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THE DUMPING OF THE NEW CARISSA: AN ANALYSIS OF THE EMERGENCY PROVISIONS OF THE LONDON CONVENTION

Jill S. Murakami

Abstract: The London Convention prohibits the dumping of hazardous materials into the ocean. This prohibition may, however, be suspended in emergencies. The bow of the M/V New Carissa ('New Carissa'), which contained approximately 135,000 gallons of oil, was dumped into the Pacific Ocean under the emergency provisions of the London Convention. An analysis of the dumping of the New Carissa illustrates the weaknesses of these provisions. As written, the provisions are ambiguous and open to varying interpretations. As a result, nations may use the emergency provisions as loopholes to dump substances that they would otherwise be prohibited from dumping, thereby undermining the purpose of the Convention. Furthermore, because the London Convention does not provide for international monitoring and enforcement, there is less incentive for nations to comply with the Convention's dumping prohibitions and a greater likelihood that the emergency provisions will be loosely interpreted. Left unresolved, such weaknesses could have severe international implications. The emergency provisions should be read restrictively in light of the precautionary policy and purpose of the London Convention and should be clarified to ensure they are uniformly applied by Contracting Parties.

I. INTRODUCTION

On February 4, 1999, the M/V New Carissa ('New Carissa') ran aground at Coos Bay, Oregon. Over 70,000 gallons of fuel leaked into the ocean and tar balls drifted more than fifty miles north to the mouth of the Siuslaw River. An attempt was made to burn the remaining fuel on board in order to prevent further leaking, but in the process the vessel split in half. On March 11, 1999, the bow section of the New Carissa, which contained approximately 135,000 gallons of heavy, tar-like fuel, was towed to international waters and dumped into the Pacific Ocean.

Thirty years ago, when the ocean appeared to have an infinite capacity as the ultimate receptacle for waste, the disposal of the New Carissa might...
not have made headlines. Today, however, it is known that the ocean cannot easily assimilate many of the materials and chemicals disposed of at sea. Although scientists have yet to fully determine all of the environmental consequences of marine pollution, the potential damage caused by such pollution is significant. Oceans are essential in sustaining life; they provide the base for the world’s fresh water supply, affect global climate, help maintain the balance of oxygen and carbon dioxide in the atmosphere, and provide transportation and food to all nations.

Over the past three decades, as a result of public exposure to marine pollution caused by accidental oil spills and a growing number of scientific studies on the condition of the marine environment, there has been a growing movement to regulate and limit the dumping of wastes into the ocean. The London Convention (“the Convention”) is the primary international agreement that addresses dumping at the global level. The Convention prohibits the dumping of certain hazardous materials into the ocean unless the dumping qualifies under an emergency exception. The grounding of the *New Carissa* was deemed an emergency by the United States Coast Guard, and the bow of the vessel was dumped under the Convention’s emergency provisions.

Although the Pacific Ocean is the world’s largest body of water and is not typically thought of as fragile, it is no less at risk of permanent harm from human activity than any other marine region. Thus, even though scientists predict the environmental consequences of dumping the *New Carissa* will be minimal, the bow of the *New Carissa*, with its 135,000 gallons of oil, is nevertheless an unwelcome addition to the Pacific. This Comment uses the case of the *New Carissa* to analyze the appropriateness and effectiveness of the London Convention’s emergency provisions. Part II

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7 COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL PROTECTION AGENCY, *OCEAN DUMPING: A NATIONAL POLICY* 34 (1970) [hereinafter CEQ].


9 *Id.* art. IV. The prohibited substances are listed in Annex I of the Convention.

10 *Id.* art. V.


12 As noted in the introduction, the *New Carissa* split in half and the bow of the vessel was dumped.

13 References in this Article to the dumping of the *New Carissa* are to the dumping of the bow of the vessel. See *supra* notes 1-5 and accompanying text.

provides background information on ocean dumping and the development of the Convention. Part III analyzes the emergency provisions of the Convention and dumping that has taken place under the emergency provisions. Part IV discusses the implications of the emergency provisions for the Pacific Rim region. Part V evaluates the New Carissa incident and describes problems in applying the emergency provisions. Part VI proposes that the emergency provisions should be read restrictively in light of the precautionary policy and purpose of the Convention and should be clarified to ensure that the provisions are uniformly applied by parties to the Convention ("Contracting Parties").

II. BACKGROUND

A. The Growth of Ocean Dumping

The oceans have traditionally been the preferred site for the disposal of wastes.\textsuperscript{14} Dumping wastes into the ocean is less expensive than burying wastes on land.\textsuperscript{15} Moreover, because ocean dumping takes place far from inhabited areas, the adverse effects of dumping are not readily noticeable.\textsuperscript{16} With the increase in industrial development and the growth of the world population in the last half-century, the quantity and concentration of wastes dumped into the oceans have risen exponentially and have begun to threaten our global ecosystem.\textsuperscript{17} In 1959 approximately 2.2 million tons of industrial wastes were disposed of at sea.\textsuperscript{18} By the late 1970s 400 million tons of wastes were dumped each year by the Convention's fifty Contracting Parties alone.\textsuperscript{19} Contrary to traditional belief that the ocean is so immense that humans can do it no harm, it has become clear that humans can produce enough toxic waste to severely impact the ocean environment.\textsuperscript{20} It is estimated that in the year 2030, if humans consume "at the same rate the average citizen consumes today, [humans] will generate 400 billion tons of solid waste every year—enough to bury greater Los Angeles 100 meters

\begin{thebibliography}{99}
\bibitem{15} Id.
\bibitem{16} Id.
\bibitem{17} See CEQ, supra note 7, at 8.
\bibitem{18} Id.
\end{thebibliography}
If the wastes continue to be disposed of through unregulated ocean dumping, the environment will be severely and irreparably harmed.

B. The Effects of Ocean Dumping

As a result of increased scientific study, it is now known that ocean dumping endangers marine life, human life, and the global ecosystem. Marine pollution harms the environment by introducing toxic substances into the food chain, depleting the oxygen level in the water, and altering marine habitats.

1. Toxic Elements in the Marine Environment

The most immediate and direct manner in which waste disposal affects marine life and human life is by introducing toxic substances into the food chain. Toxic pollutants dumped into the ocean enter the tissues of marine organisms such as phytoplankton, which extract nutrients directly from the water. Phytoplankton and other organisms are vital parts of the marine food chain. As larger forms of marine life feed on the contaminated organisms, toxic substances become successively concentrated, leading to high levels of concentration in predatory marine mammals, birds, and humans. Furthermore, sewage sludge and dredged material contain metals such as cadmium, lead, zinc, and mercury. In high concentrations, these heavy metals can kill marine organisms; in low concentrations, they can impair sensory, reproductive, and other vital functions. Chemicals released into the ocean can become concentrated in shellfish and are toxic to

22 CEQ, supra note 7, at 12.
23 Lumsdaine, supra note 14, at 756 n.17 (citing Hearings on S. 2005 Before the Subcomm. on Air & Water Pollution of the Senate Comm. on Public Works, 91st Cong. 2d Sess., 2294 (1970) (testimony by B.H. Ketchum)).
24 Id. at 756 n.18 (citing G.M. Woodwell, Changes in the Chemistry of the Ocean: The Pattern of Effects, in GLOBAL EFFECTS OF ENVIRONMENTAL POLLUTION 186 (S.F. Singer ed., 1970)).
25 Sewage sludge is the solid material remaining after municipal wastewater treatment and is composed of residual human wastes and other organic and inorganic wastes. See CEQ, supra note 7, at iv.
26 Dredged materials are the solid materials removed from the bottom of water bodies for the purpose of improving navigation. Dredged materials may include sand, silt, clay, rock, and pollutants from municipal and industrial discharges. Id.
27 Lahey, supra note 6.
28 Id. (citing U. FORSTNER & G. WITTMAN, METAL POLLUTION IN THE AQUATIC ENVIRONMENT (1977)).
marine life and humans. As a result of marine pollution, the Food and Drug Administration has closed approximately twenty percent of the shellfish beds in the United States, and many species of fish have been depleted or rendered inedible.

2. Oxygen Depletion

Ocean pollution further affects marine life and the marine environment through the process of oxygen depletion. Oxygen supports aquatic life and is necessary for the biological degradation of organic materials. Organic wastes, particularly sewage sludge, demand large amounts of oxygen for decomposition. Approximately 320,000 gallons of air-saturated seawater are required to completely oxidize one gallon of crude oil. Because oxygen in waters near dumpsites is consumed in the decomposition of wastes, these waters are often so depleted of oxygen that they are unable to support marine organisms. The decomposition of marine organisms that die due to insufficient oxygen further accelerates and compounds the problem of oxygen depletion. When an area is depleted of oxygen, anaerobic bacteria produce hydrogen sulfide and methane gas. Additionally, the accumulation of organic matter, sulfides, and some metals can act as a reservoir of future oxygen demand, thereby perpetuating the cycle of oxygen depletion in the waters near dumpsites.

3. Habitat Changes

In addition to the immediate and direct effects of marine pollution, habitat changes caused by ocean dumping may have a deleterious long-range effect on the global ecosystem. Pollutants have varying effects on different marine organisms and can deplete certain marine species. Changes in the population of marine species can upset the ecological balance in the affected

30 ENVIRONMENTAL PROTECTION AGENCY, ANNUAL REPORT ON ADMINISTRATION OF THE OCEAN DUMPING PERMIT PROGRAM 7 (1973).
31 CEQ, supra note 7, at 17.
32 Id. at 14.
33 Id.; Lumsdaine, supra note 14, at 757.
34 CEQ, supra note 7, at 14.
35 Id.
36 Id.
37 Id.
38 Id.
Additionally, changes in the kinds and quantities of sediments deposited in the ocean can alter ecosystems. The plague of coral-eating starfish in the Pacific Ocean, for example, is thought to be linked to sediments resulting from blasting, dredging, and dumping. The sediments protect larval starfish from predators that normally keep the starfish population in balance.

C. Development of Ocean Dumping Regulations

In response to the growing threat of marine pollution, President Nixon instructed the United States Council on Environmental Quality ("CEQ") to conduct a comprehensive investigation of the nature and magnitude of the ocean dumping problem. The CEQ's 1970 report detailed the harms of marine pollution and predicted massive increases in the level of ocean dumping and widespread deterioration of marine environments. The report urged legislative action at both the national and international levels.

Domestic and international action is necessary if ocean dumping is to be controlled. The United States must show its concern by strong domestic action through implementation of recommended policy. But unilateral action alone will not solve a global problem. International controls, supported by global monitoring and coordinated research, will be necessary to deal effectively and comprehensively with pollution caused by ocean dumping.

In June of 1971, as a result of the CEQ report, the United States submitted a draft convention on ocean dumping to the first session of the Inter-Governmental Working Group on Marine Pollution. After numerous

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See Lumsdaine, supra note 14, at 757 (citing WATER RESOURCES ENGINEERS, INC., ECOLOGIC RESPONSES TO OCEAN WASTE DISCHARGES: RESULTS FROM SAN DIEGO'S MONITORING PROGRAM (1970)).

CEQ, supra note 7, at 15.

Id.

Id.


CEQ, supra note 7, at v.

Id. at 37.

negotiations, the final text of the Convention was adopted in London on November 13, 1972. The Convention entered force on August 30, 1975. Currently, seventy-seven nations have signed the Convention.


Parties to the Convention pledge to take all practicable steps to prevent marine pollution caused by the dumping of wastes that could have deleterious effects on human life and marine life. They further agree to harmonize their dumping policies and, within their scientific, technical and economic capabilities, take individual action to prevent marine pollution caused by dumping.

More specifically, parties to the Convention agree to prohibit the dumping of certain hazardous materials and to require that a special permit be obtained before other general classes of potentially harmful wastes can be dumped into the ocean. Prohibited materials are listed in Annex I of the Convention and include high-level radioactive wastes, oil taken on board for the purpose of dumping, materials in whatever form (e.g., solids, liquids, gases) produced for biological and chemical warfare products, and materials containing mercury or cadmium. The dumping of Annex I materials is strictly prohibited unless the substance is “rapidly rendered harmless by physical, chemical or biological processes in the sea, provided it does not (1) make edible marine organisms unpalatable, or (2) endanger human health or that of domestic animals.” Special permit materials are listed in Annex II and include low-level radioactive wastes, heavy containers and scrap metal that are likely to sink to the sea bottom and present a serious obstacle to fishing or navigation, and substances that contain any of a variety of chemicals or their compounds in “significant” quantities. A general permit

48 Id.
50 Id.
51 London Convention, supra note 8, art. I.
52 Id. art. II.
53 Id. art. IV.
54 Id. annex I.
55 Id.
56 Id. annex II.
is required before other wastes or matter not specified in Annex I or II can be dumped. 57

The Convention specifies two emergency exceptions under which the dumping prohibitions may be suspended. The first, known as the "safety at sea exception," applies when the failure to dump would endanger the safety of human lives or vessels at sea. 58 The second, known as the "emergency exception," applies when an emergency poses an unacceptable risk to human health. 59 Many nations objected to the idea of emergency exceptions to the dumping prohibitions. 60 A small negotiating and drafting group was established to discuss differences among the nations, but the group was unable to work out a viable solution. 61 The exceptions were ultimately included in the Convention along with a waiver clause. Article V(3) allows Contracting Parties to waive their rights under the emergency clause at the time of, or subsequent to, ratification or accession to the Convention. 62

III. EMERGENCY SITUATIONS UNDER THE CONVENTION

A. The Safety at Sea Exception

All dumping prohibitions are suspended when dumping is necessary to secure the safety of human lives or vessels at sea (1) in cases of force majeure caused by stress of weather, or (2) if dumping appears to be the only way to avert the threat and there is every probability that the damage resulting from such dumping will be less than would otherwise occur. 63 This exception is typically known as the "safety at sea exception." Dumping done under this exception does not require a permit, but must be reported to the current organization for the London Convention ("the Organization"). 64 The Organization is designated by the Contracting Parties and is responsible

57 Id. art. IV(c).
58 Id. art. V(1).
59 Id. art. V(2).
60 The safety at sea exception was opposed at the 1972 Conference in a recorded statement by the Byelorussian Soviet Socialist Republic, the Ukrainian Soviet Socialist Republic, and the U.S.S.R. The emergency exception, originally proposed by the United States, was opposed by most coastal and developing countries. Argentina and Mexico presented their reservations in writing and Chile, Spain, and Portugal asked to have their oral reservations recorded in a conference document. TIMAGENIS, supra note 43, at 223-25
61 Id.
63 London Convention, supra note 8, art. V(1).
64 Id.
for secretariat duties\textsuperscript{65} in relation to the Convention.\textsuperscript{66} The International Maritime Organization ("IMO") is the current Organization for the London Convention.\textsuperscript{67}

The provisions for \textit{force majeure} and securing vessels under the safety at sea exception were later additions to an earlier draft which stated, "[t]he provisions of Article IV shall not apply where the safety of human life is threatened."\textsuperscript{68} While including these additions in the final version, however, the drafters of the Convention neither defined a \textit{force majeure} situation nor clarified what was meant by "necessary to secure the safety of vessels."

B. Unacceptable Risks to Human Health: The Emergency Exception

Situations that do not qualify under the safety at sea exception, but nevertheless pose an unacceptable risk to human health, may be excepted from the Convention’s dumping prohibitions with an emergency permit. This exception is typically referred to as the "emergency exception." An emergency permit may be issued if (1) there is an unacceptable risk to human health, (2) there is "no other feasible solution," and (3) the Contracting Party issuing the emergency permit has consulted with the Organization and with other countries that may be affected by the dumping.\textsuperscript{69} The Contracting Party must follow the Organization’s recommendations "to the maximum extent feasible" and must inform the Organization of any action subsequently taken.\textsuperscript{70}

Although the emergency exception is technically applicable to emergency situations on land and at sea, the IMO has interpreted the "main thrust of Article V(2) [as regulating] exceptional problems with wastes or other matter \textit{on land} involving black-list substances only."\textsuperscript{71} Situations on land that have resulted in ocean dumping under the emergency exception

\textsuperscript{65} Secretariat duties include: (1) the convening of consultative meetings of the Contracting Parties not less frequently than once every two years and of special meetings of the Parties at any time on the request of two thirds of the Parties; (2) preparing and assisting, in consultation with the Contracting Parties and appropriate international organizations, in the development and implementation of procedures; (3) considering inquiries by, and information from, the Contracting Parties, and (4) consulting with the Contracting Parties, and providing recommendations to the Parties on questions related to, but not specifically covered by, the Convention. London Convention, \textit{supra} note 8, art. XIV(3).

\textsuperscript{66} Id. art. XIV(2).

\textsuperscript{67} Id. art. XIV(2).

\textsuperscript{68} THE FIRST DECADE, \textit{supra} note 62, at 37.

\textsuperscript{69} Hunter, \textit{supra} note 46, at 46.

\textsuperscript{70} Id. art. XIV(2).

\textsuperscript{71} Id.

\textsuperscript{71} Id.

include the disposal of chemical ammunition\(^72\) and the disposal of residues and rubble left over from the explosion of a chemical plant.\(^73\)

Situations at sea that have resulted in ocean dumping under the emergency exception have involved ships that became wrecks after collisions and/or fires.\(^74\) Ships that have been involved in such emergencies have included the *Hatsue Maru* # 55, which caught fire off of Canada;\(^75\) the *Anyo Maru*, which caught fire off the coast of Greenland;\(^76\) and the *Wishing Star*, which caught fire after a collision near the beaches of Puerto Rico.\(^77\)

Most recently, the United States issued an emergency permit for the disposal of an ice pier off Antarctica.\(^78\) The underside of the pier had eroded and the structure had developed internal cracks that could not be repaired.\(^79\) The unloading of heavy materials onto the pier posed a substantial and unacceptable hazard to human life.\(^80\) The Environmental Protection Agency ("EPA") determined that no options other than dumping were available and that an emergency permit was necessary in order to tow the deteriorating pier and dump it in McMurdo Sound before the harbor and sound froze.\(^81\)

The Convention leaves assessment of whether there is "risk to human health" and "no other feasible solution" to each individual nation. Recognizing the lack of criteria and procedures for determining an emergency, however, the First Consultative Meeting of Contracting Parties adopted Interim Procedures and Criteria ("Interim Procedures") that should be considered in emergency situations.\(^82\) Under the Interim Procedures, Contracting Parties should first assess the risk to human health by considering (1) the circumstances of the emergency, including the chemical composition of material involved, the location and cause of release, the

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\(^72\) Denmark notified the IMO following the issuance of a special permit in June 1977 and requested information on the safe handling of World War II chemical ammunition which had been dumped in 1947 and 1948 in the Baltic Sea. The ammunition had been and still is regularly caught in the nets of Danish fishermen and sometimes causes personal injury. *Id.* annex (2).

\(^73\) Following the explosion of a chemical plant in Seveso on July 10, 1976, Italy requested advice concerning international procedures that may be followed in disposing of material contaminated by TCDD (Dioxins). *See id.* annex (13).

\(^74\) *Id.* at 5.3.2(B).

\(^75\) *Id.* annex (3.1).

\(^76\) *Id.* at 10.

\(^77\) *Id.* at 11.

\(^78\) Issuance of an Emergency Ocean Dumping Permit to the National Science Foundation for Disposal of an Ice Pier From its Base at McMurdo Station, Antarctica, 64 Fed. Reg. 5790 (1999).

\(^79\) *Id.* at 5791.

\(^80\) *Id.* It is unclear whether the ice pier itself was a danger to human life or if it was just the use of the pier that made it unsafe. The Convention does not explicitly cover the latter scenario. However, its text is broad enough that the situation may be read into the exception.

\(^81\) *Id.* at 5792.

\(^82\) *THE FIRST DECADE*, supra note 62, at 80.
amount lost into the environment, the potential for further release, and the expected rate of further releases; and (2) the risks relating to human health, including the toxicity of the material to human life, the method of contact, and the impact of dumping on the health of present and future generations.\textsuperscript{83} The Contracting Parties further found that the feasibility of disposal at sea should only be considered after alternative methods of disposal have been evaluated.\textsuperscript{84} Such evaluations should take into account the costs, the assessment of environmental impact of each alternative, and the designation and monitoring of the disposal site.\textsuperscript{85}

Though helpful, the Interim Procedures are merely recommendations, and the final weighing of factors and decisions is left to individual nations. As such, the terms and conditions of the emergency exception continue to allow for varying interpretations. Additionally, although the third element of the emergency exception requires consultation with other countries and the Organization, the final decision on whether to dump is made by the individual nation, and recommendations need only be followed to the extent “feasible,” a term left undefined and open to interpretation.

C. Enforcement

The duty to ensure compliance with the Convention is delegated to each Contracting Party. Specifically, the Convention provides that the state where the vessel is registered (“flag state”), the state where the waste was loaded (“port state”), or the state having jurisdiction over the area where the dumping occurred (“coastal state”) shall apply enforcement measures.\textsuperscript{86} In addition, each Contracting Party is required to prevent and punish conduct that violates the Convention.\textsuperscript{87} There are, however, no provisions for international sanctions in the event a state dumps prohibited substances either in direct disregard of the Convention or in a situation that does not fall under the emergency provisions. The lack of any international enforcement mechanism leaves open the possibility that there will be differences in the

\textsuperscript{83} Id. at 156-57.

\textsuperscript{84} Id.

\textsuperscript{85} Id.

\textsuperscript{86} London Convention, supra note 8, art. VII(1); see also James McCullagh, Russian Dumping of Radioactive Wastes in the Sea of Japan: An Opportunity to Evaluate the Effectiveness of the Convention 1972, 5 PAC. RIM. L. & POL’Y J. 399, 409 (1996).

\textsuperscript{87} London Convention, supra note 8, art. VII(2).
degree of vigilance Contracting Parties will exhibit in the monitoring and sanctioning of violators.\textsuperscript{88}

The Convention encourages states with a common interest in particular geographical areas to enter into regional agreements to supplement the Convention.\textsuperscript{89} Although Contracting Parties are free to implement binding enforcement mechanisms on regional levels, there are currently no regional agreements in the North Pacific region.

IV. IMPLICATIONS FOR THE PACIFIC RIM REGION

In the Pacific Rim region, the United States, Canada, Japan, China, and the Philippines have all signed the Convention.\textsuperscript{90} Thus, the North Pacific\textsuperscript{91} and the countries bordering the North Pacific are in theory protected from ocean dumping. However, the ambiguous emergency provisions and the lack of enforcement provisions provide a loophole for unregulated dumping that could threaten nations sharing common seas. This is particularly true in the North Pacific, where some countries, such as Japan and the Philippines, are in close proximity to other nations. In both Japan and the Philippines, domestic laws implementing the Convention retain the ambiguous wording of the Convention. In Japan, the Law Concerning Prevention of Marine Pollution and Marine Disasters\textsuperscript{92} provides:

No person shall discharge wastes from a ship on the sea area. Provided that, this shall not apply to the discharge of wastes falling under any of the following: (1) The discharge of wastes for the purpose of securing the safety of a ship or saving human life; (2) The discharge of wastes when wastes were discharged due to damage to the ship or by other unavoidable cause and all the possible measures to prevent the continuous discharge of wastes were taken.\textsuperscript{93}

\textsuperscript{88} See, e.g., Legislative Developments: Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter, 6 LAW & POL'Y INT'L BUS. 575, 582 (1974) [hereinafter Legislative Developments].
\textsuperscript{89} London Convention, supra note 8, art. VIII.
\textsuperscript{90} See Status of Conventions, supra note 49.
\textsuperscript{91} For the purposes of this Comment, the North Pacific is the portion of the Pacific Ocean above the equator.
\textsuperscript{92} Kaiyo Osen Oyobi Kaijo Saigai no Boshi ni Kansuru Horitsu [Law Concerning Prevention of Marine Pollution and Marine Disasters], translated in 7 EHS LAW BULLETIN SERIES YE (1970).
\textsuperscript{93} Id. art. 10(1)-(2).
Similarly, the Philippines Presidential Decree No. 979 provides:

Except in cases of emergency imperiling life or property, or unavoidable accident, collision, or stranding or in any cases which constitute danger to human life or property or a real threat to vessels, aircraft, platforms, or other man-made structure [sic], or if dumping appears to be the only way of averting the threat and if there is probability that the damage consequent upon such dumping will be less than would otherwise occur, it shall be unlawful to [dump wastes in navigable waters.] 94

Although neither Japan nor the Philippines has notified the IMO of any dumping under the emergency provisions, the ambiguous provisions and the ability of states to declare an emergency situation at their own discretion poses a continuous threat to neighboring nations.

On the eastern side of the North Pacific, unregulated dumping by Canada and the United States poses similar threats. Canada has twice notified the IMO of decisions to sink vessels under the emergency provisions, 95 and the United States has notified the IMO four times. 96 Although only one dumping (that of the Hatsue Maru # 55, a Japanese-registered vessel that caught fire off the west coast of Canada) occurred in the North Pacific, the frequency and discretion with which Canada and the United States have used the emergency provisions are a threat to the Pacific Ocean and the countries that border it.

V. THE NEW CARISSA AND THE APPLICATION OF THE EMERGENCY EXCEPTIONS

A. Summary of Events Leading to the Dumping of the New Carissa

The New Carissa, a 639-foot cargo ship en route from Japan to Oregon, ran aground one mile north of Coos Bay on the morning of

95 On December 26, 1978, Canada sunk the trawler Hatsue Maru # 55 after it caught fire off the west coast of Canada. See IMO Circular, supra note 71, annex (3.1). On April 1, 1979, Canada sunk the bow of the tanker Kurdistan after it struck ice in the Cabot Strait. Id. annex (3.2).
96 On April 28, 1976, the United States dumped 90% of the cargo of the barge Sparkling Waters after it was involved in a collision. On December 16, 1988, the United States sunk the Wishing Star after it caught fire in a collision. Id. at 1. In February 1999, the United States dumped the ice pier in McMurdo Sound. See supra notes 78-81 and accompanying text. In March, the United States dumped the New Carissa. See infra Part V.A.
February 4, 1999. The ship was carrying 359,000 gallons of bunker oil used to fuel the ship’s engines and 37,400 gallons of diesel fuel used to run the electric generators. After the New Carissa ran aground, the twenty-three member crew was safely removed from the freighter and a Unified Command was formed to coordinate response efforts. The Unified Command was headed by the United States Coast Guard and included the ship’s owner and a representative from the Oregon Department of Environmental Quality.

The Unified Command called a salvage tug to pull the ship off the beach. While waiting for the tug to arrive, however, the ship began leaking fuel from two oil tanks and ultimately released approximately 70,000 gallons of oil into the ocean. The Unified Command made a joint decision to burn off as much of the oil as practicable. Approximately 200,000 gallons of fuel were burned in this operation, but during the burn the vessel broke in half. An attempt was made to pump some of the remaining 130,000 gallons of fuel from the vessel, but due to the viscosity of the fuel, the operation was unsuccessful. In light of expected severe weather and sea conditions, the Unified Command concluded that the New Carissa would likely suffer catastrophic structural failure and would release significant quantities of oil into the ocean. The Unified Command made a joint decision to tow the bow of the New Carissa 280 miles west into international waters and sink it in water approximately 10,000 feet deep.

B. Did the Dumping of the New Carissa Violate the London Convention?

The United States ratified the London Convention on April 29, 1974. Thus, when the Convention entered force on August 30, 1975, it became binding upon the United States. The dumping of the bow of the
New Carissa, with its 130,000 gallons of fuel, was therefore subject to the London Convention.

Under Annex I of the Convention, the dumping of crude oil and its wastes, refined petroleum products, and petroleum are strictly prohibited unless these substances are "rapidly rendered harmless." If the substances are "rapidly rendered harmless," they may be dumped by special or general permit. Under the guidelines presented in Resolution LDC 24(10) of the Convention, substances may be regarded as "rapidly rendered harmless" if tests of the waste or other matter proposed for dumping, including tests on the persistence of the material, show that the substances can be dumped so as not to cause acute or chronic toxic effects or bioaccumulation in sensitive marine organisms typical of the marine ecosystem at the disposal site.

Although the Unified Command thought the oil would not leak from the bow of the New Carissa, no tests were actually performed to confirm whether the oil on board would be "rapidly rendered harmless" at the disposal site. Furthermore, no permits were issued for the dumping of the New Carissa.

The dumping of the New Carissa would have to have fallen under one of the emergency exceptions in order to have been permissible under the Convention. Because the text of the Convention is ambiguous and leaves the interpretation of the provisions to individual nations, the United States could argue that the dumping of the New Carissa qualified under an emergency exception. Under a strict reading of the Convention, however, the dumping was a violation. Although the lack of international enforcement makes the legality of the dumping inconsequential, application of the Convention to the dumping of the New Carissa illustrates several weaknesses of the Convention that could have serious international implications.

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107 London Convention, supra note 8, annex I.
109 Id. at 162.
110 Press Release 86, supra note 13. Bill Milwee, a member of the Unified Command and a salvage expert with Gallagher Marine Systems said, "The crew on the U.S.S. David R. Ray have indicated that the New Carissa sank by the stern. That provides the best assurance that the remaining oil will be trapped onboard. We also expect that the very cold ocean temperatures will help trap the oil in the fuel tanks." Id.
111 See discussion supra Part III.A-B.
1. The Safety at Sea Exception

The dumping of the *New Carissa* should not fall within the safety at sea exception because dumping was not necessary to secure the safety of human lives or the vessel at sea. Moreover, even if lives or the vessel had been threatened, the dumping would have to have involved additional factors in order to have qualified under this exception. To qualify under the safety at sea exception, dumping must either be (1) necessary due to *force majeure* caused by stress of weather, or (2) the only way to avert a threat to human lives or vessels. In situations involving the second factor, dumping must cause less damage than would otherwise occur. Neither qualification is clearly defined, but under a strict reading of the Convention, the dumping of the *New Carissa* did not meet either qualification.

a. Securing the safety of human life and vessels at sea

The safety at sea exception applies when it is necessary to secure the safety of human lives or vessels at sea. In the case of the *New Carissa*, the crew of twenty-three had already been removed from the freighter when it was dumped. Thus, human lives at sea were not threatened. Furthermore, the vessel was ultimately dumped into the ocean. Therefore, dumping was not necessary to secure the vessel. The purpose of dumping was to prevent further release of oil, not to secure the safety of human lives at sea or to secure the safety of the vessel.

It could be argued that release of oil would, over time, threaten human lives on land, as the exception is ambiguous as to whether the human lives threatened may be lives at land as well as those at sea. This ambiguity was discussed during the drafting of the Convention. The relevant report of the Sea-Bed Committee stated, "Attention was ... drawn ... to the exemption contained in Article V which was thought to need some clarification. It was suggested that the human lives to be safeguarded in this draft article should be those aboard ships, platforms, and aircraft." The
final text does not draw any distinction, however, so the provision remains ambiguous.

The safety at sea exception should be interpreted narrowly for several reasons. First, Article V(2) of the Convention provides for emergencies where there is an unacceptable risk to human health generally. This suggests that Article V(1) should be interpreted narrowly to apply only when lives at sea are threatened. Second, in a 1994 circular on the interpretation of Article V of the Convention, the IMO stated, "there is agreement that Article V(1) solely applies to situations involving ships etc. in distress at sea." Although this circular does not specifically address the issue of whether securing the safety of human lives includes lives on land, the interpretation indicates that Article V(1) only applies to situations in which human lives at sea are threatened. Finally, because the safety at sea exception allows dumping without a permit, the provision should be narrowly construed to prevent the unregulated dumping of prohibited substances. Because the dumping of the New Carissa was not necessary to secure the safety of human lives or the vessel at sea, the safety at sea exception should not apply to this case.

b. Force majeure caused by stress of weather

If the dumping of the New Carissa were found to fall within the safety at sea exception, the situation would still have to have involved one of two factors. The first is force majeure caused by stress of weather. The Convention neither defines force majeure nor specifies what situations constitute events of force majeure. Typically, events of force majeure are defined as events not within the reasonable control of the party affected and which, despite the exercise of reasonable diligence, the party is unable to prevent or avoid. Because the Convention specifies that force majeure must be caused by stress of weather, the exception covers only situations that could not have been prevented or avoided due to unforeseeably severe weather conditions. Although the New Carissa was caught in stormy weather with winds of twenty-five to thirty knots and swells of twenty feet, it is questionable whether these conditions were severe enough and unforeseeable enough to have constituted an event of force majeure.

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118 IMO Circular, supra note 71, at 2.5 (emphasis added).
119 London Convention, supra note 8, art. V(1).
c. Dumping necessary to avert a threat and minimize damage

If an emergency does not involve force majeure, the safety at sea exception only applies if dumping is the only way to avert a threat to human lives or vessels and there is every probability that the damage caused by dumping will be less than would otherwise occur. In the case of the New Carissa, it is questionable whether there was any threat to human lives or vessels. Furthermore, even if there was such a threat, dumping was not the only way to avert it. The Unified Command considered a number of alternatives and ultimately decided dumping would be the best way to prevent oil from leaking. The command decision memo noted, “numerous lightering proposals were considered. In each case, removal of the oil from the vessel [was] a less effective or unsafe alternative.” Because there were alternative methods to avert the threat of oil leakage, dumping was not the only way to avert the threat. Thus, even though the Unified Command decided dumping was the most effective alternative, the second qualification required for the safety at sea exception was not met.

2. Emergency Exception

If a dumping does not qualify under the safety at sea exception, it may still be permissible if an emergency permit is issued. In the United States, the EPA is the administrative body authorized to issue emergency permits. The Marine Protection, Research, and Sanctuaries Act (“MPRSA”), which implemented the Convention in the United States, states:

[The] Administrator [of the EPA] may issue emergency permits . . . for the dumping of industrial waste into ocean waters . . . if the Administrator determines that there has been demonstrated to exist an emergency, requiring the dumping of such waste, which poses an unacceptable risk relating to human health and admits of no other feasible solution.
In the case of the *New Carissa*, however, the EPA did not consider issuing an emergency permit. When consulted, the EPA Region 10 ocean dumping coordinator stated, "so long as the situation continued as an emergency, no permitting [was] required." Because the "emergency" took place in marine waters, the EPA deferred to the United States Coast Guard. The Coast Guard subsequently found authority to dump the *New Carissa* under the National Contingency Plan ("NCP") authorized by the Clean Water Act. Under the NCP, if "the lead agency makes the determination . . . that there is a threat to public health or welfare of the United States or the environment, the lead agency may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or the threat of release." Although the statute appears to confer unlimited authority on lead agencies, an "appropriate removal action" may not violate international law. The United States Supreme Court addressed this issue in a similar case in which the Carriage of Goods by Sea Act, a domestic statute, could have been construed to nullify foreign arbitration clauses. The Court found that "[i]f the United States is to be able to gain the benefits of international accords and have a role as a trusted partner in multilateral endeavors, its courts should be most cautious before interpreting its domestic legislation in such manner as to violate international agreements."

Under the Convention, dumping prohibitions may not be suspended when there is a threat to the environment unaccompanied by a threat to human lives or vessels at sea. Moreover, prohibited substances may not be dumped unless one of the two emergency exceptions apply. Contrary to the EPA's determination, if the emergency does not meet the requirements of the safety at sea exception, an emergency permit must be issued for the dumping of substances otherwise prohibited under Annex I of the Convention.

Had the EPA considered issuing an emergency permit, it is unlikely that a permit for dumping the *New Carissa* could have been properly issued under the Convention. Under both the MPRSA and the Convention, an

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129 Memorandum from John Malek, Ocean Dumping Coordinator Sediment Management Program, to Environmental Protection Agency Region 10 File 2 (Feb. 10, 1999) (on file with author); Decision Memo, supra note 103, at 2.
130 Id.; Telephone Interview with John Malek, EPA Region 10 Ocean Dumping Coordinator (May 13, 1999) [hereinafter Malek].
133 Authority is found in 33 U.S.C. § 1321 and is delegated to the federal on-scene coordinator by the NCP.
emergency permit may only be issued if there is an unacceptable risk to human health and no other feasible solution exists. Though the Interim Procedures provide some guidance, the definition of both “unacceptable risk to human health” and “no other feasible solution” remains nebulous. If the exceptions are narrowly construed, the dumping of the New Carissa would not fall under the emergency exception.

a. Unacceptable risk to human health

In order to qualify under the emergency exception in Article V(2) of the Convention, a situation must pose an unacceptable risk to human health. The Interim Procedures provide a list of factors to consider in assessing the risk to human health, but do not state explicitly which situations constitute “unacceptable risk[s].” Because the weighing of factors and the ultimate determination of an unacceptable risk is left to individual nations, the United States could have decided that the New Carissa posed an unacceptable risk to human health. Under a strict reading of Article V(2) of the Convention, however, the New Carissa did not meet the “unacceptable risk” requirement. As with ocean dumping and other forms of marine pollution, the release of oil from the New Carissa posed some risk to human health. However, the New Carissa only presented indirect human health risks such as contamination of the food chain and the water supply. In this case, the direct threat was to the environment. The Unified Command decision memo justifying the dumping of the New Carissa stated:

We continue to have major concerns for wildlife and associated habitats. The continued release of oil, or the industrial operation required to remedy the oil impact, would have a devastating impact throughout the response area . . . Wildlife and their associated habitats on the Coos Bay north spit would be significantly impacted through road construction and overland wreck removal activities . . .

Nowhere in the decision memo is there reference to human health risks, much less an “unacceptable risk” to human health. Though the Convention does not define an unacceptable human health risk and the Interim

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135 London Convention, supra note 8, art. V(2); 42 U.S.C. § 1412(a).
136 See discussion supra Part III.B.
137 London Convention, supra note 8, art. V(2).
138 Decision Memo, supra note 103, at 1.
Procedures fail to specify which risks are "unacceptable," the risk should at least be direct, if not imminent and severe. If the Convention were to provide exceptions for situations that pose an indirect risk to human health, dumping would merely substitute one environmental harm for another. It is unlikely that the Convention meant to provide for such a solution, particularly in light of the United Nations Convention on the Law of the Sea, which provides, "in taking measures to prevent, reduce and control pollution of the marine environment, States shall act so as not to transfer, directly or indirectly, damage or hazards from one area to another or transform one type of pollution into another."139

b. No feasible solution

Even if the New Carissa were found to have posed an unacceptable risk to human health, in order for the emergency exception to have applied, no feasible alternative to dumping could have existed.140 Again, the Convention is vague as to what is meant by "feasible." Thus it is questionable whether the dumping of the New Carissa was the only "feasible" solution within the meaning of the Convention. The Unified Command considered alternative lightering proposals but decided they were less effective or unsafe.141 It is not clear whether "less effective" is the equivalent of "not feasible." Furthermore, the Interim Procedures suggest that the cost and the environmental impact of each alternative should be considered in determining whether feasible alternatives exist.142 Although the alternatives for removing the oil from the New Carissa may have been more costly, removal would have substantially minimized the environmental impact of dumping.

c. Consultation

In addition to requiring that a situation pose an unacceptable risk to human health and that there be no feasible solution other than dumping, both the EPA regulations promulgated pursuant to the MPRSA and the Convention contain consultation requirements. The EPA regulations require those making a decision on dumping to discuss with the

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140 London Convention, supra note 8, art. V(2).
141 Decision Memo, supra note 103, at 1.
142 London Convention, supra note 8, annex VII; THE FIRST DECADE, supra note 62, at 156-57.
Department of State whether there is a need to consult with other parties to the Convention. The Convention requires that countries proposing to dump prohibited material consult with parties that may be affected and the IMO before a permit for dumping is issued. In the case of the New Carissa, neither the affected party nor the IMO was consulted during the decisionmaking process.

C. Weaknesses of the Convention Illustrated by the New Carissa

The case of the New Carissa illustrates several weaknesses of the Convention. First, the emergency exceptions are broad and open to varying interpretations. Although it is likely that the dumping of the New Carissa violated the Convention, the emergency exceptions could be interpreted loosely to justify the dumping. Allowing individual nations to interpret the Convention’s ambiguous provisions may result in wide variations on dumping standards. Of greater concern, some nations may interpret the ambiguity of the Convention’s provisions as a license to dump pollutants. The loopholes provided by the vague provisions are further exacerbated by the lack of coordinated monitoring and enforcement mechanisms. In the absence of international monitoring and enforcement, nations have less incentive to construe the provisions narrowly, particularly when dumping is the less expensive alternative.

VI. RECOMMENDATIONS

A. Clarification at the Global Level

The emergency exceptions of the Convention, as written, weaken and undermine the complete prohibition on ocean dumping established in Article IV(1). The Contracting Parties should develop and adopt definitions and criteria to clarify (1) what conditions constitute force majeure under the safety at sea exception, (2) what risks are “unacceptable risks” to human health under the emergency exception, and (3) what criteria must be considered before there is a determination that there is no feasible alternative

143 40 C.F.R. § 220.3 (c) (1998)
144 London Convention, supra note 8, art. V(2).
145 In this case, Canada was the only party that may have been affected. Though not consulted during the decisionmaking process, Canada was informed of the Unified Command’s decisions after calling the United States to inquire about the situation. Malek, supra note 130.
146 The incident was reported to the IMO after the dumping had been completed. Id.
to dumping. Additionally, the Contracting Parties should clarify whether the safety at sea exception applies to situations involving threats to human lives on land as well as sea. Finally, the Contracting Parties should consider establishing an international mechanism to monitor and enforce the dumping prohibitions. An international coast guard, for example, could probably enforce greater compliance with the Convention.\footnote{Legislative Developments, supra note 88, at 582.}

B. Regional Agreements

In addition, or as an alternative to clarification at the global level, countries sharing bodies of water should enter into regional agreements that supplement the Convention. Regional agreements\footnote{Regional agreements are provided for in Article VIII of the Convention. London Convention, supra note 8, art. VIII.} sidestep the problem of seventy-seven nations agreeing on definitions and provide a mechanism through which countries sharing a body of water can create appropriate and effective solutions to protect the area from marine pollution. Regional agreements allow flexibility and permit countries to account for the unique geographical concerns of each region. Neighboring countries should use regional agreements to clarify the ambiguities of the emergency provisions and to implement binding enforcement and monitoring mechanisms.

The South Pacific region's Convention for the Protection of the Natural Resources and Environment of the South Pacific Region ("Noumea Convention")\footnote{South Pacific Region: Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (1986), reprinted in 26 I.L.M. 38 (1987).} and the Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region,\footnote{Protocol Concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region (1986), reprinted in 26 I.L.M. 38, 59 (1987) [hereinafter Emergency Protocol].} signed together in 1986, are examples of such regional agreements. These agreements call for the establishment of reporting requirements, research and monitoring programs, response measures, and mutual assistance in combating pollution emergencies.\footnote{See Marian Nash Leich, U.S. Practice: Contemporary Practice of the United States Relating to International Law, 85 AM. J. INT'L L. 155, 158 (1991).} Furthermore, the Noumea Convention establishes a regional organization, the South Pacific Commission, to oversee its implementation and the implementation of accompanying protocols.\footnote{Id.} As one commentator suggested:
The Convention and Protocols [of the Noumea Convention] are . . . major step[s] forward both with regard to protecting the environment of the South Pacific and to U.S. relations with the states concerned. The Convention bridges differences between the island states . . . and other states with strategic interests in the region. It is designed to reduce tensions by creating a legal framework and institutional arrangements for mutual assistance and cooperation, scientific projects, and information exchange.

Although the Noumea Convention retains the London Convention’s ambiguous emergency provisions, 154 it represents a first step toward greater regional protection of the marine environment.

C. The Precautionary Principle and Restrictive Readings

Whether clarification of the emergency provisions takes place at the global or regional level, the emergency provisions should be read restrictively in light of the precautionary principle and purpose of the Convention. The precautionary principle is a preventative environmental policy that requires the reduction and prevention of environmental impacts before the threshold of risk is reached. 155 The precautionary principle rejects historically accepted assumptions that science can ascertain and accurately determine the assimilative capacity of the environment and that, once determined, sufficient time will remain for preventative action. 156

The CEQ’s report on ocean dumping that initiated the development of the Convention 157 recognized and embraced the precautionary principle. The report’s summary of findings and recommendations concluded:

The Nation has an opportunity unique in history—the opportunity to act to prevent an environmental problem which otherwise will grow to a great magnitude. In the past, we have failed to recognize problems and to take corrective action

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153 Id. at 156.
154 The Noumea Convention’s emergency provisions parallel those of the London Convention. See Leich, supra note 151, at 159.
156 Fullem, supra note 21, at 498 (quoting Ellen Hey, The Precautionary Concept in Environmental Policy and Law: Institutionalizing Caution, 4 GEO. INT’L ENVTL. L. REV. 303, 305 (1992)).
157 See discussion supra Part II.C.
before they became serious. The resulting signs of environmental degradation are all around us, and remedial actions heavily tax our resources.\textsuperscript{158}

The Convention may also have been influenced by the precautionary principle when the delegates voted to continue an indefinite suspension of radioactive waste dumping in 1985, even though an expert study on the dangers of radioactive waste dumping was inconclusive.\textsuperscript{159} In addition, Resolution LDC 44(14) provides for preventative actions when substances introduced into the marine environment are likely to cause harm, even if there is "no conclusive evidence to prove a causal relationship between inputs and their effects."\textsuperscript{160} In light of the precautionary principle underlying the purpose and policies of the Convention, the emergency provisions should be read narrowly to prevent the unregulated dumping of substances harmful to the marine environment.

Some critics caution against the use of the precautionary approach and argue that, in the case of ocean dumping, there may be a safer disposal method that has yet to be realized or developed.\textsuperscript{161} However, waiting for such an alternative to be developed could result in severe and irreparable harm to the environment. As one commentator wrote, "given scientific ignorance, prudent pessimism should be favoured over hazardous optimism."\textsuperscript{162} Although no approach to the problem of waste disposal is perfect, the precautionary approach at least errs on the side of preserving the environment rather than polluting it.

VII. CONCLUSION

The London Convention represents a global consciousness of the dangers presented by marine pollution. However, consciousness alone cannot create preventative actions that preserve the marine environment. Parties to the Convention must commit to abide by the strict prohibitions of the Convention in order for the Convention to stem the growing tide of waste dumped into the oceans. Furthermore, loopholes through which

\textsuperscript{158} CEQ, supra note 7, at viii.
\textsuperscript{159} Waczewski, supra note 155, at 106.
\textsuperscript{160} WILLIAM T. BURKE, INTERNATIONAL LAW OF THE SEA 4-143 (1997) (quoting Resolution LDC 44 (14) Fourteenth Consultative Meeting LDC 14/16 25 November 1991)).
\textsuperscript{161} "[T]he parties to the Convention should . . . keep all options for radwaste disposal open until a truly permanent and safe disposal method is developed." McCullagh, supra note 86, at 425.
\textsuperscript{162} Fuller, supra note 21, at 497 (citing MICHAEL JACOBS, THE GREEN ECONOMY: ENVIRONMENT, SUSTAINABLE DEVELOPMENT AND THE POLITICS OF THE FUTURE 100 (1991)).
Contracting Parties can escape their international obligations must be eliminated. Currently, the vague provisions in the safety at sea exception and the emergency exception permit varying interpretations of when an emergency exists and provide little guidance as to when an exception may properly be invoked. In the case of the New Carissa, dumping was not necessary to secure the safety of human lives or vessels at sea, the situation did not pose an immediate and imminent risk to human health, and alternatives other than dumping were available. This case illustrates the weaknesses of the emergency provisions. These problems are exacerbated by the lack of international monitoring and enforcement of the Convention, which allows states to declare the suspension of dumping prohibitions without providing any justification.

Parties to the Convention should develop and adopt, either on a global or regional level, definitions and criteria that clarify the language of the emergency provisions. Furthermore, Contracting Parties should consider creating an international mechanism to monitor and enforce the Convention's prohibitions on ocean dumping. Clarifications should reflect the Convention's precautionary policy and purpose in order to prevent irreparable environmental damage. Though scientists have yet to fully determine the environmental consequences of ocean dumping, failure to curb dumping practices now will severely affect the global environment of the future.