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Hugh M. Kindred*

The Allocation of Civil Liability for Damage to the Marine Environment in the New Canadian Law of Merhant Shipping, or the Polluter Pays How Much?

Infrequent but catastrophic incidents of pollution by ships have attracted worldwide attention to the regulation of the merchant shipping industry for the protection of the marine environment. Under the detailed legal regime that has been established, ships and their owners are held strictly liable for the pollution of the oceans that they cause. Less well known but equally well established are other principles of maritime law that allow shipowners to limit their liability for the expense and damage their polluting ships incur. Canada has recently undertaken a major reform of its shipping laws and, in the process, it has revamped the national regime respecting ship sourced pollution. This article investigates the grounds and extent of civil liability of shipowners under this regime and thus exposes the actual allocation of loss and expense when ships pollute the seas.

Les cas peu fréquents mais catastrophiques de pollution par des navires ont attiré l'attention du monde entier sur les règlements du transport maritime pour la protection de l'environnement marin. En vertu du régime légal établi, les propriétaires des navires sont tenus strictement responsables de la pollution qu'ils causent dans les océans. Mais il y a d'autres principes de droit maritime, moins bien connus mais tout aussi bien établis, qui permettent aux armateurs de limiter leur responsabilité quant aux dépenses et aux dommages causés par leurs navires pollueurs. Le Canada a récemment entrepris une réforme en profondeur de ses lois sur le transport maritime et ce faisant, il a réorganisé le régime national sur la pollution causée par les navires. Cet article examine les motifs et la portée de la responsabilité civile des armateurs sous ce régime et explique ainsi l'affectation véritable des pertes et des dépenses lorsque des navires polluent les océans.

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Introduction

- I. Grounds of Ships' Civil Liability for Marine Pollution
- II. Extent of Ships' Civil Liability for Marine Pollution

Conclusions

Introduction

As a trading nation with massive maritime interests, Canada is heavily dependent on merchant shipping. Although air transportation carries an increasing volume of cargo and a great proportion of its trade is moved overland by surface carriers to and from the United States,1 the fact remains that the modern economy and standard of living in Canada would not exist without the shipment of goods by sea. In addition, Canada has enormously long coastlines that are dotted with ports, and is surrounded by international waters for approximately three and one-third of its four frontiers 2

Given these interests one might expect Canada to have developed a sizeable merchant marine fleet capable of carrying its overseas trade to and from all points around its shores. In fact Canada has a small merchant marine and relies on foreign shipping fleets. For sure, Canada has a variety of coastal services, including privately owned coasting vessels, ferries, government organized northern supply services and, on the West coast, numbers of tugs and barges. There is also a fleet of Great Lakes vessels, which are specially designed to carry bulk cargoes across the Great Lakes and through the narrow locks and waterways of the St. Lawrence Seaway system. A few of these ships are registered for deep sea trading when the Seaway is closed in winter. More ocean going vessels are owned by

According to Statistics Canada about 85 per cent of Canada's trade is with the U.S. See online: Statistics Canada - http://www.statean.ea>.

Pacific, Arctic and Atlantic Oceans and Great Lakes - St. Lawrence Seaway.

According to Transport Canada, the number of ships of over 1.000 tons in the Canadian merchant fleet in 2000 were: 72 dry bulk, 56 ferries, 24 general cargo, 22 tankers and 8 others. See online Transport Canada http://www.tc.gc.ca/en/menu.htm.

Canadians but are registered offshore for commercial reasons.4

As a result of its reliance on foreign merchant ships to carry its vital trade, Canada has a crucial interest in the supply and regulation of international shipping. In addition, as a coastal state, Canada is deeply concerned about pollution and other assaults on its huge area of marginal seas from all shipping, whether foreign or national. These concerns drive Canada strongly to favour uniform international standards for shipping. Not surprisingly, Canada is an active participant in the International Maritime Organisation (IMO) and its work towards "safer shipping, cleaner oceans." Indeed, from a Canadian perspective, IMO is a highly organized and advantageously centralized body of expertise and consultation about shipping. Canada has exercised leadership, especially in the important Legal Committee, in the IMO's development and conclusion of uniform regulations for shipping.

Domestically Canada, as a member of the British Commonwealth, regulates shipping under a regime that was originally adopted from the system of Admiralty courts and laws of England. The regime was expressed principally in the Canada Shipping Act (CSA), which, over time, has been supplemented by other enactments to adapt it to the needs of a federal state, such as the Federal Courts Act, and to adopt the increasing number of law making international conventions, mostly sponsored by the IMO. Such was the volume of new international regulations and domestic amendments that by the 1990s CSA became hopelessly overburdened. It was greatly outdated, grossly amended and exceedingly inconvenient to use. In consequence, the decision was taken to reform CSA from top to bottom. During the overhaul that ensued, it was further decided to separate out those parts of CSA that regulated the civil liabilities of ships and shipowners and to capture them in one new enactment that came to be called the Marine Liability Act (MLA). The result is a modern and stream-

^{4.} There are also more than 20,000 Canadian fishing boats registered in Canada which are excluded from the present consideration of cargo carrying ships.

^{5.} Where the Canadian, Alfred Popp, has occupied the chair.

^{6,} R.S.C. 1985, c. S-9.

^{7.} R.S.C. 1985, c. F-7.

^{8.} A previous attempt, which succeeded in placing the Maritime Code S.C. 1977-78, c. 41 [Maritime Code] on the statute book in partial reform of CS4 was aborted. It never came into effect and was repealed: Canada Shipping Act 2001, SC 2001, c. 26 [CS.42001], repealing Maritime Code, not in force as of 30 April 2003.

S.C. 2001, c. 6 [ML4], in force 8 August 2001.

lined regime that, in essence, is organized in two parts. The new CSA2001¹⁰ deals with the owners' management of ships and the government's administration of shipping, while MLA regulates the responsibilities of ships and shipowners towards others.

This is not an entirely comfortable division of legislated responsibility. In the first place, the administration of the two Acts is awkwardly distributed between Transport Canada and the Department of Fisheries and Oceans with "help" from other departments such as Environment and Heritage Canada, More importantly, the division between public and private liabilities that the two Acts are supposed to represent is not, in fact, so clear cut. In law there is a deep difference in principle between public and private wrongs. Public wrongs are delinquencies against the community which are prosecuted as criminal acts and carry penalties for the wrongdoer. Private wrongs are breaches of obligations causing injury or loss to one or more individuals who may bring civil actions for compensation. Not infrequently the same act or omission can give rise to both forms of liability. Thus a shipowner who fails to observe a safety requirement for ships may be held criminally liable for violation of the public standard and civilly liable to compensate individuals who are injured as a result of the contravention. The shipowner's criminal offence is established in CS.4 while his her civil liability is affected by maritime common law and MLA.

In practice, however, an intermediate category of liability is imposed, especially by legislation to protect the marine environment. The creation of offences against pollution of the seas are necessary but not sufficient. If a ship does pollute the environment, the shipowner may be prosecuted to conviction and fined. But there remains the need to clean up the pollution, remediate the environment and compensate for the damage caused. Private individuals may bring civil suits for their personal loss and damage in the ordinary way, but how shall the shipowner be made to pay for other costs of clean up and remediation? These tasks are usually undertaken by government agencies or emergency organizations in the public interest. In general, CSA authorizes the government to step in and take action and VLA grants the right to recover the government's costs. This right of recovery is in addition to the public penalty imposed on the owner of the polluting ship for the criminal offence, but it is not a private action for compensation for damage in the ordinary civil law sense. In truth, it is

^{10.} Supra note 8.

a hybrid, being a right of civil action over a public obligation. This article is concerned with the civil liability imposed on shipowners by the new Canadian legislation. It explores the allocation of civil liability in the larger sense of both private and public claims against shipowners, but it is not directly concerned with the public standards and penal consequences of their activities.

Pursuant to the policy of Canada's Oceans Act, 11 one of the purposes of the new shipping legislation is to advance the use of the seas in sustainable ways. The reformed Canadian shipping regime does so by promoting prevention of pollution of the oceans by ships. However, the expression of this principle must be gathered from a number of provisions, both in and beyond the new legislation, that have grown up piecemeal in the face of specific needs. The control of oil pollution has attracted the most attention, but other provisions also regulate the pollution of Arctic waters, the spillage of noxious chemicals, the dumping of wastes, the transportation of dangerous goods and the prevention of nuclear damage. 12 Canada is also moving towards regulation against such dangers to the oceans as alien invasive species carried in ships' ballast water and collisions between vessels and marine mammals. In addition, these initiatives are supported by improved standards for the crewing and management of ships.

Within all these provisions, responsibility for pollution prevention, clean up and damage is clearly imposed on the participating ship. In other words, the polluter is made to pay the costs of his her pollution, whether that be the expense of cleaning up the mess, remediating the environment or compensating damaged private property interests. The ship and its owner bears the first line of liability as the party that permitted the pollution but in some situations, where the spill involves the ship's cargo, the cargo owner is also made to share the costs of the consequences of the pollution. In this way a basic principle of environmental law that polluters should pay for their abuse and degradation of the environment¹³ is forcefully implemented in Canada's renewed merchant shipping regime.

Even so, while the effort to make the polluter pay furthers the sustain-

^{11.} S.C. 1996, c. 31.

^{12.} Part 7 of CS.12001, supra note 8, also governs the treatment of wrecks of ships.

^{13.} See Rio Declaration, Report of the UN Conference on Environment and Development, UN GAOR, 1992, UN Doc. A/CONF 151 26 (Vol. 1), Principle 16, Patricia W. Burnie & Alan E. Boyle, International Law and the Environment, 2rd ed. (Oxford: Oxford University Press, 2002) at 92-95; and Philippe Sands, Principles of International Environmental Law 1 Frameworks, Standards and Implementation (Manchester: Manchester University Press, 1995) at 213-217.

able use of oceans, it has also to interact with other longstanding principles of shipping law to do with sharing and limiting liability. Indeed, the interaction of environmental protection provisions with other shipping law principles raises serious issues about the proper balance between the costs and values of protecting the marine environment and the sustainable level of liability that may be imposed on shipowners.

This article discusses this interaction from a Canadian perspective. More particularly, it explores the allocation of civil liability for pollution of the marine environment by merchant ships in two stages, first by investigating the grounds of liability of shipowners and then by assessing the extent of their liability. In short, the paper will determine how far, under the new Canadian regime of shipping laws, the polluting ship is made to pay.

1. Grounds Of Ships' Civil Liability For Marine Pollution

A pollutant is defined in a similar way in both CSA2001¹⁴ and MLA.¹⁵ Section 47 of MLA provides as follows:

"pollutant" means

(a) a substance that, it added to any waters, would degrade or alter ... the quality of the waters to an extent that is detrimental to their use by humans or by an animal or plant that is useful to humans; ...

and includes oil and any substance or class of substances identified by the regulations as a pollutant \dots ^{to}

This broad anthropomorphic definition of pollution might be interpreted to include everything living in the oceans. There are few animals or plants that humankind does not, or might not, find useful. Their preservation necessarily depends upon the protection of their marine habitats and interdependent ecosystems. In addition, there is the amenity value of the physical environment of the seas to humankind. This reading of the definition of pollution would appear to be supported by the proscription, as a criminal offence, in section 253 of CSA2001 of any human activity which "intentionally or recklessly causes a disaster that results in ... serious damage to the environment."

¹⁴ Supra note 8 at ss. 165, 185,

^{15.} Supra note 9 at s. 47.

^{16.} Ibid.

In practice Canadian law concentrates on "pollution damage" which is confined to "loss or damage outside the ship caused by contamination resulting from the discharge [of a pollutant] from the ship." In general, only actual physical loss or damage is compensable and then only if caused by the ship's discharge of a prescribed list of specific substances.

The regulatory emphasis in Canada has been placed on the prevention of oil pollution damage, specifically oil carried in bulk. The choice of emphasis reflects international public consternation about a relatively small number of spectacular oil tanker casualties which have given rise to a series of international agreements about oil pollution prevention, response and liability. The new Canadian shipping acts fully implement these conventions and more.

Responsibility for pollution prevention and response is divided between the Department of Fisheries and Oceans and the Department of Transport under Parts 8 and 9 of CS42001. Civil liability is regulated by Parts 3 and 6 of MLA. The CSA2001 gives effect to Canada's obligations under the International Convention for Prevention of Pollution from Ships, 1973 and its Protocol of 1978 (MARPOL 73 78) and the International Convention for Oil Pollution Preparedness Response and Cooperation, 1990. The CSA2001 places particular duties on ships of a certain size and function. In this period of transition, the regulations made under the old CSA are to remain in force until repealed. They demand that all oil tankers of 150 gross tons or greater and other ships of more than 400 gross tons that carry oil, whether as cargo or as fuel, must prepare and maintain an oil pollution emergency response plan. Such ships must also have an arrangement with a certified pollution response organization and carry on board a declaration regarding the arrangement and those who may implement it as well as the vessel's pollution insurers. 19 These ships must also meet specially prescribed standards of construction and carry specifically prescribed equipment. They are forbidden to discharge oil except as prescribed and are expected to implement their emergency response plan in the event of a spill.20 They are also subject to the preventive directions of the Minister of Transport as to their movements, and to the administrative orders of the

^{17.} MLA, supra note 9 at s. 47. Similarly, s. 165 of CS.12001 (supra note 8) provides: ""pollution damage", in relation to a vessel or an oil handling facility, means loss or damage outside the vessel or oil handling facility caused by contamination resulting from a discharge from the vessel or facility."

^{18.} CSA 2001, supra note 8 at s. 274.

^{19.} Ibid. at s. 167.

^{20.} Ibid. at ss. 187, 188

Minister of Fisheries and Oceans as to the repair, remedy, minimization or prevention of pollution damage.²¹ For this purpose a body of pollution prevention officers are broadly empowered to board, inspect, detain and generally give directions to ships that, it is reasonable to believe, may or may have discharged pollutants.²²

Civil liability for oil pollution is imposed by Part 6 of MLA. The statute implements in Canada the International Convention on Civil Liability for Oil Pollution Damage (CLC) 1969, plus Protocols of 1976 and 1992, and the International Convention on the Establishment of the International Fund for Compensation for Oil Pollution Damage (Fund) 1971, plus its Protocols of 1976 and 1992, as well as establishing the Canadian Ship-source Oil Pollution Fund (SOPF).23 In the event of a spill, the shipowner is liable under section 51 of MLA for all oil pollution damage and for the costs of clean up. In addition, if the environment is impaired as well, the shipowner is liable for the cost of its reinstatement. This liability may be wider than the CLC imposes since the Convention is concerned only with tankers which carry persistent oil in bulk as cargo (known as Convention ships).24 The WLA defines oil as "oil of any kind or in any form"25 which could be oil in containers or the ship's bunker fuel. Further, the costs with which the ship may be charged will not necessarily be limited to remedying the oil pollution damage and remediating the marine environment but may also include the expense of measures to prevent the pollution or to monitor its effects.26 This liability is strict: no proof of fault or negligence is necessary. The shipowner may only be excused on proof that the incident was the result of war, natural disaster, negligence of a third party or a wrongful act of the government.

Compensation for liability is provided out of a step up system of insurance schemes. A Convention ship carrying more than 200 tons of oil must bear a certificate showing it is covered by insurance for liability under CLC, and, in the event of a spill, must constitute in court a fund equal to the shipowner's liability under the Convention.²⁷ If the compensation

^{21.} Ibid at 88 189, 179,

²² Ibid at ss 174-79

²³ Supra note 9 at ss. 47, 77 respectively.

²⁴ The 1992 Protocol extends the application of CLC to spills of bunker fuel but only from tanker ships.

²⁵ Supra note 9 at s. 47. See also the IMO's new International Convention on Civil Liability for Bunker Oil Pollution Damage 2001, 23 March 2001, IMO LEG CONF.12.DCI, not in force.

²⁶ MLA, thid at 88, 47, 48, 51.

²⁷ Ibid at 88 60, 58 respectively. The shipowner will lose the right to limit liability (discussed later) if the fund is not constituted.

payable by the shipowner under CLC is insufficient, recourse may be made to the International Oil Pollution Compensation Fund (International Fund) constituted by the Fund Convention. This fund is financed by contributions from oil importers through levies on states parties to the Convention. It has an upper limit to compensatory repayments for a single incident which, however, are adjustable. Currently the maximum amount the Fund will pay is 135,000,000 SDR or about \$270,000,000 Can.

If the International Fund's payments are inadequate, the Canadian SOPF further supplements compensation. It has been built by a levy, now set at 30 cents per ton, that may be imposed on all imports and exports by ships from Canada of oil cargoes in excess of 300 tons, as well as with any amounts recovered in subrogation by the administrator of the SOPF from shipowners that are liable. The three-tiered system provides very substantial compensation for oil pollution injuries but the several parts are not fully complementary. In particular, the Canadian SOPF admits some claims that the CLC and the Fund Convention will not. Thus the SOPF may be a first, as well as a third, recourse of compensation for some incidents. In particular, fishers, aquaculturalists, fishing boat owners, on shore fish handlers and fish plant workers all have rights to claim against the SOPF for the loss of income resulting from pollution damage. The convention of the supplementary is a supplementary of the supplementary.

Separate legislation deals with ships engaged in offshore oil exploration and exploitation.³¹ The Canada Oil and Gas Operations Act³² covers offshore oil activities, including transportation by ships, in all submarine areas on Canada's extensive continental shelf, north, east and west. The Act is administered through the National Energy Board to whom operators must provide proof of financial responsibility. In seeking to promote protection of the marine environment it prohibits "spills" of oil or gas from a ship unless authorized or unless controlled under CSA or MLA, and imposes liability without proof of fault or negligence up to a prescribed limit.³³

Ship source pollutants other than oil are chiefly regulated under the shipping statutes by criminal proscription. The broad definition of pollutants in CSA and MLA has provided the basis for an extensive list of ministerial regulations under the CSA that are not matched by civil liabilities

^{28.} Ibid. at s. 84.

²⁹ Ibid. at ss. 77, 93. The levy may be adjusted annually and charged or not accordingly as the SOPF requires replenishment; see *ibid.* at ss. 94, 95

^{30.} Ibid at ss 84, 85, 88.

^{31.} CS.42001, supra note 8 at ss. 166(2), 186(2).

^{32.} R.S.C. 1985, c. O-7.

^{33.} Ibid. at ss. 24-27

under MLA. For example, regulations have been promulgated under CSA prescribing pollutant substances. 4 directing garbage pollution prevention, 35 Great Lakes sewage pollution prevention,36 and pleasure and non-pleasure craft sewage pollution,37 and controlling dangerous bulk materials and dangerous chemicals and noxious liquid substances.38 The MLA complements CS42001 only to the extent that it allows for recovery by the Crown of the financial outlays of the government in taking measures to ensure compliance with CS.12001's prescriptions.39 Although there is sufficient regulatory power in MLA to impose civil liability in general for marine pollution, it is likely the government is awaiting the entry into force of the IMO sponsored International Convention on Liability and Compensation for Damage in Connection with Carriage of Hazardous and Noxious Substances by Sea (HNS), 1996, which Canada supports.40

The lack of imposition of general civil liability by MLA is partly made up by the provisions of two other broad pieces of legislation and several other sector specific Acts. The Canadian Environmental Protection Act, 1999 (CEPA)⁴¹ addresses pollution of the environment, whether of the land. oceans or atmosphere. The Transportation of Dangerous Goods Act, 1992 (TDGA)⁴² regulates the movement of dangerous substances by surface, sea or air transport. These two acts are supplemented by particular anti-pollution provisions of several other statutes to be mentioned later.

CEP4 controls pollution of the oceans in three ways. Part 7 Division 3. headed Disposal at Sea, implements Canada's obligations under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and its Protocol of 1996 (Dumping Convention).43 The Act prohibits anyone from loading a ship or disposing of waste in Canadian marginal seas except under permit. "Waste" is defined in Schedule 5 as including dredged material, fish waste, inert minerals, rocks and soil, uncontaminated organic matter and bulky masses of iron, steel and

^{34.} Oil Pollution Prevention Regulations, C.R.C., c. 1458.

^{35.} Garbage Pollution Prevention Regulations, C.R.C., c. 1424.

^{36.} Great Lakes Sewage Pollution Prevention Regulations, C.R.C., c. 1429.

^{37.} S.O.R./91-661 and S.O.R. 91-659 respectively

S O R, 87-24 and SOR 93-4 respectively

³⁹ Supra note 9 at x 51(1)(c).

^{40. 3} May 1996, 35 I.L.M. 1406 (signed by Canada in 1997).

⁴¹ S.C. 1999, c. 33.

⁴² S.C. 1992, c. 34

⁴³ Supra note 41 at s. 122

^{44.} See Disposal at Sca Regulations, S.O.R./2001-275.

concrete if disposal at sea is the only practicable method and does not pose serious obstacles to fishing and navigation. Contravention of this proscription is permitted if disposal of the waste is necessary to avert danger to life or the ship under distress of weather, provided it is carried out in a way that minimizes both the danger and the damage to the environment. But this excuse does not avail a person who caused or contributed to the danger by negligence.

Part 7 Division 8 of CEP4 controls the movement of hazardous waste for final disposal. The provisions reflect the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal⁴⁸ although CEPA does not expressly implement it. However, the Minister is empowered to regulate traffic in hazardous waste as required of Canada by international agreements respecting the environment. * CEPA prohibits the transportation of hazardous waste except under Ministerial permit and in accordance with prescribed conditions.⁴⁷ In particular, CEPA proscribes the abandonment of any hazardous waste during the transit.48 This proscription may be applied against the disposal of hazardous waste from ships, whether intentionally or negligently committed. In this context "hazardous waste" has a special meaning defined by the Export and Import of Hazardous Waste Regulations.49 It includes "any product, substance or organism that is dangerous goods, as defined in Section 2 of the Transport of Dangerous Goods Act, 1992, that is no longer used for its original purpose and that is recyclable material or intended for treatment or disposal...." as well as over 100 classes of products and their residues named in Schedule III of the Regulations.

The third portion of CEP4 affecting ship source pollution is Part 8, which addresses environmental emergencies, that is the uncontrolled, unplanned or accidental release of a prescribed toxic substance into the environment. Ships laden with a toxic cargo which may spill into the oceans may very well be subject to these provisions. Akin to CSA requirements for oil pollution preparedness, under CEPA Part 8 the Minister may require the preparation and implementation of environmental emergency plans regarding the prevention, response and recovery in respect of listed

^{45 22} March 1989, Can. T.S. 1992 No. 19, 28 I.L.M. 657 (entered into force 5 May 1992).

^{46.} Supra note 41 at s. 186.

^{47.} Ibid. at s. 185.

^{48.} Ibid. at s. 186(2)

^{49.} S.O.R./92-637 and S.O.R./2000-103.

^{50.} Supra note 41 at s. 193.

toxic substances. The list of prescribed toxins, found in Schedule 1, is long, varied and technical. It includes a large number of chemicals and heavy metals, such as CFCS, certain biphenyls, chloro- and fluro-methanes, inorganic florides, polycyclic aromatic hydrocarbons, acetaldehydes, inorganic arsenic compounds, lead, mercury, vinyl chloride, asbestos, fuel containing toxic substances, chlorinated waste water effluents, effluents from pulp mills using bleaching and respirable particulate matter.

When an accidental spill occurs several obligations arise for the person who owns or had control of the toxic substance immediately before the environmental emergency. Both governmental officials and members of the public must be notified and reasonable measures to prevent or mitigate the emergency must be undertaken. Government enforcement officers are empowered to step into the emergency situation as they judge necessary.⁵² Liability is also imposed for the restoration of any damage to the environment and the costs and expenses of the federal Minister and any provincial and Aboriginal government for reasonable measures taken to prevent, repair, remedy and minimize environmental damage. Such liability does not depend on proof of fault or negligence but is subject to the recognized exceptions of war, third party acts and government negligence.53 This duty to pay for the restoration of the marine environment after a toxic discharge is similar to the liability for impairment and clean up of the environment from oil spills under MLA, except that there is no comparable fund to back the compensation levied. Instead CEPA imposes joint and several liability on the owner and the person in control of the toxic substances.⁵⁴ The shipowner may feel aggrieved to have to bear the sole liability for, possibly, very extensive environmental consequences of carrying a cargo of toxins owned by others. However, CEPA would allow the shipowner to sue the cargo owner if there are grounds for contribution or indemnification.55

Liability for personal loss and damage, other than injury to the environment, is left to the general principles of CEPA Part 2. Anyone who suffers loss "as a result of conduct that contravenes any provision of this Act or the regulations" may bring an action for damages and costs. 56 No

^{51.} *Thid* at 88–199, 58, 59. Possible overlap and duplication with *CS.42001* is potentially avoided by acceptance under *CEP4* of an emergency plan formulated under another Act provided it meets the requirements of *CEP4*.

^{52.} Ibid. at s. 201

^{53.} Ibid. at s. 205.

^{54.} Ihid. at s. 201

^{55.} Ihid.

^{56.} Ibid. at s 40

basis of liability is specified; proof of the loss and its cause in contravention of *CEPA* appears to be sufficient. This right of action is additional to any remedy available under any other act or law, but a degree of alignment with specific shipping legislation is achieved by the limitation that no claim for damage caused by a ship may be made under *CEPA* if one could be made under *MLA* or the *Arctic Waters Pollution Prevention Act.*⁵⁷

Protection of the Arctic's waters, especially from shipping activities, was the cause of environmental legislation as long ago as 1970. The Arctic Waters Pollution Prevention Act (Arctic Act)⁵⁸ operates over the Canadian marginal seas north of 60 degrees latitude and out to 100 nautical miles from the coast.⁵⁹ It prohibits ships from depositing "waste" which is defined in a way very similar to "pollutant" under CSA2001 and MLA. It also imposes very stringent requirements about the construction and equipment of ships transiting Arctic waters, especially for vessels carrying oil in excess of 453 cubic metres.⁶¹ In addition shipowners must establish satisfactory evidence of financial responsibility.⁶² Liability for any spillage of waste is imposed jointly and severally on the shipowner and the cargo owner and is absolute, without proof of fault or negligence, except for the contributory negligence of others.⁶³

The prohibitions against disposal of pollutants at sea found in CEPA and the Arctic Act are backed up by two living species protection statutes,—the Fisheries Act²⁴ and the Migratory Birds Convention Act (MBCA), 1994.65 The Fisheries Act section 36 proscribes both the deliberate discharge or accidental spill of a deleterious substance in Canadian fisheries waters. It makes an exception where the deleterious substance is of a quantity permitted by the regulations or is a waste or pollutant whose deposit is permitted under any other act, such as the disposal regime of CEPA.60 A deleterious substance includes "anything that degrades the quality of the water to which it is added so as to render it deleterious to fish or their habitat." This general definition of harmful matter is additional to a list of substances that may be prescribed by Order-in-Council.67

^{57.} Ibid. at s. 42

^{58.} R.S.C. 1985, c. A-12.

^{59.} Ibid. at s. 2.

^{60.} Ibid.

^{61.} See Arctic Shipping Pollution Prevention Regulations, C.R.C., c. 353.

^{62.} Arctic Waters Pollution Prevention Regulations, C.R.C., c. 354, s. 12.

^{63.} Supra note 58 at ss. 6. 7.

^{64.} R.S.C. 1985, c. F-14.

^{65.} S.C. 1994, c.22.

^{66.} Supra note 64 at s. 36.

^{67.} Ibid. at s. 34.

Anyone who contravenes section 36 may be held both criminally and civilly liable. The civil liability is expressly towards the Crown and licensed commercial fishers. A shipowner carrying a deleterious cargo is jointly and severally liable with the cargo owner in the event of a damaging spill (i) to the Crown for all reasonable costs and expenses taken in counteracting, mitigating or remedying the adverse effects, and (ii) for all loss of income of fishers shown to be caused by the incident. This liability is expressed to be "absolute" without proof of fault or negligence, but the defendant is permitted to plead as a defence that the discharge was caused by an act of war or by a third party. The Act does not impose civil liability generally and so there is no right of recovery for anyone dependant on the fishing industry other than fishers. For instance, fish plant workers have no claim for loss of income under the Fisheries Act as they may under the Canadian Ship-source Oil Pollution Fund in the event of oil pollution of the fishery contrary to MLA.

The *VIBCH* implements the convention of that name concluded with the United States in 1916 as modernized by the Protocol of 1995. The purpose of the Act is to protect migratory birds and their nests.⁷² It prohibits the deposit of oil, oily waste and other substances harmful to listed migratory birds in any waters frequented by them,⁷³ but it does not impose civil liability for contravention of the Act.

Canada is also developing a system of marine protected areas for a combination of heritage, scientific and conservation purposes. Towards the creation of a suitable legal regime, Parliament has also enacted the Canada National Marine Conservation Areas Act. ⁷⁴ This Act prohibits discharges capable of degrading the environment within designated marine conservation areas and imposes on those who have charge of the pollutants, such as shipowners, an obligation to take measures to mitigate and clean up the area. ⁷⁵ If the governmental authorities are required to intervene, then civil liability may be imposed for the costs and expenses reasonably incurred to reverse the effects of the discharge, But these

^{68.} Ibid at ss 40(2), 42

⁶⁹ Ihid. at s. 42. Note, however, that a shipowner is not exposed to this liability under the Fisheries Act if the deposit or spill constitutes a discharge of a pollutant; see s. 42(7).

^{70.} Ibid at s. 42(4).

^{71.} Supra note 9 at s. 88. See also text accompanying note 30.

^{72.} Supra note 65 at s. 4

^{73.} Migratory Birds Regulations, C.R.C., c. 1035, s. 35.

⁷⁴ S.C. 2002, c. 18. See also the Canada Wildlife Act R.S.C. 1985, c. W-9 and the Species at Risk Act, S.C. 2002, c. 29, especially at s. 58.

^{75.} Ibid. at ss. 14, 29.

provisions will not operate in a situation where action may be taken under CSA2001, the Arctic Act or CEPA.76

The protection of the oceans from deliberate disposal of hazardous products in CEPA is buttressed by the liability imposed for accidental spills by the TDGA. This statute gives legislative force in Canada to the voluntary International Maritime Dangerous Goods Code of the IMO and does so progressively as the Code is amended." No one may transport dangerous goods except in compliance with the safety regulations for their handling, packaging and movement. The goods must be accompanied by the prescribed safety documents as well as be contained and transported by prescribed means, bearing applicable safety marks.78 An emergency response assistance plan must also be prepared for the movement of dangerous goods. Interestingly and appropriately, this plan must be established by the owner of the goods before they are delivered to the ship or other carrier for transportation." However, the carrier, as well as the cargo owner, must establish their financial responsibility in respect of the goods. ** A body of government appointed inspectors have wide powers to monitor compliance with the TDGA safety requirements by all parties including stopping and searching ships and detaining goods.81

"Dangerous goods" are defined in the *TDGA* as "a product, substance or organism included by its nature or by the regulations in any of the classes listed in the schedule." There are nine classes of goods scheduled as dangerous, which include:

- 1. Explosives
- 2. Compressed gases
- 3. Flammable and Combustible Liquids
- 4. Spontaneous and Combustible Solids
- 5. Oxidizing substances
- 6. Poisonous and Infectious substances
- 7. Nuclear substances that are radioactive
- Corrosives^{k3}

⁷⁶ Ibid. at s. 29(3), s. 29(4).

^{77.} Transportation of Dangerous Goods Regulations, S.O.R. 2001-286 [TDG Regs.].

^{78.} TDGA, supra note 42 at s. 5. The TDG Regs., ibid., set refined safety requirements for packaging, documenting, marking, placarding, handling and transporting dangerous goods as well as for training personnel and reporting.

^{79.} Ibid. at s. 7.

^{80.} Ibid at s. 14.

^{81,} Ibid. at ss. 10, 15-17.

^{82.} Ibid. at s. 2.

^{83.} Ibid. at Sch.

The ninth class is a miscellany of products included by Order-in-Council from time to time because they are considered dangerous. This classification is further detailed by regulations, which also exempt a large number of dangerous products that are handled in limited quantities or used in special and protected ways. ⁵⁴ A much more limiting feature of the Act, however, is the fact that it does not apply to cargoes carried by ships in bulk: it regulates only the movement of dangerous goods in packages and containers. ⁸⁵

Where the accidental release of dangerous goods occurs, the person in charge of them must report the spill and immediately take reasonable measures to reduce or eliminate any danger to public safety, including the environment.86 These duties will, consequently, arise for the ship carrying dangerous goods however careful and compliant the master may have been and regardless what safety precautions and emergency plan the cargo owner may have put in place. In the event of an accidental spill, government inspectors may also intervene and direct operations. Then the Crown has a right to recover its costs and expenses from anyone, such as the shipowner, who through their fault or negligence, caused or contributed to the circumstances that necessitated the governmental intervention.87 This fault standard of liability appears less onerous than the strict liability generally imposed by other environmental protection acts under discussion. However, the TDGA further states that defendants shall be presumed negligent unless they prove they took all reasonable measures to comply with the Act and the regulations.**

Such reimbursement of the Crown is civil liability only of a limited kind. The *TDG.4* does not impose any general liability for personal or environmental damage directly on dangerous goods owners or carriers. Their responsibility to compensate arises only indirectly through criminal liability. Any contravention of the Act is an offence. Upon a conviction a court may additionally order (i) payment for compensation for remedial action taken or damage suffered by anyone, and (ii) repair of any damage to the environment arising from the commission of the offence. This is some-

⁸⁴ Supra note 77.

^{85.} Supra note 42 at s. 3(4).

⁸⁶ Ibid at ss. 18, 2,

⁸⁷ Ibid at s. 22.

⁸⁸ Ibid at s. 22(3). Defendants may continue to pursue any right of indemnity from others; see s. 22(5).

^{89.} Ibid. at s. 33.

^{90.} Ibid. at s. 34.

what truncated civil liability, since it depends upon proof beyond a reasonable doubt of some contravention of the Act which has a sufficient causal connection to the kind of environmental injury suffered.

Provision is made in TDGA and other acts to continue the operation of special legislation concerning the possession, use, movement and disposal of radioactive nuclear materials. These peculiarly dangerous goods are regulated under two statutes. The Nuclear Safety and Control Act⁹¹ seeks to limit, to a reasonable level and consistent with Canada's international obligations, risks to the environment associated with the production and use of nuclear energy.⁹² To that end it establishes the Canadian Nuclear Safety Commission and an inspectorate which, inter alia may inspect vehicles, including ships that are carrying nuclear materials.⁹³ The Nuclear Liability Act (NLA)⁹⁴ imposes absolute civil liability on all nuclear operators, that is licencees under the Nuclear Safety and Control Act.⁹⁵

This survey of Canadian legislation that imposes civil liability for shipsourced pollution of the oceans discloses some general trends as well as some disturbing gaps. Speaking generally, the Canadian Parliament has made a three-pronged attack upon marine pollution by ships, represented by the CSA2001-MLA combination, by CEPA and by TDGA, and supported by portions of sundry other related statutes. The focus of each of the three legislative approaches is different but complementary. The CSA2001-MLA combination concentrates on regulating the risk of, and organizing compensation for, pollution by spills of oil carried by tankers in bulk. whether as cargo or ship's fuel. Spills of noxious chemicals, an enormous range of products, are proscribed, with criminal sanctions, by CS.42001 but no civil liability is imposed except for recovery of the government's costs of clean up. CEPA controls the dumping of wastes whether hazardous or not, as well as environmental emergencies created by accidental spills of a prescribed list of toxic substances. TDGA sets standards for the safe movement of dangerous goods transported in packaged form. Both acts contain mechanisms for the recovery of compensation for any damage suffered as a result of contravention of their provisions.

Between these three acts there is little overlap but a large gap in their

^{91.} S.C. 1997, c. 9.

^{92.} Ihid. at s. 3.

^{93.} Ibid. at ss. 8, 30, 2. The Packaging and Transportation of Nuclear Substances Regulations, S.O.R./2000-208, s. 15 sets the standards for moving nuclear materials, including an obligation on the carrier to comply with TDG Regs. and the International Atomic Energy Regulations.

⁹⁴ R.S.C. 1985, c. N-28.

^{95.} Ibid. at s. 4.

provisions for civil liability. The nine classes of dangerous goods in the Schedule to TDGA encompass an enormous range of products in the packaged state, for which compensation for damage is obtainable. The scope of control on products moved in bulk is nothing like so extensive. The arrangements for civil compensation under CSA2001-MLA are limited to spills of oil carried in bulk, while CEPA and its compensatory provisions operate on the dumping of hazardous wastes. Even though hazardous wastes under CEP4 (Part 7) are described by reference to the very large range of dangerous goods defined by TDGA, it is only the used or recyclable remains of these products which attract CEPA's control. The scheduled list of substances for which civil, as well as criminal, liability may be imposed in the event of their accidental discharge under the environmental emergency provisions of CEP4 (Part 8) is long but not nearly so extensive as the range under TGDA. This leaves the possibility of large volumes of a large number of harmful chemicals and other toxic products free to be moved as bulk cargoes by ships with little civil liability by statute for any injury or damage that their spillage or disposal in the marine environment may occasion.96

This realization shows up another difficulty in the legislative definition of pollutants. Whether called hazardous, toxic, or dangerous substances, wastes or goods, the attempt in each act is to regulate a broad and encompassing range of pollutants. The CS.42002-MLA definition is the most general in expression. The classification used in the TDGA, which by reference applies in CEPA also, is the most progressive in the sense that it is automatically added to as new products with harmful characteristics are identified and included in the IMDG Code. But in the end, each act only operates upon specifically named substances found in the schedules and regulations. Inevitably this laundry list approach means that the commercial development of new but potentially polluting products will always outrun the reach of the legislation to protect the marine environment.

It may be argued that harmful substances must be identified specifically in order to provide a degree of certainty in the law so that owners, carriers, handlers and other interested commercial parties know by what standards they must operate. After all, there is no harm to the marine

⁹⁶ The discussion in this article of statutory liability does not exclude the possibility of ordinary tort claims for the consequences of marine polluting spills but they would face the well recognized difficulties of environmental suits, including problems over duty of care, causation and proof of damage, and physical and economic loss.

environment if dangerous and polluting products and wastes are packaged, handled and carried appropriately. Few substances are prohibited from movement, as opposed to disposal, at sea. The prescriptive lists of substances in the extensive regulations to these Acts affords the opportunity to set down, and for others to discover, the safe way to deal with these potential pollutants and toxins.

However, the soundness of this approach to the known dangers of discharges of prescribed ship borne materials does not need to preclude a more general imposition of civil liability for pollution damage and injury to the marine environment. At common law the courts have held cargo owners liable to shipowners for shipping goods without adequate notice of their dangerous character, even though the hazard was not known or controlled by any dangerous goods regulation at the time. 97 In statutes like the Arctic Act and the Fisheries Act it has been found appropriate to employ only a general definition of waste or deleterious substance which refers to any substance that, if added to water, would degrade it, without adding a prescribed list of pollutants. In the absence of reliance upon a general and inclusive definition of pollutants, the commercial interests and their agents that develop, market and move new products are free to do so without restraint and liability. In other words, the risk of damage to the marine environment and all who partake of it is lifted off the shoulders of those who have the chief interest to introduce new products and probably exclusive access to knowledge about their hazards.

There is more consistency and inclusiveness in the standard of proof of civil liability under the three Acts. Under CS.4.2001-MLA and CEPA both the cargo owners and the shipowners will be held strictly liable, both jointly and severally, for injury to the marine environment. Only limited exceptions for events of war or intentional acts of strangers are recognized. The TDGA employs a fault standard but reverses the onus of proof. Thus the owner or carrier of the dangerous goods will be presumed liable unless proof is made that all reasonable measures were taken to comply with the Act. Under the TDGA, therefore, the defendant has a greater chance to escape liability than under CSA2001-MLA or CEPA, but incurs a very heavy burden of proof to do so.

^{97.} Heath Steel Mines Ltd. v. Erwin Schröder (The), [1970] Ex. C.R. 426.

II. Extent Of Ships' Civil Liability For Marine Pollution

Ordinarily the amount of compensation payable by a wrongdoer is the actual cost and expense of repairing or remediating the damage done. In shipping law, however, the shipowner is customarily allowed to limit the measure of compensation. This ancient principle probably reflects an economic policy to provide a commercial incentive to shipowners to trade overseas. In former times they faced enormous risks in sending their sailing ships for long periods to distant parts of the world well beyond their control and direction. Whatever its origin, the principle is deeply rooted in shipping law and appears in several forms. As regards pollution of the marine environment, though liability for such damage is of relatively recent imposition, the right of the shipowner to limit, share or shed responsibility is clearly established in international conventions and Canadian shipping law. The MLA makes provision for the allocation of liability in three of its eight parts plus there are principles of salvage and general average to consider as well.

The historical principle of limitation of a shipowner's liability is nowadays internationally agreed and controlled by the Convention on Limitation of Liability for Maritime Claims, 1976 (LLMC): it, together with the Protocol of 1996, is given the force of law in Canada by MLA Part 3.48 The LLMC grants the shipowner the right to limit liability according to the gross tonnage of the ship. It sets separate limits for personal injuries and property damage but these limits are for all claims arising on any distinct occasion. For small ships, i.e. less than 300 tons, Canada has exercised the freedom to establish a ceiling of \$500,000 Can for damage claims.99 Otherwise the limits for damage claims, including associated costs and expenses. under LLMC is currently 1,000,000 SDR or approximately \$2,000,000 Can for a ship of less than 2,000 gross tons rising by 400 SDR per ton up to 30,000 tons, then by 300 SDR per ton up to 70,000 tons and 200 SDR for every ton of a ship in excess of 70,000. Hence the maximum liability is a different amount for each ship. In addition if the maximum compensation payable for personal injuries (which is set at double the rate for damage) is insufficient, the unpaid balance becomes a claim rateably along with the claims for damage compensation. In other words the shipowner's liability for property and other damage claims will be further reduced. 100

^{98.} Supra note 9 at s. 26, Sch. 1.

^{99.} Ibid at s. 28.

^{100.} Ibid. at Sch. 1, Pt. 1, arts. 1(1), 6.

Not only are these limits much higher than in the past, but the move to calculating ships on their gross tonnage will also increase their liability. Further, as a result of the Protocol of 1996, the limits may be adjusted, presumably upwards, by a simplified procedure for the tacit approval of amendments to *LLMC* every five years, which may in turn be incorporated into Canadian law by Order-in-Council. However, shipowners now lose the right to limit liability only if the damage was caused by their personal act committed deliberately or recklessly with knowledge that it would probably result. Further it is the claimant, rather than the shipowner, who must now bear the burden of proving the owner's fault. Thus, the ease with which claimants could overreach the older and lower limits of liability in Canadian law has been severely constrained.

The *LLMC* does not cover every type of maritime claim. There are several exceptions to its operation that are important to the protection of the marine environment. Of particular concern is the exclusion from LLMC of:

- (1) claims for oil pollution damage within CLC,
- (2) salvage claims.
- (3) general average contributions, and
- (4) nuclear damage claims, which typically carry unlimited liability. 103

These types of claims are separated from *LLMC* because they are subject, by international agreement, to their own specific regimes.

Claims for oil pollution damage within CLC are regulated, as previously discussed, ¹⁶⁴ by MLA Part 6. In addition to establishing the basis of liability for oil pollution damage, MLA also sets the limits of liability of shipowners according to whether their vessels are Convention ships or not. For Convention ships (essentially tankers carrying oil in bulk)¹⁶⁵ the maximum liability for a spill is 3,000,000 SDR or approximately \$6,000,000 Can for a ship up to 5,000 gross tons and 420 SDR for every ton greater to an absolute maximum of 59,000,000 SDR or about \$120,000,000 Can in aggregate. Even the largest amount is distinctly lower than the cost and expenses of remedying the effects of major oil spills by large tankers and

^{101.} Ibid. at Sch. 2, Pt. 2, art. 8, s. 31 respectively

¹⁰² Ihid. at Sch. 1, Pt. 1, art. 4 There is some danger that the claimant's success in breaking the limits of liability will be self-defeating if the shipowner, faced with unlimited liability, chooses to abandon the ship behind the corporate veil of a one-ship company.

^{103.} NLA, supra note 94.

¹⁰⁴ See text accompanying note 23.

^{105.} Supra note 9 at s. 47.

amply demonstrates the need for the compensatory resources of the international and Canadian oil pollution funds. Their establishment is deliberately intended to respect the principle of limited liability for shipowners while providing needed compensation by imposing the excess liability, in effect, on oil cargo owners. Thus the costs of oil pollution damage are apportioned, if somewhat arbitrarily, between the owners and the carriers.

For oil spills by non-Convention ships, such as discharges of fuel oil by vessels that are not oil tankers, the limits of the shipowner's liability is determined by the ordinary principles of LLMC enacted in MLA Part 3.106 Its limits, explained previously, are consistently lower rates per ton than CLC, especially for ships of less than 5,000 tons.

As under LLMC, the CLC's liability limits may be altered by an expedited procedure for international agreement and imposed by Order-in-Council in Canadian law. In addition shipowners will lose the advantage of limited liability if the oil pollution damage arose from a personal action done intentionally or recklessly. 10° Such personal acts of wrongdoing are also likely to be outside the typical insurance cover on the ship and to prejudice the ability to establish in court a "shipowner's fund" equal to the limit of liability for the vessel, without which the owner is not entitled to any limitation.

A second exception to the application of LLMC is salvage awards. These are regulated in Canada in accordance with the International Convention on Salvage, 1989, which is given effect through CS.42001.108 Salvage is the operation of assisting a ship in danger or recovering a wreck or other property of a ship at sea. Salvage may be conducted under contract or not. The typical contract, such as Lloyd's Open Form, has traditionally operated on the principle of "no cure, no pay." The recent Salvage Convention has varied this approach. It is still true that successful salvage operations give the salvor a right to a reward, but it is no longer accurate to say no payment is due for salvage efforts in the absence of a useful result. The revisions to the law particularly affect the protection of the marine environment in two respects.

When a reward is earned the court will fix the amount by reference to ten criteria including the value of the salved property, the measure of success, the degree of danger involved, the skill, effort, time and expense

¹⁰⁶ Ibid. at s. 55.

^{107.} Ibid. at s. 54(4), s. 54(2) respectively.

^{108.} Supra note 8 at s. 142.

used and the risks run by the salvor. To these traditional criteria the court must also take into account the skill and efforts of the salvor in preventing or minimizing damage to the environment.¹⁰⁹ The salvor thereby owes a duty to try to protect the marine environment and the quality of performance of that duty, in the course of salvaging the ship, will be reflected as an increase or decrease in the award that would otherwise be made. The shipowner must pay the reward with interest as ordered by the court and has no right to assert any limits of liability.

The Salvage Convention also introduces a new right to "special compensation" for efforts by a salvor to protect the environment. If the salvage operation is unsuccessful or the reward is smaller than the expense of the salvor's efforts to mitigate the risk of harm to the marine environment, the salvor is still entitled to recover a proportion of the costs of the operation. Although oil tanker casualties are the most obvious example, this right to compensation from the shipowner arises whenever the ship or its cargo threatens damage to the environment. The salvor may expect to be awarded up to 30 per cent of the salvage expenses incurred, which may be increased to 100 per cent by the court where appropriate in light of the criteria for salvage rewards. However, if the salvor negligently failed to prevent injury to the environment, special compensation may be denied.¹¹⁰

This provision is a deliberate incentive to salvage companies to act in protection of the seas regardless of the outcome of a salvage operation. In effect, it places a compensatory floor under a salvage attempt. The salvor has the prospect of a major reward for salving property or at least the fall back position of recovering many, if not all, the out-of-pocket expenses as well as the costs of equipment and personnel of the salvage operation on account of efforts to minimize damage to the environment. As a consequence, the shipowner will be made to pay at least part of the cost of protecting the marine environment in the event of a casualty to the ship. The salvor's reward or special compensation is additional liability for the shipowner since salvage is outside the limitation of liability available under *LLMC*. Only if the harm is within the regime of *CLC*, that is oil pollution damage from a salvaged Convention ship, will the shipowner's limit of liability be unaffected.

The ancient maritime principle of general average provides the third exception to the limitation of a shipowner's liability under *LLMC*. General

^{109.} Ibid. at Sch. 3, art. 13.

^{110.} Ibid. at arts. 14, 18.

average is a regime for the sharing of loss on a voyage in special circumstances. "Average" is an old expression derived from the French word "avarie" signifying damage or loss. Thus "general average" is common loss, to be distinguished from "particular average", which is the ordinary case of individual loss. The general average regime comes into operation whenever an extraordinary sacrifice of ship or cargo is made or expenditure is incurred in a time of peril at sea for the purpose of preserving life and property on the voyage. Such loss or expense is treated as general average and is recompensed by contributions rateably assessed against all the parties to the voyage according to the value of their saved property.¹¹¹

Typically nowadays general average is regulated in accordance with the York-Antwerp Rules¹¹² through their incorporation by shipowners into contracts of carriage with cargo owners. These Rules set down the technical standards for assessing and adjusting losses, expenditures, property values and contributions. They expressly include salvage costs since the expense of rescuing a ship from disaster is a clear example of a general average expenditure. But immediately a question arises whether the whole of a salvage reward is admissible in general average, in particular whether special compensation for environmental protection is included.

In principle no allowance in general average is made for loss or expense regarding pollution or other damage to the marine environment.¹¹³ This approach supports the principle of shipowner responsibility for the protection of the oceans. But in two exceptional sets of circumstances, associated with salvage, expenses to protect the environment are admitted in general average.

The first is in response to the inclusion by the Salvage Convention, 1989 of the right of salvors to receive a reward that, inter alia, reflects their efforts to prevent or minimize damage to the environment. Under the York-Antwerp Rules the whole of the reward will be treated as general average provided the successful salvage operation was undertaken for the common interests of the parties to the voyage. However, awards of special compensation under the Salvage Convention are not admissible in general average. This is because they are made to the salvor for efforts, not in the common interests of the ship and cargo on the voyage, but to protect

¹¹¹ See the definition of general average in the Marine Insurance Act, S.C. 1993, c. 22, s. 65.

^{112.} Promulgated by the Comité Maritime International (CMI) in successive versions, the latest being 1994 reprinted in (1995) 26 J. Mar. L. & Comm. 485.

^{113.} Ihid. at Rule C. para. 2.

^{114.} Ihid at Rule VI.

the environment, which is the responsibility of the owner of the ship that requires the salvage assistance.

The other sets of circumstances in which expenses to protect the environment are admitted in general average are highly particular and all incidental to the more central concern of saving the ship and cargo from peril. They include situations in which such expenditure would have earned a salvage reward had it been made by a stranger to the voyage, or was necessary for the ship to enter or remain in a port of refuge, or was made in connection with moving the cargo when this operation is itself a general average act. By the nature of these specific situations, the expenses that are admissible are limited to measures to prevent injury to the environment and will never cover liabilities for pollution damage and clean up.

In general then, some costs of preventing or minimizing damage to the marine environment, mostly in association with salvage of the ship or cargo, may be chargeable to the shipowner outside the limits of liability of *LLMC*. But, since they are assessable only because they are admitted in general average, the shipowner will be relieved of the full burden of liability by contributions from cargo owners in proportion to the value of their interests.

Since salvage and general average are express exceptions to the general body of maritime claims subject to limitation under *LLMC*, the shipowner may have to pay for them over and above the ceiling of liability calculated according to the tonnage of the ship. In the event of oil pollution it is clear that separate limits of liability are established by *CLC* for Convention ships and non-Convention ships may assert the limits of *LLMC*.

What is not so clear is the status of claims brought under CEPA or TDGA. Although claims subject to limitation under LLMC may have a statutory basis of liability, the classes of claims to which the Convention applies are complex in operation. The LLMC's primary application to "claims in respect of... loss or damage to property ... occurring on board or in direct connexion with the operation of the ship ... and consequential loss resulting therefrom" would appear wide enough to encompass a variety of types of pollution damage. But claims for impairment of the marine environment through the discharge of dangerous goods under TDGA or hazardous wastes and environmental emergencies under CEPA would not be included under this provision in the absence of a property interest. They

^{115.} Ibid. at Rule XI(d).

^{116.} MLA, supra note 9 at Sch. 1, Pt. 1, art. 2(1)(a).

could be covered as "claims in respect of the removal, destruction or rendering harmless of the cargo of the ship"¹¹⁷ at least as to prevention and minimization of the harmful spread of cargo spills, but the costs of remediation of the environment might be considered outside the scope of *LLMC*. Claims for business and other purely economic losses as a result of such toxic spills, if sustainable, would probably be included under *LLMC* as "claims in respect of other loses resulting from infringement of rights other than contractual rights, occurring in direct connexion with the operation of the ship ..."¹¹⁸

Whether the shipowner may limit liability or not, it is now possible to apportion liability. In the absence of appropriate federal legislation, Canadian maritime law used not to permit apportionment of liability between contributing wrongdoers except in cases of collisions of ships. Even though the provinces had altered tort law by statute, their changes did not affect federal (maritime) law, which, consequently, continued to apply the old common law rule that wronged parties who contributed by their own fault to their injuries forfeited the right to compensation. At long last Part 2 of ML4 has introduced a new and simple apportionment rule:

Where loss is caused by the fault or neglect of two or more persons or ships, their liability is proportionate to the degree to which they are respectively at fault or negligent and, if it is not possible to determine different degrees of fault or neglect, their liability is equal.¹¹⁹

Contributing wrongdoers are jointly and severally liable to claimants but bound to indemnify each other, subject to any pre-existing contractual arrangements.¹²⁰ These provisions have hopefully consigned to history a number of troubling judicial precedents and provided an acceptable and readily applicable principle of apportionment of liability.

Conclusions

The drive toward safer ships and cleaner seas moves on apace with Canada in its vanguard. In at least three areas Canada is taking new initiatives to prevent pollution of the oceans. As the cruise industry in Canada has grown, so the disposal of sewage by cruise ships has become a concern. New

^{117.} Ibid. at art. 2(1)(e).

¹¹⁸ Ibid. at art 2(1)(c).

^{119.} Ibid. at s. 17(1).

¹²⁰ Ibid. at ss. 17, 21 and 22

governmental guidelines will encourage cruise ships to use onboard marine sanitation devices or sewage holding tanks in Canada's coastal waters while a working group is considering the form of regulations that might usefully be made to prohibit the dumping of raw sewage. ¹²¹ A novel marine traffic separation scheme is also set to protect marine mammals in the Grand Manan Basin and the approaches to the Bay of Fundy on Canada's east coast. The much reduced right whale population is being further endangered by entanglement with fishing gear and collisions with ships. Major changes have therefore been announced to the existing vessel traffic separation scheme to route ships away from the Grand Manan whale sanctuary. ¹²²

Canada was also one of the earliest countries to raise concerns and to take action regarding foreign invasive species transported in the ballast water of ships. The entry and subsequent ravages in the St. Lawrence Seaway and Great Lakes of the alien zebra mussel and the Atlantic sea lamprey attracted initial national attention to the general problem of transplanted marine organisms. Beginning with the Great Lakes area, Canada now has nationwide Canadian Ballast Water Management Guidelines¹²³ which apply to all ships entering its exclusive economic zone. The Canadian provisions reflect IMO's 1997 Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens. 124 Ships are expected to have management plans and to take precautionary measures, principally, for the time being, by exchanging their ballast water in mid-ocean provided that can be done safely. The Canadian guidelines also provide for inspection. sampling and reporting of ships but are not yet mandatory. However, the Canadian government is working towards declaring regulations, for which it already has express legislative authority in CS.42001. 125

However, these kinds of new initiatives to add further prohibitory controls against degradation of the marine environment, worthy as they

^{121.} The dumping of sewage may already be subject to s. 36 of the Fisheries Act, supra note 64, which prohibits the deliberate discharge of deleterious substances into the fisheries waters around Canada's coasts; see text accompanying note 64

^{122.} See the Canadian Coast Guard's Notice to Mariners 303 (P) online: Fisheries and Oceans Canada http://www.notmar.gc.ca.

^{123.} Moira L. McConnell, GloBallast Legislative Review: Final Report (London: Global Ballast Water Management Programme, 2002) at 73-77.

¹²⁴ *Ibid.* at 11-14. IMO has since adopted an international convention on the subject on February 13, 2004: see <www.imo.org/home.asp?topic_id=3>.

^{125.} Supra note 8 at s. 190(1)(f).

are, do not affect the distribution of risk and imposition of civil liability for the consequences of marine pollution. The review made in this article of the pollution prevention provisions contained in the reformed Canadian merchant shipping regime leads to two significant conclusions regarding the allocation of civil liability. The first observation concerns the scope of imposed liability and the second involves the extent of that liability.

As to the scope of civil liability of shipowners, the new CSA2001 and MLA are, as yet, incomplete. Their preponderant focus on oil pollution to the exclusion of other hazardous substances leaves a large gap in the holistic management of the seas and their resources that both international 126 and national¹²⁷ principles of environmental protection demand. The incidental infilling of this gap by sundry other acts, especially CEPA and TDG.1, is not an effective solution. It is neither sufficient nor satisfactory. In particular, the prescription of civil responsibility for polluting discharges of bulk cargoes of goods is inadequately patchy at best. Further, the shipping legislation and the environmental statutes are not satisfactorily complementary in application or operation. Fortunately, CS.42001 and MLA contain the legal machinery to overcome these problems. As pointed out at the beginning, both acts have a wide and encompassing definition of a pollutant. 128 The CS.42001 exercises this liberality on the criminal side by prohibiting the discharge of a large range of toxic chemicals and other pollutants, 124 and MLA admits the recovery of the out of pocket expenses of the Crown in securing the clean up necessary as a result of a polluting breach of a ship's duty under CSA2001. More importantly, MLA also grants generous regulation making authority to impose civil liability generally for at least as extensive an array of polluting substances. 130 The most obvious step forward is offered by the HNS Convention, 131 which, it must be hoped, will soon come into force internationally so it may be put into effect nationally in Canada and elsewhere.

The second concluding observation concerns the extent of the shipowner's liability for marine pollution. The environmental principle that polluters should pay the whole cost of their misdeeds is challenged by the much older principle of maritime law that shipowners are entitled to

¹²⁶ E.g. United Nations Convention on the Law of the Sea 1982, 10 December 1982, 1833 U.N.T.S. 3, 21 J.L.M. 1261 (entered into force 16 November 1994), arts. 192-237.

^{127.} E.g. Canada's Oceans Act, supra note 11.

¹²⁸ See text accompanying notes 14, 15.

^{129.} See text accompanying notes 34-38.

^{130.} Supra note 9 at s. 102.

^{131.} Supra note 40

limit their liability. Though modernized to set higher and subsequently adjustable ceilings of liability, the limitation principle remains a central feature of shipping law.

Limitation of liability is undoubtedly an arbitrary notion. Upon what principle is the ceiling of liability to be fixed? Even a relative scale of liability based on ships' tonnage begs the question as to how much per ton. Given the modern technologies of shipping and communications which afford shipowners constant contact, if not control, over their vessels, it is hard to justify the limitation of vicarious liability for their employees which employers in other industries are bound to bear.

Be that as it may, in one respect, the operation of the limitation principle has been adopted and adapted with positive effect. The model is the International Oil Pollution Fund which, hopefully, is soon to be copied for other hazardous substances on the entry into force of the HNS Convention. The essence of such arrangements is the contributing participation of all interested parties, not just shipowners.

It has to be remembered that ships ordinarily carry cargoes owned by others. It might be supposed, therefore, that cargo owners should bear some responsibility for the environmental damage their property may cause when discharged by the carrying ship, unless it is done deliberately or recklessly careless of the consequences. Based on this premise, the international fund conventions provide, in effect, insurance cover contributed by both ship and cargo owners. But like all insurance, the calls or premiums only buy so much cover. Under the active International Oil Pollution Fund the ceiling of compensation is very high and rising. But the *quid pro quo* for this deep pocket of compensation is that the contributors bear no further liability. In other words, the range of responsible parties is extended beyond the shipowners to include the cargo owners and consequently the financial resources available to prevent, minimize and clean up pollution of the oceans are greatly increased. At the same time the principle of limitation of liability is given new and extended application.