Greenland is a self-governing country within the Kingdom of Denmark. Greenland enjoys extensive self-governance, but areas such as defence, security, and foreign affairs cannot be taken over by the government of Greenland and are governed by the government of Denmark. Greenland is not a member of the EU, but is an OCT (Overseas Countries and Territories).

As such, Greenland is not a sovereign state. Rather, it is a self-governing unit within the Danish realm and the Danish constitution applies to Greenland. Laws adopted by the Danish parliament also apply to Greenland unless Greenland is specifically exempted. The political system is very similar to the Danish style of parliamentary democracy. The parliament elects the self-rule government, the Naalakkersuisut, which is headed by the premier.

⁴⁴ 1996 Protocol, *supra* note 42.

⁴⁵ *Ibid* at Art. 3.

⁴⁶ Contributed by Lars Rosenberg Overby (Hafnia Law Firm, Copenhagen).

In general, self-rule has resulted in Greenland taking control over all matters of domestic policy, the economy, the education system, culture, social affairs, etc. In all these matters, legislative competence rests with the self-government authorities.

Foreign affairs were a matter for the Danish State until 2009, when the *Greenland Home Rule Act* was replaced by the *Self-Government Act*.⁴⁷ The *Self-Government Act* expanded Greenland's power over its own foreign affairs so that the Naalakkersuisut is authorized to negotiate and enter into agreements with foreign states, as well as be involved in foreign policy issues under the jurisdiction of the Danish state authorities.⁴⁸

Greenland is represented in the Danish UN delegation by two members, who are elected by the Inatsisartut (Landstinget). Greenland has two Nordic Council members, and the Inatsisartut participates in the Nordic Council of Ministers. In addition, Greenland also cooperates with the Faroe Islands and Iceland in various regional fora.

Jurisdiction

The territorial waters of Greenland extend for 3 NM from the coastline.⁴⁹ Further, an EEZ up to 200 NM (where possible) has been established for Greenland.⁵⁰

Conventions

Denmark is a signatory to the International Convention on Civil Liability for Oil Pollution Damage (1969),⁵¹ including the 1992 protocol,⁵² as well as the International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage 1971⁵³ and 1992. The 2003 protocol to the 1992 Fund Convention⁵⁴ as enacted in Denmark also applies in Greenland. Equally, the LLMC 1996⁵⁵ applies in Greenland. The Nairobi Convention came into force for Denmark on 22 January 2015, but has so far not been made applicable in Greenland.⁵⁶ The Bunker Convention forms part of the *Danish Merchant Shipping Act* (DMA)⁵⁷ and came into force on 21 November 2008, whereas the HNS Convention has also been implemented in the

⁴⁷ *Act on Greenland Self-Government*, Act no. 473 of 12 June 2009 [*Self-Government Act*].

⁴⁸ *Ibid* at Ch. V.

⁴⁹ See Anordning (Executive order) no. 1004 of 15 October 2004.

⁵⁰ See Bekendtgørelse (Order) no. 1020 of 20 October 2004 that sets out the accurate coordinates and defines the boundaries towards Norway and Canada.

⁵¹ *International Convention on Civil Liability for Oil Pollution Damage*, 29 November 1969, 973 UNTS 3 [CLC 1969].

⁵² CLC 1992, *supra* note 6.

⁵³ *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage*, 18 December 1971, 1110 UNTS 57 [1971 Fund Convention].

⁵⁴ Fund Convention 1992, *supra* note 24; *Protocol of 2003 to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1992*, 16 May 2003, Can TS 2010 No 4 [2003 Supplementary Fund Protocol].

⁵⁵ 1996 Protocol, *supra* note 42.

⁵⁶ *Nairobi International Convention on the Removal of Wrecks*, 18 May 2007, 46 ILM 694 [Nairobi Convention].

⁵⁷ See Lovbekendtgørelse (consolidated act) no. 75 of 17 January 2014 [DMA].

DMA,⁵⁸ but has not yet come in to force.⁵⁹ The Bunker Convention has so far not been made effective for Greenland. Finally, Denmark is party to the Protocol of 1978 to the International Convention for the Prevention of Pollution from Ships 1973, relating to the International Convention for the Prevention of Pollution from Ships; International Convention on Oil Pollution Preparedness Response and Cooperation, 1990; and Protocol of 1997 relating to the International Convention for the Prevention of Pollution from Ships.⁶⁰ The majority of these conventions have been implemented in the DMA. The DMA has been made effective for Greenland⁶¹ and thus applies there.

Liability and response

The basis for making a claim for damages following an oil spill depends on where the spill or pollution has occurred and the type of oil or substance involved: Any spill within the abovementioned 3 NM territorial waters is subject to a local regulation regarding the protection of the marine environment.⁶² Beyond that zone, the *Danish Marine Environment Act* (DMEA) applies.⁶³ Both the DMA and DMEA prohibit the discharge of oil and provide strict liability for spills and pollution by any type of oil, including non-persistent oil, and thus supplement the DMA.

Greenland's local government, Inatsisartut, is charged with pollution response within its territorial waters⁶⁴ whereas the Danish Arctic Command is responsible for this task outside this area. In both cases, the authorities have the power to intervene, including taking preventive measures and arranging clean-up. They may further require the owner of the vessel to provide security and detain the vessel. Additionally, authorities may board the vessel suspecting of polluting and conduct investigations without a court order. The master of a polluting vessel is obliged to report the spill.

The two sets of environmental legislation provide liability for the costs of reasonable emergency and response measures, but they do not provide compensation for other losses such as economic losses and on-shore clean-up. Nevertheless, such losses could be recovered in tort from the responsible party (that is, in the ordinary course of events, the owner or bare boat charterer of the vessel). The responsible party may rely on the LLMC 1996 as implemented in the DMA and limit its liability if relevant.

⁵⁸ See Lov (Act) no. 599 of 24 June 2005.

⁵⁹ HNS Convention 1996, *supra* note 39.

⁶⁰ *Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships of 1973*, 17 February 1978, 1340 UNTS 61 [MARPOL]; OPRC, *supra* note 31; *Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto*, 26 September 1997, Can TS 2010 no. 14.

⁶¹ By virtue of Anordninger (Executive orders) no. 8 of 15 January 1996, no. 911 of 14 November 2003 and no. 217 of 11/03/2005.

⁶² See Landstingsforordning no. 4 of 3 November 1994 as amended.

⁶³ See *Lovbekendtgørelse no. 963 of 3 July 2013 section 9 (1)* [DMEA]. DMEA applies in Greenland in accordance with Anordning (order) no. 1035 of 22 October 2004. Lov (Act) no. 466 of 17 June 2008 (Environmental Damage Act) and Lov (Act) no. 225 of 6 April 1994 (Compensation of Environmental Damage Compensation Act) do not apply in Greenland.

⁶⁴ See s. 27 of Landstingsforordning no. 4 of 3 November 1994 as amended.

To the extent that the situation is covered by the CLC 1992 Convention as enacted (i.e. so far as persistent oil is concerned), the tort regime overlaps with the DMA, but the latter would prevail as *lex specialis*. Further, section 206(2) of the DMA provides that sections 191 and 192 (which basically implement articles I-III of the CLC 1992 Convention) also apply to pollution damage caused by vessels other than tankers, but — by implication — the sections are only relevant to persistent oil. In such cases, the LLMC 1996 would be the relevant limitation of liability regime to follow, for example, for the owners of a passenger vessel having spilled heavy fuel oil (HFO).

If CLC 1992 applies, then the restrictions in the convention as to which claims are recoverable and how much compensation is available apply.

While the DMEA implements the EU Environmental liability Directive⁶⁵ and stipulates strict liability for any environmental damage or a threat thereof to the marine environment,⁶⁶ these rules do not apply in Greenland.

3.2 Canada⁶⁷

Introduction

Canada is a confederation consisting of 10 provinces and three territories whose jurisdictions and powers are limited by the *Constitution Act, 1867*.⁶⁸ This act also determines the scope of federal jurisdiction. The federal government has sole jurisdiction over navigation and shipping throughout the country and its navigable waters, both internal and external.

Jurisdiction

Canada's authority over its external waters is limited to its territorial sea (12 NM from Canada's jurisdictional coastline) and the adjoining EEZ (which stretches 200 NM beyond the jurisdictional coastline; however, a portion of the international boundary between Canada and Greenland is less than 200 NM from the baselines of Canada's territorial sea). Also, Canada has extensive claimed internal waters on the basis of historic title and which are defined as waters enclosed by the system of baselines delineated along the outermost points of the Arctic archipelago.⁶⁹

Conventions

Canada is a party to a number of international conventions relating to oil pollution, including the International Convention for the Prevention of Pollution from Ships, 1973; Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships; International Convention on Oil Pollution Preparedness, Response and Cooperation, 1990 and Protocol of 1997

⁶⁵ Directive 2004/35/CE of the European Parliament and of the Council of 21/04/2004 on environmental liability with regard to the prevention and remedying of environmental damage.

⁶⁶ DMEA, *supra* note 63 at s. 47(b)(2).

⁶⁷ Contributed by Peter J. Cullen (Stikeman Elliott LLP, Montreal).

⁶⁸ *Constitution Act, 1867* (UK), 30 & 31 Vict, c3, reprinted in RSC 1985, Appendix II, No. 5, ss. 91, 92.

⁶⁹ The source for Canada's maritime zones is the *Oceans Act*, S.C. 1996, c. 31, 5(3).

relating to the International Convention for the Prevention of Pollution from Ships; and the International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001.⁷⁰ Further, Canada is currently a party to 1992 International Oil Pollution Compensation Fund, and the 1992 Civil Liability Convention and the 2003 Supplementary Fund Protocol.⁷¹ Such Conventions have been incorporated into federal legislation under Canada's principal oil pollution liability statute, the *Marine Liability Act* (MLA),⁷² occasionally with some modifications (some of which are more fully described below), and apply in Canada's Arctic waters. It must be noted that amendments to the MLA, in respect of the HNS Convention, have yet to come into force.

Liability

An important modification in the MLA is that the liability rules of the Civil Liability Convention apply to all ships that cause oil pollution, with special rules in Division 1 of the MLA in respect of "Convention ships" (that is, tankers carrying persistent oil in bulk as cargo). The liability of non-Convention ships is found in Division 2 of the MLA, where "oil" is defined in broader terms as meaning oil of any kind or in any form (including petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes, but not dredged spoil). Also, a "ship" is defined as any vessel or craft designed, used or capable of being used (either solely or partly) for navigation, without regard to its method of propulsion or lack of propulsion (and includes stranded, sunk, or wrecked vessels).⁷³ The difference between Division 1 and 2 vessels is also relevant in terms of access to the IOPC Fund (limited to spills involving Convention vessels under Division 1).

Generally speaking, Canada's pollution laws apply to spills on navigable waters, be they fresh- or seawater (whether ice covered or not). Provincial and territorial pollution laws apply to non-navigable waters and provincial/territorial shorelines. On occasion, such jurisdictions may overlap depending on the nature and effect of the spill. Thus, charges under both the federal and provincial/territorial pollution statutes may be laid in connection with a marine spill. In addition to Canada's large expanse of Arctic waters, this would include the northern non-navigable waters and shorelines, and the non-navigable waters and shorelines of the three territories (Nunavut, the Northwest Territories, and Yukon), the province of Quebec, and, to a smaller degree, the province of Newfoundland and Labrador.

In 1970, Canada enacted the *Arctic Waters Pollution Prevention Act* (AWPP),⁷⁴ which has since been made subject to the MLA. The AWPP prohibits the deposit of waste in Arctic waters. The term "arctic waters" is defined as the internal waters of Canada and the waters of the territorial

⁷⁰ *International Convention for the Prevention of Pollution from Ships, 1973*, 2 November 1973, 1340 UNTS 184 [MARPOL 1973]; MARPOL, *supra* note 60; OPRC, *supra* note 31; *Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto*, 26 September 1997, Can TS 2010 no 14 [1997 Protocol]; Bunker Convention, *supra* note 36.

⁷¹ Fund Convention 1992, *supra* note 24; CLC 1992, *supra* note 6; 2003 Supplementary Fund Protocol, *supra* note 54.

⁷² S.C. 2001, c.6 [MLA].

⁷³ *Ibid* at s. 25(1)(a).

⁷⁴ R.S.C., 1985, c.A-12 [AWPP]. The act is accompanied *Arctic Shipping Pollution Prevention Regulations*, CRC, c 353 and *Arctic Waters Pollution Prevention Regulations* CRC, c 354. At the time of writing Canada is conducting public consultations on a new set of regulations that amend previous AWPPA regulations in anticipation of implementation of the Polar Code.

sea of Canada and its EEZ, within the area enclosed by the 60th parallel of north latitude, the 141st meridian of west longitude and the outer limit of the EEZ (with, as previously indicated, the exception of the boundary with Greenland), and essentially covers the Arctic archipelago.⁷⁵ The term "waste" is broadly defined to cover any substance that, if added to water, would degrade or alter the quality of such water to an extent detrimental to their use by man or by any animal, fish, or plant that is useful to humans.⁷⁶ This definition parallels the definition of "pollution" under the MLA.⁷⁷

The AWPP is enforced through Canadian pollution prevention officers, who may board and inspect any vessel within defined shipping safety control zones (broadly including all Canadian Arctic waters) and take action where necessary.⁷⁸ The AWPP also provides federal authority to implement regulations in respect of pilotage and the use of ice navigators in Canada's Arctic waters. In this regard, the use of qualified ice navigators is mandatory on specific vessels (including all tankers) in certain safety control zones.

It is noteworthy that the AWPP was enacted to ensure:

the national resources of the Canadian arctic are developed and exploited and the arctic waters adjacent to the main land and islands of the Canadian arctic are navigated only in a manner that takes cognizance of Canada's responsibility for the welfare of the Inuit and other inhabitants of the Canadian arctic and the preservation of the peculiar ecological balance that now exists in the water, ice and land areas of the Canadian arctic.⁷⁹

Pollution under the MLA (Division 1 or 2) essentially gives rise to strict liability (not dependent on proof of fault or negligence) for oil pollution damage (including any damage as a result of impairment to the environment and the costs of reasonable measures of reinstatement), as well as the costs and expenses incurred by the federal Minister of Fisheries and Oceans (an authorized response organization under the *Canada Shipping Act, 2001*⁸⁰) or others in respect of measures taken to prevent, repair, remedy, or minimize oil pollution damage. This includes the minister's reasonable costs of monitoring a spill and clean-up efforts. As the Canadian Coast Guard (and its fleet of icebreakers, tenders, and patrol vessels) and Fisheries and Oceans Canada (and its fleet of patrol and inspection vessels) report to the minister, it is these entities that are generally engaged in such matters.

Canada has implemented a Ship-source Oil Pollution Fund (SOPF) headed by a federally appointed administrator who reports annually to Parliament.⁸¹ In 2014, the SOPF reported on two oil pollution claims stemming from vessels in Canada's Arctic waters. The first report involved a Bahamian-registered passenger vessel in a 2010, which grounded in the Coronation Gulf off

⁷⁵ *Ibid*, s. 2.

⁷⁶ *Ibid*.

⁷⁷ MLA, *supra* note 72 at s. 75.

⁷⁸ AWPP, *supra* note 74, ss. 12, 15.

⁷⁹ *Ibid* (Preamble).

⁸⁰ S.C. 2001, C.26.

⁸¹ MLA, *supra* note 72 at s. 121(1).

Yukon Territory (monitoring the costs and expenses under dispute between the shipowner and the Canadian Coast Guard and the Canadian Hydrographic Service). The second report involved a Canadian-registered product tanker, which grounded near Gjoa Haven, off Nunavut Territory in 2010 (monitoring the costs in respect of a Coast Guard icebreaker that stood by). The administrator continues to monitor the first dispute, and has settled the second based on the reasonableness of certain expenses.

The SOPF's jurisdiction to pay oil spill claims is not limited to matters involving tankers carrying persistent oil: it covers all classes of ships and also deals with "mystery spills" (unattributed spills). Furthermore, it may be a fund of first resort for claimants as well as a fund of last resort, and may provide another layer of compensation in addition to the compensation regimes under the IOPC Fund and the CLC 1992 Civil Liability Convention.⁸²

Additional relevant pollution statutes (providing for a mixture of criminal and public welfare offenses) that have occasionally been applied where there are overlapping federal departments or overlapping jurisdiction with provincial/territorial non-navigable waters or shorelines include the federal *Fisheries Act*,⁸³ *Migratory Birds Convention Act, 1994*,⁸⁴ and *Canadian Environment Protection Act 1999*,⁸⁵ as well as Quebec's *Environment Quality Act*⁸⁶ and Newfoundland and Labrador's *Environmental Protection Act*.⁸⁷ These statutes generally provide that oil pollution constitutes a strict liability offence (without proof of fault or negligence). Like the MLA, these acts generally target the owner, custodian, or person who had the charge, management, or control of the polluting substance (such as the shipowner or bareboat charterer). Some reach further and hold that the directors or officers of a company that commits an offence may be presumed to have participated in the offence unless they can establish that they exercised due diligence and took all necessary precautions to prevent such offence.

Finally, Canada's Admiralty Court, the Federal Court,⁸⁸ has *in rem* jurisdiction in respect of navigation and shipping matters. It is a national admiralty court that sits across the country and is the court referred to in the MLA in respect of limitation proceedings and related claims for pollution matters.

⁸² The MLA Compensation is administered on an administrative basis for specified claimants only; a dissatisfied claimant can appeal the decision of the SOPF Administrator to the Federal Court. Under the MLA, designated persons may seek, as a first resort, compensation directly against the SOPF; following compensation the SOPF is subrogated into their rights as claimants against the shipowner and IOPC. Other claimants may be only compensated after claiming against the shipowner pursuant to the CLC and IOPC and failing to seek compensation. See MLA, *supra* note 72 at Part 6.

⁸³ R.S.C. 1985, c. F-14.

⁸⁴ S.C. 1994, c. 22.

⁸⁵ S.C. 1999 c.33.

⁸⁶ R.S.Q., c. Q-2.

⁸⁷ S.NL. 2002 C.E-14.2.

⁸⁸ *Federal Courts Act*, R.S.C., 1985, c. F-7.

3.3 United States⁸⁹

Introduction

The State of Alaska is the only U.S. state that borders the Arctic. The Beaufort Sea, the Chukchi Sea, and the Bering Sea form Alaska's northern and western coasts. Vessels sailing between Europe and Asia must pass through the Bering Strait, a 41 NM wide strait separating Alaska from the Russian Federation. While the United States has enacted federal legislation governing civil liability for discharges of oil from vessels within 200 NM of the U.S. coastline, the laws of the State of Alaska governing oil pollution apply to any discharges of oil that occur within 3 NM of the Alaska coast.

Conventions

While the U.S. has adopted some international conventions relating to oil pollution discharges from vessels, such as the International Convention for the Prevention of Pollution from Ships (MARPOL)⁹⁰ and the International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties,⁹¹ it has not adopted the CLC 1992.⁹² The U.S. has further enacted the *Act to Prevent Pollution from Ships*,⁹³ which implements the International Convention for the Prevention of Pollution from Ships⁹⁴ (MARPOL 73/78) in the United States. MARPOL 73/78 was enacted to control pollution from vessels as mandated by the Law of the Sea Convention.⁹⁵ The U.S. ratified MARPOL on 2 July 1980, and subsequently passed implementing legislation in the form of the *Act to Prevent Pollution from Ships*, which gives the Coast Guard broad authority to regulate vessel operations and enforce MARPOL requirements.⁹⁶ Regulations enacted pursuant to this authority and enforced by the Coast Guard establish criteria regulating the discharge of various categories of operational wastes from ships that are covered by the MARPOL annexes.⁹⁷

Jurisdiction

The U.S. has adopted the following seaward limits to its maritime zones as measured from the baseline⁹⁸:

⁸⁹ Contributed by Bert Ray (Keesal Young Logan, Anchorage, Alaska).

⁹⁰ MARPOL, *supra* note 60.

⁹¹ Intervention Convention, *supra* note 26.

⁹² CLC 1992, *supra* note 6.

⁹³ The *Act to Prevent Pollution from Ships* (APPS), 33 U.S.C., ss. 1901 – 1911.

⁹⁴ MARPOL 1973, *supra* note 70.

⁹⁵ UNCLOS, *supra* note 3 at Art. 211(1).

⁹⁶ 33 U.S.C. s. 1903(b)(1).

⁹⁷ See extensive regulatory requirements in 33 C.F.R. Part 151, subpart (a), Implementation of MARPOL 73/78. Violation of these regulations may result in civil or criminal penalties. 33 C.F.R. §151.03 makes this subpart applicable to each ship that must comply with Annex I (Regulations for the Prevention of Pollution by Oil), Annex II (Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk), or Annex V (Regulations for the Prevention of Pollution by Garbage from Ships) of MARPOL 73/78.

⁹⁸ The normal baseline under the Art. 3 of *Convention on the Territorial Sea and the Contiguous Zone*, 29 April 1958, 516 UNTS 205, and Art. 5 of UNCLOS, is the low water line along the coast as marked on large – scale charts officially recognized by the coastal state. Both conventions recognize the method of “straight baselines” or by deeply indented coast lines or fringe islands may be used to measure the baseline. The U.S. has not used the straight baseline method to determine the territorial sea baseline.

1. Alaska Coastal Waters – 3 geographical miles⁹⁹
2. Territorial Sea – 12 NM¹⁰⁰
3. Contiguous Zone – 24 NM¹⁰¹
4. Exclusive Economic Zone – 200 NM¹⁰²

The United States recognizes the legal right to navigation through its territorial sea by foreign vessels under the doctrine of innocent passage, and the related doctrine of transit passage. Therefore, under U.S. law, ships in innocent passage, which by definition would exclude vessels bound for or departing from U.S. ports, are not required to comply with many of the laws and regulations applicable to U.S.-flagged vessels or foreign vessels calling at U.S. ports. By way of example, the U.S. requirements relating to oil spill response plans do not apply to foreign-flag vessels engaged in innocent passage or transit passage.¹⁰³ However, foreign tank vessels operating in waters subject to the jurisdiction of the United States, including the EEZ, must immediately report any incidents¹⁰⁴ affecting the seaworthiness of the vessel or posing a threat to the environment.

Liability

In the United States, both federal and state laws may determine a shipowner's civil liability for oil pollution discharges from vessels. The *Federal Water Pollution Control Act* (FWPCA)¹⁰⁵ prohibits the discharge of oil in a harmful quantity from a vessel into the navigable waters of the United States. A harmful quantity is defined as a quantity that produces a sheen.¹⁰⁶ For purposes of the FWPCA, the navigable waters of the United States extend seaward to the limits of the United States EEZ. The FWPCA imposes civil penalties upon owners and/or operators of vessels that discharge oil in violation of the Act.

The *Oil Pollution Act of 1990* (OPA 90)¹⁰⁷ imposes civil liability for unauthorized discharges of oil into the navigable waters of the United States. As with the FWPCA, navigable waters for purposes of OPA 90 extend to the outer limits of the U.S. EEZ.

Federal law also requires that vessels transiting through the U.S. EEZ that are bound for or departing from a U.S. port or place must have an approved vessel response plan for responding to an oil pollution incident. The federal vessel response plan requirements do not apply to vessels in innocent passage.

⁹⁹ Pursuant to the *Submerged Lands Act*, 43 U.S.C. s. 1312, the seaward boundary of coastal States is generally a line three geographical miles from their coastline.

¹⁰⁰ Presidential Proclamation 5928, December 27, 1988.

¹⁰¹ Presidential Proclamation 7219, September 2, 1999.

¹⁰² 48 Fed. Reg. 10605 (March 10, 1983).

¹⁰³ 33 C.F.R. s. 155.1015(c) (7).

¹⁰⁴ 46 C.F.R. s. 4.05 – 2(a).

¹⁰⁵ 33 U.S.C. s. 1321(b) [FWPCA].

¹⁰⁶ *Ibid* at Part 110.

¹⁰⁷ 33 U.S.C. ss. 2701 *et seq.* [OPA 90].

United States federal laws governing liability for oil pollution do not pre-empt the application of the law of coastal states imposing similar liabilities. Alaska is the only coastal state that borders the polar region. Alaska has enacted laws governing discharges of oil in its coastal waters that would be applicable to discharge from a vessel operating within those coastal waters. Vessels transiting through the narrow Bering Strait between Alaska and Russia might operate within Alaskan coastal waters.

Federal Law

The Oil Pollution Act of 1990

The liability provisions of OPA 90 apply to any incident involving the discharge or the substantial threat of a discharge of oil into the navigable waters of the United States or the U.S. EEZ.¹⁰⁸ Each “Responsible Party”¹⁰⁹ for an OPA 90 incident is liable for “removal costs” and “damages.” Liability is strict, but OPA 90 provides limited defences to liability and a limitation on liability.

Defences to OPA 90 Liability

OPA 90 provides that, under certain conditions, a responsible party may be entitled to a complete defence to liability, or to limit its liability.¹¹⁰ Complete defences under OPA 90 are difficult to maintain, and are only available if the oil discharge was “caused solely” by one or a combination of three events: an act of God, an act of war, or an “act or omission of a third party with which the responsible party was not in a “contractual relationship.”¹¹¹ An “act of God” means an “unanticipated grave natural disaster or other natural phenomenon of an exceptional, inevitable, and irresistible character, the effects of which could not have been prevented or avoided by the exercise of due care or foresight.” No responsible party has successfully asserted an act of God defence to OPA 90 liability since the act’s enactment. Were a ship to spill oil due to an encounter with abnormally heavy ice in polar waters, it is unlikely that the vessel’s owner or operator would succeed in asserting an act of God defence under OPA 90.

The defence to liability for spills caused by third parties does not apply if the third party was in a contractual relationship with the vessel. Privity of contract is not required to establish a contractual relationship between a third party and the vessel’s owner or operator. For example, pilots, tugs, and others providing services to a vessel who are hired by the vessel’s time charterer are considered, for OPA 90 purposes, to be in a contractual relationship with the vessel’s owner and operator.

¹⁰⁸ *Ibid* at s. 2702.

¹⁰⁹ Responsible Party with respect to a vessel is defined as any person owning, operating, or demise chartering the vessel. *Ibid* at s. 2701(32).

¹¹⁰ *Ibid* at s. 2703.

¹¹¹ *Ibid* at s. 1002. The defense based upon an act or omission of a third party is not available if the third party’s “act or omission occurs in connection with any contractual relationship with the responsible party.” In addition, the responsible party must establish that it took precautions against foreseeable negligence and foreseeable consequences of that third party’s negligence.

Defences under OPA 90 are not intended to allow a responsible party to simply assert a complete defence and avoid the obligation to respond to cleaning up a discharge.¹¹² A defence is not available to the responsible party where it fails or refuses to report the incident as required by law, to provide reasonable cooperation and assistance in connection with removal activities, or, without sufficient cause, to comply with an order issued by the federal on-scene coordinator. Thus, the responsible party must pay for response costs and settle third party claims until the government agrees that it may stop doing so, or it risks losing its defence to liability. If the owner is ultimately entitled to a defence, they may recover amounts they have expended on response costs and damages from the federal government.

Limits on Liability

OPA 90 provides that a responsible party may limit its OPA 90 liability under certain circumstances. If a responsible party is able to establish its right to limitation of liability, limits are calculated by reference to tonnage and type of the vessel. Also, limits are expressed as being "the greater" of either a fixed amount or an amount calculated on the basis of the vessels gross tonnage. Because the limit is expressed as "the greater" of two amounts, there is not really a maximum sum that can be stated, but as of 21 December 2015, the limits are:

Single Hull Tanker > 3,000 GT: The greater of USD 3,500/GT or USD 25,845,000
Single Hull Tanker < 3,000 GT: The greater of USD 3,500/GT or USD 7,048,800
Double Hull Tanker > 3,000 GT: The greater of USD 2,200/GT or USD 18,796,800
Double Hull Tanker < 3,000 GT: The greater of USD 2,200/GT or USD 4,699,200
Non-Tank Vessel: The greater of USD 1,100/GT or USD 939,800.

The OPA limits are periodically adjusted for inflation. In 2014, the Coast Guard published a proposal to increase the liability limits to account for inflation. They suggested limitation of liability is not available where an incident was proximately caused by (1) gross negligence, (2) wilful misconduct, or (3) violation of applicable federal safety, construction, or operating regulations on the part of the responsible party, an agent or employee of the responsible party, or a person acting pursuant to a contractual relationship with the responsible party.¹¹³

As with the defence to OPA 90 liability, the right to limit liability under OPA 90 does not mean that a responsible party can stop paying response costs or settling third party claims as soon as its liability limit is reached. A responsible party will lose its right to limit its OPA 90 liability if it fails to provide reasonable cooperation and assistance requested of it by the federal government or to comply with clean-up orders. If the responsible party pays more than its limitation amount in responding to an OPA 90 incident, it can seek reimbursement of its excess payments from the federal government. The responsible party will also lose its right to limit its liability if it fails to immediately notify the Coast Guard of an OPA incident.

¹¹² See *Unocal v. United States*, 222 F.3d 528, 535 (9th Cir. 2001) and cases and statutes cited.

¹¹³ OPA 90, *supra* note 107 at s. 2704.

Damages

OPA 90 makes the responsible party strictly liable for removal costs and compensatory damages. The responsible party is not only the owner of the vessel, but can also be the operator and bareboat charterer. Removal costs include the costs to contain and remove oil from water and shorelines, and other actions necessary to minimize or mitigate damage to public health or welfare.¹¹⁴ Liability for removal costs includes costs of cleaning up and responding to the spill, the costs incurred by the United States (typically the Coast Guard), and state and local officials for monitoring the clean-up.

Recoverable damages include response, removal, clean-up costs, and “other damages” arising from a discharge or threatening discharge of oil, damage to natural resources and the cost of assessing them, damage or loss of real or personal property, loss of revenues by governments, loss of profits or earning capacity, lost subsistence damages, and damages for net costs of public services. Natural resource damages are a unique and controversial type of damages awarded under United States law. State and federal government agencies with jurisdiction to manage natural resources are considered trustees of those resources and manage them on behalf of the public. When natural resources are damaged or impaired as the result of an oil spill, the trustees are statutorily required to assess the damage to the resources, assess whether they should implement restoration proposals to help damaged resources recover, and develop remedial projects to compensate the public for the interim loss of use of damaged resources. Natural resource damage assessments are often costly and time consuming. The total costs of natural resource damage claims often are in the tens of millions of dollars in spills originating from vessels.

Claims must be made against the responsible party or its guarantor for reimbursement and compensation.¹¹⁵ The responsible party is therefore under a duty to procure evidence of financial responsibility (so-called COFR).¹¹⁶

Federal Water Pollution Control Act

A vessel owner or operator is subject to a civil penalty under the *Federal Water Pollution Control Act* (FWPCA) for discharging oil.¹¹⁷ The penalty can be up to USD 37,500 per day of violation, or up to USD 2,100 per barrel of oil discharged. In any case in which the discharge was the result of gross negligence or wilful misconduct, the penalty shall be not less than USD 150,000 or USD 5,300 per barrel of oil discharged. In smaller spills, the government may proceed with an administrative penalty, in which case the maximum penalty is USD 37,500.

The FWPCA also imposes civil penalties if the owner or operator fails to properly carry out removal of a discharge after being ordered to do so by the United States, or fails to immediately report a discharge.

¹¹⁴ *Ibid* at ss. 2701(30) & (31).

¹¹⁵ *Ibid* at s 2705(a).

¹¹⁶ *Ibid* at 2716(a).

¹¹⁷ FWPCA, *supra* note 105 at ss. 1321(b) (6)-(7).

Liability under Alaska State Law

In the litigation arising out of the Deepwater Horizon incident, the United States Court of Appeals for the Fifth Circuit held that state oil pollution laws do not apply to a spill that originates outside of the state's territorial waters and subsequently drifts into these waters. The Fifth Circuit Court of Appeals has jurisdiction over appeals from U.S. states along the Gulf Coast, but its jurisdiction does not extend to Alaska, so its decision does not bind courts in Alaska. It is thus unclear whether Alaska law's strict liability provisions would apply to an oil spill from a vessel originating outside of Alaska's territorial waters that drifts into its state waters.

Alaska has jurisdiction over waters within three geographical miles seaward of the baseline and offshore islands. While most commercial vessels would normally stay well outside of Alaska's territorial waters, there are areas in the vicinity of the narrow Bering Strait in which vessels might transit through state waters. Were a vessel to discharge oil, or other pollutants while in state waters, the strict liability provisions of Alaska law would apply to such a discharge.

Strict Liability under State Law

Alaska imposes unlimited strict liability for damages caused by oil spills on the shipowner, ship operator, and the cargo owner.¹¹⁸ Potential plaintiffs include the State of Alaska, municipalities, and private individuals. Damages are broadly defined to include personal injury and property damage as well as loss of income, loss of means of producing income, loss of tax revenues, loss of an economic benefit, and state response costs.¹¹⁹

Defences to strict liability are few. The defendant is not strictly liable if the discharge is caused solely by an act of God, but only if the defendant, within a reasonable time after the discharge, discovered the discharge and promptly commenced operations to clean up the discharge. No strict liability is imposed if the discharge is caused solely by act of war or the negligent or intentional act of a third party other than a party or its agents in privity of contract with or employed by the defendant. However, the latter provision only precludes strict liability if the defendant exercised due care with respect to the hazardous substance and took reasonable precautions against the act or omission of the third party, and discovered the discharge and began operations to clean up the discharge within a reasonable time after the discharge.

Civil Penalties for Discharges of Oil

Civil penalties may be imposed for failing to report discharges, failing to clean up discharges, or failing to comply with Alaska Department of Environmental Conservation (ADEC) orders. Alaska has enacted three different civil liability provisions applicable to oil spills. The provisions relate to the size of the spill and the type of oil.¹²⁰

¹¹⁸ *Strict Liability for the Release of Hazardous Substances*, A.S. s. 46.03.822.

¹¹⁹ *Ibid.*

¹²⁰ A.S. section 46.03.760 governs civil penalties for discharges of oil, whether crude or refined, in amounts of 18,000 gallons or less. A.S. section 46.03.758 governs civil penalties for a discharge of refined oil that exceeds 18,000 gallons. A.S. section 46.03.759 governs civil penalties for discharge of crude oil that exceeds 18,000 gallons.

For discharges under 18,000 gallons, the Alaska *Water, Air, Energy, and Environmental Conservation* Statute provides for a civil penalty to be imposed against any person who “violates or causes or permits to be violated” a provision of Alaska pollution laws.¹²¹ The penalty may not exceed \$100,000 for the initial violation, nor more than \$5,000 for each day after in which the discharge continues. It is a violation of Alaska pollution laws to discharge oil into state waters. Neither fault nor intent is required to violate this provision. Thus, a vessel owner or operator is liable for a civil penalty whenever oil is discharged from their vessel, regardless of whether or not they are at fault.

For discharges of crude oil or refined oil exceeding 18,000 gallons, Alaska law imposes a per-gallon civil penalty on the vessel owner, bareboat charterer, or master.¹²² If the discharged oil was being carried as cargo, the owner of the oil is also liable for a civil penalty. The amount of the penalty is based on the size of the spill, the toxicity and disposability of the oil spilled, the sensitivity of the marine environment in which the spill occurred, whether the spill was caused by gross negligence or wilful misconduct, and the success of recovery efforts.

OSLTF

The liability regime works in conjunction with the American Oil Spill Liability Trust Fund (OSLTF).¹²³ The ultimate sum in terms of compensation by the fund is USD 1 billion.

3.4 Norway¹²⁴

Introduction

Norway has its own legislation that applies in the Arctic and Antarctic, which is not based on international conventions regarding pollution from ships and drilling units. Only the portions that apply outside the territorial border of mainland Norway are discussed here; rules on intervention are only mentioned if they relate to a system to refund costs associated with them. Possible conflicts between Norwegian provisions and international conventions are not discussed.

Jurisdiction

The territorial waters of Norway extend for 12 NM from the coastline.¹²⁵ Norway’s claims for continental-shelf jurisdiction beyond 200 NM have been recognized by the Commission on the Limits of the Continental Shelf (CLCS).¹²⁶

Conventions

Norway has ratified the following conventions:

¹²¹ A.S. 46.03.760.

¹²² A.S. 46.02.758 & .759.

¹²³ 26 U.S.C 9509.

¹²⁴ Contributed by Professor Erik Røsæg (Scandinavian Institute of Maritime Law, Oslo and senior legal advisor Kjersti Tusvik of the Norwegian Coastal Administration).

¹²⁵ Act No. 57/2003.

¹²⁶ CLCS/62, 20 April 2009.

CLC 1992¹²⁷
Fund Convention 1992¹²⁸
Supplementary Fund Convention¹²⁹
Bunker Convention¹³⁰
LLMC 1996¹³¹
HNS Convention¹³²

Norway has also accepted the Liability Annex to the Antarctic treaty.¹³³ Norway has not ratified the Nairobi Convention¹³⁴

Liability

Norwegian tort law may apply in the Arctic if the strongest connections to the incident are to Norway.¹³⁵

*The Maritime Code (NMC)*¹³⁶

Section 207 of the NMC makes the strict liability provisions of CLC 1992 and its monetary limits applicable if the oil pollution happens on the high seas or in a state that is not party to CLC 1992, or on the Norwegian continental shelf but outside the EEZ and Norwegian law is applicable as a matter of international private law. In these cases the limitation rules of CLC 1992 apply by virtue of sections 194 and 207. A special limitation fund can be established in national law for these situations. Certain special provisions apply to the management of the fund.¹³⁷

NMC section 208 makes the strict liability provisions of CLC 1992 apply by force within the 200 NM limit of the CLC 1992, even if the conditions of the CLC are not met. Thus, the strict liability provisions apply, for example, to light oils and oil not carried in bulk. In cases outside the geographical scope of the CLC 1992 (200 NM), the global limitation regime (based on LLMC 1996) applies as long as liability is established.

Norway has a special global limitation fund for clean-up costs (Norway took advantage of the possibility of reservation under LLMC Art. 18(1) in order to establish this fund).¹³⁸ Norway

¹²⁷ CLC 1992, *supra* note 6.

¹²⁸ Fund Convention, *supra* note 24.

¹²⁹ 2003 Supplementary Fund Protocol, *supra* note 54.

¹³⁰ Bunker Convention, *supra* note 36.

¹³¹ LLMC 1996, *supra* note 37.

¹³² HNS Convention 1996, *supra* note 39.

¹³³ Annex VI to the Protocol on Environmental Protection to the Antarctic Treaty, 1991, Secretariat of the Antarctic Treaty [Liability Annex].

¹³⁴ Nairobi Convention, *supra* note 56.

¹³⁵ For example, see the Supreme Court case Rt-1923-II-58.

¹³⁶ Act No. 39/1994 [NMC].

¹³⁷ *Ibid.*, s. 207(2).

¹³⁸ *Ibid.*, ss. 172a, 175a.

has also implemented special global limits for drilling vessels and oilrigs.¹³⁹ The responsible party can claim costs for clean-up operations under the abovementioned special limitation fund pursuant to NMC section 175a, but not in the ordinary global limitation fund pursuant to NMC section 175.¹⁴⁰ Costs for clean-up operations following a bunker fuel spill are subject to limitation in accordance with section 175a¹⁴¹ if they result from a collision or grounding. Otherwise a bunker spill will be regulated by the Norwegian implementation of the Bunker Convention.¹⁴²

The limitation limits in the NMC do not apply to the liability of off-shore operators under the *Petroleum Act*.¹⁴³

The Pollution Control Act

The scope of the liability provisions of the *Pollution Control Act* (PCA)¹⁴⁴ is similar to that of the corresponding provisions of the Maritime Code.¹⁴⁵ The *Pollution Control Act* applies to pollution from sources in the territorial waters and in the EEZ if the source is a Norwegian ship or installation. The *Pollution Control Act* does not apply for Svalbard.¹⁴⁶ The act establishes strict liability for pollution.¹⁴⁷ In this aspect, this is an important difference because it makes the polluter, which usually includes the shipowner (*reder*), strictly liable for pollution, including pollution from substances other than oil. The act also includes provisions pertaining to compensable environmental damages; there are provisions pertaining to who can claim on behalf of the general public in certain cases.¹⁴⁸ The claim can extend to the costs of establishing, for example, alternative recreational facilities.¹⁴⁹

In addition to tort liability, there are provisions for intervention to prevent pollution on the high seas subject to Norwegian treaty obligations; for example, section 74 refers to Norway's obligations under UNCLOS.¹⁵⁰ After such intervention, the government can claim refund from a responsible party.¹⁵¹ However, limitation rules and exceptions of maritime law take precedent as *lex specialis*.

The PCA section 7 provides that the person responsible for pollution shall undertake clean-up. The liability limits do not apply to this duty. The authorities may perform clean-up measures on behalf of the responsible polluter.¹⁵² In the event of larger incidents, the authorities will often

¹³⁹ *Ibid*, ss. 181, 507.

¹⁴⁰ *Ibid* at s. 179.

¹⁴¹ See *ibid*, s. 172a.

¹⁴² See *ibid*, ss. 148, 209.

¹⁴³ *Ibid*, s. 209.

¹⁴⁴ Act No. 6/1981 [PCA].

¹⁴⁵ *Ibid*, s. 54.

¹⁴⁶ *Ibid*, s. 3.

¹⁴⁷ *Ibid*, s. 55.

¹⁴⁸ *Ibid*, ss. 57, 58.

¹⁴⁹ In this direction, Ot.prp. No. 11 (1979-1980) p. 96-97.

¹⁵⁰ This provision also applies to Extension at Svalbard and Jan Mayen, SI No. 245/1997, available online in Norwegian: <<https://lovdata.no/pro/#document/SF/forskrift/1997-08-22-945?searchResultContext=1262>>. It must therefore apply also at the high seas close to these islands, as anywhere else.

¹⁵¹ PCA, *supra* note 144 at s.76.

¹⁵² *Ibid* at ss. 7 and 74.

take charge of clean-up operations pursuant to PCA section 46. After such response, authorities can claim recovery of expenses and damages from a responsible party.¹⁵³ A recourse claim may be subject to, for example, global limitation rules. The result of this is that the less prepared the polluter is, the more likely it is that the authorities will take over the clean-up operation and the more likely that the polluter will benefit from limitation.

In addition to tort liability, there are provisions for intervention to prevent pollution on the high seas, subject to Norwegian treaty obligations.¹⁵⁴ Under this provision, the Intervention Convention is implemented in Norwegian law through regulation 1997-09-19 no. 1061.

The Svalbard Environmental Protection Act

The *Svalbard Environmental Protection Act*¹⁵⁵ applies to the territorial sea around Svalbard. The liability rules are quite similar to those of the *Pollution Control Act*.¹⁵⁶ The Svalbard Environmental Protection Fund has a similar role as the local authorities in mainland Norway, and can be awarded compensation for conservation measures to compensate for the loss of irreplaceable environmental values. This compensation is close to a penal sanction.¹⁵⁷

The Harbour Act

The *Harbour Act*¹⁵⁸ includes regulations that apply to vessels in distress or danger. Under section 38 of the act, the authorities may order the responsible party, usually the shipowner, to take action to avoid damage to the environment. The authorities may carry out such action on behalf of the responsible party, and recover their costs in a recourse claim. However, if there is a threat of acute pollution, the *Pollution Control Act* takes precedent over the *Harbour Act*. Section 38 of the *Harbour Act* applies in the territorial sea. The provision also applies to the territorial sea around Svalbard, but exempts the right to recover the costs for actions carried out by authorities.¹⁵⁹

Regulation on the Environment in Antarctic

The *Regulation on the Environment in Antarctic* (REA)¹⁶⁰ implements the Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty in Norwegian law. The regulation applies on Queen Maud's Land and Peter Ist's Island, and on Norwegian enterprises in Antarctic in general.¹⁶¹ The regulation provides rules on liability for pollution and limitation of liability.

¹⁵³ *Ibid* at s. 76.

¹⁵⁴ *Ibid* at s. 74; this is a reference to UNCLOS, among other treaty obligations.

¹⁵⁵ Act No.79/2001.

¹⁵⁶ *Ibid* at s. 95.

¹⁵⁷ Ot.prp. No. 38 (2000-2001) p. 164.

¹⁵⁸ Act no.19/2009.

¹⁵⁹ Regulation 2009-12-30 no. 1846.

¹⁶⁰ Regulation 2013-04-26 no. 412 [REA].

¹⁶¹ *Ibid* at s. 2.

3.5 Russian Federation¹⁶²

Introduction

According to the Russian Constitution, the Russian Federation consists of 85 constituent entities: 46 regions, 22 republics, nine territories, four autonomous areas, three cities of federal significance, and an autonomous region, all of which are equal subjects of the Federation.¹⁶³ The constitution grants the federal government sole jurisdiction over the status of and activities in the territorial sea and the EEZ and on the continental shelf of the Russian Federation.¹⁶⁴

Jurisdiction

The territorial waters of the Russian Federation extend for 12 NM from the coastline.¹⁶⁵ The waters of the EEZ of the Russian Federation extend for 200 NM from the coastline.¹⁶⁶

Conventions

The Russian Federation is party to a number of international conventions pertaining to vessel-source pollution: the CLC 1992¹⁶⁷; 1992 Fund Convention¹⁶⁸; the Bunker Convention¹⁶⁹; LLMC 1996¹⁷⁰; and the HNS Convention.¹⁷¹ The HNS Convention has not yet come into force, and Russia is not party to the 2010 Protocol to the HNS Convention.¹⁷²

The Russian Federation is also party to the International Convention for the Prevention of Pollution from Ships 1973/1978 and its 1997 Protocol (in other words, all MARPOL Annexes),¹⁷³ OPRC,¹⁷⁴ and the Intervention Convention and Intervention Protocol.¹⁷⁵

These conventions have been implemented in federal legislation, in most cases under the Merchant Shipping Code of the Russian Federation (MSC).¹⁷⁶

¹⁶² Contributed by Professor *Alexander S. Skaridov*, *Russian State Polar Academy* and Dr. *Olya Gayazova*, *Scandinavian Institute of Maritime Law*, University of Oslo.

¹⁶³ Constitution of the Russian Federation, adopted at National Voting 12/12/1993, ss. 65(1) and 5(1).

¹⁶⁴ Constitution of the Russian Federation, s. 71(н).

¹⁶⁵ Federal Law N 155-FZ of 31/07/1998, On the Internal Waters, Territorial Sea and Contiguous Zone of the Russian Federation, s. 2(1).

¹⁶⁶ Federal Law N 191-FZ of 17/12/1998, On the Exclusive Economic Zone of the Russian Federation, s. 1(3).

¹⁶⁷ CLC 1992, *supra* note 6.

¹⁶⁸ Fund Convention 1992, *supra* note 24.

¹⁶⁹ Bunker Convention, *supra* note 36.

¹⁷⁰ LLMC 1996, *supra* note 37.

¹⁷¹ HNS Convention 1996, *supra* note 39.

¹⁷² HNS Convention 2010, *supra* note 40.

¹⁷³ MARPOL 1973, *supra* note 70, MARPOL *supra* note 60, 1997 Protocol, *supra* note 70.

¹⁷⁴ OPRC, *supra* note 31.

¹⁷⁵ Intervention Convention, *supra* note 26; Intervention Protocol, *supra* note 30.

¹⁷⁶ Merchant Shipping Code of the Russian Federation N 81-FZ of 30/04/1999 [MSC].

Liability

MSC Chapter XVIII implements the terms of the CLC 1992. MSC Chapter XIX.1 implements the terms of the Bunker Convention. MSC Chapter XIX implements the terms of the HNS Convention, but that convention has not yet come into force. LLMC 1996 is implemented in MSC Chapter XXI. The 1992 Fund Convention is implemented in a separate law.¹⁷⁷ The Russian Federation is not party to the 2003 Protocol establishing an International Oil Pollution Compensation Supplementary Fund.¹⁷⁸

In MSC Chapter XXVI on “Applicable Law” it is stipulated that the rules of MSC Chapter XVIII apply to vessel-source oil pollution damage in the territorial sea and EEZ of the Russian Federation.¹⁷⁹ Accordingly, a wider applicability of the CLC 1992 rules than the narrow definitions of “vessel” and “oil” in the CLC 1992 is envisioned.

MSC would prevail as *lex specialis* over pollution liability provisions in the Water Code.¹⁸⁰ However, if pollution damage occurs within the territorial sea, the methodology of calculating the amount of damage caused to water objects and to be compensated for the purpose of restoration of the environment adopted under the Water Code may be used.¹⁸¹ Claims based on the methodology may be rejected if no evidence of actual costs undertaken or to be undertaken in accordance with a remediation project is provided.¹⁸²

The MSC provisions pertaining to liability for vessel-source pollution apply in the water area of the Northern Sea Route (NSR), which comprises the internal waters, territorial sea, contiguous zone, and EEZ of the Russian Federation.¹⁸³ The standard of the NSR regulation is specified in the Federal Law on the Internal Waters, Territorial Sea and Contiguous Zone of the Russian Federation¹⁸⁴ as well as the MSC.¹⁸⁵ The Rules of Navigation in the Water Area of the Northern Sea Route adopted under the MSC prohibit the deposit of any oil residues in the waters of the NSR and stipulate related equipment requirements.¹⁸⁶ The same rules specify the terms of mandatory icebreaker assistance and ice pilotage as measures to ensure the safety of navigation and protection of the marine environment in the NSR water area.¹⁸⁷

¹⁷⁷ Federal Law N 26-FZ of 02/01/2000, On the Accession of the Russian Federation to the Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, and the Denunciation by the Russian Federation of the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971.

¹⁷⁸ 2003 Supplementary Fund Protocol, *supra* note 54.

¹⁷⁹ MSC, *supra* note 176, s. 421.

¹⁸⁰ Water Code of the Russian Federation N 74-FZ of 03/06/2006, s. 69(1).

¹⁸¹ On Approval of the Methodology of Calculating the Amount of Damage Caused to Water Objects due to the Violation of Water Legislation, Order of the Ministry of Natural Resources of the Russian Federation N 87 of 13/04/2009. The Water Code applies in the territorial sea but not the EEZ of the Russian Federation, s. 1(6).

¹⁸² See, Decision of the Arbitration Court of St Petersburg and Leningrad Region of 7 September 2010 N A56-45633/2010.

¹⁸³ MSC, *supra* note 176, s. 5.1.

¹⁸⁴ On the Internal Waters, Territorial Sea and Contiguous Zone of the Russian Federation, s. 14.

¹⁸⁵ MSC, *supra* note 176, s. 5.1.

¹⁸⁶ Rules of Navigation in the Water Area of the NSR, Russian Ministry of Transport Order N 7 of 17/01/2013, ss. 65 and 61.

¹⁸⁷ *Ibid*, Ch. III and IV.

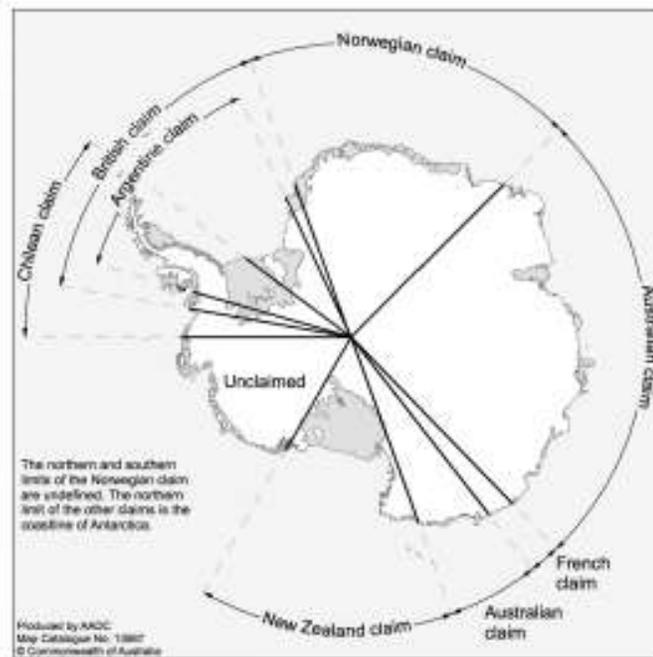
4. ANTARCTIC WATERS¹⁸⁸

4.1 Liability and Compensation for ship-sourced pollution damage in Antarctic Waters – the current position

In order to clarify the current position on liability and compensation for ship-sourced pollution damage in the Antarctic region, it is important to recognize that, while a number of states claim historic rights of sovereignty over areas of Antarctica, the Antarctic Treaty freezes all new claims to territorial sovereignty in Antarctica.¹⁸⁹ As discussed below, this could lead to some legal conundrums with regard to the subject matter covered by this report.

A number of states, however, do maintain historic strategic, scientific and environmental interests in Antarctica, such as the United Kingdom, which administers the British Antarctic Territory.

Figure 3: National claims to Antarctic Territory



Source: Australian Antarctic Data Centre, 2008.

The 1959 Antarctic Treaty came into force in June 1961 after ratification by the 12 countries then active in Antarctic science.¹⁹⁰ It covers the area south of 60°S latitude.

¹⁸⁸ Contributed by David Baker, International Group of P&I Clubs.

¹⁸⁹ *Antarctic Treaty*, 1959, Secretariat of the Antarctic Treaty [Antarctic Treaty].

¹⁹⁰ Argentina, Australia, Belgium, Chile, the French Republic, Japan, New Zealand, Norway, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the U.S.

The treaty will remain in force indefinitely with 46 countries having acceded to it. Consultative (voting) status is open to all countries that have demonstrated their commitment to the Antarctic by conducting significant research. Twenty-nine states currently have consultative status.¹⁹¹

The 1959 Treaty does not contain liability and compensation provisions for ship-sourced pollution damage south of 60°S latitude and therefore the adoption of a Liability Annex to the Protocol on Environmental Protection to the Treaty was required.¹⁹² The Liability Annex, which is explained in more detail below, is currently not in force.

This report already outlines the extensive scope of the IMO liability and compensation conventions for ship-sourced pollution damage and various national regimes. The IMO Conventions cannot apply to the waters south of 60°S latitude (that is, where the Antarctic Treaty applies), since — for the purposes of liability and compensation arising from ship-sourced pollution damage — the relevant and in-force IMO Conventions (namely the Bunker Convention 2001 and the CLC 1992) apply to “*pollution damage caused in the territory, including the territorial sea, of a State Party, and in the EEZ of a State Party (or equivalent area).*”¹⁹³

Furthermore, none of the states that are parties to both the Antarctic Treaty and these IMO regimes have extended the IMO regimes to their Antarctic territories. As a result, it would seem that the geographical scope of these IMO conventions does not extend to the waters south of 60°S latitude simply because there are no coastal states with territorial sea and EEZ or equivalent zones there.

However, as has already been noted in this report with regard to the CLC 1992 and the 2001 Bunker Convention, costs incurred for preventive measures are recoverable under these two regimes, even when no oil spill occurs, provided that there was “a grave and imminent threat” of pollution damage and, more importantly in this context, there is no geographical restriction regarding the jurisdictional zone in which the preventive measures have to be taken. Preventive measures are limited to measures that prevent pollution damage as defined in Art. I.6.¹⁹⁴

Although the geographical scope of these conventions applies “to preventive measures, *wherever taken*, to prevent or minimise such damage,” it is debatable whether they apply if no territorial sea, EEZ, or equivalent zone is threatened.¹⁹⁵ Therefore, if a state party to either of these conventions undertakes preventive measures in response to a pollution incident south of 60°S latitude, such state is probably not able recover the costs (from the owner/owner’s insurer) under the applicable convention’s liability provisions.

Further, these two conventions also prescribe the jurisdiction where actions for compensation against owners and their insurers can be brought. Article 9 of the Bunker

¹⁹¹ See Secretariat of the Antarctic Treaty, “Parties,” available online: <www.ats.aq/devAS/ats_parties.aspx?lang=e>.

¹⁹² Liability Annex, *supra* note 133.

¹⁹³ CLC 1992, *supra* note 6, Art. II(a)(i); Bunker Convention, *supra* note 36, Art. 2(a)(i).

¹⁹⁴ CLC 1992, *supra* note 6, Art 1.6.

¹⁹⁵ CLC, *supra* note 6, Art. II(b); Bunker Convention, *supra* note 36, Art. 2(b) (emphasis added).

Convention, which follows the same jurisdiction clause in the CLC 1992, provides that actions for preventive measures taken in the territory, territorial sea, or EEZ may only be brought in the courts of state parties. The conventions do not make it clear, however, where actions may be brought to recover costs for preventive measures taken outside the territory, territorial sea, or EEZ of a state party. It may be thought that such actions can only be brought in the courts of state parties to the IMO Conventions, but the jurisdiction provisions in the Bunker Convention and the CLC 1992 are silent on where actions to recover costs for preventive measures taken outside the territory, territorial sea, or EEZ of a state party can be brought. It will be a decision for national courts to determine whether costs for preventive measures taken in waters south of 60°S latitude can be brought forward.

The CLC 1992 and Bunker conventions require registered owners of all vessels that are registered in or trade to a state party to maintain financial security to cover their liabilities under the conventions, and this is evidenced by a certificate that must be issued by a convention state party. The relevant financial security provisions stipulate that insurers shall respond to a claim brought directly against them. Enforcement of these financial security requirements generally takes place through the port state control or flag state inspection of ships.

It is clear that the owners of vessels falling under the scope of these convention regimes are required to maintain and provide evidence of financial security for their liabilities wherever they arise. This includes the waters south of 60°S latitude, albeit the geographical scope of these conventions suggests that they would apply to such waters only for the purposes of preventive measures (“wherever taken”), and with the abovementioned caveat in terms of actions brought to recover costs for preventive measures.

The 1990 International Convention on Oil Pollution Preparedness, Response and Cooperation¹⁹⁶ (which deals with coastal states preparedness and response to oil pollution incidents) probably does not (in the absence of coastal states) apply in Antarctica. However, the parties to Annex IV to the Protocol on Environmental Protection to the Antarctic Treaty¹⁹⁷ have agreed on certain basic obligations in this area.

The Antarctic region is not therefore fully covered by the provisions of an IMO regime providing statutory rights of cost recovery or a right to compensation for ship-sourced pollution damage. But by virtue of Article 15 of the Protocol on Environmental Protection to the Treaty, which is in force, the parties to this treaty agree to “provide for prompt and effective response action to such emergencies which might arise in the performance of activities for which advance notice is required.”¹⁹⁸ This was illustrated by the U.S. and Argentina, who shared the clean-up costs when in the Southern Ocean in 1989 the Argentinean supply and tourist vessel *Bahia Paraiso* sank and about 830,000 litres of diesel fuel and lubricants entered the marine environment.

The absence of an international statutory regime governing liability and compensation for ship-sourced pollution damage in the Antarctic region provided the catalyst for the discussions on

¹⁹⁶ OPRC, *supra* note 31.

¹⁹⁷ Liability Annex, *supra* note 133.

¹⁹⁸ Environmental Protection Protocol, *supra* note 29.

a Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty, which were concluded in 2005.¹⁹⁹

4.2 The Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty

Introduction

The following is an outline of the relevant provisions of the Antarctic Treaty with specific focus on Annex VI to the Protocol on Environmental Protection to the Treaty in the context of liability arising from environmental emergencies.

Background

The Antarctic Treaty, which entered into force in 1961, establishes a mechanism for international cooperation to protect and preserve the continent of Antarctica. There are currently 29 consultative parties and 22 non-consultative parties to the treaty. The parties to the Liability Protocol meet each year to exchange information and discuss matters relating to the Antarctic, as well as to adopt measures to further the purposes of the treaty.

A Protocol on Environmental Protection to the Treaty, providing for the comprehensive protection of the Antarctic environment, was adopted in 1991 and entered into force in 1998, along with Annexes I-IV to the Protocol.²⁰⁰ Annex V, which covers protected areas, was adopted in 1991 and entered into force in 1998. Among other matters, the protocol:

- Requires all human activities undertaken in Antarctica to be planned and conducted so as to limit adverse impacts on the environment,²⁰¹
- Prohibits any activity relating to mineral resources other than scientific research,²⁰²
- Allows for modification only by unanimous agreement by all of the consultative parties to the treaty until 2048,²⁰³ and
- Provides that the prohibition on activity relating to mineral resources cannot be removed without a binding legal regime on Antarctic mineral resource activities in force.²⁰⁴ As a result, there is no foreseeable prospect of oil exploration or similar activities in Antarctica.

The provision on mineral resource activity is in distinct contrast to the situation in the Arctic.

Annex VI to the Protocol, titled “Liability Arising from Environmental Emergencies” was adopted by the Antarctic Treaty Consultative Parties in 2005, but is yet to enter into force. The main tenants of the Liability Annex are for states parties to require their state and non-state operators (as defined) to:

¹⁹⁹ *Ibid.*

²⁰⁰ Environmental Protection Protocol, *supra* note 29: Annex I – EIA, Annex II – Fauna and Flora, Annex III – Waste Disposal, Annex IV – Marine Pollution.

²⁰¹ *Ibid* at Art. 3(2)(a).

²⁰² *Ibid* at Art. 7.

²⁰³ *Ibid* at Art. 25.

²⁰⁴ *Ibid.*

- (i) Take reasonable preventative measures to reduce the risk of environmental emergencies in Antarctica;²⁰⁵
- (ii) Establish contingency plans for responses to incidents;²⁰⁶
- (iii) Take prompt and effective response action to environmental emergencies arising from their activities;²⁰⁷
- (iv) Establish liability on the operator for the costs of response action taken by state parties in the event that the operator fails to take prompt and effective response action;²⁰⁸
- (v) Establish a limitation regime;²⁰⁹
- (vi) Require operators to maintain adequate financial security to the limits established;²¹⁰ and
- (vii) Establish a fund to provide for the reimbursement of reasonable and justified costs incurred by a state, for response measures taken, in certain circumstances.²¹¹

Scope

The Liability Annex applies to “environmental emergencies” in the Antarctic Treaty area that relate to scientific research programs, tourism, and all other activities in the area for which advance notice is required under Article VII (5) of the treaty itself. The Annex differs in this regard from the IMO adopted liability and compensation regimes relating to the carriage of persistent oil, HNS, and bunker oil by sea in the sense that it does not refer to, or define, pollution damage per se; rather, its scope of coverage applies to the type of incident that may occur, i.e. an “environmental emergency,” which is defined as: “any accidental event that has occurred and that results in or imminently threatens to result in, any significant and harmful impact on the environment.”²¹²

The Liability Annex also defines the term “reasonable” in the context that “Each Party shall require its operators to undertake reasonable preventative measures that are designed to reduce the risk of environmental emergencies and their potential adverse impact.”²¹³

While “reasonable” in the context of response measures undertaken pursuant to an incident under the scope of the IMO regimes is included in the definitions of “pollution damage” and “damage” in those regimes, “reasonable” is not actually defined in the Liability Annex, but includes the following objective criteria:

[reasonable] measures or actions which are appropriate, practicable, proportionate and based on the availability of objective criteria and information, including:

²⁰⁵ Liability Annex, *supra* note 133 at Art. 3.

²⁰⁶ *Ibid* at Art. 4.

²⁰⁷ *Ibid* at Art. 5.

²⁰⁸ *Ibid* at Art. 6.

²⁰⁹ *Ibid* at Art. 9.

²¹⁰ *Ibid* at Art. 11.

²¹¹ *Ibid* at Art. 12.

²¹² *Ibid* at Art. 2(b).

²¹³ *Ibid* at Art. 2(e).

- (i) Risks to the Antarctic environment, and the rate of its natural recovery;
- (ii) Risks to human life and safety, and
- (iii) Technological and economic feasibility.²¹⁴

While this could be seen, on the one hand, as a means of overcoming the issues that have arisen in the context of ship-sourced oil pollution damage (where carried as cargo) in past CLC 1992/IOPC Fund cases as to what is reasonable or not (notwithstanding the non-binding policy of the IOPC funds in this regard), on the other hand, the determination as to what is “reasonable” in the context of the Liability Annex still, inevitably, provides for a degree of subjectivity.

Liability

Where an “operator” fails to take “prompt and effective response action to environmental emergencies arising from its activities,” it shall be liable to pay:

- (1) The costs of response action taken by Parties or
- (2) When a State operator should have taken action and no response action was taken by any Party, the operator is liable to pay into a fund the costs of the response action that should have been undertaken, and
- (3) When a non-State operator should have taken prompt and effective action but did not, and no response action was taken by any Party, that operator shall be liable to pay an amount that reflects as much as possible the costs of the response action that should have been taken. Such money is to be paid directly into a fund or to the Party of the operator (who should make “best efforts” to make a contribution to the fund in at least the amount equal to that received from the operator).²¹⁵

In the event that an operator does not take prompt and effective response action, then the Annex encourages the party of the operator or other parties to do so; the Annex provides that such a party may bring an action against a non-state operator for the costs incurred in the courts of a party (which will be determined by whether the operator is incorporated in a party or not).²¹⁶ Separate provisions apply in the case of state operators.

Basis of Liability

The Liability Annex provides for strict liability of the operator in terms of paying the costs of response action taken by a party or parties.

The onus, and indeed it is a requirement to be imposed by the parties, is on the operator to take “prompt and effective response action to environmental emergencies arising from the activities of that operator” in the first instance.²¹⁷

²¹⁴ *Ibid.*

²¹⁵ *Ibid* at Art. 6.2(b).

²¹⁶ *Ibid* at Art. 6

²¹⁷ *Ibid* at Art. 8.1(d).

Time Bar

Actions are to be brought within three years of the commencement of the response action or within three years of the date on which the party bringing the action knew or ought reasonably to have known the identity of the operator, whichever is later. However, under no circumstances shall an action (against a non-state operator) be commenced more than 15 years after the commencement of the response action.

The Fund

The Annex provides for a fund to be established and administered by the Antarctic Treaty Secretariat, which provides for the reimbursement of the reasonable and justified costs incurred by a party in taking response action where an operator does not do so.

Reimbursement from the fund will be generated by proposals made by the party or parties concerned to consultative meetings of the Antarctic Treaty.

Limitation

Some debate took place during the final negotiations of the Annex as to whether distinct limits should be included in the final text or whether the operator's right to limit liability should be linked to the limits contained in the LLMC 1976. Following the latter approach would have ensured that the limits contained in the Annex keep pace with any increases to the 1996 LLMC Protocol, such as the increases agreed by the IMO in 2010 and came into effect in June 2015.

However, the agreement reached during the final negotiations took the former approach. A specific sliding scale of limits based on the tonnage of the vessel concerned was included in the text of the Annex; the scale reflects the non-loss-of-life/personal injury limits contained in the 1996 LLMC Protocol as adopted in 1996, but without taking account of any future increases such as those agreed in 2010.

Since such limits are prescribed in the Liability Annex, they would not be affected by any unpaid balance of claims with regard to loss of life or personal injury claims in the same manner as the corresponding limits in Article 6 of LLMC.

There is, however, a provision for the Antarctic Treaty Consultative Meetings to review the limits every three years and for amendments or modifications to be made in accordance with the measure adopted in the Antarctic Treaty itself.²¹⁸

²¹⁸ Antarctic Treaty, *supra* note 189 at Art. IX.

Financial Security

Operators are required to maintain financial security to cover their liability up to the applicable limits, which can be in the form of insurance or other financial security such as the guarantee of a bank or similar financial institution.

Unlike the IMO regimes, the Annex does not provide for state certification, the right of direct action against the financial security provider, or the waiver of policy defences save for wilful misconduct of the assured. It is unlikely that a blue card/COFR type system will be required by parties for the purposes of compliance with the financial security requirements of the Annex.

Entry into Force

The Liability Annex will become effective following ratification by all 29 consultative states to the treaty. As of the 40th Antarctic Treaty Consultative meeting in May 2017, 13 states have ratified.²¹⁹

5. NON-REGULATED GEOGRAPHICAL AREAS²²⁰

There are “white spots” on the marine chart, that is, areas that are outside the geographical scope of the various conventions such as the high seas (see Figure 2 above).

Norway would appear to be the only state that has extended its application of the CLC 1992 (as implemented nationally) to oil pollution on the high seas; that action benefits both the environment and the polluting shipowner. The practical application of these rules remains unclear.

If pollution threatens a coastal state, a legal framework is available because the Intervention Convention applies if pollution is threatening a CLC 1992 State. Equally, if U.S. waters are threatened, OPA 90 would apply. Although current traffic in the Arctic does not affect the high seas, it is a fact that if a spill occurs in such an area and does not spread, it will not be governed by any of the existing legal regimes.

As a matter of international law, it seems that every state has the right to combat pollution on the high seas, but no existing legal regime appears to provide for compensation. Logically, if a state intervenes on the high seas, it is doing so at its own coast. Hence, there appears to be no legal basis for making a claim against the polluter. Instead, possibly an inter-state discussion can arise under UNCLOS art. 194. This article provides:

States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.

²¹⁹ The official list of ratifications can be found online: <www.State.gov/documents/organization/189998.pdf>.

²²⁰ Contributed by Lars Rosenberg Overby (Hafnia Law Firm, Copenhagen).

6. THE POLAR CODE

Although the Polar Code makes no provision for civil liability, it is an important contribution to the prevention of vessel-source pollution in the polar regions and accordingly should be mentioned in this working paper as background information. The code lends itself to being incorporated in insurance policies and commercial contracts, such as charter parties, as rules to be adhered to and commercial standards.

6.1 Background

The International Code for Ships Operating in Polar Waters (Polar Code)²²¹ took effect on 1 January 2017 after being adopted on 15 May 2015. The code was developed in response to the growing trend of marine shipping in polar regions. Its goal “is to provide for safe ship operation and the protection of the polar environment by addressing risk present in polar waters and not adequately mitigated by other instruments of the [International Marine] Organization.”²²² The code, “requires vessels in polar waters to comply with various safety and environmental requirements..., contains detailed requirements relating to safety, design and construction, operations, training, and the prevention of environmental pollution” and “includes recommendations and guidelines relating to [its] mandatory portions.”²²³

6.2 Mandatory safety measures

The Polar Code classifies vessels into one of three categories depending on their design for use in polar waters. Category A ships are “designed for operation in polar waters in at least medium first-year ice” (0.7-1.2 metres thick); Category B ships are “designed for operation in polar waters in at least thin first-year ice” (0.3-0.7 metres thick); and Category C ships are “designed to operate in open water or in ice conditions less severe than those included in Categories A and B.”²²⁴ Many safety provisions within the code vary accordingly depending on the category of the vessel.

*Certificate and Survey, Polar Water Operations Manual*²²⁵

The Polar Code requires all vessels to have a valid Polar Ship Certificate, which is not issued until the ship is classified as an A-, B-, or C-category vessel. The certification process requires “an assessment to establish procedures or operational limitations, which would take into account the anticipated range of operating and environmental conditions and hazards the vessel may face in polar waters.”²²⁶ The assessment considers the anticipated range of operating and environmental conditions, which may include operating in ice and/or low air temperatures and at high latitude in remote areas, potential abandonment on land or ice, and how such conditions can affect human

²²¹ *International Code for Ships Operating in Polar Waters*, 2014 MEPC 68/21/Add.1 Annex 10 [Polar Code].

²²² *Ibid* at Intro para 1.

²²³ Keesal, Young & Logan, “Maritime Alert: IMO Adopts Additional Provisions to Polar Code, Imposing Mandatory Environmental and Safety Requirements on Vessels Traversing Polar Waters” (2015), available online: <www.kyl.com/2015/05/21/maritime-alert-imo-adopts-additional-provisions-to-polar-code-imposing-mandatory-environmental-and-safety-requirements-on-vessels-traversing-polar-waters/>.

²²⁴ Polar Code, *supra* note 221 at Intro, paras 2.1-2.4.

²²⁵ *Ibid* at Ch 1-2.

²²⁶ Keesal, Young & Logan, *supra* note 223.

performance. The code mandates that any vessel operating in a low ambient air temperature, the vessel, and its system and equipment must be able to operate at the polar service temperature (PST); the PST is specified for each vessel and is at least 10° C lower than the mean daily low temperature for the intended area and season of operation. Further, “Survival systems and equipment must be fully operational at the PST for the maximum expected rescue time.”²²⁷

In addition to the Polar Ship Certificate, all vessels must also carry a Polar Water Operational Manual (PWOM). The PWOM, like the certificate, is specific to each vessel. It must include information related to the ship’s capabilities and limitations in relation to the certification assessment, as well as outline specific procedures to follow both in normal operations and in the event of any incident that occurs in polar waters or if conditions exceed the ship’s capabilities and limitations.

*Ship Structure, Stability, Materials, Machinery Installations*²²⁸

The Polar Code has requirements to ensure vessels will be able to operate at its PST, which include mandatory criteria for materials used in its construction. Similarly, the code also has provisions that ensure vessels will have sufficient stability and subdivision in both intact and damaged conditions. The requirements relate to how the vessel is designed and its ice-removal equipment, as well as ensuring any machinery aboard the ship can also function in polar conditions (including ice accretion, snow accumulation, and low air temperatures). The requirements vary depend on whether the vessel is classified as Category A, B, or C.

*Fire/Safety Protection, Life-Saving Appliances and Arrangements*²²⁹

The Polar Code’s fire/safety protection requirements mandate that all fire safety systems and equipment must be protected from snow and ice accumulation, and be effective at temperatures colder than the PST. The design of such systems and appliances must consider and account for the need for persons to wear bulky and cumbersome cold weather gear. Escape, evacuation, and survival guidelines require that adequate thermal clothing, such as an immersion suit, is available for each person on board, as well as requiring life boats to be partially or fully enclosed.

*Safety of Navigation, Communication, Voyage Planning*²³⁰

The Polar Code requires all vessels to be able to receive and display up-to-date information on current conditions in order to ensure safe navigation. This includes navigational equipment that must be able to retain its functionality below the PST, and being able to visually detect ice when operating in darkness. Additionally, ships must also have two non-magnetic means to determine and display the vessel’s heading. Vessels must be able to prevent ice from accumulating on antennas required for navigation and communication if they are operating in areas or conditions where ice accretion is likely.

²²⁷ *Ibid.*

²²⁸ Polar Code, *supra* note 221 at Ch. 3-6.

²²⁹ *Ibid* at Ch. 7-8.

²³⁰ *Ibid* at Ch. 9, 10, 11.

The Code has various requirements providing for effective communications in normal and emergency situations, including requiring that two-way voice and data communications be available at all points along the intended operating route (for ship-to-ship and ship-to-shore communication).

The voyage planning requirements include taking into consideration the PWOM, current information regarding ice, icebergs, other hazards, as well as densities of marine mammals (including seasonal migration areas) in the vicinity of the intended route, and statistical data on past years' ice and temperatures.

*Manning and Training*²³¹

The Polar Code mandates that masters, chief mates, and officers in charge of a navigational watch complete appropriate training. Basic training is required for open-water operations, while advanced training is required for other conditions, including ice. The training requirements also depend on whether the vessel is a tanker, passenger ship, or other type of vessel. Further, every crewmember must be familiar with the vessel's PWOM, particularly the procedures and equipment relevant to their assigned duties.

6.3 Mandatory pollution prevention measures

The Polar Code has a range of provisions aimed at preventing pollution.²³² These requirements are aimed at controlling pollution by oil, noxious liquid substances, harmful packaged substances, sewage, and garbage. These provisions prohibit discharging any oil or oily mixtures, noxious liquid substances into Arctic waters (although this prohibition does not apply to clean or segregated ballast). Sewage and garbage discharge is also prohibited, unless it is done so in accordance with the MARPOL Annexes IV and V, as well as the additional requirements specified in the code. Additional requirements for Category A and B vessels to prevent oil pollution include requiring those vessels to have their oil fuel tanks separated from the outer hull.

7. EMERGENCY PREPAREDNESS AND RESPONSE MEASURES

7.1 General comments

While each Arctic coastal state has its own command centres and response set-up, the question is whether the existing aircraft, vessels, equipment, and resources are sufficient to respond to a major event in the polar regions. If not, then additional support has to be sourced and chartered for the occasion, which will in turn cause delays and increase costs dramatically. Experience with operations in remote areas shows that the costs of, for example, a wreck removal will multiply if personnel and equipment have to be mobilized. Also, in many scenarios, there will be not local human power to rely on as opposed to the "ordinary" oil spill scenario.

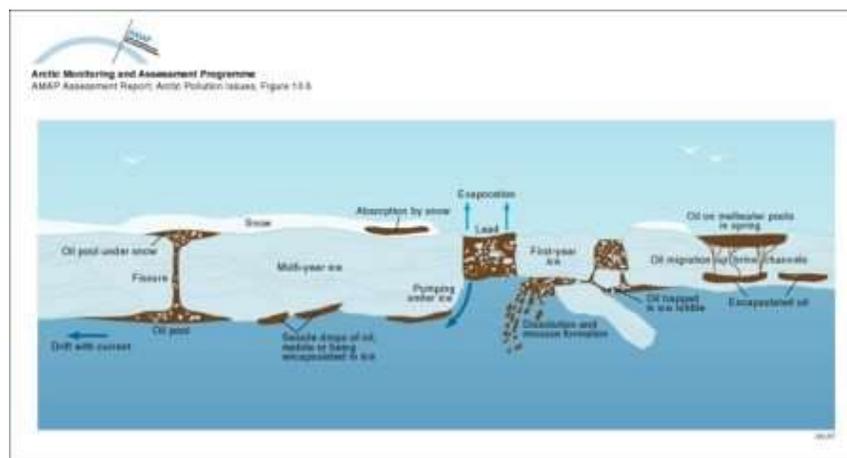
²³¹ *Ibid* at Ch. 12.

²³² *Ibid* at Part II-A.

The lack of infrastructure would be a significant liability in the event of a large oil spill.²³³ The vastness of the Arctic inherently makes it difficult to calibrate the response capability properly in any event.

The Arctic oil spill countermeasures are mechanical containment and recovery, biodegradation, chemical dispersants, and in situ burning. These are traditional and tested methods, but the special conditions in a polar environment seriously hamper these countermeasures; further, critical time will be lost due to the long distances that have to be overcome in order to get to the site. Additionally, oil that has been collected must be stored and disposed; however, there are no such facilities in the area. There are concerns as to whether a large spill can be effectively mitigated in the Arctic.²³⁴ Even if these methods are used in combination, they will be severely constrained in recovering the oil that has spilled.

Figure 4: The Behaviour of Oil in Ice



Source: Arctic Council, AMAP, 2011

7.2 The Arctic Council Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic

While the Agreement on Cooperation on Marine Oil Pollution, Preparedness and Response in the Arctic²³⁵ from 2013 by the members of the Arctic Council is a useful instrument, its impact depends entirely on the vessels, equipment, etc. in the pool. The agreement includes non-binding operational guidelines. The relationship between this instrument and the compensation regimes is likely to be that the member state that has sourced some of its response measures under this

²³³ National Research Council: *Responding to Oil Spills in the U.S. Arctic Marine Environment* (Washington: National Academics Press, 2014), p. 9.

²³⁴ *Ibid* at p. 93.

²³⁵ *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*, 2013 Kiruna, Sweden, 15 May 2013, available online: <www.arctic-council.org/eppr/agreement-on-cooperation-on-marine-oil-pollution-preparedness-and-response-in-the-arctic/>.

agreement will then claim expenses incurred in the process from those liable after having paid the contributing member states in accordance with the tariffs. As such, the member states are supposed to be compensated directly from the state seeking assistance rather than having to make claims themselves.

7.3 International Coast Guard Forum for cooperation in the Arctic

In late October 2015 a new international forum for cooperation in the Arctic was formed. The new Arctic Coast Guard Forum will include coast guards or similar agencies from Canada, Denmark, Finland, Iceland, Norway, Sweden, Russia, and the United States. The Arctic Coast Guard Forum is designed to be an operational entity that can “leverage collective resources and coordinate communications, operational plans, and on-the-water activity.”²³⁶

7.4 Canada/U.S. bilateral cooperation

Under the Great Lakes Water Quality Agreement,²³⁷ Canada and the U.S. have an annex that concerns joint oil spill response that applies to the Arctic. There are biennial exercises.

7.5 Coastal state summaries²³⁸

Denmark (Greenland)

Greenland’s local government is responsible for pollution response within its territorial waters whereas the Danish Arctic Command is responsible for this task outside Greenland’s territorial waters. A report published on 11 September 2013 by Statsrevisorerne (a permanent supervisory body under the Parliament) strongly criticized the capacity to respond to environmental incidents in the Arctic. Work is in progress to improve the response measures. In January 2016, the Danish authorities began an extensive risk assessment and analysis to determine how that risk can best be managed. Greenland has established its own national organisation, Greenland Oil Spill Response (GOSR) to meet the challenges.

Canada

Canada’s ship-source spill preparedness and response capabilities in Arctic waters were extensively reviewed in 2014 by a Tanker Safety Expert Panel,²³⁹ which proposed a series of

²³⁶ Source: “U.S. Coast Guard Unveils a New Model for Cooperation Atop the World,” *Council on Foreign Relations* (November 2, 2015), online <<http://usinsurequotes.com/insurance-news/10035-u-s-coast-guard-unveils-a-new-model-for-cooperation-atop-the-world>>.

²³⁷ *Protocol Amending the Agreement Between Canada and the United States of America on Great Lakes Water Quality, 1978, as Amended on October 16, 1983 and on November 18, 1987.*

²³⁸ The information provided is not exhaustive and the national response capabilities are likely to change over time. Readers are encouraged to research the position in the present in order to get updated information.

²³⁹ See Tanker Safety Expert Panel, *A Review of Canada’s Ship-Source Spill Preparedness and Response: Setting the course for the future, Phase II* (Ottawa: Minister of Transport, 2014), available online: <www.tc.gc.ca/media/documents/mosprr/TC-Tanker-E-P2.pdf>. See also Office of the Auditor General of Canada, “2014 Fall Report of the Commissioners of the Environment and Sustainable Development, Chapter 3,” available online: <www.oag-bvg.gc.ca/internet/English/att__e_39878.html>. This report critically examined whether Transport Canada, Fisheries and Oceans Canada (including the Coast Guard and Hydrographic Service) and Environment Canada “adequately support safe marine navigation in Canadian arctic waters” and points out a number of

recommendations to “set the course to improve ship-source prevention, preparedness and response in the Canadian Arctic.”²⁴⁰ Recommendations include modernizing Canada’s Arctic navigation systems, accelerating the collection of bathymetric data and hydrographic surveys, reviewing scientific data on hull strengths and safe ice loads, conducting specified training for ice navigators and vessel officers, requiring Shipboard Arctic Spill Response Plans, developing Arctic oil handling facilities and spill prevention, preparedness and response measures, and advancing Canada’s Coast Guard capability in the Arctic. These recommendations remain under review by Transport Canada, but will very likely set the basis for further legislative and regulatory initiatives to significantly advance Canada’s Arctic waters response capabilities.

Russia

Rosmorrechflot, the Federal Agency of Maritime and River Transport under the Ministry of Transport of the Russian Federation, is the executive body in charge of the general administration of the federal system for the prevention and removal of marine oil spills.²⁴¹ Oil spill contingency plans and removal activities are managed at the federal level by Gosmorspassluzhba, the State Marine Accident and Rescue Coordination Administration of Russia; at the regional level, operations are managed by the Marine Rescue Coordination Centres (MRCC).²⁴² It is required that a marine oil spill is reported immediately to the nearest MRCC. Ports, oil terminals, and harbours maintain local contingency plans. If local and regional oil spill removal capabilities are not sufficient, Gosmorspassluzhba mobilizes the federal Tier 2 and Tier 3 capabilities. For Tier 2 and Tier 3 oil spills, dispersants, and all other oil spill combat methods are permitted, but in-situ burning and dispersant use require authorization by the Ministry of Health, the Ministry of Natural Resources, and the Fisheries Committee.²⁴³

*Norway*²⁴⁴

The Norwegian Coastal Administration (NCA) is the government agency responsible for the national pollution preparedness and response in Norway with regard to acute pollution, including oil spills at sea. The NCA reports to the Ministry of Transport and Communications. The NCA administrates the national system for prevention and response to marine oil spills and coordinates the national response system. The system includes three tiers of response: private, municipal, and national. The NCA supervises responses carried out by private parties and municipal authorities. The NCA has a duty team handling cases of acute pollution around the clock. In case of larger oil

shortcomings in Canada’s approach to safe marine transportation in the Arctic, as well as a lack of long-term national vision or coordinated departmental strategies to support such transportation.

²⁴⁰ Tanker Safety Expert Panel, *supra* note 239 at pp. 2-3.

²⁴¹ “Statement Concerning the Functional Subsystem of Coordinating Activities for the Prevention and Removal of Spills of Oil and Oil Products from Vessels and Structures regardless of their Departmental Identity or Nationality,” Russian Ministry of Transport Order N 53 of 06/04/2009, ss. 7(1) and 8.

²⁴² “Statement Concerning the Functional Subsystem of Coordinating Activities for the Prevention and Removal of Spills of Oil and Oil Products from Vessels and Structures regardless of their Departmental Identity or Nationality,” Russian Ministry of Transport Order N 53 of 06/04/2009, ss. 7(1) and 8.

²⁴³ For a summary in English, see the entry for the Russian Federation at the website of the International Tanker Owners Pollution Federation Limited (ITOPF), available online: <www.itopf.com/knowledge-resources/countries-regions/countries/russian-federation/>.

²⁴⁴ Contributed by senior legal advisor Kjersti Tusvik (Norwegian Coastal Administration).

spills, the NCA may take charge of the response operation through an NCA command centre established in accordance with a national contingency plan.

The responsibility for the national response on Svalbard is placed both on the Governor of Svalbard and on the NCA. A separate contingency plan is issued for Svalbard. For the islands of Jan Mayen and Bear Island, the NCA will be in charge of the response, but it may include the resources of Svalbard in the response operation.

In its northern areas, Norway has implemented a number of risk-reducing measures such as increased vessel surveillance, mandatory ship routing, mandatory piloting services, and increased information exchange.²⁴⁵ Through the Emergency Prevention, Preparedness and Response Working Group of the Arctic Council (EPPR), Norway is working actively to follow up the two major agreements on oil spill preparedness in the Arctic, the Arctic Oil Spill Response Agreement²⁴⁶ and the Arctic SAR Agreement.²⁴⁷ The government has funded a project within the framework of the Arctic Council EPPR that aims to further strengthen oil spill response in the Arctic. The project is managed by the NCA and will give recommendations on oil spill equipment and risk-reducing measures in the Arctic. The project will give its final report in 2017.

The NCA maintains four emergency towing vessels, including two operating the northern areas of the mainland coast. In addition, the NCA has access to resources from other public and private parties through cooperation agreements, which include the Coast Guard, the Norwegian Military Forces, and the Norwegian Clean Seas Association for Operating Companies (NOFO). Through other cooperation agreements, Norway also has access to assistance from neighbouring countries and EU (EMSA). A number of private offshore vessels and coast guard vessels are equipped with oil spill equipment owned by the Norwegian state authorities. In order to cover the northern areas that are outside the normal automatic identification system (AIS) coverage, Norway has employed two satellites orbiting the northern areas. Data from the satellites are administrated through a national centre in Vardø and distributed to relevant authorities. Information exchange and handling are improved by the work of BarentsWatch, a collaboration between government agencies and research institutions working to collect, develop, and share knowledge of coastal and marine areas close to Norway.

In 2015, a white paper on the Antarctica was handed over to parliament.²⁴⁸ In addition, a separate white paper was issued on the Bouvet Island. It is expected that a white paper on pollution preparedness and response will be handed over to the parliament during 2016. The white paper may further outline the government's strategy for the pollution preparedness and response in Norway including the polar areas.

²⁴⁵ *The Norwegian Pilot – Volume 7: Sailing Directions – Svalbard and Jan Mayen* (Norwegian Hydrographic Service and Norwegian Polar Institute, 2017).

²⁴⁶ *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic, 2013*, Arctic Council.

²⁴⁷ *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, 2011*, Arctic Council [Arctic SAR agreement].

²⁴⁸ Ministry of Foreign Affairs, "Norwegian Interests and Policy in the Antarctic" Meld.St. 32 (2014 – 2015): (June 12, 2015), available online: <www.regjeringen.no/en/dokumenter/meld.-st.-32-20142015/id2415997/>.

United States

Coast Guard officials have warned the U.S. government they do not have the equipment or infrastructure needed to respond to emergencies in the Arctic. The Coast Guard's Arctic Strategy describes the operational challenges to include vast distances, extreme weather, and limited infrastructure.²⁴⁹ The closest U.S. deep-water port to Barrow, Alaska, the main population center, is more than 1,100 miles away in Dutch Harbor. There are only two small commercial airports in the U.S. Arctic at Barrow and Deadhorse, Alaska. Other challenges include poor radio propagation, partial satellite coverage, geomagnetic interference with navigation equipment, and limited cellular networks.

Arctic Council SAR Agreement

While the focus is different, it should be mentioned that there is also an Arctic Search and Rescue Agreement among the members of the Arctic Council. The illustration below serves to illustrate the vastness of the area that the agreement applies to.

Figure 5: Geographical Scope of the Arctic Council SAR Agreement



Source: NOAA, 2011

²⁴⁹ U.S. Coast Guard, "Arctic Strategy" (Washington: 2013).

8. DISCUSSION

The Arctic states (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, and the U.S.) have each identified activities in their Arctic region that they consider to present risks due to location, operation and environmental conditions. These risks are associated with oil and gas activities such as exploration, production, and marine transportation. The threats involve release of oil or radiological and other hazardous materials from exploration activities and shipping. Further risks exist in relation to shipping, for example, abandoned and sunken vessels have the potential to leak oil and other hazardous materials. There are a variety of conventions and agreements at international, multi-lateral and bi-lateral levels to address these risks. The most significant of these have been described above in Section 2.

Compensation for pollution damage caused by spills from oil tankers is governed by the international regime originating from the 1969 International Convention on Civil Liability for Oil Pollution Damage (1969 Civil Liability Convention)²⁵⁰ and the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (1971 Fund Convention).²⁵¹ In the United States, OPA 90²⁵² and its associated provisions apply.

Many of the international conventions relate to emergency prevention, preparedness or response (for example, the International Convention for the Protection of Pollution from Ships (MARPOL 73/78),²⁵³ the International Convention on Oil Pollution Preparedness Response and Cooperation (OPRC),²⁵⁴ and the Protocol On The Preparedness, Response and Cooperation On Pollution Incidents by Hazardous and Noxious Substances (OPRC-HNS Protocol 2000).²⁵⁵

Pollution by non-persistent oil and other substances is also subject to national regulation that comprises liability, responsible parties and recoverable losses even though the HNS Convention is not yet in force.

There is a comprehensive network of international liability and compensation regimes for the Arctic region generally, which would cover damage caused by spills from oil cargo and vessels' bunkers (the CLC 1992, Fund Convention and Bunker Convention) when this occurs in the territorial sea and EEZ of a contracting state party, irrespective of the flag of the ship, the place of registry, and whether or not they are contracting state parties.

Further, the Intervention Convention 1969²⁵⁶ and the Intervention Protocol of 1973²⁵⁷ permit the Arctic states to take in the high seas to prevent damage to their coastline when there is a "grave and imminent threat" of damage by pollution. As observed earlier, the costs in this respect are recoverable from the CLC 1992/Fund Conventions/Bunker Convention when this concerns oil pollution.

²⁵⁰ CLC 1992, *supra* note 6.

²⁵¹ Fund Convention 1992, *supra* note 24.

²⁵² OPA 90, *supra* note 107.

²⁵³ MARPOL, *supra* note 60.

²⁵⁴ OPRC, *supra* note 31.

²⁵⁵ HNS Convention 2010, *supra* note 40.

²⁵⁶ Intervention Convention, *supra* note 26.

²⁵⁷ Intervention Protocol, *supra* note 30.

To date, there have not been any oil spills in the polar regions to which the CLC/Fund regime has applied, and the Supplementary Fund has yet to be engaged anywhere in the world. The IOPC Claims Manual and the recently adopted revised Guidelines for Presenting Claims for Environmental Damage will assist the preparation of claims.²⁵⁸ It is not known whether the monetary compensation schemes will be sufficient to meet the costs of responding to a major oil spill, especially considering that responding to a major oil spill in the Arctic, as in other remote areas, could result in substantial costs.²⁵⁹ A spill occurring in areas where ice is present would present additional challenges. Major casualties in other remote areas, such as the “Oliva” on Tristan da Cunha in 2011 suggest that responding to a spill may entail very high costs.²⁶⁰

Pollution response personnel and equipment will need to be mobilized and brought in from afar; in many instances, due to the remoteness of the region, national response options will likely need to be supplemented by resources procured on market terms. That will escalate costs, as will the likely lack of locally-based personnel.

With respect to exemptions from liability, CLC 1992 enables the shipowner to avoid liability to pay compensation where the loss “was wholly caused by the negligence or other wrongful act of any Government or other authority responsible for the maintenance of lights or other navigational aids in the exercise of that function.”²⁶¹ This exemption is particularly relevant in the navigable waters of the Arctic where navigation aids may be moved by sea ice and where many areas are not charted, insufficiently charted, or the existing charts are not up to date. This, in turn, increases exposure to liability for Arctic coastal states under the CLC 1992, although such incidents will still be covered by the Fund Convention.

There is also notionally a regime at the international level for liability and compensation for damage caused by HNS, but it is not yet in force. Until such time when it enters into force, the limit of liability for damage caused by HNS will be governed by LLMC 1996, where this is in force, or by national law. The LLMC does not regulate liability for such damage and it could be said that there is vacuum until the HNS Convention is in place, although national legislation may cover such vacuum.

As regards the high seas, there is an issue as to how pollution damage should be dealt with in the interest of the international community. While there currently are few ice-free areas beyond

²⁵⁸ *Supra* note 13.

²⁵⁹ “Many parts of the northern and southern hemispheres at high latitudes are geographically isolated with vast distances between supply centres. This introduces significant operational challenges in developing a significant level of oil spill preparedness, entailing substantial costs, and amplifying the potential consequences of risk events.” In “Guide to Oil Spill Response in Snow and Ice Conditions,” Submitted by Norway, IMO Doc PPR 3/15, 11 November 2015, Annex at 94. Moreover, “Intensive and costly international efforts to develop dedicated mechanical systems for operations in naturally broken ice have not progressed beyond the small-scale prototype stage, for example the MORICE project (Mullin et al., 2003). The problems and impracticality of scaling up such systems to achieve useful oil encounter and recovery rates in an Arctic environment have stalled further developments of systems dependent on ice cleaning or processing to deal with very large spills.” *Ibid* at 132.

²⁶⁰ See “Challenges of a Spill Response,” (2011) *Ocean Orbit* at p. 3, available online: <www.itopf.com/fileadmin/data/Documents/Company_Lit/OceanOrbit2011.pdf>.

²⁶¹ CLC 1992, *supra* note 6, Article III(2)(c).

200 NM in the Arctic in the summer navigation season, an instrument similar to the Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty (see section 4.2 above) might be a useful precedent in the event that summer sea ice occurs to such an extent as to permit increased navigation on the high seas.²⁶²

A simpler approach would be to follow the Norwegian model of extending the application of the CLC 1992 to oil pollution on the high seas as that would benefit both the environment and the ship owner whose civil liability might be engaged.

The vastness of the area poses great challenges for pollution response. The problem could possibly be managed to some extent by establishing transport corridors and restricting navigation to certain areas. A ban on HFO modelled on the Antarctic solution is another option for some areas and is currently under consideration in the Arctic Council. Norway, Canada, Finland, Germany, the Netherlands, and the U.S. have tabled a proposal for an HFO ban at the IMO and industry organizations, such as the Norwegian Shipowners' Association' have provided support.²⁶³

The United States aggressively enforces its pollution liability laws. In recent years, it imposed stringent operating restrictions on companies seeking to conduct oil exploration in Arctic waters on its continental shelf in order to protect the environment and to prevent interference with traditional subsistence activities of native Alaskans. If a vessel had a significant discharge in Arctic waters subject to the jurisdiction of the U.S., it is likely the U.S. would demand a full response to the incident, and would pursue substantial claims for natural resource damages and civil penalties. The lack of adequate response resources or infrastructure from which to mount a response in all Arctic areas would hamper the ability of a vessel operator to respond to such a spill.²⁶⁴

The Antarctic Treaty's liability annex would benefit from wider ratification in order to clarify the currently uncertain legal position regarding "reasonable measures," and to ensure that environmental protection and liability measures are in place in that region, should an environmental emergency occur.

9. CONCLUSIONS AND RECOMMENDATIONS

The legal infrastructure for civil liability for oil spills in marine areas within national jurisdiction in the Arctic is very good. The coastal states bordering the Central Arctic Ocean have legislation in place that deals with pollution, liability, calculation of losses, responsible parties, and funding.

It is possible that a major oil spill could stress the monetary limits of the CLC and Fund Convention regime, although the limits under the Supplementary Fund, if it applies, may be

²⁶² Liability Annex, *supra* note 133.

²⁶³ "Heavy Fuel Oil Ban in Arctic Waters Gains Support among Norwegian Shipowners", Bellona Europe, online: <bellona.org/news/fossil-fuels/2017-06-heavy-fuel-oil-ban-in-arctic-waters-gains-support-among-norwegian-shipowners>.

²⁶⁴ See, e.g., *Arctic Marine Shipping Assessment Report, 2009* (Arctic Council Secretariat, 2009), available online: <oarchive.arctic-council.org/handle/11374/54>.

sufficient in most instances. However, this is also likely to be the case in other parts of the world as well as in the polar regions.

Russia and Iceland would benefit from participating in the Supplementary Fund Protocol to the Fund Convention 1992 should a major oil pollution incident occur.

There is a gap in the CLC/IOPC coverage areas within national jurisdiction and actions taken on the high seas where national interests might be affected, but this is not currently a problem. In time, the issue should be addressed in the interest of the international community.

There is no indication the U.S. will join the CLC and Fund Convention regime. Rather, the U.S. will continue to enforce its domestic laws governing spills, including OPA 90.

Antarctica is exposed to legal uncertainty in the event that a pollution incident occurs until the liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty is ratified. Therefore, it is specifically recommended that the Antarctic Treaty Protocol States ratify the Liability Annex described in this report.