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## A Black (and Rising?) Tide: Controlling Maritime Oil Pollution in Canada

Suzanne Hawkes

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## A Black (and Rising?) Tide: Controlling Maritime Oil Pollution in Canada

### Abstract

A series of dramatic oil spills in recent years has once again drawn critical attention to the nature and adequacy of existing domestic and international legislation regarding ship source oil pollution. Predictably, legislators and policy makers have responded with a plethora of studies, reviews, and consultations. However, past improvements to the domestic and international regimes have traditionally been slow and incremental, at best. In Canada, approximately three years have passed since the Nestucca spill took place off the B.C. coast. Yet, while there has been much discussion, domestic legislation remains virtually unaltered at the present time. The authors find that the status quo must be changed substantially, in order for real and significant improvement in marine environmental protection to be achieved. Mere "tinkering" with the existing regime has proved to be largely ineffective.

### Keywords

Oil pollution of the sea—Law and legislation; Canada

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# A BLACK (AND RISING?) TIDE: CONTROLLING MARITIME OIL POLLUTION IN CANADA<sup>©</sup>

BY SUZANNE HAWKES\* AND R. MICHAEL M'GONIGLE\*\*

A series of dramatic oil spills in recent years has once again drawn critical attention to the nature and adequacy of existing domestic and international legislation regarding ship source oil pollution. Predictably, legislators and policy makers have responded with a plethora of studies, reviews, and consultations. However, past improvements to the domestic and international regimes have traditionally been slow and incremental, at best. In Canada, approximately three years have passed since the *Nestucca* spill took place off the B.C. coast. Yet, while there has been much discussion, domestic legislation remains virtually unaltered at the present time. The authors find that the *status quo* must be changed substantially, in order for real and significant improvement in marine environmental protection to be achieved. Mere "tinkering" with the existing regime has proved to be largely ineffective.

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## I. INTRODUCTION

In early January 1989, waves of thick crude oil began washing ashore on the beaches of Pacific Rim National Park, covering miles of shoreline and marine habitat. Ten days earlier, 875,000 litres of Bunker C oil had been loosed when the barge *Nestucca* collided with its own tugboat off Grays Harbor, Washington. Gale force winds swept the oil up the coast to Vancouver Island, catching the Canadian Coast Guard completely by surprise and causing the worst oil spill the Canadian West Coast had ever experienced.

Less than four months later, the *Exxon Valdez*, after grounding on Bligh Reef, loosed 41,000,000 litres of crude oil into the pristine arctic waters of Prince William Sound, Alaska. Observers around the world watched the spill gradually spread over hundreds of miles of remote coastline, while control efforts were futile. The extent of the spill was staggering; it may take decades for the area to recover. The spill has earned the distinction as being the worst in American history and one of the worst in the world.

Months later, the *Exxon Philadelphia*, sister ship to the *Valdez*, lost power just before it was to enter the Straits of Juan de Fuca. For several hours, it drifted a few miles offshore, fully laden with Alaskan crude oil. Fortunately, weather conditions were unusually calm that day, and tugboats were able to reach the supertanker before she drifted ashore.<sup>1</sup> Had the ship's power gone down a few hours later, during its passage through the narrow straits and fast moving waters outside the Cherry Point refinery, an environmental disaster for the entire Puget Sound and Juan de Fuca coastline would have been possible.

Subsequent American spills read like a litany of things gone wrong. On 2 March 1989, 114,600 litres of crude and fuel oil were spilled into the waters of Oahu—fifteen miles from Hawaii's most popular beach—after yet another Exxon vessel, this time the *Exxon Houston*, grounded on a coral reef while unloading oil at a local refinery.<sup>2</sup> Approximately 1,319,500 litres of home heating oil were spilled off the coast of Rhode Island on 23 June 1989, after the Greek flagged tanker, *World Prodigy*, ran aground on Brenton Reef. Less than two hours later, a U.S. oil-carrying barge collided with a Panamanian flagged chemical tankship in the Houston shipping channel, spilling about 1,137,500 litres of "heavy slurry oil." The next day, about 1,365,000 litres of number six oil (a heavy oil which quickly sinks below the water's surface) were spilled into the Delaware River when the

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<sup>1</sup> Exxon Oil Spill: Hearings before the National Ocean Policy Study and the Subcommittee on Merchant Marine of the Committee on Commerce, Science, and Transportation: First session on Cleanup, Containment, and Impact of the Exxon Valdez Oil Spill and Spill Prevention and Maritime Regulations, 101st Cong., 1st Sess., (Part 2, 10 May and 20 July 1989) (Washington, D.C.: U.S. Government Printing Office, 1989) at 286 [hereinafter Exxon Oil Spill Hearings Part 2].

<sup>2</sup> Exxon Oil Spill: Hearing before the Committee on Commerce, Science, and Transportation on the Exxon Valdez Spill and its Environmental and Maritime Implications, 101st Cong., 1st Sess. (Part 1, 6 April 1989) (Washington, D.C.: U.S. Government Printing Office, 1989) at 8 (statement of Senator Inouye) [hereinafter Exxon Oil Spill Hearings Part 1].

Uruguayan tanker, *Presidente Rivera*, ran aground near Marcus Hook, Pennsylvania.<sup>3</sup>

Despite two decades of quiet progress since the notorious *Torrey Canyon* spill off the coast of Cornwall in 1967, this remarkable series of accidents has exposed the serious gaps and deficiencies in the current legislative and regulatory regime and the inadequate state of preparedness and response capabilities within Canada and the United States. Once more, the high media profile of these recent spills has led Canadians to an abrupt awakening—or rather, reawakening—to the extreme risks posed by the marine transport of oil. Old and contentious issues regarding accident prevention standards, spill clean-up, emergency preparedness, liability, and compensation have resurfaced. What had become a plodding, internal debate over ship pollution prevention policy again came under public scrutiny.

Predictably, the immediate response in Canada has been political, leading to a range of promises and reassurances to an alarmed public. Separate provincial and federal commissions on the adequacy of pollution prevention and response capability were launched and have now reported. But it is all a familiar pattern. The aftermath of any major oil spill is inevitably marked by a flurry of bureaucratic and political activity. Without exception, numerous reforms regarding prevention, clean-up, and economic imperatives are at least *discussed* in the wake of the media attention and public outrage accompanying high profile oil spills. The basic assumption that oil will continue to be transported by tanker—indeed, that such transportation will increase—remains, however, unchallenged. With that assumption goes a concern about the costs of improved regulations. In the past, the result has been progress for sure, but slow progress. Progress which might lead to fundamental changes in the legal regime has not come easily and often has not come at all.

After the *Nestucca* spill, the Canadian Coast Guard was first off the mark. In the media, the Coast Guard was castigated for its ineffectiveness in responding to the spill, and it initiated its own internal

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<sup>3</sup> Three Recent Oil Spills: Hearing Before the Subcommittee on Environmental Protection of the Committee on Environment and Public Works on Oil Spills in the Coastal Waters of Rhode Island, the Delaware River, and the Houston Ship Channel, 101st Cong., 1st Sess. (Washington, D.C.: U.S. Government Printing Office, 1989) at 52-55 (statement of Admiral Paul A. Yost) [hereinafter *Three Recent Oil Spills*].

review shortly after the clean up was completed.<sup>4</sup> The agency's final report was submitted to the federal government on 1 July 1989.<sup>5</sup> This was an "internal" review and has never been released to the public.<sup>6</sup>

The palpable anger of the citizens of British Columbia demanded a political response as well. In the spring of 1989, Premier Bill Vander Zalm appointed Canada's most respected critic of shipping pollution, the former Vancouver Island MP David Anderson, to report on the issue as it affects the West Coast. Anderson's report and recommendations were submitted to the newly formed "Washington/British Columbia Oil Spill Task Force" late in the year.<sup>7</sup>

Because the mandate for oil spill response rests with a federal agency, public outrage was directed largely toward Ottawa. Calls for a national royal commission were frequent. Indeed, a group with the unlikely name of "Call for Inquiry" was formed and continues to operate today as a monitoring and pressure group. In response to these demands, the federal government finally appointed the \$3 million Public Review Panel on Tanker Safety and Marine Spills Response Capability on 9 June 1989.<sup>8</sup> The commission was to be chaired by Vancouver lawyer David Brander-Smith. Its mandate was not, however, to conduct

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<sup>4</sup> The internal review commenced in April 1989 directed by Environment Canada in conjunction with the Department of Fisheries and Oceans and the Canadian Coast Guard. See *Final Report of the Public Review Panel on Tanker Safety and Marine Spills Response Capability: Protecting Our Waters* (Ottawa: Ministry of Supply & Services, September 1990) (Chair: D. Brander-Smith) at 3 [hereinafter *Protecting Our Waters*].

<sup>5</sup> Federal Internal Review of Tanker Safety and Marine Spills Response Capability (Ottawa: Canadian Coast Guard, 1989) [unpublished]. The Federal Internal Review consists of numerous separate papers submitted from the various Coast Guard Regional offices and other federal departments. Hereinafter, all such submissions will be cited simply as the Federal Internal Review followed by the title of the individual paper.

<sup>6</sup> It appears, however, that the individual papers comprising the review are available upon request. The Coast Guard made a copy of the entire review available to the authors in June 1990.

<sup>7</sup> D. Anderson, *Report to the Premier on Oil Transportation and Oil Spills* (Victoria: Policy & Planning Branch, Ministry of Environment, November 1989). This committee is comprised of officials from British Columbia, Washington, and more recently, Oregon and Alaska. Its mandate is "to enhance existing means of prevention and explore new ones, research and implement means of financial recovery for both the province and the state, and establish ongoing technology sharing." See Department of Ecology, State of Washington, *Focus: Oil Spill Task Force* (Olympia, Wash.: Department of Ecology, June 1989) [information paper].

<sup>8</sup> *Protecting Our Waters*, *supra*, note 4.

a full blown commission inquiry, but merely to hold informal hearings on the topic from coast to coast.<sup>9</sup>

In fact, despite the clear interest of the public in the prevention and control of oil spills, the response of all levels of government in 1989 was not sympathetic to extensive public involvement. For example, Brander-Smith's West Coast hearings began during the height of the fishing season, when the majority of native and non-native fishermen—many of whom had suffered the most direct effects of the *Nestucca* incident—were unable to attend. In another case, Vancouver participants were informed only eight days in advance of the hearings, when meaningful preparatory work and informed public participation was virtually impossible.<sup>10</sup> The panel's report was submitted to the federal Minister of the Environment on 24 October 1990.<sup>11</sup>

In this study, we will describe the current state of ship source oil pollution and analyze the Canadian legal and regulatory regime in the areas of pollution prevention, liability, and compensation. In so doing, we will critically examine the nature of the contemporary political and economic context in which this regime has been created and reformed, both domestically and internationally. In our review, we will explore past trends which have lead to the present law and anticipate what aspects of the law require change in the years ahead. Our recommendations will take into account the findings of the federal and provincial reviews.

Within this broader context, the Canadian West Coast, which has suffered such recent damage, will be examined as a detailed illustration of the state of the law and especially its implementation. This region is also particularly vulnerable to oil spills due to the intense offshore tanker traffic from Alaska. Like the East Coast, the area has a rich and sensitive coastal environment, a lucrative fishing industry, and an increas-

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<sup>9</sup> For a list of hearing locations and dates, see *Protecting Our Waters*, *ibid.* at 239. For an outline of the Panel's mandate, see chapter 1.

<sup>10</sup> Hearings were initially held in Vancouver on 25-27 July and in Victoria on 28 July. The Panel later returned to the West Coast to hold hearings again in Vancouver on 29 November, Tofino on 30 November, and finally, in Vancouver again on 1 December, the last day of hearings. *Ibid.* at 239. Vancouver residents were informed of the 25 July hearing, the first to be held by the Panel, only on 17 July 1989. See the notice contained in the *Vancouver Sun* (17 July 1989) B5.

<sup>11</sup> Transport Canada, Release 240/90, "Government Responds to Report on Tanker Safety and Marine Spills Response Capability" (2 November 1990).



ingly significant tourist industry. The treatment of the issue on the West Coast is also driven by the presence of strong environmental and native interests.

## II. BACKGROUND: OIL AND TROUBLED WATERS

### *A. A Growing Threat: Oil Shipments and Tankers*

It goes almost without saying that the past fifty years have seen a dramatic rise in the international shipment of oil. Oil has been, and remains, the foundation of the industrial world, leading to huge increases in oil consumption since the second world war. Between 1963 and the Arab oil embargo of 1973, exports of crude oil alone more than tripled from 10.5 million barrels per day to almost 32 million barrels per day.<sup>12</sup> With this rise in consumption, there has been a corresponding expansion in the size of the world tanker fleet. In 1938, the world tanker fleet totalled 11.6 million tons. By 1980, tanker traffic peaked at 175 million tons, comprising 41 per cent of the total global merchant fleet.<sup>13</sup> Although there was a slight decline in the registered tonnage of tankers in the early 1980s due to the decreased demand for oil in those years, investment in both used or "newbuilding" tanker tonnage has again begun to increase. By 1988, ordering of new tanker tonnage stood at about 22 million dead weight tons (dwt),<sup>14</sup> representing an increase of

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<sup>12</sup> J. Curtis, "Vessel-source Oil Pollution and MarPol 73/78: An International Success Story?" (1985) 15 Env. L. 679 at 679. In 1973, the OPEC nations' oil embargo resulted in substantially higher prices in the world market, spurring the heavily oil consuming nations into action that lead temporarily to enhanced oil conservation, greater independence from foreign oil reserves, and the tentative development of alternative energy sources. In recent years, however, crude oil prices have been relatively cheap and consumption has once again risen dramatically.

<sup>13</sup> K.A. Gourlay, *Poisoners of the Seas* (London: Zed Books, 1988) at 61.

<sup>14</sup> The deadweight tonnage (dwt) of a ship is defined as "the amount of cargo, fuel, stores, crew, and crew affects it can hold." See Exxon Oil Hearings Part 2, *supra*, note 1 at 348 (statement of T.S. Wyman, Chevron Shipping Company).

approximately 8 per cent of the contemporary world tanker fleet.<sup>15</sup> Currently, the world tanker fleet consists of almost 250 million dwt.<sup>16</sup>

At the same time, the bulk of the existing tanker fleet is aging. In 1983, almost one-third of the world fleet was fifteen years old, the age when they begin to show signs of stress.<sup>17</sup> In the United States, the average age of the active tanker fleet is eighteen years.<sup>18</sup> This aging fleet has been likened to a "time bomb," with some still active tankers dating as far back as 1945.<sup>19</sup> Many of these vessels regularly ply the waters of the Canadian West Coast.

### B. *The Case of Canada's West Coast*

Extensive transportation of oil along the West Coast began in the early 1970s. Following the discovery in 1968 of oil at Prudhoe Bay, Alaska,<sup>20</sup> a debate began over the safest and most economically viable method of transporting the oil to market. Canada created the Berger Commission to consider the issue, but before it had even begun assessing the impacts of an overland gas pipeline route through Canada, the U.S. oil industry (citing "too many time consuming and exhaustive studies") opted for a pipeline running from Prudhoe Bay to holding tanks at the port of Valdez and running from there to refineries on the American West Coast via a fleet of seventy-four tankers.<sup>21</sup> This is the so-called Trans Alaska Pipeline System (TAPS), and most of the TAPS tankers were bound for the oil refinery at Cherry Point, Washington. In order to assuage considerable public concern about the potential environmental

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<sup>15</sup> "Promising future for tanker trade, predicts Troodos Vice President" *Lloyd's Ship Manager/Shipping News International* (September 1989) 64.

<sup>16</sup> International Maritime Organization, "Preventing Marine Pollution: The Environmental Threat" *Focus on IMO* (September 1989) 1 [hereinafter "Preventing Marine Pollution"].

<sup>17</sup> By 31 December 1982, over two-thirds of the global tanker fleet had been built after 1969. See Curtis, *supra*, note 12 at 682.

<sup>18</sup> Wyman, *supra*, note 14.

<sup>19</sup> "Aging tankers: time bombs on Valdez oil route?" *The Seattle Times/Seattle Post-Intelligencer* (2 April 1989) A12 (reprinted from the *Journal of Commerce*) [hereinafter "Aging tankers"].

<sup>20</sup> V. Cernetig, Jr., "Black Waters" (1989) 8:4 *Equinox* 40 at 43.

<sup>21</sup> *Ibid.* See also Anderson, *supra*, note 7 at 18.

impacts of the route, the oil industry and the U.S. Coast Guard promised to implement only the highest calibre of ship design, crew, and navigation standards and to ensure the existence of state of the art clean-up equipment and response procedures.<sup>22</sup> At one point in the mid-1970s, new oil ports were being considered for the B.C. coast, but were rejected following the results of a public inquiry.<sup>23</sup>

As these ships pass down the coast of the Queen Charlotte Islands, Vancouver Island and through the Strait of Juan de Fuca, the threat to West Coast waters is sizeable. Every week, about sixteen loaded TAPS tankers leave the Port of Valdez. On average, 2.5 of these leave or enter the Juan de Fuca Strait each day. Despite the promises, the Tanker Advisory Institute in New York has rated the quality of the Alaskan fleet as averaging only 2.6 on a scale of one to five, with many of the vessels receiving the lowest ratings of dependability possible.<sup>24</sup> Between 1984 and 1986, 52 per cent of all U.S. tanker casualties involved TAPS trade vessels.<sup>25</sup> Many estimate that the Strait of Juan de Fuca is next in line for a major oil spill.<sup>26</sup>

The threat of pollution to the inland waters of the West Coast is also growing substantially. In the Port of Vancouver, crude oil exports have increased dramatically—from 61,000 tonnes in 1984 to 430,000 tonnes in 1986, to 1,025,000 tons in 1988. This is a sixteen-fold increase in just four years—all undertaken without any public review.<sup>27</sup> Further increases in shipments through Vancouver will occur with the recently approved expansion in activities of the TransMountain Pipeline

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<sup>22</sup> These included state of the art clean-up equipment, twenty-four hour monitoring which would be "similar in concept to airport control systems," specially trained crews, and double hulls on all tankers. However, without statutory backing, many of these provisions were gradually eroded. In fact, most of the promises were not met at all. See Exxon Oil Hearings Part 2, *supra*, note 1 at 9 (statement of C. Curtis on behalf of the Oceanic Society). See also Cernetig, *supra*, note 20 at 43.

<sup>23</sup> The so-called "West Coast Oil Ports Inquiry" was chaired by the noted natural resources lawyer, Dr. Andrew Thompson. His report, entitled *West Coast Oil Ports Inquiry: Statement of Proceedings* (Vancouver, B.C.: West Coast Oil Ports Inquiry, 1978), was submitted in February 1978.

<sup>24</sup> See "Aging tankers," *supra*, note 19.

<sup>25</sup> Curtis, *supra*, note 12 at 12.

<sup>26</sup> Cernetig, *supra*, note 20 at 42.

<sup>27</sup> Vancouver Port Corporation, *Vancouver Port Corporation, 1987-1988: Statistics by Commodity* (Vancouver: Vancouver Port Corporation, 1988).

Company based in Burnaby. Total oil exports are expected to double to two million tons annually by the year 1992,<sup>28</sup> and the number of tankers will rise from one or two to four per month.<sup>29</sup> If a second pipeline from Edmonton to Burnaby is approved by the National Energy Board, export may increase to a staggering nine million tons annually.<sup>30</sup> In addition, a new trade in methyl tertiary butyl ether (MTBE) has been approved by the National Energy Board, which will further increase the tanker and barge traffic in the Port of Vancouver and Burrard Inlet.<sup>31</sup> Already, the port is a heavily used urban harbour (a very hazardous place from which to export oil), with increasing pollution problems and traffic congestion. Safety standards have been widely criticized. With these trends, it is questionable whether major spills can be avoided without significant improvements to the regulatory framework and changes in the patterns of oil transportation and consumption.

### C. *Oil and Water Do Mix*

#### 1. The scale of the problem

Oil pollution has become a fact of life on a global scale. The United Nation's Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) notes that New Zealand is now the only place on the planet where "oil pollution is not a serious problem."<sup>32</sup> Tar balls and other oil based residues proliferate the world's beaches, particularly those near tanker shipping lanes.<sup>33</sup>

Tankers and other ships cause oil pollution in two ways: through accidental discharges (as discussed above) and through operational or intentional discharges. Operational discharges occur in a number of ways. One of the most significant of these takes place when cargo tanks

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<sup>28</sup> *Protecting Our Waters*, *supra*, note 4 at 186.

<sup>29</sup> Anderson, *supra*, note 7 at 21.

<sup>30</sup> *Protecting Our Waters*, *supra*, note 4 at 199.

<sup>31</sup> *Ibid.*

<sup>32</sup> Cited in Gourlay, *supra*, note 13 at 113.

<sup>33</sup> National Research Council *et al.*, *Oil in the Sea: Inputs, Fates and Effects* (Washington, D.C.: National Academy Press, 1985) at 12 [hereinafter *Oil in the Sea*].

are used to store oil and ballast water alternately. Oil residues from the cargo tanks become mixed with seawater, resulting in oily "departure ballast," which must be removed prior to arrival at the loading port. Further oily residues result when cargo tanks are cleaned to reduce the build up of sludge.

Operational discharges constitute the single most significant source of oil pollution generated by ships. As such, for years, they were virtually the exclusive focus of international maritime law. The 1954 *International Convention for the Prevention of Pollution of the Sea by Oil*<sup>34</sup> was the first major treaty to deal with the issue. It dealt almost solely with operational discharges, for which, among other things, it established a "prohibition zone" of fifty miles from shore, within which the discharge of oil and oily residues was to be tightly controlled. As was common in those days, the 1954 *Convention* was based largely upon the concept of "self-regulation" and "self-reporting," whereby vessels were to keep "oil record books" recording their own operational discharges. Again, as was common, the ability to prosecute contraveners rested exclusively with the flag state. The system was woefully inadequate, and operational pollution grew in tandem with the growth in the international fleet.<sup>35</sup>

Exact figures on the total quantity of oil discharged into the ocean as a result of marine transportation are difficult to obtain due to sporadic and incomplete reporting, variable estimating methods, and the often voluntary nature of reporting of spills.<sup>36</sup> The U.S. National Academy of Sciences estimated in 1985 that such discharges range from 1.0 to 2.6 million tons per year, with a best estimate of 1.45 million tons per year.<sup>37</sup> This estimate is somewhat lower than that of ten years earlier, when the same organization estimated that marine transportation contributed 2.13 million metric tonnes (the equivalent of approximately 2.35 million non-metric tons) of petroleum hydrocarbons

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<sup>34</sup> 12 May 1954, 12 U.S.T. 2989, T.I.A.S. No. 4900, 327 U.N.T.S. 3.

<sup>35</sup> For a discussion of the international legal regime, see R.M. M'Gonigle & M.W. Zacher, *Pollution, Politics, and International Law: Tankers at Sea* (Berkeley: University of California Press, 1979).

<sup>36</sup> See Gourlay, *supra*, note 13 at 85 and D.W. Abecassis *et al.*, *Oil Pollution from Ships*, 2d ed. by D.W. Abecassis (London: Stevens & Sons, 1985) at para. 4-05—4-09.

<sup>37</sup> *Oil in the Sea*, *supra*, note 33 at 56.

to the oceans each year.<sup>38</sup> This reduction may reflect the at least partial efficacy of the international control measures implemented in the intervening years.

Tanker operational discharges account for approximately half of this total.<sup>39</sup> The vast majority of these discharges, amounting to 672,000 tons per year, is comprised of crude oil from crude oil tankers. A much smaller portion, approximately 37,000 tons per year, is comprised of product oil, including lubricating oil, fuel oil, kerosene, and gasoline.<sup>40</sup> Most of these discharges occur during "long haul" voyages.<sup>41</sup> The National Academy of Science further estimates that, of the total amount of oil discharged annually from marine transportation activities, 400,000 tons per year, or 27.6 per cent of all vessel source pollution, are due to accidental spills.<sup>42</sup> These spills are mainly from tankers.

Canada has had its fair share of oil spills. There were twenty-five major fuel spills from either tankers or bulk carriers in Canada from 1972-1987, ranging in size from 129 to 7,139 tons, with an average of 669 tons. The majority occurred on the East Coast, with the most frequent causes being groundings and bad weather.<sup>43</sup> The most notorious of these occurred in February 1970, when the *Arrow* grounded off Nova Scotia, spilling 10,000 tons of heavy crude (Bunker C) oil into the waters of Chedabucto Bay. Another major incident was the breakup of the s.s. *Kurdistan* in 1979.<sup>44</sup>

In British Columbia, between 1984 and 1989, there have been a total of thirty-seven "significant" spills on the West Coast, including the

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<sup>38</sup> National Academy of Sciences, *Petroleum in the Marine Environment: Workshop on Inputs, Facts, and the Effects of Petroleum in the Marine Environment* (Washington, D.C.: National Academy of Sciences, 1975) at 6, cited in M'Gonigle & Zacher, *supra*, note 35 at 17 (Table 2).

<sup>39</sup> J.A. Cowley, "IMO and National Administrations" (1989) 1 *IMO News* 14 at 14.

<sup>40</sup> *Oil in the Sea*, *supra*, note 33 at 60-63.

<sup>41</sup> *Ibid.* at 60.

<sup>42</sup> *Ibid.* at 56.

<sup>43</sup> Computer printout showing spills from bulk carriers or tankers in Canadian waters from 1972 to 1987 (NATES Data Base, Environmental Emergencies Centre, Environment Canada, Ottawa, 1989) [unpublished].

<sup>44</sup> The *Kurdistan* discharged 7,130 tonnes of Bunker C fuel into Cabot Strait, Nova Scotia on 3 March 1979. The spill was allegedly due to a major tank leak caused by a "material failure." *Ibid.*

*Exxon Valdez* and *Nestucca* spills.<sup>45</sup> Based on current tanker traffic levels, the Public Review Panel estimates that "unless the situation changes, Canada will experience over 100 small spills, about 10 moderate spills and at least one major spill every year."<sup>46</sup>

## 2. The environmental effects of oil in water

Although there exists a wide divergence of opinion on the fate and long term effects of oil on the marine environment, ship source oil pollution is obviously seriously detrimental to the marine environment. Coastlines and vulnerable habitat are often eradicated over a broad area. Even where they are recolonized over time, habitats may not return to their pre-spill character or level of productivity for decades, if ever. Seabirds typically die in the thousands following a major oil spill, when their feathers become oiled and lose the ability to retain heat. Fur bearing marine mammals, such as sea otters, suffer the same fate. As well, inhaling oil fumes damages the lungs of mammals, and ingesting oil severely damages their kidneys and livers. In Alaska, local sea otter populations have been reduced by as much as one-third to one-half following oil contamination from the *Exxon Valdez*.<sup>47</sup> Even land mammals, including bears, eagles, and other carrion feeders, are harmed by the consumption of oiled carcasses. The combined effect of habitat and population loss is a crippling environmental blow.

The effects of oil on fish populations range from death to sub-lethal effects, which include reduced growth, developmental abnormalities, behavioural changes, and altered or reduced reproductive potential.<sup>48</sup> Fish larvae and eggs are extremely sensitive to oil pollution and may be killed in concentrations as low as 0.1 to 1 parts per million (ppm). Bivalves, such as clams and oysters, may be killed in concen-

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<sup>45</sup> Computer record entitled Significant West Coast Spills to Marine Waters from Marine Vessels: 1984-1989 (Environment Canada, Vancouver, 1989) [unpublished].

<sup>46</sup> *Protecting Our Waters*, *supra*, note 4 at 8. The Panel defines "small spills as less than 1 tonne, moderate spills from 1 to 100 tonnes, major spills from 100 to 10 000 tonnes and catastrophic spills as greater than 10 000 tonnes." *Ibid.* at 7.

<sup>47</sup> Anderson, *supra*, note 7 at 66.

<sup>48</sup> *West Coast Offshore Exploration Environmental Assessment Panel, Offshore Hydrocarbon Exploration: Report* (Vancouver: Ministry of Supply & Services, April 1986) at 63 [hereinafter *Offshore Hydrocarbon Exploration*].

trations of 1 to 10 ppm or less, depending on their stage of development.<sup>49</sup> They may remain contaminated for up to one year following exposure to oil, possibly longer.<sup>50</sup>

There is evidence that oil can even induce cancer in marine organisms and in the humans that consume them.<sup>51</sup> Some petroleum hydrocarbon compounds may become toxic, mutagenic, or carcinogenic, with the ability to bind the nucleic acids,<sup>52</sup> and certain potentially carcinogenic components of crude oil are known to bioaccumulate in the fatty, nervous, and cutaneous tissues of marine animals.<sup>53</sup> Yet, great uncertainty still exists concerning the long term effects of oil once it enters the food chain. As the National Research Council in the United States notes, "Little is known of either the distribution, fate, or turnover of the metabolic products of petroleum hydrocarbons, after their formation within the tissues of marine organisms."<sup>54</sup> Still less is known as to how serious or reversible are the cumulative effects over time of chronic oil pollution from operational discharges, combined with decades of industrial contamination from land based pollution sources.

### 3. The social effects of oil in water

The social impacts of oil pollution may also be substantial. For people who live and work in a coastal marine environment, the effects of

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<sup>49</sup> P. Nounou, "The Oil Spill Age: Fate and Effects of Oil in the Marine Environment" (1980) 9:6 *Ambio* 297 at 299-300.

<sup>50</sup> *Offshore Hydrocarbon Exploration*, *supra*, note 48.

<sup>51</sup> Nounou, *supra*, note 49 at 300.

<sup>52</sup> *Oil in the Sea*, *supra*, note 33 at 15.

<sup>53</sup> Nounou, *supra*, note 49 at 300.

<sup>54</sup> *Oil in the Sea*, *supra*, note 33 at 389. Nounou, *supra*, note 49 at 299 concludes that much of this paucity of data is simply due to poor methodology:

The plethora of attempts to determine the toxic potential of petroleum and petroleum products to marine life have produced confusing and often erroneous conclusions. In the case of many laboratory experiments, this has mainly been due to the lack of standardized techniques with respect to the type of oil, test organisms, or duration of exposure which introduced errors in the interpretation of reported effects. Bioassays have often been performed in laboratories under conditions which do not simulate natural conditions. Rarely has the exact amount of oil initially added to aquaria been controlled; thus researchers have overestimated the concentration causing visible effects, or underestimated those actually effective.



a major oil spill can be economically, culturally, and psychologically devastating. The most economically tangible effects of a spill are clearly demonstrated in the fishing and tourism industries. Following even the relatively minor *Nestucca* incident, oyster and crab fisheries were closed almost immediately in the Tofino and Uclulet regions of Vancouver Island.<sup>55</sup> Seafood markets themselves can be affected over a longer term as customers avoid products from affected regions due to concerns about health or to unpleasant flavours. Tourism can suffer in coastal resort areas following a major spill, depending upon the level of visible contamination along local beaches. As well, Native subsistence fishing and gathering activities may be adversely affected and traditional lifestyles severely diminished.

Related to these direct costs, but less easily quantified, is the psychological impact on coastal communities. The decimation of wildlife and pristine coastlines can be devastating to local residents. In Valdez, the social and emotional upheaval caused by the spill has been significant, manifesting in a number of ways. The "artificial economy" created by the massive influx of clean-up workers and damage control experts, combined with high paychecks for local residents employed in clean-up crews, has had a severe negative impact on the community. The corresponding surge of cash, the emotional impact of the spill, and the disruption of the local economy have resulted in severe social stresses. These are reflected in escalating alcoholism, family violence, marital breakups, psychological disorders, and overcrowded local jails.<sup>56</sup>

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<sup>55</sup> Environment Canada, "Spills Management: Cleanup and Control" (1989) 9:1 Environment Update 5 at 9. See also R. Howard, "B.C.'s Oil Spill Aftermath" *The Globe and Mail* (2 September 1989) D2.

<sup>56</sup> For a brief discussion of the socio-economic impacts of oil pollution with respect to the *Exxon Valdez* spill, see National Response Team, *The Exxon Valdez Oil Spill: A Report to the President* (Washington, D.C.: United States Environmental Protection Agency, 1989) (Samual K. Skinner, Secretary, Department of Transportation, and William K. Reilly, Administrator, Environmental Protection Agency) at 31-33.

### III. THE STATE OF THE LAW: PREVENTING POLLUTION

#### A. *A Brief History of Regulation*

The past two decades have witnessed a number of high profile landmark oil spill disasters throughout the world. In what has become a predictable pattern of crisis management, the legal regime (whether domestic or international) receives big promises which are translated through legislation into incremental improvements in the year or two following a crisis, then slips (especially in enforcement) as the attention fades in later years.

The first and most dramatic of these incidents occurred on 18 March 1967, when the *Torrey Canyon* ran aground off the coast of Cornwall, spilling 117,000 tonnes of Kuwaiti oil and fouling over a hundred miles of British and French shorelines. Gaining extensive worldwide media coverage, the spill was at that time one of the worst environmental disasters in modern history.<sup>57</sup> It also highlighted severe deficiencies in international maritime law, particularly regarding the right of a coastal state to intervene in the event of a spill and the subsequent right of such a state to be fully compensated for any damage incurred.<sup>58</sup> The event prompted a number of significant reforms to the international legislative regime. These included two private oil industry initiatives to provide for compensation in the event of an accident and three international conventions concerning coastal state intervention, shipowner liability, and international compensation. In Canada, the major legislative instrument of relevance in this field, the *Canada Shipping Act*,<sup>59</sup> was also substantially amended especially following the *Arrow* incident, which occurred just three years after the sinking of the *Torrey Canyon*.

In the mid-1970s, numerous other international conventions were drafted or amended in the areas of accident prevention, safety, and

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<sup>57</sup> See E. Cowan, *Oil and Water: The Torrey Canyon Disaster* (Philadelphia: Lippincott, 1968).

<sup>58</sup> At the time, admiralty law dictated that, in order for the shipowner to exercise his or her right of salvage, a certain period of time had to pass before any other party could legally intervene in the event of a shipping accident. Accordingly, response to the spill was delayed for several days, by which time its containment was virtually impossible. See also M'Gonigle & Zacher, *supra*, note 35 at 145.

<sup>59</sup> R.S.C. 1985, c. S-9, as am. R.S.C. 1985 (3d Supp.), c. 6.

the control of operational pollution. In 1976, the *Argo Merchant*, carrying 27,000 tons of oil, sank off the coast of Massachusetts, another crisis which marked the beginning of a new series of tanker accidents, many of which took place in American waters. On 17 March 1977, the Carter administration announced a series of significantly strengthened legal and regulatory controls, the so-called "Carter Initiatives," which represented, in part, a threat to act unilaterally in setting standards. This prompted another flurry of international negotiations aimed at improving and expanding the regulatory regime for both intentional and accidental pollution. This activity was given another push when, in 1978, the *Amoco Cadiz* ran aground off the coast of Brittany, spilling about 233,000 tons of crude oil onto the beaches, some of which had been contaminated just over ten years earlier by the *Torrey Canyon*.

The international negotiations which occurred in that decade laid the basis for the entire modern framework for oil pollution regulation, both internationally and in Canada. There are three major thrusts in the legal regulatory regime aimed at oil pollution prevention. One focuses on direct prevention by means of standards for vessel design, navigation, crew training, and crew certification. A second thrust addresses the implementation and enforcement of the standards, an important area as the level of political will and commitment of resources to put new laws into practice ultimately determines that law's actual effectiveness. A third focuses on liability and compensation when accidents do occur.

These three areas will be discussed in light of Canadian, international, and certain U.S. legislation as it may affect Canada. Again, the Canadian West Coast provides an exemplary focus of implementation in one area where the threat of a major oil spill is high. Canada is, of course, party to a number of international maritime conventions which will be discussed below. In general, most Canadian standards are in accordance with international standards.<sup>60</sup>

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<sup>60</sup> *Interim Report of the Public Review Panel on Tanker Safety and Marine Spills Response Capability* (29 September 1989) (Chair: D. Brander-Smith) at 17 [hereinafter *Interim Report*].

## B. *Setting Ship Standards*

### 1. The international context

The issue of oil pollution has long been one of international concern. The debate has involved numerous actors, but for the past few decades has found its major focus within the International Maritime Organization (IMO), formerly known as the Intergovernmental Maritime Consultative Organization (IMCO).<sup>61</sup> The IMO was created in 1948 as a special agency within the United Nations at a time when there was a perceived need for a permanent intergovernmental organization to address the needs of the shipping community. Ten years later, in 1958, the requisite twenty-one states ratified the *Convention of the Intergovernmental Maritime Consultative Organization*,<sup>62</sup> and the organization formally came into being.<sup>63</sup> Since then, prevention of oil pollution through the regulation of shipping standards has been a central focus of the IMO through the negotiation and administration of several conventions.

#### a) *Operational pollution*

The 1954 *International Convention for the Prevention of Pollution of the Sea By Oil*<sup>64</sup> was the first such treaty. Though the *Convention* was drafted prior to the formal ratification of the IMCO *Convention*, its administrative powers were quickly conferred upon the international body. The 1954 *Convention* was the first large scale international environmental negotiation to be held in almost three decades.<sup>65</sup> Thirty-two states attended, representing 95 per cent of the world's shipping

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<sup>61</sup> The name of the IMCO was changed in 1975 by an amendment to the *Convention on the International Maritime Organization*, 14 November 1975, T.I.A.S. No. 10374 (effective 22 March 1982).

<sup>62</sup> 6 March 1948, 9 U.S.T. 621, 289 U.N.T.S. 48.

<sup>63</sup> M'Gonigle and Zacher, *supra*, note 35 at 39.

<sup>64</sup> *Supra*, note 34.

<sup>65</sup> M'Gonigle & Zacher, *supra*, note 35 at 219. Four years later, in 1958, the first Law of the Sea Convention was concluded, a convention which was far less directly concerned with the environment than were its successors.

tonnage. Its product was a convention which was almost exclusively concerned with operational discharges and which provided virtually no means of ensuring compliance. A series of subsequent amendments in 1962 and 1969 similarly focused on operational discharges, with few provisions in the way of monitoring and enforcement.<sup>66</sup> It was not until 1971 that amendments were agreed upon to address accidental discharges.<sup>67</sup>

By 1973, it was recognized that the current system of oil pollution regulation was so deficient as to be virtually useless. Neither the 1969 nor the 1971 amendments were yet in force.<sup>68</sup> The 1954 *Convention*, as amended in 1962, represented the sole international regulatory scheme in existence at the time—and it was demonstrably ineffectual. In practical terms, “self-reporting” of operational discharges did not exist, and “few—if any—ships over 20,000 dwt were actually complying with its ‘general prohibition’ provisions.”<sup>69</sup>

Thus, prompted largely by the environmental initiatives of the Nixon administration, the 1973 *International Convention for the Prevention of Pollution From Ships*,<sup>70</sup> better known as *MARPOL 73*, was drafted. In many ways, *MARPOL 73* consolidated and expanded the 1954 *Convention*. Its purpose was to seek “the achievement by 1975 if possible but certainly by the end of the decade of the complete

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<sup>66</sup> See the 1962 Amendments, 11 April 1962, 17 U.S.T. 1523, T.I.A.S. No. 6109, 600 U.N.T.S. 332 and the 1969 Amendments, 21 October 1969, 28 U.S.T. 1205, T.I.A.S. No. 8505, U.K.T.S. 21 (1978), Cmnd 7094, reprinted in 9 I.L.M. 1.

<sup>67</sup> See the 1971 (Tanks) Amendments, 15 October 1971, Misc. 36 (1972), Cmnd 5071, reprinted in 11 I.L.M. 267. At the 1971 negotiations, such technical issues as crew standards, navigational aids, traffic control, traffic separation schemes were discussed. The key provision emerging from the conference was the establishment of limits on cargo tank sizes. For tankers exceeding 400,000 dwt, cargo tanks were allowed a certain amount of proportional increase, while still attempting to minimize the total “hypothetical outflow.”

<sup>68</sup> The 1969 Amendments did not enter into force until 20 January 1978. See International Maritime Organization, *Status of Multilateral Conventions and Instruments in Respect of Which the International Maritime Organization or its Secretary-General Performs Depositary or Other Functions* (London: International Maritime Organization, 1989) at 418 [hereinafter *Status of Multilateral Conventions*]. The 1971 (Tanks) Amendments never did enter into force, as they both lacked the requisite number of contracting parties (only twenty-seven acceptances were deposited, while forty-seven were needed), and they were superseded by subsequent legislation. *Ibid.* at 422.

<sup>69</sup> M’Gonigle & Zacher, *supra*, note 35 at 112.

<sup>70</sup> *International Convention for the Prevention of Pollution from Ships*, 2 November 1973, reprinted in 12 I.L.M. 1319 [hereinafter *MARPOL 73*].

elimination of the wilful and intentional pollution of the seas by oil and noxious substances other than oil, and the minimization of accidental spills."<sup>71</sup> Today, it is the foundation of international conventional law and thus the standard for domestic law throughout the world.

*MARPOL 73* offered a dramatic improvement to, and expansion of, its 1954 predecessor. In addition to dealing with oil discharges, it provided for the control of other noxious substances. It did this by a series of annexes, only the first of which dealt with oil.<sup>72</sup>

Annex I contained a number of important provisions regulating intentional discharges. The maximum discharge of oil for all new tankers was reduced by half, from 1/15,000 to 1/30,000 of their total cargo capacity.<sup>73</sup> "Special areas" were created, in which, to all intents and purposes, operational discharges would be totally prohibited.<sup>74</sup> Another provision included an expansion of the definition of "oil" to include not just "black oils," such as crude, but also refined or "white oils."<sup>75</sup>

In addition to the regulatory provisions regarding discharges, certain ship and shore technologies were required under *MARPOL 73*,

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<sup>71</sup> *Acceleration of the Maritime Safety Committee's Work Programme*, Res. A.237 (VII), IMO Assembly 7th Sess., Doc. IMO-047E (1971) at 156.

<sup>72</sup> Annexes I to V deal with oil pollution, noxious liquid substances carried in bulk, harmful substances carried in packaged forms, sewage, and garbage respectively. Annex I, concerned with oil pollution, entered into force on 2 December 1983. Annex II is concerned with noxious liquid substances, which are grouped into categories A (being the most toxic) to D, and to which differing discharge criteria apply. Annex II was slated for entry into force on 2 October 1986. However, additional amendments in 1985 were first required in order to resolve difficulties with technicalities and implementation. Annex II subsequently entered into force on 6 April 1987. Annex III concerns pollution caused by harmful substances carried in packaged form. It requires that such packages are appropriately documented and receive a "Marine Pollutant" mark. This Annex is "optional" and has not yet entered into force. Annex IV deals with sewage, prohibiting the discharge of untreated sewage within four miles of the nearest body of land. Sewage must be disinfected and pulverized between less than four and twelve miles before being discharged. Annex IV is also optional and is not yet in force. Finally, Annex V concerns garbage. The discharge of plastics into the marine environment is totally prohibited, and discharge restrictions are placed upon ships in coastal waters and designated "Special Areas," such as the Baltic, Black, and Mediterranean Seas. Annex V entered into force on 31 December 1988. See "Preventing Marine Pollution," *supra*, note 16 at 4-7.

<sup>73</sup> *MARPOL 73*, *supra*, note 70, Annex I, r. 9(1).

<sup>74</sup> These included the Mediterranean Sea, the Black Sea, the Baltic Sea, the Red Sea, and the "Gulfs Area." *Ibid.* r. 10(1)(a)-(e).

<sup>75</sup> *Ibid.* r. 1(1).

without which discharge regulations were largely ineffectual. On shore, reception facilities were mandated to ensure that stored oily wastes would have somewhere to go.<sup>76</sup> Most significant of the shipboard technologies was the requirement for all new tankers over 70,000 dwt to contain segregated ballast tanks.<sup>77</sup> This was a major improvement, but it was achieved at a price. In the negotiations, it replaced a more controversial proposal advocated by the U.S. to make double hulls mandatory on all tankers over 70,000 dwt. Canada was among the states who opposed the proposal.

The provisions of *MARPOL 73* amounted to a serious attempt to redesign new tankers (and alter some aspects of existing tankers) to be environmentally self-contained. To achieve this, several other ship technologies were required, including slop tanks,<sup>78</sup> oil discharge monitoring and control systems, filtering systems, oil/water interface detectors, and special piping and pumping arrangements.<sup>79</sup> Oily water separators, or a filtration system for discharges from machinery space bilges, as well as on board storage tanks for oily residues were required of all ships exceeding 400 gross tons.<sup>80</sup>

To monitor for compliance of standards within their own waters, "International Oil Pollution Prevention Certificates" were to be issued to all oil tankers of 150 gross tons and more and to all other vessels of 400 tons and more for presentation to the port (that is, coastal) state.<sup>81</sup> The certificates remained valid for no more than five years.<sup>82</sup> As well, oil record books still had to be maintained, in which all operations regarding the handling of oil were to be recorded.<sup>83</sup>

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<sup>76</sup> *Ibid.* r. 10 and 12.

<sup>77</sup> *Ibid.* r. 13.

<sup>78</sup> Oily ballast water and tank cleaning residues are stored in so-called "slop tanks" aboard the tankers. In the "Load on Top" (LOT) system, oil rises to the top of the oily water mixture retained in the slop tank and the relatively oil free water is then decanted from the bottom.

<sup>79</sup> *MARPOL 73, supra*, note 70, r. 14-18.

<sup>80</sup> *Ibid.* r. 16 and 17.

<sup>81</sup> *Ibid.* r. 5.

<sup>82</sup> *Ibid.* r. 8.

<sup>83</sup> *Ibid.* r. 20.

However, by 1976, the 1969 amendments still remained the only international regulations in force.<sup>84</sup> As well, despite the great progress made in 1973, the new regime still focussed on standards to control operational pollution, not to prevent accidental pollution. In 1976, the *Argo Merchant* incident and other spills in American waters prompted the U.S. to threaten unilateral action (the "Carter Initiatives") if the international community failed to implement quickly, and even improve, the new regime.<sup>85</sup> In this context, IMCO convened yet another conference, the Conference on Tanker Safety and Pollution Prevention (TSPP) in 1978. The main purpose of the TSPP was to correct deficiencies in MARPOL 73, as well as those in another new convention, the 1974 *Safety of Life at Sea Conference* (SOLAS 74).<sup>86</sup> The conference resulted in the adoption of protocols to both SOLAS 74 and MARPOL 73 (thereafter known as MARPOL 73/78).<sup>87</sup> The MARPOL amendments created a number of improvements in terms of both ship design and powers of inspection that, in essence, represent the state of international law today.<sup>88</sup>

The most notable amendment concerned the requirement for segregated ballast tanks. Again, the United States demanded the adoption of a requirement for double hulls, something which was possible under American law.<sup>89</sup> Instead, however, the 1973 standard was set to require protectively located segregated ballast tanks (PL/SBT) for all new crude carriers of 20,000 dwt and over and for all new product carriers of

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<sup>84</sup> In fact, MARPOL 73 never entered into force, as it was superseded by MARPOL 73/78. See *infra*, note 87. See also *Status of Multilateral Conventions, supra*, note 68 at 465.

<sup>85</sup> The so-called "Carter Initiatives" consisted of a number of specific proposals to improve tanker safety. These included provisions such as mandatory collision avoidance aids, inert gas systems to prevent explosions, improved steering standards, and double bottoms on all tankers over 20,000 dwt, as well as improvements to enforcement, rules for liability, and crew certification.

<sup>86</sup> *International Convention for the Safety of Life at Sea*, 1 November 1974, U.K.T.S 46 (1980), Cmnd 7874, T.I.A.S. No. 9700, reprinted in 14 I.L.M. 959 [hereinafter SOLAS 74].

<sup>87</sup> *Protocol Relating to the 1974 International Convention for the Safety of Life at Sea*, 16 February 1978, U.K.T.S 40 (1981), Cmnd 8277, T.I.A.S. No. 10009, reprinted in 17 I.L.M. 579 [hereinafter SOLAS 74/78] and *Protocol Relating to the 1973 International Convention for the Prevention of Pollution From Ships*, 17 February 1978, Misc. 26 (1974), Cmnd 5748, reprinted in 17 I.L.M. 546 [hereinafter MARPOL 73/78].

<sup>88</sup> MARPOL has since been amended in 1984, 1985, 1987, and 1989. See *infra*, note 93 and accompanying text.

<sup>89</sup> *Ports and Waterways Safety Act of 1972*, 33 U.S.C.S. §§ 1221 *et seq.* (Law. Co-op. 1987) enabled the Coast Guard to require ship standards, such as double bottoms, higher than those accepted internationally.



30,000 dwt and over.<sup>90</sup> Although a substantial compromise, this provision certainly provides increased protection to the marine environment in the event of collisions or groundings. In addition, to reduce the chances of explosions from vapour buildup, inert gas systems were mandated for all new product carriers over 30,000 dwt and for all new crude oil carriers over 20,000 dwt (*MARPOL 73* required this only for crude carriers exceeding 70,000 dwt).<sup>91</sup> Finally, Crude Oil Washing (COW), a much improved technique for cleaning dirty tanks, was required.<sup>92</sup>

There have since been several amendments to *MARPOL 73/78*, particularly important are the amendments in 1984.<sup>93</sup> Briefly, the 1984 Annex I amendments offer slightly strengthened environmental regulations and help resolve difficulties with implementing the Annex. For example, further requirements for equipment and procedures in order to prevent oily water from being discharged into "special areas" are introduced.<sup>94</sup> In certain circumstances, the carriage of ballast water in cargo tanks is permitted,<sup>95</sup> while the use of the forepeak tank to carry oil is prohibited altogether.<sup>96</sup>

For ships operating within fifty miles of land or on short voyages, requirements for slop tanks and certain other monitoring and discharge equipment may be waived, provided other conditions are met.<sup>97</sup> Similarly, for ships operating within twelve miles of land on "restricted" voyages or within "special areas," requirements for equipment, such as oily water separators and oily discharge monitoring equipment, are

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<sup>90</sup> *MARPOL 73/78*, *supra*, note 87, Annex I, r. 13(1).

<sup>91</sup> *Ibid.* r. 13B(3).

<sup>92</sup> *Ibid.* r. 13. COW is a tank cleaning system, designed by the oil industry, where crude oil is used to wash out cargo tanks. It is estimated that the technique removes 80 to 90 per cent of sludge and oil residues. COW was required, not only of new tankers, but of all existing crude (unless these implemented protectively located, segregated ballast tanks) and product carriers exceeding 40,000 dwt.

<sup>93</sup> The 1984 Amendments to the Annex to the 1978 Protocol, September 1984, adopted by resolution MEPC 14(20), effective 7 January 1986. See *Adoption of Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships*, 1973, Res. MEPC 14(20), MEPC 20th Sess., Doc. MEPC 20/19, Annex 4 (1984).

<sup>94</sup> *Ibid.* Annex I, r. 10.

<sup>95</sup> *Ibid.* r. 13.

<sup>96</sup> *Ibid.* r. 14.

<sup>97</sup> *Ibid.* r. 15.

waived, provided certain other conditions are met.<sup>98</sup> Some discharges of oil are permitted to occur below the waterline, provided that the water and oil have been adequately separated.<sup>99</sup> Some changes have been made to the oil record book.<sup>100</sup> The 1984 amendments entered into force on 7 January 1986.<sup>101</sup>

Following the revisions to Annex I, further amendments to MARPOL 73/78 were undertaken in 1985.<sup>102</sup> The 1985 amendments deal with modifications to Annex II, which are primarily beyond the scope of this review.<sup>103</sup> It is worth noting, however, that the 1985 amendments made the *International Bulk Chemical Code*<sup>104</sup> mandatory from 6 April 1987, the date upon which the 1985 amendments entered into force.<sup>105</sup> In 1987, a further amendment to Annex I resulted in designating the Gulf of Aden a "special area" under regulation 10.<sup>106</sup>

MARPOL 73/78 remains the key international instrument responsible for regulating the transportation of oil by sea. This is particularly true of vessel design standards. Canada had no small part to play in the development of the landmark *Convention* and its *Protocol*. Indeed, led by then Commissioner of the Canadian Coast Guard, William O'Neill, Canada took an active leadership role at the TSPP conference in 1978.<sup>107</sup> O'Neill has continued to play an active role at the IMO throughout the 1980s and,

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<sup>98</sup> *Ibid.* r. 16.

<sup>99</sup> *Ibid.* r. 18.

<sup>100</sup> *Ibid.* r. 20.

<sup>101</sup> *Status of Multilateral Conventions, supra*, note 68 at 101.

<sup>102</sup> The 1985 amendments to the Protocol of 1978 relating to the *International Convention for the Prevention of Pollution from Ships, 1973*, adopted by resolution MEPC 21(22), effective 6 April 1987. *Ibid.* at 103.

<sup>103</sup> For more information, see International Maritime Organization, "MARPOL 73/78" *Focus on IMO* (March 1988) at 14-16. Annex II was further amended in March 1989, by MEPC Resolution 36(28), effective 13 October 1990.

<sup>104</sup> *International Bulk Chemical Code*,

<sup>105</sup> See "MARPOL 73/78," *supra*, note 103.

<sup>106</sup> *Ibid.* at 16.

<sup>107</sup> As a number of factions developed regarding alternatives to double hulls, namely, PL/SBT in conjunction with special tank washing requirements, Mr. O'Neill worked closely with the other delegates to facilitate the discussions. In recognition of his constructive mediatory skills, Mr. O'Neill was asked to present the final compromise package for acceptance. The TSPP negotiations are discussed in M'Gonigle & Zacher, *supra*, note 35 at 122-42.

in 1989, was appointed the organization's new Secretary-General.<sup>108</sup> *MARPOL 73/78* entered into force on 2 October 1983.<sup>109</sup> There are now fifty-five contracting states, including the U.S.<sup>110</sup> Remarkably, however, Canada has not ratified *MARPOL 73/78*.

b) *Accidental pollution*

International regulations dealing with shipping standards to prevent accidents are applicable generally and are not restricted to the transportation of oil. The most important of these are the 1972 *Convention on the International Regulations for Preventing Collisions at Sea* (*COLREG 72*),<sup>111</sup> the 1974 *International Convention for the Safety of Life at Sea* (*SOLAS 74*),<sup>112</sup> and the 1978 *International Convention on Standards of Training, Certification and Watchkeeping for Seafarers* (*STCW*),<sup>113</sup> plus the many amendments to these conventions. *SOLAS* and *COLREG* and their subsequent amendments "have received such widespread ratification that ... their fundamental principles must be considered to have passed into customary international law."<sup>114</sup>

i) Preventing Collisions

International regulation to prevent collisions and maintain ship safety long predates the IMO. In the early years of this century, international collision regulations were attached to other regulations applying more generally to safety of life at sea. When these latter regu-

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<sup>108</sup> International Maritime Organization, "Mr. O'Neill of Canada Takes Over as IMO Secretary-General" (1990) 1 *IMO News* at 1.

<sup>109</sup> *Status of Multilateral Conventions*, *supra*, note 68 at 69.

<sup>110</sup> The United States ratified the *Convention* on 12 August 1980, with a reservation stating "that the United States considers that Annex I and II of the Protocol apply only to seagoing ships." See *Status of Multilateral Conventions*, *ibid.* at 100.

<sup>111</sup> 20 October 1972, U.K.T.S. 77 (1977), Cmnd 6962, T.I.A.S. No. 8587, Can. T.S. 45 1977 [hereinafter *COLREG 72*].

<sup>112</sup> *Supra*, note 86.

<sup>113</sup> 7 July 1978, Misc. 6 (1979), Cmnd 7543, Can. T.S. 36 1988 [hereinafter *STCW*].

<sup>114</sup> *Abecassis et al.*, *supra*, note 36 at para. 4-27.

lations were superseded by the 1960 *SOLAS Convention*,<sup>115</sup> the collision regulations were separated out and incorporated instead into the 1960 *International Regulations for Preventing Collisions at Sea*. These were revised and incorporated by IMCO into *COLREG 72*, which has subsequently been amended a number of times.<sup>116</sup>

*COLREG 72* sets out basic standards for navigation and safety through a variety of provisions concerning such aspects of collision avoidance as vessel speed,<sup>117</sup> radar, conduct in restricted visibility,<sup>118</sup> navigational lights and shapes,<sup>119</sup> distress signals,<sup>120</sup> the marking of fishing gear,<sup>121</sup> proper lookout procedures,<sup>122</sup> and signals for dredging or underwater operations.<sup>123</sup> Most importantly, *COLREG 72* contains over sixty vessel traffic routing schemes. All traffic separation schemes adopted by IMO are mandatory.<sup>124</sup>

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<sup>115</sup> *International Convention for the Safety of Life at Sea*, signed 17 June 1960, reprinted in 536 U.N.T.S. 27.

<sup>116</sup> The 1981 amendments to *COLREG 72* (IMO Assembly resolution A.464(XII), effective 1 June 1983) exempt certain vessels with restricted manoeuvrability from the provisions of rule 10 (concerning mandatory traffic separation schemes), when they are engaged in cable laying or operations aimed at improving navigation safety. See International Maritime Organization, "IMO and the Safety of Navigation" *Focus on IMO* (February 1990) at 4. The 1987 amendments (*Amendments to the International Regulations for Preventing Collisions at Sea*, 1972, Res. A.626(15), IMO Assembly 15th Sess., Doc. IMO-130E (1987) at 137) stressed that the provisions of rule 10 apply to IMO-designated traffic separation schemes, but do not exempt vessels from any other legal obligations. As well, the amendments clarify the means by which vessels should cross traffic lanes. Finally, the 1989 amendment permits the use of inshore traffic lanes by fishing vessels. See "On the Horizon" (1990) 4 *IMO News* 4.

<sup>117</sup> *COLREG 72*, *supra*, note 111, r. 6.

<sup>118</sup> *Ibid.* r. 19.

<sup>119</sup> *Ibid.* r. 20-31.

<sup>120</sup> *Ibid.* Annexes I-IV.

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid.* r. 5.

<sup>123</sup> The regulations are comprised of 38 rules divided into 5 parts. Part A deals with definitions, the general application of the rules, and general obligations for their application. Part B concerns steering and sailing. Part C concerns required lights and shapes. Part D deals with sound and light signals. Part E covers exemptions. See "IMO and the Safety of Navigation," *supra*, note 116 at 2-4.

<sup>124</sup> *COLREG 72*, *supra*, note 111, r. 10.

## ii) Maintaining Safety at Sea

Like the international collision regulations, the many international provisions relating to safety are, by their nature, relevant to pollution prevention. The roots of *SOLAS* extend long before the formation of IMCO. In the historic pattern of high profile disaster followed by regulatory action, the first *SOLAS* was drafted in 1914, following the sinking of the *Titanic*.<sup>125</sup> The *Convention* was again amended in 1929 and in 1948.<sup>126</sup> However, two years after its official birth, IMCO drafted *SOLAS 60*, superseding its 1948 predecessor.<sup>127</sup> Fourteen years later, the agreement was again superseded by *SOLAS 74*.<sup>128</sup> Like *MARPOL 78*, a protocol to *SOLAS 74* (*SOLAS 74/78*) was negotiated at the TSPP conference in 1978 and has been amended several times, including a second protocol in 1988.<sup>129</sup>

*SOLAS 74/78* deals with such marine safety issues as structural requirements for ships, fire protection, mandatory lifesaving equipment, radio-communications, safety of navigation, the carriage of grain and dangerous goods, and nuclear vessels.

The establishment of standards for steering gear has long been a particularly important safety issue. The potential for pollution damage resulting from steering failure was vividly highlighted by the *Amoco Cadiz* incident in 1978,<sup>130</sup> and a series of regulations in 1978 and 1981 required special steering gear provisions for tankers, including main and

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<sup>125</sup> Reprinted in 108 Br. and For. St. Papers 283.

<sup>126</sup> 1929 *International Convention for the Safety of Life at Sea*, 31 May 1929, 136 L.T.S. 81 and 1948 *International Convention for the Safety of Life at Sea*, 10 June 1948, 16 U.N.T.S. 203.

<sup>127</sup> *SOLAS 1948* was superseded by *SOLAS 60*, taking effect from 26 May 1965. See *Status of Multilateral Conventions*, *supra*, note 68 at 391.

<sup>128</sup> *Ibid.* at 9.

<sup>129</sup> *Protocol Relating to the 1974 International Convention for the Safety of Life at Sea*, 11 November 1988, IMO Doc. HSSC/CONF/11 (not yet in force).

<sup>130</sup> Although the *Amoco Cadiz* was built according to standards of the American Shipping Bureau, the steering gear failed when the ship encountered a heavy storm off the coast of Brittany. Attempts to repair the steering gear failed, as did attempts to tow the massive vessel out to sea (the tow line broke twice). The vessel grounded. Several hours later, she broke in two, spilling her entire cargo of crude oil out onto the French Coast. See C. Juric, "A Review of the Liability Issues Arising from the Grounding of the Oil Tanker, *Amoco Cadiz*" in J. Kennely, ed., *Trial Lawyer's Guide* (Deerfield, Ill.: Callaghan & Co., 1987) 297 at 300-1.

auxiliary steering gear for all ships, with two or more power unit backups for all tankers of 10,000 tons gross tonnage (tgt) and over.<sup>131</sup>

*SOLAS 74/78* also sets out several requirements for navigational aids. Radar was first made mandatory by *SOLAS 74*, which also required that all ships of at least 1,600 tgt maintain a gyro-compass, echo-sounder, radio-telephone, and distress frequency honing device.<sup>132</sup> In addition, the 1981 amendments to *SOLAS* required all vessels of 10,000 tgt and over to install such safety features as an automatic radar plotting aid, devices to indicate speed and distance, radio direction-finders, and a rate-of-turn indicator for new ships.<sup>133</sup>

The *Convention* also contains a number of provisions regarding fire protection, detection, and extinction and the installation of inert gas systems.<sup>134</sup> *SOLAS* included new towing requirements, again prompted largely by the *Amoco Cadiz* spill, in which the tow line snapped. As well, it provides for vessel design inspections, where authorized classification societies such as Lloyd's Register of Shipping and the American Bureau of Shipping issue a "Cargo Ship Safety Construction Certificate" and a "Cargo Ship Safety Equipment Certificate." Additional inspections are permitted, but government surveyors should board and inspect vessels only if they have "clear grounds" that such an inspection is warranted, that is, that the vessel is substandard in some way.<sup>135</sup> *SOLAS 74* entered into force on 25 May 1980, two years after Canada acceded to the *Convention*.<sup>136</sup> There are 106 contracting states, representing 97 per cent of gross tonnage of the world's merchant shipping fleet.<sup>137</sup> The

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<sup>131</sup> *SOLAS 74/78*, *supra*, note 87, c. II-1, r. 29, as am.

<sup>132</sup> *Ibid.* c. II-2, r. 12.

<sup>133</sup> *Ibid.*

<sup>134</sup> *Ibid.* c. II-2, as am. Regulation 60(1) requires inert gas systems (necessary for the implementation of COW) on all tankers of 20,000 tonnes dwt, with transitional provisions for existing tankers.

<sup>135</sup> *Ibid.* c. I, r. 6.

<sup>136</sup> Canada acceded to *SOLAS 74* on 8 May 1978. See *Status of Multilateral Conventions*, *supra*, note 68 at 9.

<sup>137</sup> *Ibid.* at 18. There have been several amendments to the *Protocol* since 1978, the most important for the purposes of oil tankers occurred in 1981 and 1983. All of these amendments have entered into force. *Ibid.* at 9. For further information, see International Maritime Organization, "SOLAS: The International Convention for the Safety of Life at Sea, 1974" *Focus on IMO* (November 1989) 1.

1978 *Protocol to SOLAS* entered into force on 1 May 1981.<sup>138</sup> There are seventy contracting states to the *Protocol*, the combined merchant fleets of which represent approximately 90 per cent of the gross tonnage of the world's merchant fleet.<sup>139</sup>

### iii) Establishing Crew Standards

Human error is by far the major cause of shipping accidents at sea. Indeed, it has been estimated that up to 90 per cent of marine casualties result from human error.<sup>140</sup> Clearly, the human factor is directly affected by the standards of training and certification of ship-board personnel. Prompted by the Carter Initiatives, the 1978 *International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STCW)*<sup>141</sup> is the major IMO convention dealing with minimum mandatory requirements in terms of age, training, and experience for crew, masters, and officers.<sup>142</sup> The *STCW* requires seafarers to hold valid certificates and endorsement forms,<sup>143</sup> although requirements for crew on near coastal voyages may be less stringent.<sup>144</sup>

Crew training and standards must keep up with the growth of tanker technology, but this is a constant struggle given the concern to cut costs. In this light, there is a growing international trend towards hiring crews from Third World countries.<sup>145</sup> Typically, while providing cheap labour, such crews possess little education or training, problems which in turn may be aggravated by communication barriers. It has been noted

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<sup>138</sup> *Status of Multilateral Conventions, supra*, note 68 at 31. Unlike *MARPOL*, the 1978 *Protocol to SOLAS 74* can be accepted separately.

<sup>139</sup> *Ibid.* at 36.

<sup>140</sup> *Protecting Our Waters, supra*, note 4 at 25.

<sup>141</sup> *Supra*, note 113.

<sup>142</sup> These requirements are laid out primarily in chapter II. *Ibid.*

<sup>143</sup> The content of these is laid out in chapter I, regulation 2. *Ibid.*

<sup>144</sup> *Ibid.* c. I, r. 3.

<sup>145</sup> Canada is an exception to this trend. Section 125(2) of the *Canada Shipping Act, supra*, note 59 provides that "No certificate shall be granted under this Part to an applicant therefor unless he is a Canadian citizen or a permanent resident of Canada within the meaning of the *Immigration Act*." This restriction, however, puts the Canadian fleet at a competitive disadvantage internationally, and there is repeated pressure from shipping companies to relax such restrictions.

that, generally, "the most pressing threat to safe ship operation today, or rather in the near future, will be the unavailability of trained officers and crew."<sup>146</sup>

Although the *STCW* has attempted to confront this situation, it is limited in its effect. For example, it stipulates the types of knowledge required for officers and crew, but does not mandate procedures necessary to assure particular levels of knowledge. Indeed, the wording of the *Convention* is quite general and leaves its interpretation and implementation almost entirely to the discretion of the flag state.<sup>147</sup> Consequently, shipboard standards vary considerably among states party to the *STCW*. The *STCW* entered into force on 28 April 1984<sup>148</sup> and has seventy-seven contracting states, "the combined merchant fleets of which constitute approximately 75% of the gross tonnage of the world's merchant fleet."<sup>149</sup>

## 2. The Canadian context

In Canada, the legislative framework dealing with ship source pollution is largely contained within the *Canada Shipping Act*,<sup>150</sup> the *Arctic Waters Pollution Prevention Act*,<sup>151</sup> and the federal *Fisheries Act*.<sup>152</sup> Other statutes may apply in particular regions.<sup>153</sup> While the former two

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<sup>146</sup> "Training—or lack of it—major worry, LSM/SNI's conference was told" *Lloyd's Ship Manager/Shipping News International* (April 1989) 4 at 4.

<sup>147</sup> For example, chapter V of the Annex to the *STCW*, *supra*, note 113, dealing with the technical provisions of the *Convention*, is concerned with special requirements for tankers. Regulation 1 states that officers and ratings working aboard oil tankers "shall have completed an appropriate shore-based fire-fighting course; and (a) an appropriate period of supervised shipboard service in order to acquire adequate knowledge of safe operational practices; or (b) an approved oil tanker familiarization course which includes basic safety and pollution prevention precautions and procedures." (Emphasis added).

<sup>148</sup> *Status of Multilateral Conventions*, *supra*, note 68 at 337.

<sup>149</sup> *Ibid.* at 342.

<sup>150</sup> *Supra*, note 59.

<sup>151</sup> R.S.C. 1985, c. A-12.

<sup>152</sup> R.S.C. 1985, c. F-14.

<sup>153</sup> Other relevant legislation includes: *Western Arctic (Inuvialuit) Claims Settlement Act*, S.C. 1984, c. 24 (incorporating the Inuvialuit Final Agreement); *St. Lawrence Seaway Authority Act*, R.S.C. 1985, c. S-2; *Oil and Gas Production and Conservation Act*, R.S.C. 1985, c. O-4; and *Canada*



*Acts* are administered by the Department of Transport, the latter *Act* is administered by the Department of Fisheries and Oceans. The *Canadian Environmental Protection Act*,<sup>154</sup> though not specifically regulating navigation and ship source pollution, could potentially apply in certain cases.<sup>155</sup> To date, however, regulations have been made solely pursuant to the *Canada Shipping Act*.<sup>156</sup> This paper will be restricted to a consideration of the *Canada Shipping Act*.<sup>157</sup>

The *Act* first came into force in 1906 and was drafted according to its model, the 1894 *British Merchant Shipping Act*.<sup>158</sup> Both *Acts* have long been criticized as awkward by those responsible for implementing them. As was noted in the Coast Guard's internal review, the *Act* is "frequently out-of-date, confusing, uncoordinated and poorly structured": "There have been many piecemeal amendments to the CSA since it came into force in 1906; however, the basic structure and philosophies have remained unchanged."<sup>159</sup>

Despite taking an historically strong environmentalist approach in IMCO and law of the sea arenas,<sup>160</sup> standards in the *Act* have lagged behind those set internationally or under American law. The *Arrow* incident vividly illustrated its deficiencies in 1970. At the time, there existed no statutory framework for liability and compensation, no government contingency plan, no overall policy clarifying which federal departments bore responsibility for such emergencies, and little equip-

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*Ports Corporation Act*, R.S.C 1985, c. C-9.

<sup>154</sup> S.C. 1988, c. 22.

<sup>155</sup> See, especially, Parts II, IV, and VI. See also Internal Federal Review, "Gaps and Overlaps: Final Paper" by Policy Team Group F (Ottawa: Canadian Coast Guard, 1989) [unpublished] [hereinafter "Gaps and Overlaps"].

<sup>156</sup> *Ibid.*

<sup>157</sup> The other statutes are restricted geographically (*Arctic Waters Pollution Prevention Act*, *supra*, note 151) or merely provide penalties for pollution, but do not set standards (*Fisheries Act*, *supra*, note 152), or are simply not being utilized for this purpose (*Canadian Environmental Protection Act*, *supra*, note 154).

<sup>158</sup> (U.K.) 57 & 58 Vict., c. 60.

<sup>159</sup> Federal Internal Review, "Federal Tanker Safety Review: Policy Issue Legislation and Regulatory Process" (Ottawa: Canadian Coast Guard, 1989) at 3 [unpublished].

<sup>160</sup> See, for example, R.M. M'Gonigle & M.W. Zacher, "Canadian Foreign Policy and the Control of Marine Pollution" in B. Johnson & M.W. Zacher, eds, *Canadian Foreign Policy and the Law of the Sea* (Vancouver: University of British Columbia Press, 1977) 100.

ment to clean up marine spills.<sup>161</sup> The amendments contained in Part XX of the *Act* came into force in 1972 after the *Arrow* disaster and created for the first time a comprehensive legal regime regarding pollution prevention and response capabilities.

Any momentum to updating and improving the legislation in the area of standard setting to control ship source oil pollution stopped, however, with the 1972 amendments. In spite of the hard lessons of the *Arrow* and other international incidents over the years, key international conventions, including MARPOL 73/78, were never ratified by Canada and incorporated into the *Act*.

### a) Operational pollution

Operational discharges, according to the Public Review Panel, "are routinely occurring with alarming frequency in and around our coastal waters."<sup>162</sup> In Canada, as elsewhere, operational spills are reported to occur most often at terminals or ports, especially during the course of such routine operations as the transferring, loading, and unloading of cargo.<sup>163</sup>

The *Oil Pollution Prevention Regulations*<sup>164</sup> made pursuant to the *Canada Shipping Act* are concerned with both operational and accidental discharges.<sup>165</sup> For example, they provide for mandatory fitting of containers or enclosed deck areas around points where oil cargo is loaded, unloaded, or transferred.<sup>166</sup> Slop tanks are required on all ships of 400 tgt or more on ocean voyages and for all ships of 100 tgt or more

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<sup>161</sup> See *Report of the Royal Commission: Pollution of Canadian Waters by Oil and Formal Investigation into Grounding of Steam Tanker Arrow* (Ottawa: Information Canada, 12 March 1970) (Commissioner: Gordon L.S. Hart) [hereinafter *Report of the Royal Commission*].

<sup>162</sup> *Protecting Our Waters*, *supra*, note 4 at 35. The Panel cites several examples of a series of such spills which occurred during the course of the cross-country hearings. *Ibid.* at 34.

<sup>163</sup> *Ibid.* at 35. See also Abecassis *et al.*, *supra*, note 36 at para. 4-10 (Table 4.2).

<sup>164</sup> C.R.C. 1978, c. 1454.

<sup>165</sup> The regulations consist of five parts and are concerned with discharges in Canadian territorial waters and fishing zones (Part I); waters beyond the territorial sea and fishing zones (Part II); the handling of cargo, fuel, and ballast (Part III); general provisions (Part IV); and limitations on cargo tank size (Part V). Part III has been amended by SOR/80-281, SOR/85-181, and SOR/87-231.

<sup>166</sup> *Oil Pollution Prevention Regulations*, *supra*, note 164, s. 15.

voyaging in inland or minor waters.<sup>167</sup> Such ships are similarly required to "have the means to discharge oily waste or oily bilge slops to a reception facility."<sup>168</sup> Canadian tankers, beyond the territorial seas or 200 mile fishing zones, are permitted to discharge restricted quantities of persistent oil or oily mixtures so long as certain conditions are met.<sup>169</sup>

As well, all Canadian ships of 150 tgt or more carrying oil as cargo are required to keep oil record books.<sup>170</sup> These must document various operations undertaken, including loading, unloading, transferring, ballasting, and cleaning of cargo tanks, discharge of water ballast from unclean tanks, discharge of water from slop tanks, disposal of oily residues, debilging, and accidental discharges.<sup>171</sup> Similar provisions also apply to foreign ships in Canadian waters.<sup>172</sup>

The *Oil Pollution Prevention Regulations* thus largely concur with the 1954 *Convention* as well as *MARPOL 73*, prior to the 1978 *Protocol*. However, they do not require such important current *MARPOL* provisions as oily water separators, automatically controlled shut-off devices for pumping systems, or oil content monitoring devices. Other provisions under *MARPOL 73/78*, such as Crude Oil Washing (cow) or dedicated clean ballast tanks, are similarly not required.

Of particular importance is the fact that the *Oil Pollution Prevention Regulations* mandate a "zero discharge" regime with respect to operational spills or intentional discharges of any kind within Canadian waters, including the 200 mile Canadian Fishing Zones.<sup>173</sup> In this respect, Canadian provisions are more stringent than those even of

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<sup>167</sup> *Ibid.* s. 17(1).

<sup>168</sup> *Ibid.* s. 18.

<sup>169</sup> These conditions are as follows:

- (a) the tanker is proceeding en route;
- (b) the instantaneous rate of discharge of persistent oil content does not exceed 60 litres per mile;
- (c) the total quantity of persistent oil discharged on the voyage does not exceed one fifteen thousandth of the total liquid cargo carrying capacity of the tankers; and
- (d) the tanker is more than 50 miles from the nearest land.

*Ibid.* s. 11(1).

<sup>170</sup> *Ibid.* s. 29.

<sup>171</sup> *Ibid.* s. 31(1)-(2)(a).

<sup>172</sup> *Ibid.* s. 30.

<sup>173</sup> *Ibid.* s. 5. The regulations do not apply to waters contained within the shipping safety control zones prescribed under the *Arctic Waters Pollution Prevention Act*, *supra*, note 151. *Ibid.* s. 4.

*MARPOL 73/78*. However, as will be discussed later, enforcement of this regime leaves much to be desired.

The *Canada Shipping Act* amendments only recently cleared the way for the implementation of *MARPOL*.<sup>174</sup> Apparently, however, there remain technical difficulties concerning the nature of the amendments to the *Oil Pollution Prevention Regulations* which would be required to do so.<sup>175</sup> It is believed that Canada will accede to the *MARPOL* in the near future.<sup>176</sup>

b) *Accidental pollution*

It will be recalled that, to a large degree, standards for the prevention of accidents (whether these be collision regulations, crew standards, or requirements for the safety of life at sea) apply to a variety of ships and not only to tankers. In this area, Canadian standards are generally in accordance with those of international conventions.

i) *Navigation and Safety*

Canada ratified *COLREG 72* on 7 March 1975, with the regulations entering into force domestically on 15 July 1977 (the same time as they entered into force in the United States).<sup>177</sup> *COLREG 72* and its several amendments are implemented *verbatim*, with Canadian modifications

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<sup>174</sup> *Supra*, note 59, s. 658.

<sup>175</sup> Much of the technical difficulties in adopting Annex I of *MARPOL* rests with the wording of the necessary amendments to the *Oil Pollution Prevention Regulations*, *supra*, note 164. For example, while the Coast Guard wished to adopt the *MARPOL* provisions *verbatim*, the Privy Council Office objected to its sometimes imprecise wording. The issue has been resolved, so that the Privy Council Office will now allow for the attachment of Annex I by reference to totally revised *Oil Pollution Prevention Regulations*. Personal communication with Tom Fleck, Canadian Coast Guard, Pollution Prevention Section (Ottawa, 8 November 1990).

<sup>176</sup> *Protecting Our Waters*, *supra*, note 4 at 81.

<sup>177</sup> *Status of Multilateral Conventions*, *supra*, note 68 at 50 and 53.

added through the Canadian *Collision Regulations*,<sup>178</sup> made pursuant to the *Canada Shipping Act*.<sup>179</sup>

A sound and comprehensive navigational safety system which can minimize the chance of a collision or grounding contains certain key ingredients, including routing schemes, communication and management systems, pilotage requirements, navigational equipment and technology, and hydrographic charting. The key to effective pollution control is the practical implementation of legal requirements. We shall briefly review here these more practical elements of the navigational system in Canada.

Perhaps, the most important navigational provisions are those concerned with routing. Designated tanker routes significantly reduce collisions and can be designed to keep loaded tankers at a safe distance from hazardous or environmentally sensitive areas. Rule 10 of COLREG 72, which provides for the implementation of IMO-designated ships' routing and traffic separation schemes, applies to the three mandatory traffic separation schemes within Canada: Chedabucto Bay and the Bay of Fundy on the East Coast and the Strait of Juan de Fuca on the West Coast. By section 562.11(2), special "Canadian Modifications" are applied to rule 10 of the *Collision Regulations* in Canadian waters to make the use of such schemes mandatory, except for commercial fishing vessels or vessels engaged in special operations, such as salvage, cable, buoy, or survey operations.<sup>180</sup>

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<sup>178</sup> C.R.C. 1978, c. 1416. For example, under the 11 October 1990 amendments to the Canadian regulations (SOR/90-702), paragraph (m) to rule 10 has been added, noting that various Canadian provisions regarding traffic separation schemes will be noted in updated editions of *Notice to Mariners: 1 to 443, 1989 Annual Edition* (Ottawa: Ministry of Supply and Services, 1989) [hereinafter *Notice to Mariners*].

<sup>179</sup> According to section 562.11(1) of the *Canada Shipping Act*, *supra*, note 59, regulations may be made by the Governor in Council "to implement the convention on the International Regulations for Preventing Collisions at Sea, 1972, signed in London on October 20, 1972, as amended in London on November 19, 1981, or to implement any amendments, whenever made, to the Regulation to that Convention."

<sup>180</sup> Canada's instrument of accession to COLREG in 1975 was accompanied by a declaration which objected to the fact that "the provisions of rule 10, 'Traffic Separation Schemes,' do not provide for compulsory use of the adopted schemes" and that "there are no exceptions to rule 10(b) (c) and (h) for vessels engaged in fishing." See *Status of Multilateral Conventions, supra*, note 68 at 57. The Governor in Council may restrict the application of the *Collision Regulations* of 1972 pursuant to section 562.11(3) of the *Canada Shipping Act, supra*, note 59.

Vessel Traffic Services (VTS), administered through the Canadian Coast Guard, provide a communication and management system which is also crucial to navigational safety. The first VTS system was developed for the St. Lawrence River in 1966,<sup>181</sup> and there are now eleven VTS zones throughout Canada.<sup>182</sup> The vessel traffic services provided in these zones include providing information and monitoring of traffic movement, designating ships' routing or exclusion zones, providing traffic separation lanes, maintaining standard communication channels, and, perhaps most important, providing radar coverage of coastal shipping lanes.

The importance of Vessel Traffic Services is recognized at the international level as well. On 20 November 1985, the IMO Assembly adopted the "IMO Guidelines for Vessel Traffic Services."<sup>183</sup> However, the ability to make regulations establishing national Vessel Traffic Service zones was only recently included in the *Canada Shipping Act*, with the major package of amendments passed by Parliament in 1985.<sup>184</sup> Prior to 1989, participation in VTS systems, such as those established at Tofino, Prince Rupert, and Vancouver, was voluntary.<sup>185</sup> Participation in designated VTS zones is now mandatory for vessels exceeding twenty metres in length, as well as for large tugboats and barges, under the

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<sup>181</sup> Canadian Coast Guard, Western Region Vessel Traffic Services, A Guide to the VTS Regulations (Information paper, Spring 1989) [unpublished].

<sup>182</sup> These are located in St. John's, Newfoundland; Placentia Bay; Port aux Basques; Halifax Harbour and Approaches; Bay of Fundy; St. Lawrence Waterway; Sarnia; Vancouver; Tofino; and Prince Rupert. See Canadian Coast Guard (Aids and Waterways), "Notice 25—Vessel Traffic Services" in *Notice to Mariners*, *supra*, note 178, 107 at para. 7.1

<sup>183</sup> *Guidelines for Vessel Traffic Services*, Res. A.578(14), IMO Assembly 14th Sess., Doc. IMO-120E (1985) at 114.. For further discussion, see also G. Plant, "International Legal Aspects of Vessel Traffic Services" (1990) 14:1 *Marine Policy* 71.

<sup>184</sup> As amended, section 562.15 enables the Governor in Council to make regulations concerning vessel traffic clearances. Section 562.16 now provides for regulations

- (a) establishing Vessel Traffic Services Zones;
- (b) respecting the monitoring and surveillance of marine traffic about to enter or within a Vessel Traffic Services Zone;
- (c) respecting the procedures and practices to be followed by ships about to enter or within a Vessel Traffic Services Zone; and
- (d) respecting the radio frequencies that ships about to enter or within a Vessel Traffic Services Zone must be capable of using.

<sup>185</sup> Personal Communication with Tom Brook, Navigation Safety, Canadian Coast Guard (Ottawa, 30 January 1990).

recently drafted *Vessel Traffic Services Zones Regulations*.<sup>186</sup> At least fifteen minutes prior to entering a VTS zone, ships are required to report their name, radio call sign, position, estimated time of entry, destination, and whether they are carrying any dangerous cargo or pollutants.<sup>187</sup> Pursuant to section 562.18(1), no direction may be issued by the Canadian Coast Guard Commissioner or a designated Marine Traffic Controller which would contravene the *COLREGS*, ship routing schemes, VTS procedures, or regulations or by-laws made by the Canada Ports Corporation. During an introductory phase, however, this provision is not being enforced.<sup>188</sup>

In addition, three Vessel Traffic Reporting systems exist for the coastal and offshore waters of Canada. These systems apply to vessels entering Western Canadian waters and Eastern or Arctic waters which are not within a local Vessel Traffic Services zone. Twenty-four hours in advance of entering the twelve mile zone boundaries, participating vessels report their position, speed, course, destination, any defects, and any potentially dangerous cargo. In turn, the systems provide navigational information utilizing Coast Guard radio stations.<sup>189</sup> On the East Coast, where participation in the scheme is mandatory, the system has been likened to air traffic control.<sup>190</sup>

Requirements to ensure that ships are equipped with modern on board equipment is another area of regulatory concern. Standard navigational equipment on many vessels include satellite communication links, electronic charts, and advanced radar.

The *Navigating Appliances and Equipment Regulations*<sup>191</sup> provide, for example, for the "appropriate" operation of electronic position fixing equipment within certain areas. Several alternative types are permitted,

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<sup>186</sup> SOR/89-98, s. 3(1).

<sup>187</sup> *Ibid.* ss 6(1)(a)(i) and 6(2)(a)-(g).

<sup>188</sup> Plant, *supra*, note 183 at 81.

<sup>189</sup> The Arctic Canada Traffic Zone (NORDREG) applies to ships of 300 tgt or more, while the Western Canada Traffic Zone (WESTREG) applies to vessels of 500 tgt or more. Participation in these schemes is, however, voluntary. See "Notice 25—Vessel Traffic Services," *supra*, note 182. The *Eastern Canada Vessel Traffic Services Zone Regulations*, SOR/89-99, however, are mandatory and apply to every ship of 500 tgt or more in the Eastern Canada VTS Zone (ECAREG), extending to the entire twelve mile territorial sea.

<sup>190</sup> Abecassis *et al.*, *supra*, note 36 at para. 4-34.

<sup>191</sup> SOR/84-689, as am. SOR/87-175.

so long as the equipment is fully operational. Currently, the "Loran C" electronic chart display system is used on the West Coast and throughout the United States. On the Atlantic coast, Canadian Coast Guard vessels use Offshore Systems Ltd's "Precise Internal Navigation System." The latter is soon to be used on a trial basis on the tanker run from Valdez to Cherry Point on all vessels owned by Atlantic Richfield Company.<sup>192</sup>

The *Navigating Appliances and Equipment Regulations* also contain provisions for such on board equipment as compasses, radar, plotting information, and radio direction-finding appliances. Specific standards for such equipment are further set out in the "Standards for Navigating Appliances and Equipment."<sup>193</sup> Standards for radar and navigational aids are set out in the "Standards for Navigating Lights, Shapes, Sound Signal Appliances and Radar Equipment."<sup>194</sup> Other relevant regulations include the *Steering Appliances and Equipment Regulations*,<sup>195</sup> which provide for mandatory equipment such as rudder indicators and auxiliary steering.

Pilotage requirements also provide a crucial component to a comprehensive system of safe navigation. Pilots who are familiar with local conditions and navigational hazards may be engaged to board and guide vessels into major ports or through particularly sensitive areas. Pilotage regulations, such as the *General Pilotage Regulations*,<sup>196</sup> are made pursuant to the national *Pilotage Act*.<sup>197</sup> As well, the *Act* establishes the Pacific, Arctic, Great Lakes, and Laurentian pilotage regions and corresponding pilotage authorities.<sup>198</sup> In certain Canadian waters, pilotage is mandatory.<sup>199</sup>

A final element of importance is hydrographic charting. Such information is crucial, not only for the safe navigation of vessels, but for

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<sup>192</sup> *Protecting Our Waters*, *supra*, note 4 at 30 and Anderson, *supra*, note 7 at 39.

<sup>193</sup> *Navigating Appliances and Equipment Regulations*, *supra*, note 191, s. 5(1)(a), TP-3668.

<sup>194</sup> *Ibid.* TP-1861.

<sup>195</sup> SOR/83-810, as am. SOR/86-1027.

<sup>196</sup> C.R.C. 1978, c. 1263.

<sup>197</sup> R.S.C. 1985, c. P-14.

<sup>198</sup> *Ibid.* s. 3 and Schedule.

<sup>199</sup> Pilotage authorities may make regulations making pilotage compulsory for certain areas. *Ibid.* s. 20(a). See, for example, the *Pacific Pilotage Regulations*, C.R.C. 1978, c. 1270.



effective response in the event of oil spills. The Canadian Hydrographic Service of the Department of Fisheries and Oceans is responsible for upgrading all hydrographic charts.<sup>200</sup> Under the *Chart and Publication Regulations*,<sup>201</sup> both foreign and Canadian vessels are required to keep current Canadian charts and various nautical publications while in Canadian waters.

The West Coast provides a comprehensive local example of a navigation system which is comprised of the elements described above, yet is still seriously flawed in terms of actual safety. For example, the Tanker Exclusion Zone (TEZ) is a quasi-routing scheme for the offshore waters of British Columbia,<sup>202</sup> which, despite good planning, remains deficient in practice. For one thing, the zone is applicable only to TAPS vessels, other laden tankers need not observe it.<sup>203</sup> As well, compliance with the TEZ is voluntary and is unenforceable. The TEZ is not mandated by the IMO.<sup>204</sup> Although the legislative authority exists to do so, Canadi-

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<sup>200</sup> *Protecting Our Waters*, *supra*, note 4 at 28.

<sup>201</sup> C.R.C. 1978, c. 1415 as am. SOR/79-585, SOR/79-731, and SOR/85-1042.

<sup>202</sup> The boundaries of the zone are based on "the time it would take for a suitable salvage tug to get to the scene of a disabled tanker and take it in tow before it grounded and caused serious pollution." The present zone replaced what was initially a recognized TAPS tanker route. First established in 1977, that route was cancelled by the U.S. Coast Guard in March 1982. It was replaced by a new route in June 1985, which maintained a greater distance from shore. However, this route was rejected by industry as being too costly. Finally, after further consultation with industry, the current TEZ was established in 1989. See Federal Internal Review, "The West Coast Tanker Exclusion Zone, Ship Routing and Related Matters: Prevention Issue Number 2" (Ottawa: Canadian Coast Guard, 1989) [unpublished] [hereinafter "Exclusion Zone"].

<sup>203</sup> Several tankers laden with crude oil leave the Port of Vancouver each week, headed primarily for the U.S., Japan, and Taiwan. None are required to observe the TEZ guidelines. Only U.S. registered tankers transiting from Alaska to U.S. ports on the West Coast are requested to do so. *Ibid.*

<sup>204</sup> The IMO designates protected areas as either "Special Areas" (according to provisions in Annexes I, II, and V of *MARPOL 73/78*, *supra*, note 87) or "Areas to be Avoided." "Special Areas" are defined as "a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of pollution by oil (noxious liquid substances, garbage, as applicable) is required." See also the report of the IMO Marine Environmental Protection Committee, "Annex 8: Revised Criteria for the Designation of Special Areas and Identification of Particularly Sensitive Areas (IMO Doc. W/7986 V/EWP)" in *Report of the Maritime Environment Protection Committee on its Twenty-Ninth Session*, MEPC 29/22, 1990, IMO Doc. W/7968v/EWP. "Areas to be Avoided" are not generally compulsory, unless they are designated as such by the coastal state. "Exclusion Zones" are recognized by the IMO through the provision of "Areas to be Avoided."

an regulations have not been drafted to mandate its use.<sup>205</sup> As a result, its efficacy is questionable. Indeed, the previous route was so disliked by the oil industry that TAPS vessels "were not generally using the recommended routing system, and this fact was substantiated by CCG Vessel Traffic Services (VTS) records."<sup>206</sup>

In the event of a problem, the success of the zone hinges on the speedy arrival of a salvage tug. Yet this is contingent on the ship's captain immediately reporting the malfunction, and there is no means to ensure that this occurs.<sup>207</sup> Finally, the degree of environmental protection offered by the TEZ guidelines is questionable as the intention of the zone was to prevent groundings. As the Internal Review notes,

potential environmental impacts from oil spilled as a result of a casualty other than grounding were not considered in the establishment of the zone ... Further analysis of oil spill drift trajectories and weathering of oil spilled offshore is required to determine if the zone is sufficiently wide to protect the coastal environment.<sup>208</sup>

Indeed, economic and political motivations have been influential in the development of the zone boundaries and have led to a substantial reduction in the zone's size since its inception in 1977.<sup>209</sup>

Vessel Traffic Services on the West Coast has also been singled out as requiring a number of improvements. VTS is described as being a "passive" system, providing only advice and information, unlike "active" systems such as exist for air traffic ground control. "Active" Vessel

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<sup>205</sup> Enabling legislation to do so exists in section 562.1(1) of the *Canada Shipping Act*, *supra*, note 59 which states that the "Governor in Council may, for the purpose of promoting safe and efficient navigation or operation of ships or environmental protection, make regulations ... (d) respecting compulsory routes and recommended routes, including, without restricting the generality of the foregoing, areas to be avoided, precautionary areas and inshore traffic zones, procedures to be followed by ships in such routes, areas and zones, and other shipping traffic measures."

<sup>206</sup> The TEZ was established as a substitute in early 1989 and is the only such zone currently observed in Canada. See "Exclusion Zone," *supra*, note 202 at 2.

<sup>207</sup> In fact, there is great incentive to do otherwise. Given the costly implications of turning the vessel over to a salvage tug, a disabled tanker may well drift closer to shore as the owner or operator tries to negotiate a satisfactory salvage contract. "Exclusion Zone," *ibid.* at 6. The recently drafted IMO *International Convention on Salvage* (28 April 1989) will ameliorate such environmental danger by providing the salvor with an economic incentive to prevent or mitigate environmental damage to the greatest extent possible. For further discussion, see C. Redgwell, "The Greening of Salvage Law" (1990) 14:2 *Marine Policy* 142.

<sup>208</sup> "Exclusion Zone," *ibid.* at 2 and 9.

<sup>209</sup> *Ibid.* at 2-3.

Traffic Services, staffed by experienced mariners, do exist near the ports of Rotterdam and Hamburg, where vessels containing hazardous cargoes must be surrounded by a "moving safety zone" into which other vessels are prohibited from entering.<sup>210</sup> Because compliance with VTS procedures is voluntary on the West Coast, the system is essentially unenforceable.

The same is true for the Western Canada Traffic Zone or WESTREG Canada. Established in 1987, the purpose of the system is "to minimize environmental risks by screening vessels to ensure compliance with Canadian regulations and joint U.S./Canadian regulatory requirements as set out in the Cooperative Vessel Traffic Management System (CTVMS) Agreement for shared contiguous waters."<sup>211</sup> While the system may sound effective, it is not. Compliance is, again, voluntary—and only 25 per cent of all Alaska tankers carrying crude oil into Juan de Fuca Strait participated in the system in early 1989.<sup>212</sup>

For these navigation systems to be effective, binding regulatory compliance is clearly necessary. In addition, though, is the dependence of the regulatory framework on the allocation of financial resources. In the VTS system today, for example, "blind spots" exist on the North shore of Vancouver Harbour and east of Second Narrows, and there is no radar coverage at all at the northern end of Vancouver Island.<sup>213</sup> Indeed, only one-eighth of the entire Tanker Exclusion Zone is under radar surveillance by the Tofino Traffic Centre.<sup>214</sup> On the West Coast, many of the current radar systems were installed at the start of the Alaskan tanker route in the mid-1970s and are now nearing the end of their useful lives, particularly when compared to state of the art technology currently available.<sup>215</sup>

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<sup>210</sup> Anderson, *supra*, note 7 at 41.

<sup>211</sup> "Exclusion Zone," *supra*, note 202 at 9.

<sup>212</sup> *Ibid.* at 10.

<sup>213</sup> *Interim Report*, *supra*, note 60 at 8. See also *Protecting Our Waters*, *supra*, note 4 at 196.

<sup>214</sup> The only means of monitoring tankers for compliance with the TEZ guidelines resides in the Tofino Traffic Centre, through occasional observance by the Canadian Armed Forces and through the voluntary reporting system established under WESTREG. See "Exclusion Zone," *supra*, note 202 at 10.

<sup>215</sup> Modern systems have improved resolution and range, as well as their capability in adverse weather conditions. See Anderson, *supra*, note 7 at 41.

Other deficiencies are notable in other areas. For example, in spite of its extreme traffic congestion and navigational hazards,<sup>216</sup> there is no pilotage requirement in the southern entrance to the Strait of Juan de Fuca.<sup>217</sup> Hydrographic charting along portions of the active tanker routes on the Pacific coast is incomplete and out of date.<sup>218</sup> Information regarding local tidal movements experienced on the West Coast is not indicated on charts. Of particular concern is the lack of knowledge regarding currents at the mouth of the Strait of Juan de Fuca at certain times of year, as well as information gaps regarding current patterns in the Dixon Entrance and along the west coast of the Queen Charlotte Islands.<sup>219</sup> This lack of understanding was particularly apparent when oil from the *Nestucca* washed ashore on Vancouver Island, despite Coast Guard assurances that the currents would take it out to sea.

## ii) Crew Standards

While Canada has been relatively prompt in keeping up with international conventions on navigation and safety, it has lagged far behind on crew standards. For example, Canada waited nearly ten years before finally acceding to the *Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)* on 6 November 1987.<sup>220</sup> Although the *STCW* entered into force for Canada on 6 February 1988,<sup>221</sup> its actual provisions will not be implemented until February 1993, by which time all Canadian crews will have to have had their endorsements updated and have undergone IMO accepted training.<sup>222</sup>

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<sup>216</sup> Traffic is particularly congested at the southern entrance to the Strait due to the convergence of large foreign vessels operating within the 200 mile fishing zone, loaded crude oil tankers outbound from the Port of Vancouver, tankers bound for oil refineries in the Puget Sound and Gulf of Georgia, and, in the summer, hundreds of Canadian fishing vessels. *Ibid.* at 50.

<sup>217</sup> *Interim Report, supra*, note 60 at 10.

<sup>218</sup> This is true for the Atlantic coast as well. *Ibid.*

<sup>219</sup> Anderson, *supra*, note 7 at 38.

<sup>220</sup> *Supra*, note 113. *Status of Multilateral Conventions, supra*, note 68 at 339.

<sup>221</sup> *Status of Multilateral Conventions, ibid.*

<sup>222</sup> Article 7 of the *STCW, supra*, note 113 allows a transitional period of up to five years for contracting states, during which time they may continue issuing certificates in accordance with previous legislation.

The regulations, which will implement the 1993 *STCW*, are currently being revised.<sup>223</sup> They are the *Ships' Deck Watch Regulations*,<sup>224</sup> the *Safe Manning Regulations*,<sup>225</sup> and the *Lifesaving Equipment Regulations*.<sup>226</sup>

Domestically, provisions for the training and certification of ship-board personnel are contained within Part II of the *Canada Shipping Act*, entitled "Certification of Masters and Seamen."<sup>227</sup> Relevant regulations include the *Safe Manning Regulations*<sup>228</sup> and the *Ships' Deck Watch Regulations*.<sup>229</sup> Foreign crews of non-Canadian ships may be subject to the same regulations when in Canadian waters.<sup>230</sup> However, foreign crew certificates, if considered adequate, may be accepted in lieu of Canadian certificates.<sup>231</sup> Canadian crew certificates are generally accepted worldwide,<sup>232</sup> as Canadian crews are generally recognized as well trained by international standards.

Nonetheless, the fact remains that, of all polluting casualties involving Canadian vessels in domestic waters, 70 per cent of those investigated are caused by human error.<sup>233</sup> Several factors contribute to such error, including reliance on industry, an absence of liability upon negli-

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<sup>223</sup> Personal communication with John Daniels, Training and Certification Section, Canadian Coast Guard (Ottawa, 31 January 1991).

<sup>224</sup> C.R.C. 1978, c. 1481.

<sup>225</sup> C.R.C. 1978, c. 1466, as am. SOR/78-937 and SOR/79-438.

<sup>226</sup> C.R.C. 1978, c. 1436.

<sup>227</sup> Regulations regarding the training and certification of masters and seamen are made pursuant to section 110(1). These regulations may prescribe, for example, "the types and classes of certificates"; "classes of ships in respect of which a certificate is not valid"; "the qualifications ... that an applicant for any type or class of certificate must meet"; "information to be furnished by an applicant"; and "examinations relating to the granting of certificates." Regulations concerning minimum crew size may be made pursuant to subsection 110(1)(j).

<sup>228</sup> *Supra*, note 225.

<sup>229</sup> *Supra*, note 224.

<sup>230</sup> *Canada Shipping Act*, *supra*, note 59, s. 112.

<sup>231</sup> *Ibid.* s. 128.

<sup>232</sup> Personal communication with Terry Stuart, Ship Safety Regional Office, Canadian Coast Guard (Vancouver, 6 June 1989).

<sup>233</sup> Federal Internal Review, "Prevention Issue Number 3: Analysis of Failure" (Ottawa: Canadian Coast Guard, 1989) at para. 4.3.2.7 [unpublished] [hereinafter "Analysis of Failure"]. On the whole, the Public Review Panel notes that human error is a factor in 90 per cent of the incidents. See *Protecting Our Waters*, *supra*, note 4 at 25.

gent watch personnel, reduced crew sizes, resultant stress and fatigue among crew members, and inadequate training.

The Internal Review notes that the government "tends to remove itself from operational issues, thus leaving it up to industry to carry out its business until another incident occurs."<sup>234</sup> There is, for example, no provision which deals specifically with alcohol or substance abuse despite the seriousness of the problem throughout the shipping world. Instead, such matters are left to the discretion of industry policy—a policy which is only selectively enforced, as the *Exxon Valdez* spill made so painfully clear in the U.S.

The disaster in Prince William Sound also highlighted the need for an adequate number of alert and responsible watch personnel. In Canada, however, there is no requirement under existing legislation which permits direct prosecution of those in charge of a navigational watch for negligently grounding their ships.<sup>235</sup>

Reduced crew sizes is another area for serious concern and has been estimated as the most significant single cause of accidents leading to pollution damage.<sup>236</sup> Obviously, small crew sizes result in stress, fatigue, and diminished emergency response capability. Yet, as an economy measure, crew sizes have been continuously reduced throughout the merchant marine fleet. The result is fewer personnel working longer hours. Twelve to fourteen hour workdays have become the norm, with crews working up to twenty-four hours straight during loading. Some Alaskan tanker crews have been reduced from forty to twenty-one in five years. In 1985, the U.S. Coast Guard certificates for the *Exxon Valdez* required a crew of twenty, only sixteen were required in 1989.<sup>237</sup>

Canadian law does little to prevent such stresses upon crew members.<sup>238</sup> As the Public Review Panel observes, the *Safe Manning*

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<sup>234</sup> "Analysis of Failure," *ibid.* at para. 4.4.3.1.

<sup>235</sup> Federal Internal Review, "Final Discussion Paper: Prevention Issue Number 4" (Ottawa: Canadian Coast Guard, 1989) [unpublished] [hereinafter "Prevention Issue Number 4"].

<sup>236</sup> *Protecting Our Waters*, *supra*, note 4 at 26.

<sup>237</sup> See R. Behar, "Joe's Bad Trip" *Time* (24 July 1989) 42 at 47 and Anderson, *supra*, note 7 at 47.

<sup>238</sup> Section 110(1)(j) of the *Canada Shipping Act*, *supra*, note 59 provides for the making of regulations setting out minimum crew size aboard particular vessels. Yet, unlike the airline industry, no regulation controls the practice of allowing crew members to become dangerously fatigued. See "Prevention Issue Number 4," *supra*, note 235 at para. 4.1.38.

*Regulations* “permit 18 hours of work in any one day period, 32 hours in two days and 48 hours in three days ... these limits do not allow for adequate rest for tanker officers involved in high-stress and high-risk operations.”<sup>239</sup> Moreover, there is evidence that even these low standards are not enforced by the Coast Guard, and many crew members are reluctant to complain, for fear of losing their jobs.<sup>240</sup>

Finally, training of shipboard personnel, particularly in the area of pollution prevention and marine spills response, is inadequate.<sup>241</sup> Perhaps, the most glaring deficiency of all is the lack of legally mandated crew certification standards for tugboats, even though (as happened with the *Nestucca* spill) the tug may be engaging in the transportation of pollutant oils and hazardous chemicals without formal crew certification or training.

### C. *Jurisdiction and Enforcement*

#### 1. Introduction

Enforcement is the underpinning of any legal regime, without which the most visionary and meticulously drafted legislation will be ineffective. In turn, a state's ability to enforce the law is contingent on its having the jurisdictional authority to do so. Historically, however, the international regime has long been deficient in conferring regulatory jurisdiction over vessel pollution on coastal states. This is particularly true for actions on the “high seas,” where the flag state has traditionally enjoyed exclusive jurisdiction over the regulation of its vessels. In turn, the authority of the coastal state has been primarily restricted to its territorial waters.

The history of the evolution of the law away from this almost exclusively flag state regime has been well recounted in the literature and need not be repeated here.<sup>242</sup> Again, disasters, such as the grounding of the *Torrey Canyon*, played an essential role by giving the coastal

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<sup>239</sup> *Protecting Our Waters*, *supra*, note 4 at 27.

<sup>240</sup> *Ibid.*

<sup>241</sup> *Ibid.* at 25-26.

<sup>242</sup> See, for example, Lewis Alexander.

state the right to intervene in the event of a spill.<sup>243</sup> In addition, *MARPOL 73* provided for an improved right of inspection for coastal states. Partially through the issuance and inspection of "Pollution Prevention Certificates," coastal states could more easily monitor—but not enforce—compliance of standards within their own waters.<sup>244</sup> However, when *MARPOL* was drafted, the more contentious issues of jurisdiction and enforcement were left to the negotiations of the Third United Nations Law of the Sea Conference (UNCLOS III), the results of which now provide the jurisdictional setting for international and domestic enforcement activities.

## 2. The Jurisdictional Setting

As oil spills proliferated on the world's shorelines throughout the 1960s and 1970s, it became obvious that the helpless reliance of coastal states on flag state enforcement of pollution prevention standards was no longer acceptable. This is particularly true for coastal states (such as Canada), which possess relatively small international shipping fleets, yet suffer the burden of pollution from foreign traffic passing their shores. Since the inception of both the IMO and the first Law of the Sea Conference in 1958, the work of each has coincided with the other. Although interwoven, the work of the two bodies is distinct. The IMO has focused on the more technical questions of pollution prevention and compensation, while the various law of the sea conferences have been concerned with the broader issues of the allocation of jurisdictional rights and duties among states. In short, UNCLOS provides the jurisdictional setting for more specific regulation of oil pollution.

The law of the sea conferences produced international conventions in 1958, 1960, and 1982. *UNCLOS III*, as the 1982 treaty is called, provides the basic jurisdictional setting for contemporary

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<sup>243</sup> See the 1969 *International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties*, 29 November 1969, 26 U.T.S. 765, T.I.A.S. No. 8068, 970 U.N.T.S. 211, reprinted in 9 I.L.M. 25 [effective 6 May 1975]. See *Status of Multilateral Conventions*, *supra*, note 68 at 175. This *Convention* strikes a balance between the traditionally exclusive powers of the flag state and new authority in the coastal state which can "intervene" in such disasters, with the latter being required to consult with parties known to be affected and to "take into account" their views.

<sup>244</sup> Inspectors could neither enforce standards nor penalize offenders; rather, they were permitted only to report violations to the flag state. See A. E. Boyle, "Marine Pollution under the Law of the Sea Convention" (1985) 79:2 Am. J. Int'l L. 347 at 362.



pollution control efforts.<sup>245</sup> Capping a marathon diplomatic endeavour spanning almost ten years (an effort in which Canada played an important role),<sup>246</sup> *UNCLOS III* has been justifiably called "the single most important instrument relating to the law of the sea ever to be adopted."<sup>247</sup>

The most significant issues discussed at the conference concerned the jurisdiction both to establish and enforce standards, particularly as these related to coastal state authority. During the negotiations, Canada continued to lobby actively for an extension of these powers, both within the territorial sea and beyond. These efforts were successful. First, controversy which had long centred around jurisdiction and territorial rights resulted in the establishment of an "exclusive economic zone" (EEZ), which extended up to 200 nautical miles from the coast.<sup>248</sup> Second, coastal state authority was considerably strengthened in cases where a ship in violation of international standards enters one of

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<sup>245</sup> *United Nations Convention on the Law of the Sea*, 10 December 1982, U.N. Doc. A/CONF. 62/122 (1982), Misc. 11 (1983), Cmnd 8941, reprinted in 21 I.L.M. 1261 [hereinafter *UNCLOS III*].

<sup>246</sup> Canada was an active participant in the conference, but was also one of the nations which pushed the international community into the negotiations as a result of its domestic legal actions. In 1970, three years before the first sessions of *UNCLOS* was held, Canada issued a substantial challenge to the principle of "freedom of the seas" through its landmark piece of domestic legislation, the *Arctic Waters Pollution Prevention Act*, *supra*, note 151. Section 3 of the *Act* established a 100 mile pollution control zone in Arctic waters, which gave Canada limited environmental jurisdiction over activities within the entire area. As well, the *Act* provided for the establishment of "shipping safety control zones" (s. 11), for which it authorized the Governor in Council to make regulations concerning standards for vessel design, equipment, navigation, and manning (s. 12). See also the *Arctic Shipping Pollution Prevention Regulations*, C.R.C. 1978, c. 353, and the *Arctic Waters Pollution Prevention Regulations*, C.R.C. 1978, c. 354. Moreover, the *Act* allowed for the establishment of a comprehensive liability and compensation regime for the zone (s. 6). Liability was to be absolute (s. 7). No limits of liability were specified; these were left to the regulations which potentially could allow for unlimited liability (s. 6(1)). All discharges of "waste" were prohibited within the zone (s. 4(1)). Pollution prevention officers were designated (s. 14) and given broad powers of enforcement (s. 15). Violators could be fined up to \$100,000 (s. 18).

The *Act* represented a key Canadian initiative to promote environmental and jurisdictional rights at the international law level. It was significant in two ways. First, in spite of its international ramifications, it was enacted unilaterally. Second, the *Act's* pollution control zone dramatically exceeded the traditionally accepted twelve mile boundary of coastal state jurisdiction. The move arose as much out of a jurisdictional dispute with the United States over sovereignty in the Arctic as it did out of environmental concern. For further discussion, see M'Gonigle & Zacher, *supra*, note 160.

<sup>247</sup> Abecassis *et al.*, *supra*, note 36 at para. 5-02.

<sup>248</sup> *UNCLOS III*, *supra*, note 245, art. 57.

its ports or offshore terminals (so-called "port state jurisdiction"), regardless of whether the violations took place beyond the territorial sea or exclusive economic zone or within them.<sup>249</sup>

Moreover, some inroads were made concerning coastal state authority over foreign ships exercising the rights of "innocent passage" within the territorial sea. Thus, laws and regulations concerning transport and navigation may be enacted by the coastal state, so long as these conform to standards established by international law.<sup>250</sup> However, the term "innocent passage" was even more strictly defined under *UNCLOS III*, ultimately resulting in somewhat narrower coastal state jurisdiction.<sup>251</sup>

In the final analysis, *UNCLOS III* resulted in strengthened coastal and port state authority and improved enforcement provisions generally.<sup>252</sup> Ultimately, however, the flag state was retained as the basic jurisdiction of standard setting and enforcement, particularly on the high sea. The shift away from the long standing tradition of virtually exclusive flag state control was achieved with great difficulty. As one author notes, "Many countries have not signed or ratified the Law of the Sea Convention because they refuse to accept these encroachments on traditional navigational sovereignty."<sup>253</sup> The United States, with several other industrialized countries, is one of these countries creating a significant obstacle to the entry into force of *UNCLOS III*. However, many of its provisions (including those concerning coastal and port state rights, described above) are by now so widely accepted that they are recognized as customary international law.<sup>254</sup>

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<sup>249</sup> *Ibid.* arts 218(1) and 220(1).

<sup>250</sup> *Ibid.* art. 17.

<sup>251</sup> Article 19 lists a series of acts which define when a passage is not innocent. According to this definition, a ship's passage is altered only by its intention, rather than by the condition of the ship itself. Passage is not innocent only when the subsequent discharge of pollution is both "serious" and "wilful." Under these terms, then, almost all passage is innocent, aside from operational discharges, few tanker operators deliberately plan to spill their cargoes into the oceans. *Ibid.*

<sup>252</sup> The Internal Federal Review notes that *UNCLOS III* "contains the best and most comprehensive enforcement provisions of any convention." See "Prevention Issue Number 4," *supra*, note 235 at para. 4.3.1.

<sup>253</sup> Curtis, *supra*, note 12 at 709

<sup>254</sup> For further discussion, see Boyle, *supra*, note 244. See also Abecassis *et al.*, *supra*, note 36 at para. 5-46—5-50.

### 3. Enforcement

Enforcement regimes are of many types. These include international, bilateral or multilateral, private industry, and domestic regimes. The majority of these regimes focus on vessel design and equipment standards. The enforcement of navigation and, to a lesser degree, discharge standards is more problematic, particularly within international waters.

#### a) *International*

Several of the international conventions discussed above provide for enforcement through a form of "administrative" action which relies on inspection and certification programs. Following regular inspections, appropriate certificates are issued to ships which are deemed to have been constructed and maintained according to appropriate regulations. Without such certificates, ships cannot sail.

#### i) Operational Pollution

The enforcement of discharge standards is relatively straightforward. Under the now defunct 1954 *Convention*, monitoring for compliance with operational discharge standards was limited to a system of "voluntary reporting," through the maintenance of "oil record books."<sup>255</sup> The 1969 amendments improved the situation somewhat by allowing visual sighting of a vessel unlawfully discharging oil to constitute an additionally valid form of evidence.<sup>256</sup> *MARPOL 73/78* led to significant improvements in mandating recordkeeping and permitting effective inspection. Oil record books were maintained, but changed in format.<sup>257</sup> Vessels are subject to regular inspections to ensure that they maintain the construction, equipment, and fittings necessary to comply

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<sup>255</sup> *Supra*, note 34, art. IX.

<sup>256</sup> *Supra*, note 66. This was because the 1969 Amendments made all discharges *prima facie* unlawful due to the requirement to implement a new "load-on-top" (LOT) pollution reduction procedure. See Abecassis *et al.*, *supra*, note 36 at para. 3-104.

<sup>257</sup> *MARPOL 73/78*, *supra*, note 87, App. I, r. 20.

with the discharge standards.<sup>258</sup> Those found to be in compliance are issued "International Oil Pollution Prevention Certificates."<sup>259</sup> When violations occur within the jurisdiction of a contracting state, that state must either

- (a) cause proceedings to be taken in accordance with its law; or
- (b) furnish to the administration of the ship such information and evidence as may be in its possession that a violation has occurred.<sup>260</sup>

Thus, all member states are required to enforce *MARPOL* within their jurisdiction,<sup>261</sup> as "jurisdiction" is defined by international law at the time.<sup>262</sup>

## ii) Navigation and Safety

*SOLAS 74/78* provides for mandatory annual—and even unscheduled—inspections of vessels by flag states during the period of validity of their certificates.<sup>263</sup> Port states also have some inspection authority and may detain substandard vessels until the defects have been remedied.<sup>264</sup> Similar provisions are contained within *MARPOL 73/78*<sup>265</sup> and the 1960 *International Convention on Load Lines*.<sup>266</sup> As well, *MARPOL 73/78* obliges the ship's master or owner to report significant defects as well as accidents to the flag state or issuer of the "Pollution Prevention Certificate."<sup>267</sup>

Private sector inspection and certification programmes exist under the auspices of classification societies as well as directly under states. Generally, such inspections occur in order for commercial vessels

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<sup>258</sup> *Ibid.* r. 4.

<sup>259</sup> *Ibid.* r. 5-6.

<sup>260</sup> *Ibid.* art. 4(2).

<sup>261</sup> *Ibid.*

<sup>262</sup> *Ibid.* r. 9(3).

<sup>263</sup> *SOLAS 74/78, supra*, note 87, c. I, r. 6.

<sup>264</sup> *Ibid.* r. 19.

<sup>265</sup> *MARPOL 73/78, supra*, note 87 art. 5, Annex I, r. 4-8, and Appendix II.

<sup>266</sup> 5 April 1966, 18 U.S.T. 1857, T.I.A.S. No. 6331, 640 U.N.T.S. 133, arts 12-21 as am.

<sup>267</sup> *MARPOL 73/78, supra*, note 87, Annex I, r. 4(4)(c).

to obtain insurance.<sup>268</sup> However, classification societies may also inspect vessels and issue certificates of compliance for international conventions, including *MARPOL*, *SOLAS*, and the *International Convention on Load Lines*.<sup>269</sup> In either case, such work is usually done for the owner of the vessel. Information obtained in this way on the condition of the vessel may be confidential, except as required by law.<sup>270</sup>

As noted above, effective enforcement regimes are, to a great degree, restricted to construction and equipment standards. Sheer logistical considerations make enforcement of navigational standards more difficult. For one, it is inherently more awkward to identify offenders of navigation practices than it is of construction or equipment requirements. With respect to *COLREG*, for example, or, indeed, traffic separation schemes in general, valid identification must be comprised, not only of a radar trace, but also of visual identification.<sup>271</sup> Further, even the enforcement of proven contraventions which occur in international waters is limited to notifying the flag state. Abecassis and Jarashow comment:

Enforcement is, therefore, a process of *ex post facto* prosecution of offenders. This is possible fairly speedily if and when the ship reaches a port in the coastal state (if the offence occurred within the jurisdiction of the coastal state). Otherwise, it is a question of relying on prosecution by the flag state itself.<sup>272</sup>

The inspection and certification of crew standards is similarly problematic. The wording of the *STCW*, for example, is ambiguous. Its

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<sup>268</sup> Federal Internal Review, "Policy Issue: Enforcement" (Ottawa: Canadian Coast Guard, 1989) at para. 3.2.2 [unpublished] [hereinafter "Enforcement"].

<sup>269</sup> In 1988, the IMO held the International Conference on Harmonized System of Survey and Certification at which protocols to the *International Convention on Load Lines*, *supra*, note 266 and to *SOLAS* 74, *supra*, note 86 were adopted. See *Protocol Relating to the 1966 International Convention on Load Lines*, 11 November 1988, IMO Doc HSSC/CONF/12 and *Protocol Relating to the 1974 International Convention for the Safety of Life at Sea*, 11 November 1988, IMO Doc HSSC/CONF/11. On 16 March 1990, *MARPOL* 73/78, *supra*, note 87 was further amended, so that now all three Conventions have harmonized their individual systems of inspection and certification. See *Adoption of Amendments to the Annex of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973 (Introduction of the Harmonized System of Survey and Certification to Annexes I and II of MARPOL 73/78)*, Res. MEPC 39(29), MEPC 29th Sess., Doc. MEPC 20/22, Annex 5 (1990).

<sup>270</sup> Anderson, *supra*, note 7 at 44.

<sup>271</sup> Abecassis *et al.*, *supra*, note 36 at para. 4-38.

<sup>272</sup> *Ibid.* para. 4-40.

interpretation and implementation is essentially left up to the flag state.<sup>273</sup> Inspections by port states are limited to verifying that crew certificates are valid.<sup>274</sup> Ships may be detained only for deficiencies in proper watch arrangements or for improper certifications which are not corrected, and then only if these deficiencies are potentially threatening to the environment, persons, or property.<sup>275</sup>

In general, the international and private sector inspection regimes noted above are considered inadequate. Both in Canada and internationally, enforcement of national and international regulations seldom results in prosecutions. Rather, the mere detainment of substandard vessels until the defects are remedied is more typical. The Federal Internal Review notes that this weak system of enforcement is due largely to "conflicting interests of port, coastal and flag states, and the varying interests of governments, private industry and the public."<sup>276</sup> This is a most serious problem capable of rendering illusory the international regulatory gains of the last twenty years.

In response to this problem, several nations concluded a more limited multilateral agreement known as the *Memorandum of Understanding on Port State Control*.<sup>277</sup> The agreement was drawn up at Paris on 26 January 1982 and supersedes the 1978 *Memorandum of Understanding between Certain Maritime Authorities on the Maintenance of Standards on Merchant Ships*.<sup>278</sup> While recognizing that the primary responsibility for enforcement rests with the flag state, the agreement allows for greater diligence on the part of port states in enforcing international conventions. There are, however, only fourteen full

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<sup>273</sup> See above, section III.B.1. b) iii) at 193.

<sup>274</sup> If the port state inspector finds that a seafarer fails to hold an appropriate valid certificate or valid dispensation, the ship may be detained until the requirements have been met. However, unless there are "clear grounds" for believing that certificates are fraudulent or have been fraudulently obtained, they must be accepted. As well, the inspector must provide written notice stating the grounds upon which it has been determined that any deficiencies found pose a danger to persons, property, or the environment. See *STCW, supra*, note 113, c. I, r. 4. However, article X(4) requires that all possible efforts must be made to ensure that the ship is not unduly detained or delayed. Thus, the requirements on the part of the port state are onerous.

<sup>275</sup> *Ibid.* art. X(3) and c. I, r. 4.

<sup>276</sup> "Enforcement," *supra*, note 268 at para. 3.2.3.

<sup>277</sup> 26 June 1982 (Paris), reprinted in 21 I.L.M. 1.

<sup>278</sup> 2 March 1978 (The Hague). See *ibid.* at s. 8.3.

member states, all from Western Europe and Scandinavia. In addition, both Canada and the United States are co-operative members, "though the U.S. does not yet directly report to the organization the results of foreign flag inspections."<sup>279</sup>

The Memorandum commits its members to inspecting a minimum of 25 per cent of all foreign tankers visiting their ports, and the results are not encouraging—approximately half of all vessels inspected in Canada under the agreement are found to be substandard.<sup>280</sup> The IMO has also acknowledged the need for more diligent enforcement of international standards. On 19 October 1990, members of the 16th Assembly of the IMO unanimously adopted a resolution which "urges states to fulfil their obligations to carry out investigations of maritime casualties"<sup>281</sup> and to ensure that these investigations are comprehensive.

b) *Canadian*

Compliance with domestic standards regarding the construction, equipment, and operation of vessels transporting oil is determined by the *Oil Pollution Prevention Regulations*,<sup>282</sup> the *Non-Canadian Ships Compliance Certificates Regulations*,<sup>283</sup> and the *Arctic Shipping Pollution Prevention Regulations*.<sup>284</sup> Purportedly, these are "strictly enforced."<sup>285</sup> Major provisions for inspection and certification are contained within Parts V and XV of the *Canada Shipping Act*.<sup>286</sup>

Part V of the *Canada Shipping Act*, entitled "Safety," establishes the Steamship Inspection Service. Steamship inspectors are appointed by the Governor in Council and are authorized to inspect the machinery,

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<sup>279</sup> "Enforcement," *supra*, note 268 at para. 3.2.5.

<sup>280</sup> *Ibid.*

<sup>281</sup> *Co-operation In Maritime Casualty Investigations*, Res. A.637(16), IMO Assembly 16th Sess., Doc. IMO-136E (1989) at 6.

<sup>282</sup> *Supra*, note 164.

<sup>283</sup> C.R.C. 1978, c. 1451, as am. SOR/79-904 and SOR/80-728.

<sup>284</sup> *Supra*, note 246.

<sup>285</sup> "Notice 32—Pollution—Compliance with Canadian Regulations" in *Notice to Mariners*, *supra*, note 178, 172 at 172.

<sup>286</sup> *Supra*, note 59.

hulls, equipment, and electrical installations of steamships.<sup>287</sup> Such inspectors have the right to board ships "at all reasonable times" in order to inspect either the vessel itself or "any certificate of any master, mate or engineer."<sup>288</sup> Ships deemed to be unsafe may be detained.<sup>289</sup> Shipboard personnel in positions of authority are obligated to answer "pertinent questions concerning the ship, or concerning any accident that has happened thereto."<sup>290</sup> As well, the steamship inspector may have machinery put in motion to "satisfy himself as to its condition"<sup>291</sup> and may check for proper navigation lights and other equipment as required under *COLREG 72*.<sup>292</sup> The inspector may check for "proper certificated officers, navigating and engineering," as required by the *Canada Shipping Act*.<sup>293</sup> Finally, all costs of the inspection are to be born by the shipowner.<sup>294</sup>

So-called "Safety Convention" ships—that is, ships of flag states which are party to *SOLAS*—of 500 tgt or more are also subject to regular inspections. These must take place on first being put into service. Thereafter, inspections must occur annually for the hull and machinery<sup>295</sup> and once every two years for equipment.<sup>296</sup> Non-convention ships must be inspected annually.<sup>297</sup>

Classification societies may also act on behalf of a government for some, if not all, of that government's inspection responsibilities.<sup>298</sup> Regulations may be made prescribing the classes of ships and specific

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<sup>287</sup> *Ibid.* s. 301. The nature of such inspections is set out in sections 310 and 311.

<sup>288</sup> *Ibid.* s. 310(1).

<sup>289</sup> *Ibid.* s. 310(2).

<sup>290</sup> *Ibid.* s. 310(3).

<sup>291</sup> *Ibid.* s. 310(4).

<sup>292</sup> *Ibid.* s. 311(1).

<sup>293</sup> *Ibid.*

<sup>294</sup> *Ibid.* s. 313(1).

<sup>295</sup> *Ibid.* s. 316(2)(b). Section 316(2)(b) provides for exceptions to be made according to regulations as may be prescribed under section 319(5)(f), which refers to inspections made by authorized classification societies. In such cases, the period between inspections by steamship inspectors may not exceed twenty-five years.

<sup>296</sup> *Ibid.* s. 316(2)(a).

<sup>297</sup> *Ibid.* s. 316(3). The same exemptions may apply as outlined in subsection 316(2)(b).

<sup>298</sup> *Ibid.* s. 319(4).



societies which may apply, the scope of inspections to be undertaken by these societies, the terms and conditions of the report to be submitted, and the length of time for which certificates may be valid, for up to twenty-five years.<sup>299</sup> These societies are given much authority and are relied on heavily. For example, steamship inspectors are not liable for issuing certificates based on inaccurate or faulty reports of classification societies.<sup>300</sup>

Part XV of the *Canada Shipping Act*, specifically entitled "Pollution Prevention and Control," is the central enforcement section in the *Canada Shipping Act* insofar as the government's agents in the field, Pollution Prevention Officers (PPOs), are appointed by the Minister of Transport under it.<sup>301</sup> They also conduct inspections, but have limited enforcement and investigative powers under the *Act* on Canadian ships anywhere, as well as on ships about to enter or within applicable Canadian waters.<sup>302</sup>

The authority of PPOs is very similar to that of steamship inspectors.<sup>303</sup> PPOs may direct personnel aboard Canadian ships or foreign ships about to enter or within Canadian waters to provide "reasonable information" concerning the ship's condition, equipment, cargo, and fuel.<sup>304</sup> They may also board and inspect all Canadian ships, as well as foreign ships whose flag states are not party to *MARPOL*, to ensure that the ship is in compliance with regulations made under Part XV or concerning Vessel Traffic Services under section 562.<sup>305</sup>

Ships to which *MARPOL* applies are inspected in accordance with its terms.<sup>306</sup> Oil samples of ships suspected of illegally discharging oil may be collected anywhere within applicable waters.<sup>307</sup> PPOs also have

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<sup>299</sup> *Ibid.* s. 319(5)(a)-(f).

<sup>300</sup> *Ibid.* s. 319(6).

<sup>301</sup> *Ibid.* s. 661(1). See also section 14 of the *Arctic Waters Pollution Prevention Act*, *supra*, note 151.

<sup>302</sup> *Canada Shipping Act*, *supra*, note 59, s. 662(1)-(3).

<sup>303</sup> However, whereas steamship inspectors are primarily concerned with inspecting compliance with *SOLAS*, PPOs are more concerned with the provisions of *MARPOL*.

<sup>304</sup> *Canada Shipping Act*, *supra*, note 59, s. 662(1)(a).

<sup>305</sup> *Ibid.* s. 662(1)(b) -(c).

<sup>306</sup> *Ibid.* s. 662(1)(d).

<sup>307</sup> *Ibid.* s. 662(1)(e).

the authority to exercise control over the movement of a ship if it is either substandard or otherwise in violation of the provisions of Part XV, if weather conditions are hazardous, or if a pollution incident is threatened or occurring.<sup>308</sup>

Penalties are substantial for those found in contravention of the provisions of Part XV. Persons or ships found guilty of illegally discharging pollutants may be fined a maximum of \$250,000.<sup>309</sup> Fines for failure to carry appropriate certificates may be as high as \$200,000.<sup>310</sup> Disobeying the direction of a PPO may lead to a fine of up to \$200,000.<sup>311</sup> Finally, refusing to assist a PPO may lead to a maximum fine of \$10,000.<sup>312</sup> As well, the PPO may detain vessels thought or found to have committed an offence under Part XV. This power may be exercised in all Canadian waters, including fishing zones, as well as waters to which the *Arctic Waters Pollution Prevention Act* applies.<sup>313</sup>

The Coast Guard Ship Inspection Report System (SIRSI) is used in Canada to administer inspection and certification.<sup>314</sup> Generally, tankers are visually inspected by the Ship Safety branch of the Coast Guard upon first entering Canadian waters. After that, however, tankers are inspected only occasionally on subsequent visits.<sup>315</sup> Inspection of foreign vessels are generally limited to ensuring that valid convention certificates are carried aboard. Inspections may be more detailed if the inspector deems the vessel to be substandard.<sup>316</sup>

These legal provisions are clearly strong ones. However, translating these into practical and effective monitoring and enforcement has not been as strong. The current objective of Ship Safety is to inspect 25 per cent of all foreign tankers entering Canadian ports. In 1988, however, only 8 per cent of these were inspected—and a large number of

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<sup>308</sup> *Ibid.* s. 662(1)(f)-(h).

<sup>309</sup> *Ibid.* s. 664.

<sup>310</sup> *Ibid.* s. 665.

<sup>311</sup> *Ibid.* s. 666(1).

<sup>312</sup> *Ibid.* s. 666(2).

<sup>313</sup> *Ibid.* s. 672(1)-(2).

<sup>314</sup> "Enforcement," *supra*, note 268 at para. 3.2.1.

<sup>315</sup> Anderson, *supra*, note 7 at 43.

<sup>316</sup> Federal Internal Review, "Policy 3.4" (Ottawa: Canadian Coast Guard, 1989) at 2 [unpublished].

them required repairs before being allowed to leave port.<sup>317</sup> In addition, enforcement of Canadian and international shipping regulations results in few prosecutions. There appears to be no incident of a foreign vessel being denied entry into Canadian waters off the West Coast, although vessels have occasionally been denied exit until deficiencies in their crew or equipment have been rectified.<sup>318</sup> Moreover, because Ship Safety lacks full access to the accident histories and the maintenance and repair records of foreign vessels, it is difficult to make special provision for those vessels which may be "repeat offenders."<sup>319</sup>

In general, while inspection of Canadian standards is considered reasonably good, enforcement within Canada is widely criticized as inadequate, even within the Coast Guard. The Federal Internal Review notes:

The enforcement of standards and regulations is presently less than satisfactory and is the area that has been identified as requiring the most improvement. Lack of meaningful enforcement leads to a certain disrespect for the standards and regulations and can encourage owners and operators to place undue emphasis on economic considerations at the expense of safety and pollution prevention. Such lax or nonexistent enforcement will negate the best intentions incorporated in national, bilateral and international safety and pollution prevention programs.<sup>320</sup>

The result is a much higher risk to Canadian waters than is anticipated by the legislation. On these issues, the federal and provincial commissions come to similar conclusions. As the British Columbia study noted, deficiencies are so frequently uncovered during tanker inspections that we can conclude that "the overall quality of vessels, equipment and crews entering Canadian ports is well below what is required to protect our waters."<sup>321</sup>

In this vein, the institutional enforcement mechanism set up by the *Canada Shipping Act* is deficient. Pollution Prevention Officers are too few in number, poorly trained, and reluctant to prosecute.<sup>322</sup> In part, this is because of their limited authority under the *Act*, their limited

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<sup>317</sup> *Interim Report, supra*, note 60 at 9 and *Protecting Our Waters, supra*, note 4 at 22.

<sup>318</sup> Anderson, *supra*, note 7 at 43.

<sup>319</sup> *Ibid.*

<sup>320</sup> "Prevention Issue Number 4," *supra*, note 235 at para. 3.6.1.

<sup>321</sup> Anderson, *supra*, note 7 at 43.

<sup>322</sup> See, for example, *Protecting Our Waters, supra*, note 4 at 23-24.

training in enforcement and prosecution techniques, and their lack of formal criminal authority and training (they are not sworn in as peace officers or trained in the gathering of evidence).<sup>323</sup> The Coast Guard attributes the neglect of enforcement to several broader issues in addition to the need for more trained inspectors experienced in legal enforcement procedures, including the maritime tradition of flag state control and the complexity of the domestic and international legal regime.<sup>324</sup>

#### IV. THE STATE OF THE LAW: LIABILITY AND COMPENSATION

##### A. *International Law*

The *Torrey Canyon* incident in 1967 vividly highlighted the inadequacies of the existing international regime concerning liability and compensation. Two particularly significant questions were raised by the spill. The first was the question over the nature and extent of the shipowner's liability in such cases. There are several ways in which liability for damage may be established. Liability may be absolute,<sup>325</sup> strict,<sup>326</sup> based on fault with a reversed burden of proof,<sup>327</sup> or finally, based on fault.<sup>328</sup> In the maritime tradition, liability had long been based upon fault, the regime which least favours the victims of pollution damage.

A second question centred around the limits of liability of the owners of the *Torrey Canyon*. The international convention in force at

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<sup>323</sup> These issues are discussed in several Federal Internal Review documents, including the following: "Analysis of Failure," *supra*, note 233 at para. 4.1.1-4.1.9 and "Enforcement," *supra*, note 268.

<sup>324</sup> "Prevention Issue Number 4," *supra*, note 235 at para. 3.6.1-3.6.2.

<sup>325</sup> That is, the party causing the damage is liable without exception, regardless of the circumstances.

<sup>326</sup> This regime is also rigorous and still imposes liability on the party causing the damage, whether or not that party is at fault, but with certain exceptions.

<sup>327</sup> Thus, the onus is on the party to prove that the incident did not occur as a result of his or her negligence.

<sup>328</sup> In such cases, the claimant must prove that the damage resulted from the party's negligence.

the time was the widely accepted 1957 Brussels *Convention on the Limitation of Liability of Owners of Sea Going Ships*,<sup>329</sup> the limits of which were vastly inadequate.<sup>330</sup> The outcry over these and other issues prompted the IMCO to quickly begin drafting new legislation in the area of international liability and compensation in 1969.<sup>331</sup>

### 1. *Tovalop/Cristal*

The first significant provision for liability in the case of oil spills was devised by the oil industry itself on 7 January 1969. Responding to mounting public pressure and hoping to forestall possible unilateral action by coastal states at the upcoming IMCO conference, the tanker industry established the *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution (TOVALOP)* in January 1969.<sup>332</sup> The *Contract Regarding a Supplement to Tanker Liability for Oil Pollution (CRISTAL)* was established on 14 January 1971 by the oil industry as a supplement to *TOVALOP*.<sup>333</sup> Both agreements remain in effect and have been amended from time to time.

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<sup>329</sup> 10 October 1957, 52 U.K.T.S. 355 (1968), Cmnd 3678, 1959 R.T.A.F. 46.

<sup>330</sup> Article 3 of the *Convention* set the shipowner's limit of liability for property damage at 1,000 gold francs (equivalent to approximately \$67 at the time of the incident) per ton of the ship's tonnage. The quantifiable costs of the damages were estimated at approximately \$18 million. This was the first time that the costs of damages so exceeded the value of the ship and its cargo. See P. Burrows, C. Rowley & D. Owen, "The Economics of Accidental Oil Pollution by Tankers in Coastal Waters" (1974) 3 J. of Pub. Econ. at 258.

<sup>331</sup> For a discussion of the negotiations leading up to the 1969 conference, see M'Gonigle & Zacher, *supra*, note 35 at 149-54.

<sup>332</sup> *TOVALOP* is a voluntary scheme by which participating tanker owners are required to obtain liability insurance through either the Protection and Indemnity Associations (the so-called "P and I Clubs") or the International Tankers Indemnity Association. See clause II(c). Current limits of liability under *TOVALOP* are \$3.5 million (U.S.) for tankers of up to 5,000 gross tons, and another \$493 (U.S.) for each additional ton, to a maximum limit of \$70 million (U.S.). Anderson, *supra*, note 7 at 105. For further discussion, see M'Gonigle & Zacher, *supra*, note 35 at 157-59. See also Abecassis *et al*, *supra*, note 36 at 304-10.

<sup>333</sup> Reprinted in 10 I.L.M. 137. In order to apply, the contract stipulates that the tanker owner must first pay compensation up to the limits of *TOVALOP*. Moreover, the oil on board the vessel must be owned by a *CRISTAL* member. For further discussion, see M'Gonigle & Zacher, *supra*, note 35 at 178-82.

## 2. The 1969 *Civil Liability Convention*

By the end of the year and influenced at least in part by the industry's initiative, IMCO created the *Civil Liability Convention (CLC)*.<sup>334</sup> The *CLC* establishes strict liability on the shipowner<sup>335</sup> with limited defences.<sup>336</sup> Shipowners can invoke their right to limit liability only by paying into a court fund,<sup>337</sup> provided they themselves are not negligent.<sup>338</sup> One particular innovation of the *CLC* is the requirement that all ships carrying over 2,000 tons of oil as cargo and entering the ports of contracting states must possess full insurance to the limit of the shipowner's liability, regardless of whether the flag states themselves are contracting parties.<sup>339</sup> This eliminated a potential competitive advantage for those flag states not party to the *CLC* and settled the question of jurisdiction, which now clearly resided with the court of the contracting state which suffers environmental damage, regardless of the original location of the pollutant or whether the flag state is party.

A particularly contentious issue concerned the territorial scope of the *Convention*, which was restricted "to pollution damage caused on the territory including the territorial sea of a contracting state, and to preventive measures taken to prevent or minimize such damage."<sup>340</sup> Thus, even measures taken beyond the territorial sea to prevent or mitigate subsequent damages within the territorial sea could be subject to compensation.

Liability limits were set at approximately \$219 (133 SDRs) for each ton of the ship's tonnage, to a maximum of \$23 million (14 million

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<sup>334</sup> *International Convention on Civil Liability for Oil Pollution Damage*, 29 November 1969, 106 U.K.T.S. (1975), Cmnd 61835, 4 I.N.T.I.R. 257, 973 U.N.T.S. 3, reprinted in 9 I.L.M. 45 [hereinafter *CLC*]. For a comparison between TOVALOP and the *CLC*, see Abecassis *et al.*, *supra*, note 36 at 307-10.

<sup>335</sup> *CLC*, *ibid.* art. III(1).

<sup>336</sup> These include an act of war; a "natural phenomenon of an exceptional, inevitable and irresistible character"; an intentional act of a third party; governmental negligence in the maintenance of navigational aids; or, finally, a situation where the damage resulted from an intentional act of the person who suffered the harm. *Ibid.* art. III(2)-(3).

<sup>337</sup> *Ibid.* art. V(3).

<sup>338</sup> *Ibid.* art. V(2).

<sup>339</sup> *Ibid.* art. VII(11).

<sup>340</sup> *Ibid.* art. II. For further discussion, see M'Gonigle & Zacher, *supra*, note 35, c. 7.

SDRs).<sup>341</sup> Even in 1969, however, this limit was recognized as being too low, and IMCO members resolved to draft a supplementary convention in 1971.<sup>342</sup>

### 3. 1971 Fund Convention

The *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage*<sup>343</sup> (*Fund Convention*) was established in 1971 to supplement the levels of compensation available under the *CLC*.<sup>344</sup> Liability under the *Fund Convention* is strict, with fewer defences compared to the *CLC*.<sup>345</sup> The *Fund Convention* may also be exempted wholly or partially if it can prove that damages resulted wholly or partially from the claimant's own negligence or intentional act.<sup>346</sup> The *Fund Convention* is liable for natural disasters, but with an overall limit of about \$49 million (30 million SDRs),<sup>347</sup> regardless of the resulting number of individual incidents.<sup>348</sup>

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<sup>341</sup> *Ibid.* art. V(1). Note that the unit of account was changed from gold francs to Special Drawing Rights (SDRs), as defined by the International Monetary Fund, with the creation of the 1976 Protocol to the *CLC*. See *Protocol to the 1969 International Convention on Civil Liability for Oil Pollution Damage*, 19 November 1976, U.K.T.S. 26 (1981), Cmnd 8238, reprinted in 16 I.L.M. 617. One Special Drawing Right was valued at \$1.6459 (Cdn.) on 5 January 1991. See *The [Toronto] Globe and Mail* (5 January 1991) B13.

<sup>342</sup> *Resolution on Establishment of the International Compensation Fund for Oil Pollution Damage*, LEG/CONF/C.2/WP.38, *Official Records*, International Legal Conference on Marine Pollution Damage (1969) (London: IMCO, 1973) at 185.

<sup>343</sup> 18 December 1971, U.K.T.S. 95 (1978), Cmnd 7383, 1978 R.T.A.F. 81, reprinted in 11 I.L.M. 284 [hereinafter *Fund Convention*].

<sup>344</sup> *Ibid.* art. 4(1).

<sup>345</sup> These include an act of war or incidents where the claimant is unable to identify the polluting ship. *Ibid.* art. 4(2)(a)-(b). In other words, "mystery spills" are not covered under the IOPC Fund.

<sup>346</sup> *Ibid.* art. 3(3).

<sup>347</sup> As with the *CLC*, the unit of account was changed from gold francs to Special Drawing Rights (SDRs) with the 1976 Protocol to the 1971 *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage*, 19 November 1976, Misc. 27 (1977), Cmnd 7029, reprinted in 16 I.L.M. 621.

<sup>348</sup> *Fund Convention*, *supra*, note 343, art. 4(4).

Recoverable damages include both direct and consequential losses.<sup>349</sup> Unless damages have resulted from the shipowner's wilful misconduct, both the shipowner and guarantor are indemnified for the total amount of liability in excess of \$165 (100 SDRs) per ton of ship's tonnage or \$13 million (8 million SDRs), whichever is less,<sup>350</sup> to a maximum of \$219 (133 SDRs) per ton or \$23 million (14 million SDRs), whichever is less.<sup>351</sup>

The *Fund Convention* is financed on levies imposed on oil companies receiving over 150,000 tons of "contributing oil" annually.<sup>352</sup> The IOPC fund is unusual in that it is inexhaustible; rather than being merely a dormant fund, into which payments are made in advance, annual payments by cargo owners are contributed in the following year and are adjusted as claims demand.<sup>353</sup> Under both the *CLC* and the *Fund Convention*, the total amount of compensation available to claimants was set at approximately \$49 million (30 million SDRs) per incident, with a proviso for increasing this amount to \$99 million (60 million SDRs) should experience demonstrate the need to do so.<sup>354</sup> Indeed, the limit has been increased to 60 million SDRs.<sup>355</sup>

The *CLC* entered into force on 19 June 1975,<sup>356</sup> while the *Fund Convention* entered into force on 16 October 1978. The 1976 *Protocols* to both, which replaced the unit of account from gold francs to the more appropriate Special Drawing Rights, entered into force in April 1981.<sup>357</sup> Canada did not ratify either *Convention* until 24 April 1989—a full twenty years after the inception of the *CLC* and more than a dozen years

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<sup>349</sup> Under article 4(1), compensation is provided to victims of "pollution damage" as defined under the *CLC*. *Ibid.* art. 1(2). By reference, then, the Fund is liable for the costs of "loss or damage caused outside the ship ... and includes the costs of preventive measures and further loss or damage caused by preventive measures." *CLC, supra*, note 334, art. I(6). Further, "preventive measures" means any reasonable measures taken by any person after an incident has occurred to prevent or minimise pollution damage." *CLC, ibid.* art. I(7).

<sup>350</sup> *Fund Convention, supra*, note 343, art. 5(1)(a).

<sup>351</sup> *Ibid.* art. 5(1)(b).

<sup>352</sup> *Ibid.* art. 10. Article 1(3) defines "contributing oil" as being either crude or fuel oils.

<sup>353</sup> *Ibid.* art. 12.

<sup>354</sup> *Ibid.* art. 4(6).

<sup>355</sup> *Ibid.* art. 4(4).

<sup>356</sup> *Status of Multilateral Conventions, supra*, note 68 at 199 and 245.

<sup>357</sup> *Ibid.* at 217 and 253.



since the *CLC* had begun operating to provide pollution compensation to victim states on the international level. The U.S. is still not party to either *Convention*.

#### 4. The 1984 *Protocols*

By the late 1970s, it had become apparent that the liability limits of the *CLC* and the *Fund Convention* were far too low, a fact which was dramatically highlighted by the *Amoco Cadiz* disaster in 1978. As a result, the international community responded by critically reviewing existing legislation through IMO's Legal Committee. In May 1984, the IMO convened a diplomatic conference, which led to the adoption of *Protocols* to both the 1969 and 1971 *Conventions*.<sup>358</sup> The *Protocols* altered the existing regime by both broadening the scope of application and substantially raising the liability limits of the 1969 and 1971 *Conventions*.

The scope of application was expanded in several ways. The definition of "ship" was broadened to include, not only ships carrying oil in bulk as cargo, but also any vessel constructed or adapted to do so "when it is actually carrying oil in bulk as cargo *and during any voyage following such carriage*."<sup>359</sup> Thus, spills resulting from the oily slops or residues of unladen tankers or combination carriers are also covered under the *Protocols*.<sup>360</sup> Similarly, the definition of oil has been broadened to include "any persistent hydrocarbon mineral oil ... whether carried on board a ship as cargo *or in the bunkers of such a ship*."<sup>361</sup>

"Incident" under article I(8) of the 1969 *CLC* is redefined as being "any occurrence, or series of occurrences having the same origin, which causes pollution damage *or creates a grave and imminent threat of*

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<sup>358</sup> Protocol of 1984 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 25 May 1984, reprinted in 15 J. Mar. L. & Com. 613 [hereinafter *CLC Protocol*] and Protocol of 1984 to Amend the International Convention for the Establishment of an International Fund for Compensation for Oil Pollution Damage, 25 May 1984, reprinted in 15 J. Mar. L. & Com. 623 [hereinafter *Fund Protocol*].

<sup>359</sup> *CLC Protocol*, *ibid.* art. 2(1) (emphasis added).

<sup>360</sup> Note that all definitions set out under the *CLC Protocol* are, by reference, the same as those of the *Fund Protocol*, *supra*, note 358, art. 2(3).

<sup>361</sup> *CLC Protocol*, *supra*, note 358, art. 2(2) (emphasis added).

causing such damage."<sup>362</sup> Hence, the *Protocol* additionally provides for the amelioration of pre-spill threats.

The definition of "pollution damage" has been clarified substantially under the *CLC Protocol*,<sup>363</sup> so that a distinction is made between damage to the environment *per se* and economic loss resulting from such damage. Previously, decisions on the extent to which claims can be made for "pure economic loss"<sup>364</sup> have been left up to the national courts of individual states.<sup>365</sup> Under the *Protocols*, recovery for loss of profit to such persons as hoteliers and restaurateurs is now allowed. However, whereas the admissibility of claims for natural resource damage was also formerly left up to the jurisprudence of national courts, non-quantifiable costs of pollution damage are now expressly not recoverable. In this sense, the new definition may be construed as being more restrictive than before. However, the *CLC Protocol* does allow for recovery of costs "of reasonable measures of reinstatement actually undertaken or to be undertaken."<sup>366</sup>

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<sup>362</sup> *Ibid.* art. 2(4) (emphasis added).

<sup>363</sup> Under the *Protocols*, "pollution damage" is defined as follows: "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." *Ibid.* art. 2(3). The 1969 definition was more general, describing pollution damage as "loss or damage caused outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss of damage caused by preventive measures." *Ibid.* art. I(6).

<sup>364</sup> "Pure economic loss" may be described as economic loss suffered by persons "as a result of oil pollution, without any damage being caused to their property." See M. Jacobsson, "The Notion of 'Pollution Damage,' with Particular Regard to Damage to the Marine Environment" in *Proceedings—1987 Oil Spill Conference: Prevention Behavior, Control and Cleanup* (Washington, D.C.: American Petroleum Institute, 1987) 555 at 556.

<sup>365</sup> For a brief account of the Fund's policy concerning the admissibility of claims, see International Oil Pollution Compensation Fund, *Annual Report 1988* (London: International Oil Pollution Compensation Fund, 1988) at 57-62.

<sup>366</sup> *Supra*, note 358. For further discussion, see also M. Jacobsson & N. Trotz, "The Definition of Pollution Damage in the 1984 Protocols to the 1969 Civil Liability Convention and the 1971 Fund Conventions" (1986) 17:4 J. Mar. L. & Com. 467. For an account of Canada's position regarding the development of the new definition during the deliberations of the IMO Legal Committee, including Canada's desire to restrict speculative claims, see D. Silverstone, "Ship Source Oil Pollution Damage: A Canadian Perspective on Recoverability of Economic Losses and Damage to the Marine Environment" (1985) 9:2 Marine Policy 108.

The geographical scope of application is also widened under the 1984 *Protocols*. Whereas the 1969 *CLC* provides for recovery of oil pollution damages sustained only within a state's territorial sea,<sup>367</sup> the *CLC Protocol* additionally provides for pollution damage caused within a state's 200 mile "Exclusive Economic Zone."<sup>368</sup>

The most important provisions of the 1984 *Protocols* concern the limits of liability, which are raised considerably. Under article 6(1) of the *CLC Protocol*, limits are set at approximately \$4.9 million (3 million SDRs) for a ship of 5,000 units of tonnage or less. For larger ships, limits are raised an additional \$691 (420 SDRs) for each additional tonne, to a maximum of \$98 million (59.7 million SDRs).<sup>369</sup> Article 6(3) of the *Fund Protocol* raises the limits much further and is implemented in two stages. First, the *Fund Convention* provides for a maximum level of compensation of 135 million SDRs, resulting in a combined total of approximately \$222 million. This limit will be raised even further to a maximum of \$329 million (200 million SDRs) with respect to any one incident,

when there are three Parties to this Convention in respect of which the combined relevant quantity of contributing oil received by persons in the territories of such Parties, during the preceding calendar year, equalled or exceeded 600 million tons.<sup>370</sup>

Once this second stage is reached, the total amount recoverable under the two *Protocols* would be approximately \$329 million—over three times the limit currently available. Moreover, the *Protocols* provide for a more expedient means of revising these limits, should this be deemed necessary in the future.<sup>371</sup>

However, while the limits may be much higher and more easily revised, the six years of negotiations leading to the drafting of the

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<sup>367</sup> *CLC*, *supra*, note 334, art. I(a).

<sup>368</sup> *CLC Protocol*, *supra*, note 358, art. 3(a)(ii). Note that, again, this provision is identical for the *Fund Protocol*, *supra*, note 358, art. 4.

<sup>369</sup> As with the *CLC* and *Fund Convention*, the "unit of account" is established as the Special Drawing Right (SDR) as defined by the International Monetary Fund. *CLC Protocol*, *ibid.* art. 6(9)(a).

<sup>370</sup> *Fund Protocol*, *supra*, note 358, art. 6(3).

<sup>371</sup> Under article XVIII of the 1969 *CLC*, *supra*, note 334, limits of liability could only be altered by means of a full scale Diplomatic Conference. However, under the *CLC Protocol*, any proposals to amend the limits may be circulated among all states party to the *Protocol* and then submitted to the Legal Committee of the IMO, which can then vote on the amendment, subject to certain conditions. *CLC Protocol*, *supra*, note 358, art. 15(1)-(6).

*Protocols* also resulted in a significant compromise regarding the shipowner's limit of liability. Whereas the *CLC* provides for strict liability,<sup>372</sup> the *CLC Protocol* reverses this legal achievement and actually reimposes only a fault based burden of intentional or reckless negligence:

The owner shall not be entitled to limit his liability under this Convention if it is proved that the pollution damage resulted from his personal act or omission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result.<sup>373</sup>

The effect of this provision is to render a shipowner's limit of liability virtually unbreakable. As Abecassis and Jarashaw note,

the concept is close to, but not identical with, the English law concept of wilful misconduct, which governs the question of when the assured's conduct invalidates the insurance contract. Since most Protection and Indemnity policies insuring oil pollution damage under the Convention are governed by English law, in most cases the cover will be intact when there is a right to limit, and the cover will fail if the right to limit is broken: this alone may discourage victims from attempting to challenge in court the owner's right to limit under these new provisions.<sup>374</sup>

That the 1984 *Protocols* would provide for virtually unbreakable limits of liability for shipowners has been particularly problematic for Canada's acceptance of the *Protocols*. The Federal Internal Review notes:

This in itself would not be of great importance provided that the limits of the revised Fund convention were sufficiently high. While the majority of spills would probably fall within the limits described earlier, recent events (EXXON Valdez) show that the revised limits of the Fund would not be sufficient in the case of mega spills. Consequently, there would be insufficient funds available for compensation in such cases should it not be possible to break limitation.<sup>375</sup>

The Public Review Panel echoes these concerns, observing that "one must be cognizant of the implicit tradeoff" imposed by "making the limitation of liability substantially unbreakable."<sup>376</sup> Both reviews con-

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<sup>372</sup> *CLC, supra*, note 334, art. V(2).

<sup>373</sup> *CLC Protocol, supra*, note 358, art. 6(2).

<sup>374</sup> Abecassis *et al., supra*, note 36 at para. 10-148.

<sup>375</sup> Federal Internal Review, "Liability and Compensation for Damages Caused by Ship Source Pollution: #4 Background Paper Re: 1984 Protocols to the Civil Liability Convention and Fund Convention" (Ottawa: Canadian Coast Guard, 1989) [unpublished].

<sup>376</sup> *Protecting Our Waters, supra*, note 4 at 84.

cluded that Canada should not become party to the *Protocols* until the higher limits of compensation provided by the second stage of the *CLC Protocol* become effective, at which point "Canada's pro rata share of clean-up and damage expenses would be far less because the expenses will be shared by more states, including most of the world's large oil importers."<sup>377</sup>

The *Protocols* to the *CLC* and the *Fund Convention* are not yet in force, as they lack the requisite number of signatories. The *CLC Protocol* will enter into force twelve months following the date on which ten states have become party to the *Convention*, six of which have not less than one million units of gross tanker tonnage.<sup>378</sup> The *Fund Protocol* will enter into force after at least eight states, whose total receipt of oil during the preceding year has been at least six hundred million tons of contributing oil, have become party to the *Convention*.<sup>379</sup> No state may sign the *Fund Protocol* without first having ratified, accepted, approved, or acceded to the *CLC Protocol*.<sup>380</sup> Further, the *Fund Protocol* will not enter into force prior to the *CLC Protocol*.<sup>381</sup>

To date, there are only six contracting states to the *CLC Protocol*,<sup>382</sup> and only two, Germany and France, are party to the *Fund Protocol*.<sup>383</sup> As it currently stands, it is unlikely that they will enter into force in the foreseeable future. This is due primarily to the fact that the federal *Oil Pollution Act of 1990*,<sup>384</sup> which was signed by President Bush on 18 August 1990, effectively precludes U.S. ratification of the *Protocols* at the current time.<sup>385</sup> Without the membership of the U.S., the other

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<sup>377</sup> *Ibid.*

<sup>378</sup> *CLC Protocol, supra*, note 358, art. 13(1).

<sup>379</sup> *Fund Protocol, supra*, note 358, art. 30(1)(a)-(b).

<sup>380</sup> *Ibid.* art. 28(4).

<sup>381</sup> *Ibid.* art. 30(2).

<sup>382</sup> *Status of Multinational Conventions, supra*, note 68 at 230.

<sup>383</sup> *Ibid.* at 262.

<sup>384</sup> For a text of the Act, see House of Representatives, Conference Report to accompany H.R. 1465, 101st Cong., 2d Sess. (1990). See Committee on Merchant Marine and Fisheries, U.S. House of Representatives, Release, "After 15 Years, Massive Oil Spill Law is Signed" (19 August 1990).

<sup>385</sup> In an earlier draft, provisions under sections 3001-8 of Title III of the House Bill, entitled "Implementation of International Conventions," provided for the implementation of the 1984 *Protocols*. See Oil Pollution and Compensation: Hearing Before the Subcommittee on Coast

leading oil importing nations—in particular, Japan and Italy—are unlikely to ratify the *Protocols*, rendering virtually impossible the ability to satisfy the provisions required to allow the *Protocols* to enter into force. Currently, members of the IMO, including Canada, are deliberating over alternative mechanisms to “trigger” the entry into force of the 1984 *Protocols*.<sup>386</sup>

Clearly, the 1984 *Protocols* offer substantial benefits to those states which are party to them, most notably in the vastly increased liability and compensation limits. As well, the increased geographical scope of application and broader definitions, among other things, offer a strengthened regime of compensation. The provision for shipowner's liability is, however, a reversal of the trend in recent years towards stricter liability. Moreover, the “unbreakable” shipowner's liability limit is extremely problematic. A monumentally wealthy corporation, such as Exxon, could well limit its liability to an amount representing only a fraction of the total costs of a massive spill and clean out the *Fund Convention* almost before the oil had hit the beaches. The U.S. federal position on not ratifying the *Protocols* until the second stage of compensation is reached is reasonable in this light. As the legislation now stands, compromises will be impossible to avoid, but the potential pay offs would, at least, be far greater. Of course, if every state waits for the second stage to be implemented before ratifying the *Protocols*, the second stage will never come into effect.

### B. National Law

Twenty years ago, the Canadian government was prompted to substantially revise the *Canada Shipping Act*, when both the *Torrey Canyon* disaster in 1967 and the *Arrow* spill off the coast of Nova Scotia in 1970 brought the issue of ship source oil pollution dramatically home

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Guard and Navigation of the Committee on Merchant Marine and Fisheries, 101st Cong., 1st Sess. (Washington, D.C.: U.S. Government Printing Office, 1989) at 63. However, in the final draft of the *Oil Pollution Act of 1990*, these provisions were deleted and replaced with the following:

It is the sense of the Congress that it is in the best interests of the United States to participate in an international oil pollution liability and compensation regime that is at least as effective as Federal and State laws in preventing incidents and in guaranteeing full and prompt compensation for damages resulting from incidents.

*Oil Pollution and Compensation Act of 1990: Conference Report, ibid.* s. 3001.

<sup>386</sup> Personal communication with A. Popp, Department of Justice (Ottawa, 9 November 1990).

to Canadians. As noted earlier, the latter incident occurred in the midst of a veritable legal vacuum.<sup>387</sup> Indeed, as one federal official notes, both the *Torrey Canyon* and *Arrow* spills were similar in several respects:

Many of the same problems that faced the British and French governments, faced the Canadian government—no statutory regime of liability, inadequate limits of liability, jurisdiction, how to bring an action against those responsible for a foreign owned, registered and operated ship.<sup>388</sup>

Consequently, Part XX of the *Canada Shipping Act* was created,<sup>389</sup> containing provisions for liability and compensation for oil pollution damage for the first time. In 1970, following the voyage of the *Manhattan* through the Northwest Passage, the *Arctic Waters Pollution Prevention Act*<sup>390</sup> was also drafted. For the purposes of this review, only the *Canada Shipping Act* will be examined, due to its general application to all Canadian waters south of the sixtieth parallel.

Briefly, Part XX applied to all Canadian waters south of the sixtieth parallel, including all fishing zones and all waters north of the sixtieth parallel which were not contained within a 100 mile shipping safety control zone made pursuant to the *Arctic Water Pollution Prevention Act*.<sup>391</sup> It established a framework of strict liability with narrow defences.<sup>392</sup> Liability limits were set at 2,000 gold francs (about \$219 at current rates) per ton of ship's tonnage or 210 million gold francs (\$23 million), whichever was less.<sup>393</sup> Moreover, the liability provi-

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<sup>387</sup> For further discussion, see *Report of the Royal Commission, supra*, note 161.

<sup>388</sup> A. Popp, "State Responsibility and the Environment (With Specific Reference to Liability and Compensation for Oil Pollution Caused by Ship)" in *Proceedings of the 1989 Conference of the Canadian Council on International Law: Preserving the Environment* (Ottawa: Canadian Council on International Law, 1989) 142 at 160 n. 37.

<sup>389</sup> S.C. 1970-71-72, c. 27.

<sup>390</sup> S.C. 1969-70, c. 47. The *Act* was drafted as much to establish jurisdictional control over arctic waters as it was to protect the arctic marine ecosystem. For further discussion on the background of the *Act*, see M'Gonigle & Zacher, *supra*, note 160. In brief, the *Act* created a regime of absolute liability (s. 7(1)), imposed upon the owners of both the ship and its cargo (s. 6(1)). Further, the *Act* applies to all pollutants; its provisions are not restricted to oil pollution (s. 2). Finally, it applies north of the sixtieth parallel (s. 3).

<sup>391</sup> *Canada Shipping Act*, R.S.C. 1970 (2d Supp.), c. 27, s. 727(2) [hereinafter *CSA (1970)*].

<sup>392</sup> These include situations where the discharge was caused by the claimant, an act of war, an act or omission done by a third person with the intent to cause damage, and government negligence in the installation or maintenance of navigational aids. *Ibid.* s. 735(1).

<sup>393</sup> *Ibid.* s. 735(4).

sions contained within Part XX applied to both the shipowner and the owner of the cargo,<sup>394</sup> and both were required to provide evidence demonstrating financial responsibility up to the prescribed liability limits.<sup>395</sup> Section 736(2) also provided for direct action against the insurers.

The provisions of Part XX applied to all pollutants, not just "persistent oil."<sup>396</sup> Also, the liability provisions of the *Act* applied to pollutants "in bulk,"<sup>397</sup> but the supporting regulations suggest the pollutant need not be carried only as cargo.<sup>398</sup>

The Maritime Pollution Claims Fund (MPCF) was also established under Part XX<sup>399</sup> and was made up of payments levied on each ton of bulk oil cargo transported within Canadian waters.<sup>400</sup> This levy was only collected between 1972 and 1975, at which time it stood at approximately \$39 million.<sup>401</sup> Further payments into the fund were then deemed to be unnecessary by the Minister of Transportation, as the amount was considered sufficiently high, and the MPCF had thus far been little used.<sup>402</sup> At the time of the *Nestucca* incident, the virtually unused fund had increased in value to approximately \$140 million.

### C. *The Canadian Regime and International Law: Pre-1989*

Part XX of the *Canada Shipping Act* shared several similarities with the international regime in force at the time, namely, the *Civil Liability Convention (CLC)*. For one, both regimes established a

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<sup>394</sup> *Ibid.* s. 734(1). In this respect, they were similar to section 6(1) of the *Arctic Waters Pollution Prevention Act*, *supra*, note 390.

<sup>395</sup> *CSA (1970)*, *ibid.* s. 736.

<sup>396</sup> *Ibid.* s. 727. "Oil" is defined as "oil of any kind or in any form."

<sup>397</sup> *Ibid.* s. 734(1).

<sup>398</sup> Popp, *supra*, note 388 at 161. Popp refers to the *Maritime Pollution Claims Fund Regulations*, C.R.C. 1978, c. 1444.

<sup>399</sup> *CSA (1970)*, *supra*, note 391, s. 737.

<sup>400</sup> *Ibid.* s. 748(1).

<sup>401</sup> *Protecting Our Waters*, *supra*, note 4 at 87.

<sup>402</sup> Personal communication with A. Popp, Department of Justice (Ottawa, 9 November 1990).



framework of strict liability, with similar defences.<sup>403</sup> The liability limits of the two pieces of legislation were also identical,<sup>404</sup> and both regimes established pollution compensation funds.

The differences between international law and the *Canada Shipping Act* were nonetheless significant. For one, the scope of application of each was substantially different. While Part XX of the *Canada Shipping Act* applied to all Canadian waters, including Canada's 200 mile fishing zones, the *CLC* applied only to the territorial sea. Also, unlike the international regime, application of Part XX was not restricted to persistent oils. The liability provisions of the *Act* were also broader, applying not only to the shipowner, but also to the cargo owner, providing also for the right of direct action against the insurer.

These discrepancies between Canadian and international law impeded Canada's accession to the *CLC* and the *Fund Convention*. In fact, Canada had unsuccessfully advocated many of these relatively "radical" provisions at the *CLC* negotiations in 1969.<sup>405</sup> Following both the *Torrey Canyon* and *Arrow* incidents, however, public opinion favoured assertive environmental initiatives, and Canada was unwilling to wait for what was often a painfully slow diplomatic process at the IMCO. As a result, Canada unilaterally enacted what appeared to be a superior environmental regime.

The final product, although a vast improvement over the previous regime, was far less effective than originally expected. The provision for direct access to the insurer and for liability to be placed on the cargo owner were highly contentious. Indeed, Protection and Indemnity Associations (P & I clubs) refused to provide the necessary insurance, and the sections were never proclaimed into force.<sup>406</sup> Similarly, while the application of Part XX was not restricted to

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<sup>403</sup> Defences under both section 735 of the *CSA* (1970), *supra*, note 391 and article III(2)-(3) of the *CLC*, *supra*, note 334 included cause by claimant, war, intentional act by a third party, and government negligence in the maintenance of navigational aids.

<sup>404</sup> As noted earlier, both article V(1) of the *CLC*, *ibid.* and section 735(4) of the *CSA* (1970), *ibid.* set the limits of liability of the shipowner at 2,000 gold francs per ton of the ship's tonnage to a maximum of 210 million francs.

<sup>405</sup> During the negotiations, Canada was prominent among a group of states supporting liability that would be strict, unlimited, and imposed jointly on both the ship and cargo owners. See M'Gonigle & Zacher, *supra*, note 160 at 172-79ff.

<sup>406</sup> Popp, *supra*, note 388 at 163.

persistent oils, the insurance offered by P&I clubs was (and still is) limited to oils defined as being "persistent."<sup>407</sup>

The Maritime Pollution Claims Fund (MPCF), as well, offered weak protection to Canadians. Although the MPCF and IOPC Fund were similar, the latter provided immediate recourse for acceptable claims. The domestic fund, by contrast, served as a fund of last resort for unsatisfied judgement claims.<sup>408</sup> In practice, the MPCF was cumbersome and complex and so dependent on the use of litigation that it was virtually unused.

Thus, few claims were submitted to the MPCF, and fewer were accepted. Between the inception of the fund in 1971 until 1979, only eight claims were made against it. In all cases, the claimants were fishermen claiming loss of income due to spill damage under section 746 of the *Canada Shipping Act*. Only two of these were accepted. The first claim was for \$3200.00 and was settled at \$345.90. The second fisherman claimed \$1,050.00 and was awarded \$300.00.<sup>409</sup> A fund with tens of millions in assets, paid out \$645.90.

In 1979, following an oil spill in which the British tanker, the *Kurdistan*, dumped 7,130 tons of bunker oil into the Cabot Strait, 190 East Coast fishermen applied to the MPCF again claiming loss of income under section 746 of the *Canada Shipping Act*. However, under section 734 of the *Act*, the polluter was directly responsible for all direct loss and damage from an oil spill, including damage of fishing gear and equipment. Consequently, claimants were obligated to direct their individual claims against the owners of the *Kurdistan*. There was no means of facilitating this process at the time.<sup>410</sup> In this case, the polluters were prompt and fair, and litigation on the part of the victims proved to be

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<sup>407</sup> Federal Internal Review, "Liability and Compensation for Damages Caused By Ship Source Pollution: Issue 2, P&I Coverage in the Arctic" (Ottawa: Canadian Coast Guard, 1989) [unpublished].

<sup>408</sup> Popp, *supra*, note 388 at 161.

<sup>409</sup> Letter from K.J. Burbridge, MPCF Administrator, to Ruth Marlyn, Canadian Labour Congress (28 February 1980) Ottawa [hereinafter Burbridge].

<sup>410</sup> The recent amendments to the *Canada Shipping Act* have altered this substantially. The renamed "Ship-Source Oil Pollution Fund" is now available as the primary means of compensation, thus facilitating claims for individuals and non-public body claimants. See below, section IV.E at 239.

unnecessary.<sup>411</sup> The Maritime Pollution Claims Fund was not used since.

In short, Part XX of the *Canada Shipping Act* was in practice impotent. By the late 1970s, Canada was in practice falling far behind what was available if the country had been covered by the original *CLC* and the *Fund Convention*. There were no substantive revisions concerning the liability and compensation features of the *Act* for fifteen years.<sup>412</sup>

#### D. *The Nestucca Fiasco*

Ironically, Canada finally got around to writing new liability laws in the mid-1980s, but their tardy proclamation came four months after the nationally visible *Nestucca* spill off Vancouver Island in 1989. This incident provides a useful landmark in examining the evolution of the law and serves to illustrate the character of the Canadian regime then and now. A description and analysis of the inadequate state of preparation and flawed efforts to clean up the spill is beyond the scope of this review. However, some mention of the organizational problems is warranted, as the issues of adequate preparedness and oil spill response are so intertwined with that of responsibility and liability.

The spill highlighted fundamental legal difficulties. Response to the spill was confounded by such logistical problems as lack of preparedness, equipment, and trained personnel and a reluctance of authorities and clean-up contractors to co-operate effectively with local volunteers.<sup>413</sup> It also spotlighted the ambiguous legal obligation of the Minister of Transport. Despite having the authority to intervene in the event of such spills,<sup>414</sup> neither the polluter nor the Minister were *obligated* to take preventive or mitigative action, and neither did for several days.<sup>415</sup>

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<sup>411</sup> Burbridge, *supra*, note 409.

<sup>412</sup> *Protecting Our Waters*, *supra*, note 4 at 90.

<sup>413</sup> For a critical discussion of the inadequate response to the *Nestucca* spill, see *ibid.* at 56-60.

<sup>414</sup> *Canada Shipping Act*, *supra*, note 59, s. 661(2)-(3).

<sup>415</sup> Under the *Canada Shipping Act*, the polluter was liable for any costs incurred in mitigating or preventing pollution damage. The amended *Act*, however, conforms with the international regime in that a shipowner may recover costs voluntarily assumed to prevent or reduce pollution damage. Thus, the shipowner can now undertake clean-up or prevention efforts without

As a result of this legal ambiguity and organizational inertia, the clean-up was delayed over concerns about who would pay. The "polluter pays" principle has long been Coast Guard policy, and the *Nestucca* incident proved how this policy could be a real obstacle to prompt and adequate response. Efforts to confirm that the barge *Nestucca* was indeed the source of the oil coating the beaches of western Vancouver Island took several days. As a result, Sause Brothers, the owner of the barge, deferred hiring contractors until 5 January, almost two weeks after the spill had first occurred. The contractors, in turn, hired clean-up workers one day later. A full-scale response effort, in conjunction with government agencies, was undertaken only on 10 January.<sup>416</sup>

These problems were seriously compounded because the spill was transboundary in nature. At the time, there was no provision for recovery under the *Canada Shipping Act* for spills originating in another jurisdiction and drifting in. Under section 654(2),<sup>417</sup> the liability and compensation provisions of the *Act* applied only

- (a) to all Canadian waters south of the sixtieth parallel of north latitude;
- (b) to all Canadian waters north of the sixtieth parallel of north latitude that are not within a shipping safety control zone prescribed pursuant to the *Arctic Waters Pollution Prevention Act*;
- (c) to any fishing zones of Canada prescribed pursuant to the *Territorial Sea and Fishing Zones Act*; and
- (d) to all ships in waters described in paragraphs (a) to (c).

The *Nestucca* spill originated beyond Canadian waters. Consequently, compensation under the *Act* was unavailable to claimants. Moreover, as neither the U.S. nor Canada were party to the *CLC* or the *Fund Convention*, claimants could seek no recourse through international law. All this was exacerbated by the concern that, even after expensive and cumbersome cross-border litigation, Canadian victims might be deprived of full compensation by the century-old American *Limitation of Liability Act*.<sup>418</sup>

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jeopardizing his or her ability to maintain costs below his or her limit of liability. *Ibid.* s. 677(b). For further discussion, see Federal Internal Review, "Liability and Compensation for Damages Caused By Ship Source Pollution: #8 Background Paper Re: The Canadian Environmental Protection Act" (Ottawa: Canadian Coast Guard, 1989) [unpublished].

<sup>416</sup> *Protecting Our Waters*, *supra*, note 4 at 56.

<sup>417</sup> *Supra*, note 59.

<sup>418</sup> 46 U.S.C.S. § 183 (Law. Co-op. 1987). See C. Sandborn, "Recommendations for Reform of the Laws Governing Oil Transportation and Oil Spills" (Brief submitted to the Public Hearing on Oil Transportation and Oil Spills, 15 June 1989) (Vancouver, B.C.: West Coast Environmental Law

*E. The New Canadian Regime: Post-1989*

In the midst of the ensuing legal uncertainty, the fact remained that Parliament had actually adopted substantial amendments to the *Canada Shipping Act* in March 1987; the new regime was simply awaiting proclamation. Finally, on 24 April 1989, the third supplement of the *Revised Statutes of Canada, 1985*, was proclaimed into force. The provisions of Part XX were repealed and replaced with the new parts: Part XV, entitled "Pollution Prevention and Control," and Part XVI, entitled "Civil Liability and Compensation for Pollution." The new amendments allowed for the ratification of much of the international regime, most notably *MARPOL 73/78*, the *CLC*, and the *Fund Convention*.

The liability provisions of Part XVI of the *Act* generally mirror those of the prevailing international framework. For example, the geographical scope of application of Part XVI has been broadened to include pollution damage which may occur

- a) in any place in Canada,
- b) in Canadian waters, and
- c) in any fishing zone pursuant to the *Territorial Sea and Fishing Zones Act*, except where the *Arctic Waters Pollution Prevention Act* applies, irrespective of the location of the actual or expected discharge and irrespective of the Location where any preventive measures are taken.<sup>419</sup>

This provision is significant in cases where marine pollution originates in another jurisdiction, such as occurred with the *Nestucca* incident.

The shipowner's limit of liability is now approximately \$219 per ton or \$23 million, whichever is less.<sup>420</sup> Liability continues to be strict, subject to certain defences virtually identical to those of the *CLC*.<sup>421</sup> As

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Association) at 11. American legislation is discussed below, section IV.F at 245. As it turned out, the U.S. District Court for the District of Oregon found Sause Bros., owners of the barge towing the *Nestucca*, "had privity and knowledge of the negligent acts that caused the casualty" and were therefore ineligible for limitation of liability under the *Act*. See *In re Sause Bros. Ocean Towing*, 769 F. Supp. 1147 (D. Or. 1991)

<sup>419</sup> *Canada Shipping Act*, *supra*, note 59.

<sup>420</sup> *Ibid.* s. 679(a)-(b). Liability provisions of the *Act* are now measured in Special Drawing Rights, with the limit of liability actually set at the lesser of 133 SDRs per tonne or 14 million SDRs in total.

<sup>421</sup> These include "an act of war"; "a natural phenomenon of an exceptional, inevitable and irresistible character"; "an act or omission of a third party with intent to cause damage"; "the negligence or wrongful act of any government or other authority responsible for the maintenance of lights or other navigational aids, in the exercise of that function"; or damage resulting due to the

with the international regime, a shipowner may be compensated for any costs voluntarily incurred to prevent or minimize oil spill damage.<sup>422</sup> Further, a tanker owner is not entitled to limit his or her liability without first establishing a "Convention ship owner's fund"<sup>423</sup> in an amount equal to the limit of that owner's liability.<sup>424</sup> In addition, the claimant has direct access to shipowner's guarantor or insurer, with respect to laden oil tankers.<sup>425</sup>

The Maritime Pollution Claims Fund has now been renamed the Ship-Source Oil Pollution Fund (SSOPF).<sup>426</sup> As was the case with its predecessor, payments into the fund are based on a levy on each tonne of oil cargo transported within Canadian waters.<sup>427</sup> The levy, however, has been increased from 15 cents to 30 cents per tonne,<sup>428</sup> to be adjusted according to the Consumer Price Index in the following fiscal years thereafter.<sup>429</sup> However, the Minister of Transport has not yet imposed the levy.<sup>430</sup> Currently, the fund stands at approximately \$163 million,<sup>431</sup> and payments into the international fund are made through it.<sup>432</sup>

The SSOPF is now designed to supplement compensation received under the *CLC* and *Fund Convention*.<sup>433</sup> However, the Canadian fund

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intent or negligence of the claimant. *Ibid.* s. 677(3)-(4).

<sup>422</sup> *Ibid.* s. 677(6).

<sup>423</sup> "Convention ship" refers simply to "a sea-going ship, wherever registered, carrying, in bulk as cargo, crude oil, fuel oil, heavy diesel oil, lubricating oil, whale oil or any other persistent oil." *Ibid.* s. 673.

<sup>424</sup> *Ibid.* s. 682.

<sup>425</sup> *Ibid.* s. 686.

<sup>426</sup> *Ibid.* s. 702.

<sup>427</sup> *Ibid.* s. 716.

<sup>428</sup> *Ibid.* s. 717(1).

<sup>429</sup> *Ibid.* s. 717(2)-(3).

<sup>430</sup> In response to the final report of the Public Review Panel, Transport Canada recently announced that recommendations concerning the reinstatement of the levy "will be examined." See Transport Canada, *supra*, note 11.

<sup>431</sup> *Protecting Our Waters, supra*, note 4 at 13.

<sup>432</sup> *Canada Shipping Act, supra*, note 59, s. 701(1). Payments are made through the SSOPF in accordance with articles 10, 11, and 12 of the *Fund Convention, supra*, note 343.

<sup>433</sup> Specifically, the SSOPF is liable when "all reasonable steps have been taken to recover payment" from the shipowner or IOPC Fund; when neither the shipowner nor the Fund are liable; when the claim exceeds the maximum liability of the shipowner, and the excess is not recoverable under the Fund; or when the shipowner has insufficient funds to fulfil his or her legal obligations,

may also provide compensation for "mystery" spills from unknown sources<sup>434</sup> and for spills caused by ships other than laden tankers.

A particularly significant new provision is that the Canadian fund is now available as a primary source of compensation for individual or public body claimants, so that victims may now seek compensation *initially* from the SSOPF, rather than the shipowner.<sup>435</sup> The fund administrator is obliged to investigate and assess the claim and to "make an offer of compensation to the claimant for whatever portion of the claim the Administrator finds to be established."<sup>436</sup> The administrator may then "take all reasonable measures to recover the amount of his payment to the claimant from the owner of the ship, the International Fund or any other person liable."<sup>437</sup> Thus, victims of oil pollution damage are spared the ordeal of potentially costly and time consuming litigation with the shipowner. This facilitative role, if actively advanced, is a major improvement for oil pollution victims.

The maximum amount of compensation available from the SSOPF is currently set at \$100 million.<sup>438</sup> The funds are now available to compensate for loss of income, itself broadened considerably to include not only fishermen,<sup>439</sup> but fish farmers and other mariculturists, as well as those practicing subsistence hunting and fishing, and even subsequent fish plant workers.<sup>440</sup>

Two other changes reflect provisions of the *CLC*. First, the cargo owner is no longer liable for oil pollution damages. To accord itself with the larger oil trading world, liability is now restricted to the shipowner

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and the Fund is not liable for those obligations. *Canada Shipping Act, ibid.* s. 709(a)-(d).

<sup>434</sup> *Ibid.* s. 709(f). In such cases, it is the responsibility of the SSOPF administrator to prove that the spill causing the damage was not caused by a ship.

<sup>435</sup> *Ibid.* s. 710.

<sup>436</sup> *Ibid.* s. 710(2)(b).

<sup>437</sup> *Ibid.* s. 711(3)(c).

<sup>438</sup> *Ibid.* s. 714(1)(a). This figure is to be adjusted annually according to components of the Consumer Price Index. *Ibid.* s. 714(2).

<sup>439</sup> Prior to the entry into force of the third supplement, the *Canada Shipping Act* provided compensation only for the loss of income by fishermen. See *Canada Shipping Act*, R.S.C. c. S-9, s. 675(1).

<sup>440</sup> *Ibid.* s. 712(1).

only.<sup>441</sup> Second, Part XVI applies solely to damage caused by oil pollution.<sup>442</sup>

With the entry into force of the new *Canada Shipping Act* amendments in 1989, Canada once more joined ranks with the international shipping community with regard to liability and compensation. The higher limits of liability, and potential compensation afforded by ratifying the *CLC* and the *Fund Convention*, as well as the more streamlined process offered by the IOPC Fund settlement procedures, clearly offer greater protection to Canadians. As well, the Canadian regime on its own offers many improvements to previous domestic legislation. Moreover, unenforceable provisions in the legislation have been removed.

Nonetheless, the new regime under the amended *Act* is far from perfect. For one thing, the scope of application of the *Act* has been reduced. Whereas its provisions formerly applied to all pollutants, they are now, in accordance with the *CLC*, limited to oil pollution. In fact, Canada has no statutory framework whereby non-public bodies can be compensated for damages resulting from hazardous and noxious substances.<sup>443</sup> This is a very serious problem in the law. For another, the regime does not go far enough. There are several instances where this is the case. For example, neither the *CLC* nor the *Act* apply to oil other than that carried in bulk. In other words, spills from ships' fuel or from non-tanker ships in ballast are still not covered under the new regime. Yet, the pollution caused by such vessels can be substantial. As discussed earlier, ratification of the *Protocols*, if in force, would remedy this.

As well, admissible claims for loss of income are still very restricted. The *Act* fails to allow recovery for loss of income for those in tourism and related industries; although, in practice, the IOPC Fund administrator has allowed for recovery of claims of restaurateurs and hoteliers, so long as the damages are quantifiable.<sup>444</sup> This has occurred

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<sup>441</sup> *Ibid.* s. 677(1).

<sup>442</sup> *Ibid.*

<sup>443</sup> Federal Internal Review, "Liability and Compensation for Damages Caused By Ship Source Pollution: Issue 1, Application of CLC and fund to Fishing Zones" (Ottawa: Canadian Coast Guard, 1989) [unpublished].

<sup>444</sup> For a summary of IOPC Fund settlement policies over the years, see *Annual Report 1988*, *supra*, note 365 at 57-62.



because of the ambiguous definition of "pollution damage" in the *Convention*. In Canadian legislation, however, allowable claims are more explicitly—and restrictively—set out.

In another respect, the definition of pollution damage under Part XVI is more restrictive than that of the *CLC* and the *Fund Convention*. Whereas the international regime renders the shipowner liable for oil pollution damage,<sup>445</sup> defined as including "any reasonable measures taken by *any person* after an incident has occurred to prevent or minimise pollution damage,"<sup>446</sup> the *Act* provides for shipowner liability only for such measures undertaken by a *public authority*.<sup>447</sup> As the Public Review Panel points out, this explicitly excludes costs incurred by volunteers undertaking clean-up efforts.<sup>448</sup> Yet, if anything should have been learned from the *Nestucca* incident, it was the absolutely critical role which local volunteers play in such events, both in terms of enormous physical labour, and essential knowledge of the local environment.

Moreover, pollution damage to the natural environment is neglected under both domestic and international compensation provisions.<sup>449</sup> As noted above, the definition of pollution damage under the *CLC* and the *Fund Convention* is vague. Explicit interpretation of the term is left up to individual states to define domestically on a court-by-court basis. In Canada's case, the issue is viewed restrictively.<sup>450</sup> As the Public Review Panel notes, "shipowners, government agencies, the oil industry and others in Canada have continued to consider clean-up costs and damage to property without giving any thought to compensation for social, economic or environmental damage."<sup>451</sup> This approach flies in the face of a large and growing body

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<sup>445</sup> *CLC*, *supra*, note 334, art. III(1).

<sup>446</sup> *Ibid.* art. I(7) (emphasis added).

<sup>447</sup> *Canada Shipping Act*, *supra*, note 59, s. 677(1)-(2).

<sup>448</sup> *Protecting Our Waters*, *supra*, note 4 at 97.

<sup>449</sup> This issue has been discussed briefly in the context of the 1984 Protocols. See above, section IV.A.4 at 227.

<sup>450</sup> Indeed, at the negotiations for the 1984 *Protocols*, Canadian delegates were among those advocating a restricted definition of pollution damage in order to reduce speculative claims to the greatest extent possible. See Silverstone, *supra*, note 366.

<sup>451</sup> *Protecting Our Waters*, *supra*, note 4 at 98.

of literature and an expanding range of judicial and statutory recognition of compensable environmental damage *per se* (assessed, for example, as the cost of restoration) independent of individual property damage or quantifiable loss.<sup>452</sup> Canada might do well to look to the U.S. *Oil Pollution Act of 1990* for guidance on this issue.<sup>453</sup>

Sadly, but perhaps to have been expected, the aggregate amount of compensation available under both the SSOPF and the IOPC fund, approximately \$200 million, is still totally inadequate for spills of significant magnitude. By contrast, recent U.S. legislation establishes a fund with a limit of up to \$1 billion (U.S.).<sup>454</sup>

At a broad national level, the larger composite statutory framework for oil pollution liability in Canada is inconsistent. Numerous gaps and overlaps exist with other domestic legislation, including the *Arctic Waters Pollution Prevention Act*,<sup>455</sup> the *Fisheries Act*,<sup>456</sup> the *Canadian Environmental Protection Act*,<sup>457</sup> and others. Each offers differing defences, penalties, and scope of application. As the Public Review Panel notes, "the overall body of legislation lacks uniformity and consistency."<sup>458</sup>

Internationally, deficiencies with the *CLC* and the *Fund Convention* limit their effectiveness for Canada. As discussed above, the international regime only applies to the territorial sea (not the 200 mile

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<sup>452</sup> See, for example, F.B. Cross, "Natural Resource Damage Valuation" (1989) 42 Vand. L. R. 269; F. Halter & J.T. Thomas, "Recovery of Damages by States for Fish and Wildlife Losses Caused by Pollution" (1982) 10 Ecology L.Q. 5 at 7; and R. Carson & P. Navarro, "Fundamental Issues in Natural Resource Damage Assessment" (1988) 28 Nat. Resources J. 815. See, especially, the Ontario Law Reform Commission, *Report on Damages for Environmental Harm* (Toronto: Ontario Law Reform Commission, 15 January 1990). See also *State of Ohio v. U.S. Department of the Interior*, 880 F. 2d 432 (D.C. Cir. 1989) and *Ontario Environmental Protection Act*, R.S.O. 1980, c. 141, s. 81.

<sup>453</sup> See below, section IV.F at 245.

<sup>454</sup> Section 9001(c)(1) of the *Oil Pollution Act of 1990*, *supra*, note 384 amends section 9509(c)(2) of the *Internal Revenue Code of 1986*, 26 U.S.C.S. § 9509 (Law. Co-op. 1988), which establishes the Oil Spill Liability Trust Fund by raising the total amount recoverable under the Fund for expenditures per incident to \$1 billion (U.S.).

<sup>455</sup> *Supra*, note 151.

<sup>456</sup> *Supra*, note 152.

<sup>457</sup> *Supra*, note 154.

<sup>458</sup> *Protecting Our Waters*, *supra*, note 4 at 90. A detailed discussion of this issue is beyond the scope of this report. For further discussion, see "Gaps and Overlaps," *supra*, note 155.

fishing zones) and is limited to persistent oils.<sup>459</sup> And with the U.S. not being a party to either the *CLC* or the *Fund Convention*, the resolution of claims for transboundary oil pollution may remain problematic. A Canadian official involved in the administration of the legislation points out that a polluting ship may remain in U.S. jurisdiction and may not be insured to the limits required by the *CLC*. Further, in order to receive compensation from the IOPC Fund, the claimant must first demonstrate that they were unable to obtain full compensation from the shipowner.<sup>460</sup> Thus, Canadian claimants might first have to seek recompense in U.S. courts "to satisfy the requirement of the Fund Convention that all reasonable steps to pursue available legal remedies have been taken."<sup>461</sup> If this should be the case, it may be that the *Conventions* have found only partial application in North American waters. As Popp observes, "in many respects, Canada and the United States face the same situation as the British and French governments faced at the time of the *Torrey Canyon* incident."<sup>462</sup>

#### F. *The New American Regime*

With one of the world's largest maritime states located directly south of Canada's borders, the issue of liability and compensation for pollution damage arising from U.S. vessels is of obvious concern to Canadians. Two potential problems may arise from pollution from U.S. vessels in Canadian or international waters and from transboundary pollution originating directly from American waters. Prior to April 1989, the *Canada Shipping Act* contained no provision for the latter scenario.

Before 1990, no comprehensive federal legislation was in place in the U.S. which promptly and adequately compensated those who suffered

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<sup>459</sup> The definition of "oil" under article I(5) of the *CLC*, *supra*, note 334 is as follows: "any persistent oil such as crude oil, fuel oil, heavy diesel oil, lubricating oil and whale oil, whether carried on board a ship as cargo or in the bunkers of such a ship." This definition is far from being explicitly clear. In practice, damages from spills of gasoline, automotive diesel, No. 2 fuel oil, and kerosene are not recoverable under the *Fund Convention*, *supra*, note 343. See also Abecassis *et al.*, *supra*, note 36 at paras 10-10-10-13.

<sup>460</sup> *Fund Convention*, *ibid.* art. 4(1).

<sup>461</sup> Popp, *supra*, note 388 at 167.

<sup>462</sup> *Ibid.* at 168.

economic loss due to oil pollution damage, other than government costs for clean-up and removal. Neither the Nixon nor the Ford administrations implemented either the *CLC* or the *Fund Convention*, as government critics contended that the limits established under each were far too low, a position supported by the environmental community.<sup>463</sup> Instead, a byzantine domestic regime existed. As one critic described it, there was "a fragmented hodge podge of national and state laws providing inadequate cleanup and damage remedies, taxpayer subsidies to cover cleanup costs, damages that go uncompensated, corporate structures designed to limit exposure, and other legal barriers to victim recoveries."<sup>464</sup>

Attempts to draft comprehensive oil pollution and compensation legislation for the U.S. were ongoing for over fifteen years.<sup>465</sup> Finally, on 18 August 1990, as images of yet another prodding disaster, this time the *Exxon Valdez*, were just beginning to fade from the public consciousness, the long awaited *Oil Pollution Act of 1990*<sup>466</sup> became law.

At the time of the *Nestucca* spill, however, no such comprehensive U.S. legislation existed, nor was the U.S. party to the *CLC* or the *Fund Convention*. Nonetheless, in cases of transboundary oil pollution or pollution from American vessels travelling in or adjacent to Canadian waters, certain U.S. legislation was potentially applicable.

One U.S. law which provides a particular impediment to the just settlement of pollution damage claims is the 1851 *Limitation of Liability Act*.<sup>467</sup> The *Act* was passed in 1851 to ensure protection to the nascent American shipping industry. Remarkably, this *Act* can still be called upon for incidents in which oil spill damages have occurred without the shipowner's "privity or knowledge" of the negligence causing the

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<sup>463</sup> Oil Pollution and Compensation: Hearing Before the Subcommittee on Coast Guard and Navigation of the Committee on Merchant Marine and Fisheries, 101st Cong., 1st Sess., 11 May 1989 (Washington, D.C.: U.S. Government Printing Office, 1989) at 205 (statement of Clifton Curtis on behalf of the Oceanic Society, Environmental Policy Institute, and Friends of the Earth) [hereinafter Curtis].

<sup>464</sup> *Ibid.* at 201. In particular, these laws were characterized as having burdens of proof that favoured the spiller.

<sup>465</sup> For a brief description of these efforts, see *Report: Oil Pollution Prevention, Removal, Liability and Compensation Act of 1989*, 101st Cong., 1st Sess. (18 September 1989) at 32-34.

<sup>466</sup> *Oil Pollution Act of 1990*, *supra*, note 384.

<sup>467</sup> *Supra*, note 418.

damage.<sup>468</sup> In such cases, liability cannot exceed the value of the shipowner's interest in the vessel and in any earned freight, as assessed *after* the incident has occurred.<sup>469</sup> The owners and time charterers of the *Torrey Canyon* unsuccessfully sought to utilize the *Act*. Had their attempt been successful, this would have limited their liability to \$50.00 (U.S.)—the cost of the lone surviving lifeboat. Instead, actual damages were assessed at approximately \$7.7 million (U.S.).<sup>470</sup>

Clearly, the anachronistic *Act* can, and does, work to the disadvantage of oil spill victims in many cases. Consequently, there is a judicial tendency to interpret the *Act* to deny or restrict shipowner's limitation.<sup>471</sup> However, as one author comments, "Forcing courts to remake United States policy by reference to a 137 year old statute has contributed to the present state of uncertainty in determining liability and recovery under U.S. law."<sup>472</sup> This uncertainty is true for foreign as well as American claimants.<sup>473</sup>

Only one law, the *Trans-Alaskan Pipeline Authorization Act* (TAPAA),<sup>474</sup> specifically applies to Canadian claimants. When the Trans-Atlantic Pipeline was authorized in 1973, considerable concern existed over the environmental risks posed by an Alaskan tanker route running along the West Coast, particularly for Canadians to whom the transport of Alaskan oil posed risks but provided no benefits.<sup>475</sup> Consequently, TAPAA provided for compensation to Canadian as well as to American victims of Alaskan oil pollution damage.<sup>476</sup>

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<sup>468</sup> *Ibid.*

<sup>469</sup> This is based upon the Supreme Court's first judicial interpretation applied to the liability provision of the *Act* in *The City of Norwich*, 118 U.S. 468 at 491-93 (1886).

<sup>470</sup> Juric, *supra*, note 130 at 305.

<sup>471</sup> See B. Van Hanswyk, "The 1984 Protocols to the International Convention on Civil Liability for Oil Pollution Damages and the International Fund for Compensation for Oil Pollution Damages: An Option for Needed Reform in United States Law" (1988) 22 Int'l Law. 319 at 332.

<sup>472</sup> *Ibid.* at 320.

<sup>473</sup> The *Act* was also applied, though broadly interpreted to favour full recovery on the part of the claimants in the *Amoco Cadiz* proceedings. See Van Hanswick, *ibid.* at 336-37.

<sup>474</sup> 43 U.S.C.S. §§ 1651 *et seq.* (Law. Co-op. 1980) [hereinafter TAPAA].

<sup>475</sup> Anderson, *supra*, note 7 at 109.

<sup>476</sup> TAPAA, *supra*, note 474, § 1653(c)(1).

*TAPAA* covers damages caused by oil discharges from vessels operating between the pipeline terminals and U.S. ports, including the loading and unloading of those vessels.<sup>477</sup> Vessel owners and operators are strictly liable with narrow defences.<sup>478</sup> Overall limits of liability are set at \$14 million (U.S.). Owners and operators must provide proof of financial responsibility before any such vessel is loaded.<sup>479</sup> Damages are recoverable, including clean-up costs, for public or private persons or entities.<sup>480</sup> As with the *Canada Shipping Act*, such damages were restricted to claims for direct economic and subsistence losses.

For damages exceeding the \$14 million (U.S.) maximum liability of the vessel owner, additional compensation may be provided by the Trans-Alaskan Pipeline Fund. The fund has an overall limit of \$100 million (U.S.) per incident.<sup>481</sup> However, damages exceeding the liability of the fund may be compensated through other applicable federal or state laws, if these are not pre-empted.<sup>482</sup> Until the *Exxon* spill, *TAPAA* was considered to be the most powerful federal law dealing with liability and compensation in the United States,<sup>483</sup> and it was the most relevant for the Canadian West Coast.

With the new environmental regime provided under the *Oil Pollution Act of 1990*, however, *TAPAA* has been eclipsed. Under the new legislation, both removal costs and damages are recoverable. Removal costs include those incurred by both the U.S. federal or state governments or native bands, as well as "any removal costs incurred by any person for acts taken by the person which are consistent with the National Contingency Plan."<sup>484</sup> Thus, compensation is not limited to governmental clean-up costs. More impressive, however, is the broadening of

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<sup>477</sup> *Ibid.* §§ 1651-1665.

<sup>478</sup> The only two defences allowed are an act of war and negligence on the part of the U.S. government. *Ibid.* § 1653(c)(2).

<sup>479</sup> *Ibid.* § 1653(c)(3).

<sup>480</sup> *Ibid.* § 1653(c)(1).

<sup>481</sup> *Ibid.* § 1653(c)(5). Note that these limits have been raised under the *Oil Pollution Act of 1990*, *supra*, note 384.

<sup>482</sup> *Ibid.* § 1653(c)(9).

<sup>483</sup> D.A. Bagwell, "Liability under United States law for spills of oil or chemicals from vessels" (1987) *Lloyd's Maritime and Commercial L.Q.* 496 at 515.

<sup>484</sup> *Oil Pollution Act of 1990*, *supra*, note 384, § 1002(b)(1)(A).

the definition of "damages," which is a major triumph for advocates of environmental protection. First, damages to *natural resources* are recoverable, including "damages for injury to, destruction of, loss of, or loss of use of, natural resources, including the reasonable costs of assessing the damage."<sup>485</sup> Second, any claimant may recover for "loss of profits or impairment of earning capacity due to the injury, destruction, or loss of real property, personal property, or *natural resources*."<sup>486</sup> Clearly, restaurateurs, hoteliers, and others in the tourist industry can now potentially recover for damages. By contrast, the *Canada Shipping Act* excludes such claimants, while the *CLC* and the *Fund Convention* do not *explicitly* cover such damages. Damages to real or personal property, subsistence use, revenues, and public services are also recoverable under section 1002(b)(2).

Liability is strict, joint, and several.<sup>487</sup> Defences are limited<sup>488</sup> and do not, in any event, apply with respect to a responsible party<sup>489</sup> who has failed to report the incident,<sup>490</sup> failed to provide all reasonable cooperation and assistance,<sup>491</sup> or failed to comply with an official order concerning damage avoidance.<sup>492</sup> No limit of liability exists for government clean-up costs in connection with Outer Continental Shelf facilities or vessels.<sup>493</sup> Liability limits of the "responsible party" are the greater of \$1,200 (U.S.) per gross ton, or \$10,000,000 (U.S.) for vessels exceeding 3,000 gross tons, or \$2,000,000 (U.S.) for smaller vessels. The U.S.

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<sup>485</sup> *Ibid.* § 1002(b)(2)(A).

<sup>486</sup> *Ibid.* § 1002(b)(2)(E) (emphasis added).

<sup>487</sup> Under section 1001(17) of the *Act*, liability is to be construed to be the standard of liability established by section 311 of the *Federal Water Pollution Control Act*, 33 U.S.C.S. § 1269 (Law. Co-op. Supp. 1992) and is thus strict, joint, and several.

<sup>488</sup> The defences are an act of God, an act of war, an act or omission of a third party or the gross negligence or wilful misconduct of the claimant, providing that the responsible party can prove these were the *sole* cause of the discharge. *Oil Pollution Act of 1990, supra*, note 384, § 1003(a)-(b).

<sup>489</sup> "Responsible party," where vessels are concerned, is defined as follows: "In the case of a vessel, any person owning, operating, or demise chartering the vessel." *Ibid.* § 1001(32)(A)).

<sup>490</sup> *Ibid.* § 1003(c)(1).

<sup>491</sup> *Ibid.* § 1003(c)(2).

<sup>492</sup> The *Federal Water Pollution Control Act, supra*, note 487, s. 311(c) or (e), as amended by s. 1003(c)(3) of the *Oil Pollution Act of 1990, supra*, note 384 or by the *Intervention on the High Seas Act*, 33 U.S.C.S. §§ 1471 *et seq.* (Law. Co-op. 1987).

<sup>493</sup> *Oil Pollution Act of 1990, ibid.* § 1004(c)(3).

President is required to adjust these limits by regulations which are to be upgraded every three years to keep up with inflation.<sup>494</sup>

Damages to natural resources are recoverable by the U.S. government, any state government, any native tribe, or for foreign governments<sup>495</sup> for natural resources under their jurisdiction.<sup>496</sup> In all cases, the process for presenting claims and recovering damages is streamlined through the designation of a trustee to act on behalf of the claimant(s).<sup>497</sup> These trustees are responsible for assessing natural resource damages and developing and implementing a plan for the restoration, rehabilitation, replacement, or acquisition of the equivalent, or the natural resources under their trusteeship.<sup>498</sup> One particularly innovative provision allows for local citizens to seek court action against federal officials acting in the capacity of public trustees "where there is alleged to be a failure of that official to perform a duty under this section that is not discretionary with that official."<sup>499</sup> The measure of damages to natural resources includes

- (a) the cost of restoring, rehabilitating, replacing, or acquiring the equivalent of, the damaged natural resources;
- (b) the diminution in value of those natural resources pending restoration; plus
- (c) the reasonable cost of assessing those damages.<sup>500</sup>

These provisions are dramatic and innovative and set a high standard for future laws on all levels.

Of particular significance to Canadians are the provisions for recovery by foreign claimants.<sup>501</sup> In order to recover, foreign claimants must demonstrate that they have otherwise been unable to recover for removal costs or damages, and that such recovery is authorized by a reciprocal agreement or treaty between the claimant's country and the

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<sup>494</sup> *Ibid.* § 1004(d)(4).

<sup>495</sup> This applies only in cases where § 1007 applies.

<sup>496</sup> *Ibid.* § 1006(a)(1)-(4).

<sup>497</sup> *Ibid.* § 1006(b)(1).

<sup>498</sup> *Ibid.* § 1006(c).

<sup>499</sup> *Ibid.* § 1006(g).

<sup>500</sup> *Ibid.* § 1006(d)(1).

<sup>501</sup> Under § 1007(c), foreign claimants are defined including individual persons, as well as governmental bodies.



U.S. which provides a comparable remedy for American claimants.<sup>502</sup> No such agreement, however, is required in the case of *TAPAA* vessels.<sup>503</sup> Foreign claimants can also recover costs for clean-up and damages only if the discharge originates from the following: an Outer Continental Shelf facility or a deepwater port, a vessel in the navigable waters, a vessel carrying oil as cargo between two places in the U.S., or a *TAPAA* vessel prior to its delivery of oil in the U.S.<sup>504</sup>

The Oil Spill Liability Trust Fund now has a sizeable upper limit of \$1 billion (U.S.) per incident.<sup>505</sup> The Trust Fund is available for the payment of removal costs and the payment of governmental costs "for assessing natural resources damages and for developing and implementing plans for the restoration, rehabilitation, replacement, or acquisition of the equivalent of damaged resources."<sup>506</sup> Defences to liability are only for gross negligence or wilful misconduct of the claimant.<sup>507</sup> Evidence of financial responsibility is required for any vessel exceeding 300 gross tons and for "any vessel using the waters of the exclusive economic zone to transship or lighter oil destined for a place subject to the jurisdiction of the United States."<sup>508</sup>

In sum, the new American legislation offers a streamlined claims process, higher limits of liability (which are relatively easy to break), a substantially increased Trust Fund, and a path breakingly broad scope of coverage of pollution damage. It is important to note that state legislation is not pre-empted by the *Act*. This was a highly contentious issue throughout the drafting of this and other attempted legislation over the past fifteen years. Thus, states are free to implement more stringent

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<sup>502</sup> *Ibid.* § 1007(a)(1).

<sup>503</sup> *Ibid.* § 1007(a)(2).

<sup>504</sup> *Ibid.* § 1007(b)(1)-(4).

<sup>505</sup> *Ibid.* § 9001(c). Amounts recovered under the various funds established under the *Federal Water Pollution Control Act*, *supra*, note 487, the *Deepwater Port Act of 1974*, 33 U.S.C.S. §§ 1501 *et seq.* (Law. Co-op. 1987), the *Outer Continental Shelf Lands Act Amendments of 1978*, 43 U.S.C.S. § 1801 (Law. Co-op. 1980), and *TAPAA*, *supra*, note 474 are to be transferred into the Oil Spill Liability Trust Fund. *Ibid.* § 9001(a).

<sup>506</sup> The Trust Fund is also available for uncompensated removal costs or damages, administration of the *Act*, and enforcement of provisions relating to oil pollution prevention. *Ibid.* § 1012(a)(1)-(5).

<sup>507</sup> *Ibid.* § 1012(b).

<sup>508</sup> *Ibid.* § 1016(a).

provisions for waters within their jurisdiction. Although, in passing this *Act*, U.S. legislators chose not to ratify the 1984 *Protocols* to the *CLC* and the *Fund Convention*, the new domestic regime offers substantial environmental protection to potential victims of oil pollution damage, including Canadians.<sup>509</sup>

## V. CONCLUSION

### A. Recent Reviews

While the U.S. has responded to the latest oil spill disasters by drafting dramatically new legislation dealing with ship source oil pollution, Canadian officials have sought to assuage public concern by "studying the problem." Most notable were three studies: the *Federal Internal Review on Tanker Safety and Marine Spills Response Capability*,<sup>510</sup> consisting primarily of reports from the Canadian Coast Guard; British Columbia's *Report to the Premier on Oil Transportation and Oil Spills*,<sup>511</sup> and the more recent federal *Final Report of the Public Review Panel on Tanker Safety and Marine Spills Response Capability: Protecting Our Waters*.<sup>512</sup>

The *Federal Internal Review* consists of twenty-two separate reports grouped into three themes: prevention, preparedness and response, and policy/legislation issues. In its entirety, it has been accurately characterized as focussing on "improvements to the status quo."<sup>513</sup> No fundamental changes of any kind are envisioned or proposed in any of the *Federal Internal Review* reports. Rather, it is generally recommended that the current legal and public policy framework be simply "fine tuned."

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<sup>509</sup> For further discussion of the Oil Pollution Act, see P.S. Edelman, "The Oil Pollution Act of 1990" (1990) 8 Pace Envtl. L. Rev. 1 and S.T. Smith, "An Analysis of the Oil Pollution Act of 1990 and the 1984 Protocols on Civil Liability for Oil Pollution Damage" (1991) 14 Hous. J. Int'l L. 115.

<sup>510</sup> *Supra*, note 5.

<sup>511</sup> *Supra*, note 7.

<sup>512</sup> *Supra*, note 4.

<sup>513</sup> *Ibid.* at 4.

For example, one internal review report concludes that international tanker design standards are adequate "since they have been universally adopted by the consensual agreement of the 133 member states represented within the IMO."<sup>514</sup> On the contrary, it could be argued that multinational safety standards in international agreements simply represent the *lowest* common denominator. Certainly, the U.S. government has made it clear that it considers many international standards, including those of tanker design, as being inadequate. Nonetheless, the *Federal Internal Review* maintains that, "in general, the current standards of tanker construction and pollution control ... provide a reasonable measure of adequacy against operational and accidental spillage of oil or chemicals from tankers."<sup>515</sup> Concerning mandatory double hulls on oil tankers, for example, the *Federal Internal Review* reiterates the industry perspective in pointing out "several cogent technical arguments against the double skin proposal," while none of the benefits are even mentioned.

Meanwhile, in the spring of 1989, shortly after the *Exxon Valdez* disaster in Alaska, former Liberal MP David Anderson was appointed by British Columbia Premier Bill Vander Zalm to examine the question of oil spill prevention, response, and compensation for pollution damage in British Columbia. Anderson's report, entitled *Oil Transportation and Oil Spills*, was released in November 1989.<sup>516</sup> Altogether, the report contains 184 recommendations based upon research and submissions made during informal public meetings held throughout the summer.

As with the later Public Review Panel report,<sup>517</sup> Anderson viewed prevention as the fundamental priority. Indeed, he exceeded his terms of reference by discussing the need for energy conservation. To this end, the report recommends that the province restore funding for conservation measures and alternative energy sources; that an Energy Development Agency be established (such a body was promised by the province in 1980) aimed at stabilizing the rate of oil consumption; that provincial taxes on petroleum products be raised to help finance some of these initiatives; and that more energy efficient standards be adopted for

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<sup>514</sup> "Policy 3.4," *supra*, note 316 at 2.

<sup>515</sup> *Ibid.* at 5.

<sup>516</sup> *Supra*, note 7.

<sup>517</sup> *Supra*, note 4.

equipment, vehicles, and appliances.<sup>518</sup> As well, the report proposed that, through education and financial incentives, the provincial government encourage the recycling of lubricating oils.<sup>519</sup>

Similarly, Anderson was highly critical of the increase of oil exports through B.C. coastal waters, a phenomenon which poses a growing threat to the local marine environment. Anderson recommended that no further expansion of crude oil exports be permitted through the Port of Vancouver, due to that area's extreme environmental sensitivity. Existing exports, he proposed, should be phased out altogether.<sup>520</sup>

Regarding tanker safety, Anderson made several technical recommendations. The most dramatic of these was that the West Coast barge fleet be double hulled within four years, with tankers possibly to follow, depending on the results of studies undertaken by the Public Review Panel and the Canadian Coast Guard.<sup>521</sup> Inspections were highlighted as being particularly deficient.<sup>522</sup> Improved safe manning requirements were also discussed.<sup>523</sup>

Much of the report was devoted to oil spill response capability and preparedness.<sup>524</sup> The use of military personnel and a more formal recognition of the role of volunteers in spill response efforts were proposed.<sup>525</sup> In addition, the creation of a joint federal/provincial Oil Spill Response Agency was proposed, to be comprised of representatives from government, industry, and interest groups.<sup>526</sup> The agency would be funded by means of a per litre levy on oil products transported to or from B.C. ports.<sup>527</sup>

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<sup>518</sup> Anderson, *supra*, note 7 at 13-15.

<sup>519</sup> *Ibid.* at 16.

<sup>520</sup> *Ibid.* at 21-25.

<sup>521</sup> *Ibid.* at 31.

<sup>522</sup> *Ibid.* at 43-45.

<sup>523</sup> *Ibid.* at 46-49.

<sup>524</sup> *Ibid.* c. 4-6.

<sup>525</sup> *Ibid.* at 91-92, 94, and 75.

<sup>526</sup> *Ibid.* at 87-88.

<sup>527</sup> *Ibid.*

Compensation for pollution damage was also discussed. Anderson recommended that Canada adhere to the 1984 *Protocol* to the *Civil Liability Convention* and work within the IMO to expand the coverage of non-economic and environmental damages under the *CLC*.<sup>528</sup> As well, he proposed that the levy for the Ship-Source Oil Pollution Fund (SSOPF) be reinstated,<sup>529</sup> and that one-third of it be used for research, once the fund reaches \$200 million.<sup>530</sup>

In sum, much of Anderson's report differs fundamentally from the Internal Review by focussing on the underlying issues of oil consumption and the larger legal and policy framework surrounding the energy issue.

Six weeks after David Anderson's appointment in B.C., the Public Review Panel on Tanker Safety and Marine Spills Response Capability was created by the Prime Minister to address the transportation of both bulk oil and chemicals in Canadian waters. The Panel and Anderson shared similar mandates. The Public Review Panel elicited public participation from coastal communities across Canada and, on 2 November 1990, the Panel released its final report entitled *Protecting Our Waters*.<sup>531</sup>

The report contains 107 recommendations addressing questions of prevention, preparedness, response, the legislative framework, and funding. As well, the report contains several sections devoted to specific local and regional issues and recommendations based on submissions from government officials and public participants from Newfoundland, Labrador, the Maritimes, the St. Lawrence River, the Great Lakes, the Arctic, and the West Coast.

The Panel's report points to the continued risk of significant future oil spills in Canadian waters and the utterly inadequate state of preparedness and response capability to deal with such spills. Enhanced prevention is thus emphasized as being key. On this issue, one of the Panel's most significant recommendations was to mandate double hulls for all Canadian tankers and tank barges within seven years and all foreign tankers and tank barges in Canadian waters within ten years.<sup>532</sup>

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<sup>528</sup> *Ibid.* at 106.

<sup>529</sup> *Ibid.* at 107.

<sup>530</sup> *Ibid.*

<sup>531</sup> *Supra*, note 4.

<sup>532</sup> *Ibid.* at 19-22.

Recommendations concerning funding of the SSOPF are particularly ambitious. Currently, the *Canada Shipping Act* authorizes the Minister to impose a maximum levy of 31.65 cents per tonne of oil transported in domestic waters.<sup>533</sup> However, the Panel recommends that the levy not only be reinstated, but increased to \$2.00 per tonne.<sup>534</sup> The *Act* would be further amended so that the SSOPF would, in turn, be additionally used to fund oil spill equipment, training programmes, and research concerning oil spill prevention, response capability, and clean-up.<sup>535</sup> The SSOPF would also provide funding for the implementation of several recommendations, including the retrofitting of double hulls on tankers and tank barges.<sup>536</sup> It is estimated that the cost of implementing all of the Panel's recommendations would amount to approximately \$1.5 billion over a one year period; about \$800 million to \$1 billion of this would be funded by the SSOPF.<sup>537</sup>

Regarding current national and international legislation, the report urges Canada to work within the boundaries of international law through the auspices of the IMO. As well, substantially raised fines for polluters and higher compensation levels for pollution victims are recommended.<sup>538</sup> The report generally urges that the law be strengthened to make the "costs of polluting prohibitive and likelihood of getting caught significantly higher."<sup>539</sup> The Panel also discusses the notion of assessing and compensating environmental damage and proposes that legislation be enacted which would permit citizens to take civil action against polluters.<sup>540</sup>

*Protecting Our Waters* does not deal with such underlying prevention issues as energy conservation, but it is nonetheless thorough and comprehensive. Many of the Panel's recommendations—such as those regarding double hulls, the SSOPF, assessing environmental

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<sup>533</sup> *Supra*, note 59. The levy was originally set at 15 cents per tonne; its value has increased to 31.65 cents in 1990 dollars.

<sup>534</sup> *Protecting Our Waters*, *supra*, note 4 at 13-15.

<sup>535</sup> *Ibid.*

<sup>536</sup> *Ibid.*

<sup>537</sup> *Ibid.*

<sup>538</sup> *Ibid.* at 95-97.

<sup>539</sup> *Ibid.*

<sup>540</sup> *Ibid.* at 101.

damage, and providing for citizen civil action—are bold and progressive. Not surprisingly, the report has drawn criticism from industry analysts, who have labelled it “alarmist.”<sup>541</sup> Industry spokespeople maintain, for example, that the recommended \$2.00 levy would cause undo hardship to Canadian oil producers, thereby threatening oil exports.<sup>542</sup> There is also disagreement about the necessity for double hulls, as well as the timing and means recommended by the Panel for their implementation.<sup>543</sup>

Government response to the report was cautious and non-committal. Transport Minister Doug Lewis called the report “a hard-hitting assessment of Canada’s current capabilities” and touted it as part of the government’s “aggressive plan to improve the protection of Canada’s marine environment.”<sup>544</sup> However, on specifics, for example, the proposed double hull requirements, the reaction was particularly vague:

The panel’s conclusion that there is strong evidence that double bottoms or hulls do limit pollution from groundings and collisions is acknowledged. Consultations will be held with tank-ship owners and operators to prepare a plan for phasing in this important pollution prevention feature.<sup>545</sup>

The government is quick to point out, however, that “consideration will always be given to other designs which provide equivalent protection.”<sup>546</sup> Similarly, the government promised only that the Panel’s recommended levels of compensation, as well as recommendations concerning the \$2.00 levy and additional funding purposes of the SSOPF, “will be examined.”<sup>547</sup> In terms of effective response to pollution incidents, requirements for training, equipment, and personnel are similarly “being carefully examined.”

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<sup>541</sup> M. Byfield, “Taxing the Tankers” (1990) 17:45 *Western Report* 17.

<sup>542</sup> *Ibid.*

<sup>543</sup> *Ibid.* See also Oceans Institute of Canada, *Seminar on the Findings of the Public Review Panel on Tanker Safety and Marine Spills Capability: Summary of Discussions* (Halifax: Oceans Institute of Canada, 1991) at 1-6.

<sup>544</sup> Transport Canada, *supra*, note 11 at 1.

<sup>545</sup> *Ibid.* at 2.

<sup>546</sup> *Ibid.*

<sup>547</sup> *Ibid.*

A recently released Coast Guard discussion paper, however, reveals a reticent attitude towards many of the Panel's most significant—and arguably, most potentially effective—proposals, including those concerned with mandatory double hulls, reinstatement of the SSOPF levy, and expanding the purposes of the SSOPF itself.<sup>548</sup> If left to the Coast Guard, it is increasingly apparent that the *status quo* will remain essentially intact, particularly in areas which lack industry support. If this occurs despite the host of problems and solutions identified in these reports, the whole public participation exercise will have amounted to little more than an expensive exercise in public relations and a serious abuse of the time and effort of so many who were involved.

### B. Recommendations

The three reviews discussed above differed greatly in the level and character of the treatment they give to the issue of ship source oil pollution in Canada. All, however, offered useful and potentially beneficial recommendations. This study need not repeat them, nor reiterate the specific changes which are evidently necessary from the discussions throughout this paper. Of greater concern is the level of political commitment we can anticipate in seeking to resolve the problem at any level.

Those who would see the *status quo* remain largely intact and unchanged argue that Canadians enjoy a high standard of living in a modern, industrialized society which is primarily based upon petroleum products and the energy these supply. This fact is indisputable. However, this conventional argument also assumes that, if we wish to *continue* to enjoy the benefits of modern society, we must accept the inevitable risks of transporting oil by sea. This argument contains three erroneous assumptions.

First, proponents of this *status quo* view assume that the current level of risk to the marine environment is “reasonable” and, therefore, acceptable. Public reaction following major spill disasters is viewed as not being fundamentally valid, but as emotional and reactionary, thus simply posing a public relations challenge which needs to be “managed.”

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<sup>548</sup> See Canadian Coast Guard, “Public Review Panel on Tanker Safety and Marine Spills Response Capability: Discussion Paper” (April 1991) [unpublished].



The current legal, regulatory, and policy framework is seen as being essentially adequate.

A second assumption is that, in order to maintain the current national standard of living, the present quantity of petroleum products consumed (and therefore transported) must remain the same. The option of energy conservation and all that that entails (reduction in use, recovery of materials, and improved energy efficiency) is greatly underdeveloped in Canada. Similarly, it is assumed that North Americans would be unwilling to pay more for petroleum products in spite of the fact that Europeans generally pay much more.

Finally, it is assumed that alternative forms of energy will not be developed in the near future and that existing alternative sources are impractical or costly. Yet, research into clean, renewable, or "soft" energy has been ongoing for at least two decades in spite of the fact that funding for such work in Canada and the U.S. has been low. Few can reasonably dispute the fact that alternatives *must* be sought. For all intents and purposes, oil is a non-renewable resource and is thus becoming increasingly difficult and costly to find and to extract.

These, then, are the underlying questions and assumptions that must be addressed if the more symptomatic issue of marine oil pollution is to be adequately examined. In other words, if "sustainable development" is truly the objective of Canadian decision makers, then it is imperative that Canadians examine the fundamental issues of not only conservation, but safe energy alternatives.

In his report to the provincial government in British Columbia, Anderson correctly pointed to this route as ultimately the true long term solution to the black tide of ocean oil pollution. But with expanded domestic exports from the urban port of Vancouver, for example, energy policy in Canada seems to be moving in the opposite direction. Even here, however, a serious attempt to implement the recommendations contained within the Public Review Panel's report could go a long way toward achieving safer, cleaner waters in Canada. Yet, the Coast Guard and federal government seem reluctant to go beyond tinkering with the current framework and are prepared to ignore most of the significant initiatives recommended by the federal and provincial reviews.<sup>549</sup> As the

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<sup>549</sup> In researching the implementation of recommendations contained within the reviews by Anderson, the Public Review Panel, and the U.S./British Columbia Oil Spill Task Force, the citizen's advocacy group, *Call for Inquiry*, comprised of Bob Bossin, David Suzuki, and Dr. Andrew

Public Review Panel Chair, David Brander-Smith, recently noted, "without a very significant injection of funds, there's no question the government is applying a Band-Aid solution to major hemorrhaging."<sup>550</sup> Indeed, it can be safely said that, unless sustained public attention is applied to the issue of ship source oil pollution, Canadians will continue to find themselves waiting—as we always have—for the *next* catastrophe, with little progress to show for the interim.

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Thompson, recently noted that their "research indicates that virtually all of the recommendations, the results of millions of dollars of studies, are being ignored." The group continues, "Incredibly, for all the excellent work of the commissions, we are little better prepared for a spill today than we were when the first oil from the *Nestucca* washed up on Vancouver Island over two years ago." See Call for Inquiry, "Alaska has learned from its mistakes, Canada has not" (Vancouver: Call for Inquiry, 24 March 1991) at 1 and 5.

<sup>550</sup> See L. Pynn, "Canada fails to act on lessons of Valdez spill" *The Vancouver Sun* (22 March 1991) B1.