PRESUMED INNOCENT: NAVIGATION RIGHTS AND RISK-BASED ACTIVITIES IN THE PASSAMAQUODDY BAY

Neil Craik*

INTRODUCTION

The Passamaquoddy Bay is not the first place that comes to mind as a setting for international controversy. A fishing and tourist area, well-known for its scenic beauty, the Passamaquoddy Bay is also bisected by the Canada-United States border.[1] Located at the Western entrance to the larger Bay of Fundy and terminating at the mouth of the Saint Croix River (an international watercourse that defines the boundary between Maine and New Brunswick), the Passamaquoddy Bay is now also the site for two proposed liquefied natural gas (LNG) terminals on the Maine side of the Bay.[2] LNG terminals are controversial at the best of times, given the environmental and human safety risks posed by LNG terminals and the transport of LNG over water.[3] In the case of the Passamaquoddy Bay proposals, the controversy is compounded because the only shipping access to the proposed LNG terminal sites in the United States is through the Head Harbour Passage, a narrow channel of water located between Deer Island and Campobello Island in the Passamaquoddy Bay, both of which are Canadian. The Canadian government has maintained that the waters of the Head Harbour Passage are "sovereign Canadian waters" and, as a consequence, Canada takes the position that it has the unilateral right to control navigation through the Head Harbour Passage.[4] The United States, on the other hand, takes the position

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* Associate Professor, Faculty of Law, University of New Brunswick. The author gratefully acknowledges the research assistance of Matt Hiltz and Toby Kruger (UNB, LLB, 2009). The author also received helpful comments from Ted McDorman (University of Victoria), Don Fleming (UNB), and Michael Martin (Gilbert McGloan Gillis, Saint John), as well as from the participants in the "(Not So) Innocent Passage: Intrenational Law and the Passamaquoddy Bay LNG Terminal Controversy" workshop held at UNB in May, 2007.

[1] See Map attached at Appendix 1.

[2] The two proposal proponents are Quoddy Bay LNG, LLC and Down East LNG, Inc. Both proposals are currently before the Federal Energy Regulatory Commission, Quoddy Bay LNG LLC (Docket Number CP07-38) and Down East LNG, Inc. (Docket Number CP07-52). A third proposal by Calais LNG was abandoned.

[3] Simon Romero, "Demand for Natural Gas Brings Big Import Plans, and Objections" *New York Times* (15 June, 2005); See also U.S., Congressional Research Service Report For Congress, *Liquefied Natural Gas (LNG) Import Terminals: Siting, Safety and Regulation* by Paul Parfomak & Aaron Flynn, (Washington, D.C.: Library of Congress, 2004); U.S., Government Accountability Office *Maritime Security: Public Safety Consequences of a Terrorist Attack on a Tanker Carrying Liquefied Natural Gas Need Clarification* (Report to Congressional Requesters, GAO-07-316) (Washington, D.C.: United States Government Accountability Office, 2007) [GAO].

[4] Letter from Michael Wilson, Canadian Ambassador to the United States, to Joseph Kelliher, Chairman of U.S. Federal Energy Regulatory Commission (14 February 2007) [Wilson Letter, on file with author]. See also *House of Commons Debates*, No. 053 (26 September 2006) at 1455 (Rt. Hon. Stephen Harper),

that the Head Harbour Passage is a strait used for international navigation and subject to the right of non-suspendable innocent passage.[5]

To assert its position, the Canadian Ambassador to the United States, Michael Wilson, provided a letter on 14 February 2007, to the U.S. Federal Energy Regulatory Commission (FERC), the lead regulatory agency reviewing the LNG terminal proposals, advising the U.S. agency that Canada will not permit LNG tankers to pass through the Head Harbour Passage in the Passamaquoddy Bay.[6] The basis of the Canadian refusal is that the transport of LNG through the Head Harbour Passage presents unacceptable navigational, safety, and environmental risks. The FERC has indicated that it will continue to consider the applications notwithstanding the Canadian position.[7] As the situation currently stands, the United States regulator could potentially approve either proposal in the face of Canadian opposition. If either of the projects proceed, Canada will be left to enforce its claim of sovereignty over the Head Harbour Passage by having to take affirmative steps to prevent LNG tankers from transiting the passage.

The current controversy is a reprise of an earlier dispute from the 1970s, where the same issues regarding the transport of environmentally hazardous materials through the Head Harbour Passage were raised in relation to an oil refinery proposal in Eastport, Maine.[8] The re-emergence of this issue suggests that regardless of the outcome of the LNG proposals themselves, Canada and the United States need to come to some resolution of the underlying issues regarding passage through these waters.

The controversy concerns disagreement over two related legal issues. First, is the Head Harbour Passage an international strait subject to the right of innocent passage or is it, as the Canadian government claims, an area subject to unqualified Canadian sovereignty? Second, if the right of innocent passage exists, would the potential environmental and safety risks posed by transporting LNG render passage non-innocent? The focus of this paper is primarily on the second issue. In particular,

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noting, "This government believes that the waters of Passamaquoddy Bay are Canadian waters. We have defended that position for a long time. We oppose the passage of LNG tanker traffic through Head Harbour and we will continue to do so".

[5] J. Ashley Roach & Robert Smith, *United States Responses to Excessive Maritime Claims*, 2d ed. (The Hague: Martinus Nijhoff Publishers, 1996) at 290.

[6] "*Wilson Letter*", *supra* note 4.

[7] Letter from Joseph Kelliher to Michael Wilson (2 March 2007) [on file with the author]. This position was affirmed by a decision of the Federal Energy Regulatory Commission in denying a motion brought by the Province of New Brunswick to suspend the processing of the LNG terminal applications on the basis the Canadian position to refuse passage, *In the Matter of Downeast LNG, Inc., CP07-52*, Order Denying Motion to Suspend Proceedings, issued June 1, 2007, (FERC) 119 FERC § 61,228.

[8] See Allen Springer, *The International Law of Pollution: Protecting the Global Environment in a World of Sovereign States* (Westport, Connecticut: Quorum Books, 1983) c. 6, describing the Eastport Oil refinery proposal and the related international legal controversy. See also Jeffrey Ewen, "The United States and Canada in Passamaquoddy Bay: Internal Waters and the Right of Passage to a Foreign Port" (1976-77) 4 Syracuse J. Int'l L. & Com. 167.

my interest here is in examining the circumstances under which navigational activities that pose risks to the coastal state may be subject to coastal state control. The Passamaquoddy Bay controversy provides a provocative example of the limits of coastal state control over ships exercising the right of innocent passage, and raises important questions regarding the coherence of the international rules respecting innocent passage with the more preventative and precautionary stance of international environmental norms. At the heart of these questions is how activities involving probabilistic risk are treated within each of these areas of law.

In relation to risk-based activities, it is helpful to distinguish between environmental harms that are predicted to occur and those harms that are identified in a probabilistic fashion. The predicted air and water emissions from an industrial activity are an example of the former. In such cases, acceptable standards may be identified domestically or internationally, which, if exceeded, would render the activity illegal. The siting of a nuclear powered generating station may be an example of the latter. Here the concerns include the potential for catastrophic environmental harm, but the probability of such an event actually occurring may be quite low.[9] Activities involving probabilistic harm, therefore, require a determination of the probability of a harm occurring and of the acceptability of the potential harm if it were to occur. Risk itself is a calculation of the probability and the potential seriousness of the harm.[10] While conceding that risk-based activities, including LNG transport, may involve both predicted and probabilistic harm, this paper concentrates on the latter.

The unsurprising difficulty here is that states and the domestic actors involved in such controversies rarely agree on the risks associated with disputed activities.[11] To complicate matters, international law provides few standards against which risk-based activities can be assessed. The result, which the Passamaquoddy Bay LNG terminal controversy aptly illustrates, is that risk-based activities will often lead to intractable disputes, with no clear basis for resolution. In part, this difficulty arises because of the scientific and technical limits in calculating risks, but it also arises because individuals and groups, including states, may have genuine, value-based differences in risk tolerance. It is in this regard that the Passamaquoddy Bay LNG terminal controversy transcends the specific facts and is salient to the broader question of the nature of innocent passage and its relation to environmental and human safety risks.

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[9] This is not to say that a nuclear powered generating facility would not also result in predicted environmental harms.

[10] See S.G. Breyer, *Breaking the vicious circle: Toward effective Risk Regulation* (Cambridge, MA: Harvard University Press, 1993) and Cass Sunstein, *Risk and Reason: Safety, Law and the Environment* (Cambridge, UK: Cambridge University Press, 2002) for a discussion of the nature of risk-based environmental decision-making processes).

[11] See Sunstein, *ibid.*, discussing effects of cognitive biases on accurate public risk assessment. See also Cass Sunstein, *Laws of Fear: Beyond the Precautionary Principle* (Cambridge, UK: Cambridge University Press, 2005). For an opposing view arguing that culture plays an important and underappreciated (by Sunstein) role in risk perception see Dan Kahan *et al.*, "Fear of Democracy: A Cultural Evaluation of Sunstein on Risk" (2006) 119:4 Harv. L. Rev. 1071).

The first part of this paper describes the LNG controversy with specific reference to how the controversy triggers the rules concerning innocent passage. This necessarily involves some discussion of the status of the Head Harbour Passage, but this issue is addressed summarily with the intent of demonstrating the legal context for discussion of the possible qualifications to free navigation in this area. In the second part, I outline the current approach to determining whether an activity will be considered non-innocent and how these rules respond to risk-based activities, such as LNG transport. The third and fourth parts describe the treatment of risk-based activities under the rules respecting transboundary environmental harms and compare that treatment with how such activities are addressed in relation to the exercise of the right of innocent passage.

My principal conclusion is that, notwithstanding the more precautionary posture of international environmental norms, international law as a whole has generally left the discretion to undertake risk-based activities in the hands of the states undertaking those activities. In short, risk-based activities are presumed innocent and the threshold for determining non-innocence remains high. That said, the procedural obligations of international environmental law provide an opportunity for a more cooperative and contextually sensitive approach to resolving disputes involving risk-based activities, such as the Passamaquoddy Bay controversy. In essence, the rules regarding innocent passage forsake contextual sensitivity in favour of legal certainty, while the rules in relation to transboundary environmental harm call for much greater consideration of the respective rights and interests of the parties. Taken together, the rules retain overall coherence by allowing source (flag) states to undertake unilateral activities, but only after satisfying onerous procedural obligations of risk evaluation and good faith consultation.

PART ONE: THE PASSAMAQUODDY LNG TERMINAL CONTROVERSY

1. LNG Transportation by Sea

Increased demand for natural gas in North America (and elsewhere) has led to a consequent demand for natural gas to be shipped from foreign sources. In order to transport natural gas by sea efficiently, it has to be condensed through a process of liquefaction, which requires that the gas be condensed by cooling it to approximately minus 260 degrees Fahrenheit (minus 162 degrees Celsius). It is then transported by specially designed tankers, generally measuring 250 to 300 metres in length, to market countries where it is stored, regasified, and piped into existing natural gas distribution networks. In its liquid form, natural gas is generally considered stable. However, as liquefied natural gas heats up and becomes gaseous, it can be explosive at certain concentrations.[12]

[12] The flammability range is generally between five and 15 per cent by volume (air to vapour). Below five per cent there is too little vapour. Above 15 per cent, the vapour cloud cannot burn due to lack of oxygen. See GAO, *supra* note 3 at 8. For a general description of LNG terminals, see Federal Energy Regulatory Commission (FERC), *A Guide to LNG - What All Citizens Should Know*, online: FERC <http://www.ferc.gov/industries/lng.asp>. For a more detailed and technical discussion, see U.S., Sandia National Laboratories, *Guidance on Risk Analysis and Safety Implications of a Large Liquefied Natural*

There is considerable public concern regarding the environmental and human safety hazards that LNG shipment and terminals present.[13] Broadly speaking, the hazards arise from an accidental or intentional release of LNG, which may result in harm due to physical contact with LNG at very low temperatures. Also where LNG changes its state from liquid to gas, combustion and thermal damage may occur where released LNG comes into contact with an ignition source. The severity of a potential incident relates to the size of the spill and decreases with distance from the spill source. A general description is contained in a recent report by the U.S. General Accounting Office:

> When LNG is spilled from a tanker, it forms a pool of liquid on the water. Individuals who come into contact with LNG could experience freeze burns. As the liquid warms and changes into natural gas, it forms a visible, fog like vapor cloud close to the water. The cloud mixes with ambient air as it continues to warm up and eventually the natural gas disperses into the atmosphere. Under certain atmospheric conditions, however, this cloud could drift into populated areas before completely dispersing. Because an LNG vapor cloud displaces the oxygen in the air, it could potentially asphyxiate people who come into contact with it. Furthermore, like all natural gas, LNG vapors can be flammable, depending on conditions. If the LNG vapor cloud ignites, the resulting fire will burn back through the vapor cloud toward the initial spill. It will continue to burn above the LNG that has pooled on the surface—this is known as a pool fire. Experiments to date have shown that LNG fires burn hotter than oil fires of the same size. Both the cold temperatures of spilled LNG and the high temperatures of an LNG fire have the potential to significantly damage the tanker, causing multiple tanks on the ship to fail in sequence-called a cascading failure. Such a failure could increase the severity of the incident. Finally, concerns have been raised about whether an explosion could result from an LNG spill.[14]

The prevailing approach to LNG transport safety in the United States is detailed in a 2004 report prepared by Sandia National Laboratories for the United States government.[15] The report itself reviews the existing literature on LNG safety and provides further analysis of the risks posed by LNG transport. The Sandia Report provides guidance on risk management measures to be taken in relation to LNG

Gas (LNG) Spill Over Water (SAND2004-6258) by Mike Hightower *et al.*, (Springfield, Va.: United States Department of Commerce National Technical Information Office, 2004) at 26-30 [Sandia Report].

[13] *Supra* note 3. See also Sandia Report, *ibid.*

[14] GAO, *supra* note 3 at 5.

[15] Sandia Report, *supra* note 12. The Sandia Report was relied upon in a report prepared for the Government of Canada assessing the potential risks of LNG transport through the Head Harbour Passage, SENES Consulting Limited, *A Study on the Anticipated Impacts on Canada from the Development of Liquefied Natural Gas Terminals on Passamaquoddy Bay* (2007), online: Foreign Affairs and International Trade Canada <http://geo.international.gc.ca/can-am/main/shared_env/passamaquoddy_bay-en.asp> at 2.15.

transport which focuses on risks from accidental and intentional (i.e. terrorist or sabotage related) spills. While the report concludes that the risks posed by accidental releases are small and manageable, it acknowledges the heightened concerns around intentional spills after the terrorist attacks in the United States in 2001.[16] Intentional spills also present greater environmental and human safety concerns owing to the potential for a spill of greater magnitude.

Because the potential risks associated with a spill decrease as the distance from the spill site increases, the Sandia Report identifies three separate hazard zones based on the distance from the accident site for accidental and intentional breaches, respectively.[17] Each hazard zone has different risks associated within it, with more severe risks arising closer to the accident site.[18] The Sandia Report suggests a number of strategies and precautions that can be taken to prevent or mitigate harms, including the creation of security zones around LNG tankers in transit, armed (U.S. Coast Guard) escorts for LNG tankers in near shore areas, vessel traffic measures, and the preparation of emergency response plans with other agencies.

The nature of the potential harm from LNG transport and terminal development is largely risk-based, in that the most serious risks to human health and the environment are probabilistic in nature. The acceptability of the risk is a function of the distribution of the potential benefits and detriments from the activity. Where the potential harm falls on a group that is less likely to benefit from the activity, it follows that they will be less likely to accept the risks. In the current controversy, there is a significant degree of asymmetry in the distribution of benefits and detriments that underlies the Passamaquoddy Bay controversy since the risk of harm is borne by the Canadian residents of Deer Island and Campobello Island and by the Canadian users of the Head Harbour Passage waters, while the benefits largely accrue to the United States through economic development and enhanced energy supply.

2. Passamaquoddy Bay and the Head Harbour Passage

The two proposed LNG terminals are located on the Maine shore of the Passamaquoddy Bay. The area itself is fairly isolated, although there is an existing deep water port in Eastport, Maine. As noted, access to the proposed terminals is through the Head Harbour Passage. The shipping channel, which varies in width, is approximately 600 metres wide at its narrowest point.[19] Navigation is complicated

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[16] *Ibid.* at 49-54. See also U.S., *Statement of RDML Brian Salerno on the Coast Guard's Role in LNG Security Before the Committee on Homeland Security: Hearing before the U.S. House of Representatives Committee on Homeland Security* (21 March 2007) online: <http://homeland.house.gov/hearings/ index.asp?ID=25> [Salerno Testimony].

[17] Sandia Report, *supra* note 12 at 74-76. See also Salerno Testimony, *ibid.*

[18] *Ibid.* The Sandia Report identified these zones as follows: for accidental spills, Zone 1 (0 to 250 m), Zone 2 (250 to 750 m) and Zone 3 (> 750 m). For intentional spills, Zone 1(0 to 500 m), Zone 2 (500 to 1600 m), and Zone 3 (> 1600 m).

[19] Canadian Hydrographic Service, *Campobello Island Admiralty Chart*, Chart 4114, (Ottawa: Minister of Fisheries and Oceans, 1988).

by a sharp turn that must be executed at the terminus of the channel, as well as by sometimes severe tidal, current, and weather conditions.

The international legal status of the Head Harbour Passage is contested by the Canadian and United States governments. The Canadian government takes the position that the Head Harbour Passage is internal Canadian waters and, therefore, subject to absolute Canadian sovereignty, allowing the Canadian government to control shipping through the passage.[20] The law of the sea makes a basic distinction between a state's internal waters and its territorial sea. The latter, which generally extends twelve nautical miles seaward from the low water line along a state's coast, is subject to the full jurisdictional authority of the coast state, subject to the rights of other states to pass through those waters, a right referred to as innocent passage. A coastal state may enclose, subject to international legal criteria, indented portions of its coastline and coastal areas fringed with islands.[21] As discussed below, a state may also under extraordinary circumstances enclose waters over which it has asserted historic sovereign title. The waters so enclosed are internal waters and typically not subject to rights of passage.

The United States maintains that the Head Harbour Passage is subject to the right of innocent passage, which allows foreign ships to traverse the passage so long as those ships are not engaged in an activity that is prejudicial to the peace, good order or security of Canada.[22] The American position relies on Article 45 of the *United Nations Convention on the Law of the Sea* (*UNCLOS*), which reads as follows:

> 1. The regime of innocent passage, in accordance with Part II, section 3, shall apply in straits used for international navigation:
>
> (a) excluded from the application of the regime of transit passage under article 38, paragraph 1; or
>
> (b) between a part of the high seas or an exclusive economic zone and the territorial sea of a foreign State.

[20] Canadian Department of External Affairs, Note LAO-448 (Ottawa: March 30, 1982), cited in Roach & Smith, *supra* note 5 at 290. But the Canadian government has been more equivocal recently, referring to Head Harbour Passage ambiguously as "Canadian waters", without specifying its precise status. See materials cited *supra* note 4.

[21] The rules respecting the delimitation of the territorial sea are set out in the *United Nations Convention on the Law of the Sea*, 10 December 1982, 1833 U.N.T.S. 3, 21 I.L.M. 221 (entered into force 16 November 1994) arts. 3-16. Canada ratified *UNCLOS* on 6 November 2003.

[22] Roach & Smith, *supra* note 5 at 290, (noting, "The regime of innocent passage, rather than transit passage, applies in straits used for international navigation that connect a part of the high seas or an exclusive economic zone with the territorial sea of a coastal State. There may be no suspension of innocent passage through such straits, and there is no right of overflight in such straits. These so-called "deadend" straits include the Head Harbour Passage leading through Canadian territorial sea to the United States' Passamaquoddy Bay and the Bahrain-Saudi Arabia Passage").

2. There shall be no suspension of innocent passage through such straits.[23]

The U.S. claim is that the Head Harbour Passage, which provides the sole access from the high seas area to the port at Eastport, Maine, is a strait used for international navigation between the high seas and the United States' territorial sea, a so-called "dead-end strait." Given that the United States has not ratified *UNCLOS*, it relies on the customary status of Article 45(1)(b). The *Territorial Seas Convention,* to which the United States is a party (but Canada is not), contains a similar provision at Article 16(4).[24] *Prima facie,* the United States' claim that the Head Harbour Passage is a "dead-end" strait appears straightforward, as the Head Harbour Passage has clearly been used for international navigation and it seems to meet the geographical criteria of Article 45(1)(b). The Head Harbour Passage itself forms only part of the strait, which notionally extends through portions of the Passamaquoddy Bay and the Bay of Fundy to the outer limit of Canada's territorial sea, thereby forming a strait from the territorial sea of the United States to Canada's exclusive economic zone. Canada's objection arises from its view that the Head Harbour Passage is contained within its internal waters (not its territorial sea) and is therefore not subject to the right of innocent passage pursuant to Article 45 or any other provision of the *UNCLOS.*

The Canadian government has not made the basis of its claim explicit, but the most likely basis for such a claim would be a claim of historic waters over an area that includes the Head Harbour Passage. As noted in the introduction, a detailed examination of the validity of the Canadian position is beyond the scope of this paper, but some brief comment on the possible bases of the Canadian claim is warranted.

Using straight baselines (drawn from the mouth of the Saint Croix River to Deer Island and across the Western entrance of the Head Harbour Passage to Campobello Island) to enclose the Head Harbour Passage would operate to render the Head Harbour Passage internal (Canadian) waters.[25] The islands are in the immediate vicinity of the Canadian coast, a straight baseline could be drawn so as not to depart appreciably from the general direction of the coast and the sea areas lying within the lines are sufficiently linked to the Canadian mainland.[26] Because the criteria for straight baselines in *UNCLOS* are drawn from the *Anglo-Norwegian Fisheries Case*, and are reflected in the *Territorial Seas Convention*, it is reasonable

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[23] *UNCLOS, supra* note 21 at art. 45.

[24] *Convention on the Territorial sea and Contiguous Zone*, 29 April 1958, 516 U.N.T.S. 205, (entered into force 22 September 1964) art. 16(4) [*TSC*].

[25] Because the coasts of the Passamaquoddy Bay do not belong to a single state, there is no argument that the whole of the Passamaquoddy Bay could be enclosed using the international rules respecting bays currently set out in *UNCLOS*, art.10. Even accepting that the mouth of the Bay of Fundy can be drawn from St. Mary's Bay to the St. Croix River (a description that coincides with the original delineation of the Province of Nova Scotia), the distance greatly exceeds 24 miles, as required by art. 10(4). But, for an opposing view, see Opinion letter from Jon Van Dyke (13 May 2007) on file with author.

[26] *UNCLOS, supra* note 21 arts. 7(1), 7(3).

to accept that these rules are customary and binding.[27] The difficulty is that Article 7(6) of *UNCLOS* states that "straight baselines may not be applied by a State in such a manner as to cut off the territorial sea of another State from the high seas or an exclusive economic zone." In the present circumstances, because the Head Harbour Passage is the only means of shipping access to the Maine coast of the Passamaquoddy Bay, this provision would operate to prevent the drawing of straight baselines, unless a right of innocent passage could be preserved. Moreover, even if straight baselines could be drawn, the enclosure of the Head Harbour Passage within Canada's internal waters would not preclude the operation of Article 45(1)(b). The reservation of innocent passage in areas enclosed by straight baselines is explicitly provided for in Article 35(a), which is in turn consistent with Article 8(2) which states that "where the establishment of a straight baseline...has the effect of enclosing as internal waters areas which had not previously been considered as such, a right of innocent passage ... shall exist in those waters".[28] In other words, simply because the Head Harbour Passage is classified as internal waters does not mean that those same waters are not subject to a right of innocent passage.[29]

An alternative, and potentially more effective, basis upon which Canada may found a claim for sovereign control over the Head Harbour Passage is to assert that the passage is within Canadian historic waters. A claim that the Head Harbour Passage is internal waters based on historic grounds is unaffected by the rules regarding the establishment of international straits by virtue of Article 35(a) of *UNCLOS*. While *UNCLOS* recognizes the possibility of historic claims over portions of the sea, it does not provide the criteria by which the validity of a claim for historic waters would be assessed.[30] Any such claim must be founded on customary rules of international law.[31] Canada has long maintained that the Bay of Fundy is to be considered as Canadian historic waters.[32] Great Britain, and then Canada, has

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[27] *Fisheries Case (United Kingdom v. Norway)*, [1951] ICJ Rep. 116.

[28] *UNCLOS*, *supra* note 21 art. 8(2).

[29] See D.P. O'Connell, *The International Law of the Sea* (Toronto: Oxford University Press, 1982) at 385-88 for discussion of the treatment of straits as internal waters, who notes Georgia Strait as another possible example.

[30] *UNCLOS*, *supra* note 21 art. 10(6).

[31] See Donat Pharand, *Canada's Arctic Waters in International Law* (Cambridge, UK: Cambridge University Press, 1988); see also R. R. Churchill & A. V. Lowe, *The Law of the Sea*, 3d ed. (Manchester: Manchester University Press, 1999) at 43-46.

[32] This claim was explicitly made in 1962 by Prime Minister Diefenbaker, who noted in the context of a Russian fishing vessel entering the Bay of Fundy:

> The Bay of Fundy has always been considered, since the earliest days, first by Great Britain and thereafter by successive Canadian governments, as Canadian territorial waters. As far back as 1763 it was described in official documents as being comprised within the boundaries of what is now Canada. There are strong geographic and economic considerations for this.

> *House of Commons Debates*, No. 2 (15 November 1962) at 1650 (Hon. John Diefenbaker). Gérard La Forest notes that the reference to "territorial waters" may

continued to affirm its position that the Bay of Fundy is historic waters, a claim that has always included the Passamaquoddy Bay.[33] Canada's claim of the Passamaquoddy Bay's status as historic waters has never been authoritatively delineated. However, La Forest indicates that Canadian sovereignty over Deer Island and Campobello Island has not been questioned.[34] The location of the international boundary within the Passamaquoddy Bay was finally settled in 1910, although the treaties addressing the boundary location did not address the question of whether the Passamaquoddy Bay, or parts thereof, were Canadian internal waters or part of Canada's territorial sea.[35] Nor did the treaty address the rights of transit through the Head Harbour Passage.

The accepted legal criteria for recognition of a claim of historical waters are described in the case of *United States v. Alaska*.[36] Here the United States Supreme Court held that in order to qualify as historic waters, the claimant state must have exercised authority over the waters, the authority must have been exercised continuously, and other states have must have acquiesced to the exercise of authority.[37] Without commenting on the overall validity of the Canadian position, I would note that the Head Harbour Passage has been the principal access to the port at Eastport, Maine. While the use of the Head Harbour Passage is subject to Canadian oversight and regulation, which include advance notice of arrival and pilotage requirement for vessels transiting Canadian waters bound for U.S. ports, there is little evidence, with the exception of the Eastport oil refinery proposal discussed below, that Canada has ever sought to restrict passage in this location in an absolute way.[38]

have been a reference to the *Coastal Fisheries Protection Act*, 1 & 2 Eliz. II, c.15, s. 2(b), which defines "territorial waters" as including inland waters. See Gérard V. La Forest, "Canadian Inland Waters of the Atlantic Provinces and the Bay of Fundy Incident" (1963) 1 Can. Y.B. Int'l L. 149.

[33] The original boundary of the colony of Nova Scotia (which then included New Brunswick) was described in colonial grants and subsequent colonial documents as being drawn across the mouth of the Bay of Fundy from St. Mary's Bay (located on the south-eastern entrance to the Bay of Fundy) to the mouth of the St. Croix River (at the back of Passamaquoddy Bay). The effect of this delineation would be to enclose the Head Harbour Passage within Canadian historic waters, although it does not necessarily affect the status of those waters as internal or as part of Canada's territorial sea. Described in La Forest, *ibid.* at 155-6.

[34] *Ibid.* at 158, 164.

[35] *Treaty Concerning the Boundary Line in Passamaquoddy Bay*, 18 August 1910, U.S.T. No. 551. The line was further refined in *Lake Superior-Lake of the Woods Boundary Treaty*, 24 February 24 1925, U.S.T. No. 720.

[36] *United States v. Alaska*, 422 U.S. 184 (1975).

[37] *Ibid.* at 189. These criteria are the generally accepted criteria for establishing historic bays in international law. See Churchill & Lowe, *supra* note 31 at 43-44, citing United Nations Secretariat, "Juridical Regime of Historic Waters, Including Historic Bays" UN Doc. A/CN.4/143 (1962) reprinted in *Yearbook of the International Law Commission*, vol. 2, 1962 (New York: United Nations, 1964), as the source of these rules. See also Malcolm Shaw, *International Law*, 5th ed. (New York: Cambridge University Press, 2003) at 500. Roach & Smith, *supra* note 5 at 16 describing the requirements in similar terms: "To meet the international standard for establishing a claim to historic waters, a State must demonstrate its open, effective, long term, and continuous exercise of authority over the body of water, coupled with acquiescence by foreign states in the exercise of that authority."

[38] *Eastern Canada Vessel Traffic Service Zone Regulations* S.O.R./89-99.

The success of the claim may turn on the extent of Canadian regulation of passage and the acquiescence to such regulation by the United States. However, the United States Supreme Court expressly noted "that the exercise of sovereignty must have been, historically, an assertion of power to exclude all foreign vessels and navigation".[39] This may be overstating the requirements, but the underlying principle is that the control exercised by the state claiming historic status must be significant enough to be an unequivocal and open expression of sovereignty over the waters in question. In a report on historic waters prepared by the UN Secretariat, the authors expressed doubt as to whether a historic waters claim in a bay with more than one coastal state, such as the Passamaquoddy Bay, could meet the acquiescence criterion.[40]

The issue of Canada's ability to control the terms of passage through the Head Harbour Passage was the subject of an earlier controversy in relation to an oil refinery and port facility in Eastport, Maine, proposed in the early 1970s.[41] At that time, the Canadian government took the position that it had the right to control vessel traffic in the Head Harbour Passage, and, specifically, that it had the right to exclude large oil tankers from using the passage. The underlying concern related to unacceptable environmental risks associated with bulk oil transport in large tankers, and has obvious parallels to the current controversy. The United States maintained that the Canadian government was without jurisdiction to interfere unreasonably or suspend passage through the Head Harbour Passage.[42] In this instance, the United States Coast Guard found that oil tankers could safely navigate the Head Harbour Passage.[43] The Canadian government, which had enacted a regulation placing limits on the carriage of oil through the Head Harbour Passage, revoked that enactment in 1987 when the oil refinery proposal was abandoned.[44] The question of passage was left unresolved. That controversy indicates that insofar as the United States has acceded to some restrictions on the conditions of passage through the Head Harbour Passage (given that the United States allowed that its right to innocent passage might be subject to reasonable and non-arbitrary interference), such acquiescence did not

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[39] *U.S. v. Alaska*, *supra* note 36 at 197.

[40] United Nations Secretariat, *supra* note 37 at 20.

[41] See Springer, *supra* note 8 and Ewen, *supra* note 8.

[42] See United States Department of State, *1975 Digest of United States Practice in International Law*, (Washington: Department of State, 1975) at 432, citing a Departmental aide memoir, dated 12 March 1975 stating:

> ...the view of the United States' Government is that vessels proceeding to or departing from United States ports through the waters of Head Harbour Passage enjoy the right of innocent passage under international law. This right is not subject to unreasonable or arbitrary interference or suspension.

See also Roach & Smith, *supra* note 5, and Ewen, *ibid.*

[43] Springer, *supra* note 8 at 192.

[44] *Oil Carriage Limitation Regulations*, S.O.R./82-244 revoked by S.O.R./87-268.

(in the U.S. government's view) amount to acceptance of Canada's unqualified right to control passage. Additionally, La Forest notes that the United States has objected from time to time to Canada's broader claim respecting the historic status of the Bay of Fundy.[45]

The resolution of the historic waters claim will ultimately turn on a careful consideration of interactions between Canada and the United States in relation to the Bay of Fundy and the Passamaquoddy Bay. However, it should not be assumed that such a resolution will necessarily result in an acceptance or rejection of the Head Harbour Passage as internal Canadian waters. In the *Case Concerning the Continental Shelf (Tunisia v. Libya)*, the International Court of Justice appears to suggest that the international rules concerning historic waters do not always result in either a straightforward acceptance or rejection of the claim, but rather, the precise scope of the historic claims will be dependent upon the particular facts that pertain to the disputed area.[46] The International Court of Justice affirmed this approach in the *Land, Island and Maritime Frontier Case*, indicating a preference to treat historic waters claims on a *sui generis* basis.[47] For example, in the *Tunisia/Libya Continental Shelf Case,* the Court makes the point that a historic claim might be limited to the exercise of only those activities historically exercised and accepted (such as fishing) or may extend to the exercise of full sovereignty, depending on the circumstances.

My point in raising the potential for a more nuanced approach to historic waters claims is to indicate that the right of transit through Head Harbour Passage is conducted within a particular historic framework, which itself has legal relevance to the determination of the respective rights of Canada and the United States. Thus, while the uncertain status of the Head Harbour Passage and the long usage of those waters suggests that they are subject to a right of innocent passage, the complex geographic and historic context does raise questions as to whether the character of innocent passage must be assessed in light of the particular physical and juridical facts of the Head Harbour Passage.

PART TWO: INNOCENT PASSAGE THROUGH THE HEAD HARBOUR PASSAGE

The right of innocent passage through the territorial sea is clearly understood to be a rule of customary international law codified in both *UNCLOS* and the *Territorial*

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[45] La Forest, *supra* note 32 at 159. But the Bay of Fundy is not listed in Roach & Smith as a known historic waters claim to which the United States has protested: *supra* note 5 at 33-34 (listing foreign waters considered not to be historic).

[46] *Case Concerning the Continental Shelf (Tunisia v. Libya)* [1982] I.C.J. Rep. 18 at 74, stating: "It seems clear that the matter continues to be governed by general international law which does not provide for a *single* 'régime' for 'historic waters' or 'historic bays', but only for a particular régime for each of the concrete, recognized cases of 'historic waters' or 'historic bays'."

[47] *Case Concerning Land, Island and Maritime Frontier Dispute (El Salvador v. Honduras, Nicaragua intervening),* [1992] I.C.J. Rep. 351 at 589, (this approach was taken in support of the Court's decision to take into account the unique three-state interest in the Gulf of Fonseca in fashioning a regime of co-ownership over the contested waters).

Seas Convention.[48] There should be no controversy that transiting through the Head Harbour Passage enroute to United States' internal waters constitutes "passage."[49] Rather, the controversy centers on whether passage will be innocent. The concept of "innocence", as set out in Article 19(1) of *UNCLOS*, requires that passage not be "prejudicial to the peace, good order or security of the coastal state".[50] In the event that passage is prejudicial to those state interests, the coastal state has the right to prevent the exercise of passage.[51] The difficulty with this formulation is that the open textured character of Article 19(1) creates considerable uncertainty in determining innocence, leaving coastal states with excessive discretion to deny passage by defining benign activities as being prejudicial, and *vice versa*. To enhance the predictability in the operation of the rules of innocent passage, *UNCLOS* goes on to enumerate in Article 19(2) those activities that shall result in passage being considered non-innocent. However, the precise legal effect of Article 19(2) remains controversial, as the text leaves unanswered whether the presence of enumerated non-innocent activities in Article 19(2) serves to restrict the broader definition of innocence in Article 19(1) either by providing an exhaustive list of non-innocent activities or by restricting non-innocent activities to the same general class of activities set out in Article 19(2) by operation of a maxim of interpretation akin to the *ejusdem generis* rule of construction.

On its face, the wording of Article 19(2) does not restrict the phrase "prejudicial to the peace, good order and security of the coastal State" to the matters listed in Article 19(2). For example, the drafters could have worded Article 19(2) such that prejudice would *only* be found where a state engages in the listed activities. Instead, the section is drafted so as to suggest that the enumerated activities are examples of non-innocent activities. Churchill and Lowe suggest that the retention of the basic formula from the *Territorial Seas Convention* in Article 19(1) also implies the intent to treat Article 19(2) as non-exhaustive.[52] Given that a narrow view of non-innocence favours maritime powers, it is not surprising that the United States and the U.S.S.R. issued, in 1989, a Joint Statement on the Uniform Interpretation of Rules of International Law Governing Innocent Passage, which includes the following statement:

> Article 19 of the Convention of 1982 sets out in paragraph 2 an exhaustive list of activities that would render passage not innocent. A ship passing through the territorial sea that does not engage in any of those activities is in innocent passage.[53]

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[48] *UNCLOS, supra* note 21 art. 17, and *TSC, supra* note 24 art. 14(1); Churchill & Lowe, *supra* note 31 at 81.

[49] *UNCLOS, ibid.* art. 18(1)(b); *TSC, ibid.* art. 14(2).

[50] *UNCLOS, ibid.* art. 19; *TSC, ibid.* art. 14(4).

[51] *UNCLOS, ibid.* art. 25.

[52] Churchill & Lowe, *supra* note 31 at 85.

[53] *Uniform Interpretation of Rules of International Law Governing Innocent Passage*, Joint Statement by the United States of America and the Union of Soviet Socialist Republics, signed 23 September 1989,

The impact of the Joint Statement, and of Article 19(2) more generally, is not yet precisely clear, although the Joint Statement does appear to depart from the ordinary meaning of Article 19. What is clear is that the intent of Article 19(2) is to ensure that the determination of non-innocence can be made with reference to objective criteria. The ill that Article 19(2) was seeking to cure was that the phrase "prejudicial to the peace, good order or security", (the sole criteria under the *Territorial Seas Convention*)[54] was open to possible abuse.[55] It follows that if Article 19(2) is to be treated as non-exhaustive, then, at a minimum, any non-enumerated activities that might be considered non-innocent should be of the same general class or nature as the enumerated activities, consistent with the interpretive maxim, *ejusdem generis*, long accepted in international law.[56] The application of the *ejusdem generis* maxim to Article 19(2) is strengthened by the inclusion of a residual clause in sub-paragraph 19(2)(l).[57] The reference to "activity" in subparagraph (2)(l), repeated from the opening clause of Article 19(2) emphasizes that non-enumerated instances of non-innocence must relate to the behavior of the ship, as opposed to the character of the ship itself.[58]

Applying Article 19 to the current controversy, Canada faces a number of challenges in making the claim that the passage of LNG tankers through the Head Harbour Passage is non-innocent. To be clear, the Canadian government has not suggested that it is relying on the non-innocent nature of the passage (instead it claims a broader right to control all activities within the Head Harbour Passage). However, Canada's stated concern with the proposal is that the passage of LNG tankers presents unacceptable risks relating to environmental and navigational safety interests.[59] In light of these concerns, the most salient of the enumerated activities is found in sub-paragraph 19(2)(h), which renders non-innocent any passage where the ship engages in "any act of willful and serious pollution contrary to this Convention."[60] While a release of LNG into the environment is likely to be serious, transporting LNG itself is not an act of pollution. What is contemplated under the

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cited in K. R. Simmonds, ed., *New Directions in the Law of the Sea* (New York: Oceana Publications, 1995) c. 27 at para. 3. Interestingly, the Joint Statement also contains a commitment to settle all differences regarding a particular case of passage "through diplomatic channels or agreed means" at para. 8. But this statement is (ambiguously) qualified by the words, "Without prejudice to the exercise of rights of coastal and flag states".

[54] *TSC, ibid.* art. 14(4).

[55] Myron Nordquist, ed., *United Nations Convention on the Law of the Sea 1982: A Commentary* (Boston: Martinus Nijhoff, 1985) at 174.

[56] See Lord McNair, *The Law of Treaties* (Oxford: Oxford University Press, 1961) at 394, noting the recognition of the maxim in international treaty interpretation.

[57] *UNCLOS, supra* note 21, art. 19(2)(l), which reads "Any other activity not having a direct bearing on passage".

[58] Nordquist, *supra* note 55 at 176-77.

[59] As stated in "Wilson Letter", *supra* note 4.

[60] *UNCLOS, supra* note 21, art. 19(2)(h).

plain meaning of Article 19(2)(h) is an intentional pollution incident, such as dumping. The requirement for the release to be both willful and serious is in keeping with the underlying and historic focus on preventing passage of ships where there is ill-intent directed towards the coastal state.

Despite the narrow application of Article 19(2)(h), there are good reasons for giving an environmentally robust interpretation to Article 19(1). First, the term "peace, good order and security" includes environmental security, as evidenced by the inclusion of Article 19(2)(h). The idea of maintaining environmental integrity as a component of state security is also widely recognized by international environmental lawyers and by international policy makers.[61] Accepting that Article 19(2) defines the contours of the general rule regarding non-innocence, the inclusion of serious pollution as an example of acts prejudicial to coastal state security strongly indicates that other forms of serious environmental harm would likewise constitute prejudicial actions. Second, a threat of harm, in addition to actual harm, may be prejudicial to a coastal state. In this regard, Article 19(2)(a) contemplates that a threat of force is sufficient to render passage non-innocent. By extension, a sufficiently imminent threat of environmental harm from a ship that poses a threat to the environmental integrity of the coastal state may render the passage non-innocent. The unresolved difficulty with an interpretation that goes beyond the enumerated grounds of Article 19(2) is determining the nature of the harm or threat that constitutes sufficient prejudice to render an activity non-innocent. This is a particular problem for risk-based activities where states must assess both the seriousness of the harm and its probability of occurrence.

The one likely exception to the requirement for an actual release of pollutants occurs when ships are excluded from passage where a release is imminent due to maritime casualty or the deplorable condition of the ship.[62] Central to the acceptability of refusing passage in these cases is the imminent and serious nature of the harm. International law in other contexts has recognized a state's right to respond to imminent harm.[63] However, the threshold for imminence appears to be quite high. In the ecological context, the question of imminent ecological harm as a component of the defence of necessity was raised in the *Gabcikovo / Nagymaros Case*, where the International Court of Justice indicated that: "'Imminence' is synonymous with

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[61] See United Nations Conference on Environment and Development, *Rio Declaration on Environment and Development*, 14 June 1992, UN Doc. A/con.151/5/Rev.1, reprinted in (1992) 31 ILM 874, Principle 25 ("Peace, development and environmental protection are interdependent and indivisible"). See also Jutta Brunnée & Stephen Toope, "Environmental Security and Freshwater Resources: A Case for International Ecosystem Law" (1994) 5 Ybk. Int'l Envt'l L. 41; Günther Handl, "Environmental Security and Global Change: The Challenge to International Law" (1990) 1 Y.B. Int'l Env. L. 3.

[62] See International Law Association, *Final Report of the Committee on Coastal State Jurisdiction Relating to Marine Pollution: Report of the 69th Conference 2002*, 443 at 495. See also Bénédicte Sage, "Precautionary Coastal States' Jurisdiction" (2006) 37 Ocean Devel. & Int'l L. 359; and J. Van Dyke, "Balancing Navigational Freedom with Environmental and Security Concerns" (2003) 15 Colo. J. Int'l Envtl. L. & Pol'y 19.

[63] Anticipatory self-defence, while admittedly controversial, is the clearest example.

'immediacy' or 'proximity' and goes far beyond the concept of 'possibility'."[64] In the case of a threat of serious harm from damaged or dilapidated ships, the threat of harm should be sufficiently immediate to trigger non-innocence.[65] Where a release is simply a possibility, non-innocence is unlikely to be found. Interpreting Article 19 to include imminent threats of serious environmental harm is clearly consistent with the overarching duty of states to prevent harm to the environment,[66] and has been linked to the increasing acceptance of the precautionary principle in international environmental law.[67] Moreover, the element of recklessness that is associated with dilapidated ships is more in keeping with Article 19's focus on undesirable and threatening behavior.

Extending the definition of non-innocence to include imminent and serious harm from damaged or dilapidated ships is easily distinguishable from the transportation of LNG. In the former, there is a high likelihood of serious harm, whereas with the latter, the harm is probabilistic in nature. The risk from both types of harm may be equal where a low possibility of harm may be countered by the catastrophic nature of the potential harm, but there is no indication that Article 19 contemplates assessing harm on a risk-based analysis. Rather the harm that results in "prejudice" must be both highly likely and serious in nature.

A second area where the boundaries of non-innocence are being challenged, and one that involves a risk analysis type assessment, is the transportation of nuclear materials by sea. A number of states, including New Zealand, South Africa and the Caribbean states, have protested the transport of shipments of nuclear waste through their territorial seas and exclusive economic zones on the basis that the environmental harm from a possible release is so significant that coastal states have the right of prior notification and possibly the right of prior authorization.[68] Prior notification would require notice to the coastal state of passage involving nuclear wastes, but not coastal state consent. Prior authorization goes further by requiring consent. These instances are quite different from threats arising from releases due to maritime casualty or dilapidated ships since the key requirement of imminence is not present. Instead the likelihood of release remains only a possibility, but nevertheless presents a significant risk due to the potentially catastrophic nature of a release. This form of argumentation is supported by the general principles of harm prevention and

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[64] *Case Concerning the Gabcikovo/Nagymaros Project (Hungary/Slovakia)*, [1997] I.C.J. Rep. 6 at para. 54.

[65] But see Van Dyke, *supra* note 62, citing examples of legislation excluding single hulled oil tankers from passage.

[66] See discussion Part 3, below.

[67] See Sage, *supra* note 62.

[68] These claims are detailed in K. Hakapää and E. Molenaar, "Innocent Passage – past and present" (1999) 23 Marine Policy 131; and in J. Van Dyke, "Applying the Precautionary Principle to Ocean Shipments of Radioactive Materials" (1996) 27 Ocean Devel. & Int'l L. 379; and J. Van Dyke, "The Legal Regime Governing Sea Transport of Ultrahazardous Radioactive Materials" (2002) 33 Ocean Devel. & Int'l L. 77; Van Dyke, *supra* note 62, all referring to, *inter alia*, the protests stemming from the transportation of nuclear wastes by the *Akatsuki Haru*, *Pacific Pintail* and the *Pacific Swan*.

precaution.[69] The analogy between LNG and nuclear wastes based on the potential seriousness of a release might suggest that Canada could rely on the state practice in relation to nuclear wastes in support of an emergent rule extending the definition of non-innocence to include the non-authorized (by the coastal state) transport of hazardous and dangerous goods, including LNG, through a state's territorial sea. An argument along these lines suffers from a number of shortcomings and cannot be said to be reflective of positive international law.

First, the differences between nuclear materials and LNG limit the saliency of the analogy. Van Dyke classifies nuclear materials, at least those which are highly radioactive, as being "ultra-hazardous", as opposed to being merely a "dangerous good."[70] The difference between the two is that the potential harm from the former is graver, given its inherent toxicity and persistence in the environment, whereas LNG dissipates completely. The unique concerns raised by radioactive material have led the international community, through the International Atomic Energy Agency and the International Maritime Organization (IMO), to develop specific rules in relation to the transport of nuclear materials, a singling out that is indicative of the unique threat that radioactive toxicity presents.[71] In comparison, the IMO treats LNG as a dangerous good, but does not single LNG out as having greater environmental consequences than other dangerous goods.[72]

Even if the difficulty with analogizing LNG to nuclear materials in this context is put aside, the state practice in relation to hazardous cargos generally is mixed at best. The major maritime powers have resisted the coastal states' claims for prior notification and prior authorization for the transport of hazardous material through their territorial waters and EEZ,[73] and there is little evidence of "constant and uniform usage practiced by States"[74] so as to suggest an emerging customary rule requiring prior notification and prior authorization. The treaty practice in this area

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[69] Protests by Chile against transport of radioactive material in territorial sea and EEZ, for example, were in part justified with reference to precautionary principle, discussed in Van Dyke (2002), *ibid.* at 88. See also Sage, *supra* note 62.

[70] Van Dyke, *ibid. See also* Sage, *supra* note 62 at 364.

[71] For example, the IAEA has adopted an advisory *Code of Practice on the International Transboundary Movement of Radioactive Waste*, adopted by General Conference GC (XXXIV)/RRES/530, 21 September 1990, reprinted in 30 I.L.M. 557 (1990), which includes a provision affirming the right of a state to prohibit the movement of radioactive waste through its territory. See also, *Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes in Flasks on Board Ships (INF Code)*, IMO Res. A.748(18) (1993). More recent IAEA developments discussed in Duncan Currie and Jon Van Dyke, "Recent Developments in the International Law Governing Shipments of Nuclear Materials asnd Wastes and their Implications for SIDS" (2005) 14 (2) R.E.C.I.E.L. 117 at 123.

[72] For example, LNG is treated as a "hazardous and noxious substance" under the *International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS)*, 3 March 1996, LEG/CONF10/8/2, 35 I.L.M. 1406, available online: <http://www.imo.org/Conventions/mainframe.asp?topic_id=256&doc_id=665>.

[73] See Hakapää and Molenaar, *supra* note 68 at 141-42.

[74] *Asylum Case (Colombia v. Peru)*, Judgment of 20 November 1950, [1950] I.C.J. Rep. 266 at 276-77.

also indicates that the international community is not prepared to extend the definition of non-innocence to include transport of unauthorized hazardous materials. The issue of coastal state authorization was broached in the negotiation of the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*,[75] but ultimately the parties agreed to a provision that affirmed the status quo.[76] Subsequent regional agreements have maintained this position, with the exception of the (as yet not in force) *Izmir Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal,*[77] which provides for prior notification, but not prior authorization. In terms of regional practice, it is noteworthy that Canada currently requires ships entering into Canadian Vessel Traffic Services Zones to notify Canadian authorities in advance and to provide details of any dangerous goods carried on board.[78] There is no indication of objection to this practice. In summary, while some countries have claimed the right to give prior authorization, the most that can be said is that right to prior notification (but not prior authorization) in relation to hazardous and dangerous goods is an emerging norm of international law.[79]

In addition, the restrictions in *UNCLOS* on the coastal states ability to regulate, as opposed to prohibit, innocent passage militate against the formation of a rule allowing states to prevent transport of LNG through their territorial seas. While Article 21 provides that the coastal state may enact laws in relation to protecting the marine environment and the safety of navigation, these laws shall not have the "practical effect of denying or impairing the right of innocent passage."[80] *UNCLOS* specifically enables states to confine ships carrying dangerous goods to identified sea lanes,[81] and to "carry documents and observe special precautionary measures established for such ships by international agreements."[82] In keeping with the coastal state's duty not to deny or impair innocent passage, the regulation of the transport of hazardous materials is restricted to controlling the manner of transport. In summary, under *UNCLOS*, risk-based activities are addressed through regulatory not prohibitory measures. States may impose measures that mitigate the risks associated with the transport of hazardous goods, but those measures cannot impair passage.

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[75] *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, 22 March 1989, UNEP IG.80/3, 28 I.L.M. 657, (entered into force 24 May 1992).

[76] *Ibid.* art. 4 (12), but see T. Scovazzi, "New Ideas as Regards the Passage of Ships Carrying Hazardous Wastes: The 1996 Mediterranean Protocol" (1998) 7 R.E.C.I.E.L. 264 at 264, noting that the ambiguity of Article 4(12) has lead to divergent interpretations.

[77] UNEP(OCA), UN Doc. MED/IG.9/4 (1996), reprinted in (1997) Int'l J. Mar. & Coast. L. 474.

[78] *Eastern Canada Vessel Traffic Services Zone Regulation*, *supra* note 38.

[79] Scovazzi, *supra* note 76 at 265, noting *Izmir Protocol* moves customary international law towards "notification without authorization" approach. See also Hakapää and Molenaar, *supra* note 68 at 144, concluding, "[t]o submit a foreign vessel with a 'hazardous' cargo to a system of coastal state *consent* represents, however, a claim hardly to be verified in applicable international law." [emphasis in original].

[80] *UNCLOS*, *supra* note 21, art. 24.

[81] *UNCLOS*, *ibid.* art. 22(3).

[82] *UNCLOS*, *ibid.* art. 23.

The difficulty (from a Canadian perspective) with the rule of innocent passage is that its structure fails to account for the particular context of the passage. Canada's stated concern is not with LNG transport *per se*. Indeed, the Canadian government has approved an LNG terminal in the nearby (to the Maine proposals) port of Saint John, New Brunswick.[83] Instead, the Canadian concern is that the particular navigational constraints in the Head Harbour Passage and the interference that LNG transportation may have on sea and land-based activities make the transport of LNG an unacceptable risk. The rules of innocent passage, however, allow for little contextual consideration. Instead, they operate to either permit or deny passage, with little scope for qualifications. Once it is determined that the Head Harbour Passage is an international strait, the right of innocent passage for any vessel, regardless of size or cargo, and regardless of the navigational constraints of the strait itself, follows.

In the case of LNG transport through the Head Harbour Passage, the lack of nuance creates some potentially troubling complications. For example, it is anticipated that LNG tankers, in accordance with United States' security requirements, will be accompanied by armed escorts.[84] This will result in United States Coast Guard armed boats having to enter into Canadian territory, which in turn may render the passage non-innocent by virtue of Article 19(2)(b), noting that "any exercise or practice with weapons of any kind" is non-innocent. Whether an escort would amount to an "exercise" in this context is ambiguous, but it raises the question of the extent to which Canada can control security operations within its own territory, a concern that is exacerbated by Canada's claim that the Head Harbour Passage is internal waters. Additionally, the exclusion zones along the proposed transit route through the Head Harbour Passage would require that precautionary measures be taken over sea and land-based activities under Canadian jurisdiction. The exclusion zone requirements are United States' domestic regulatory requirements, but these cannot be implemented in the absence of Canadian cooperation.[85] The result of passage in this context is to put the Canadian government in the untenable position of either cooperating to facilitate the safe passage of LNG tankers that it opposes or ignoring the possible safety and environmental risks posed. It puts the United States in an equally awkward position since in the absence of Canadian cooperation, any approval will not conform to the accepted regulatory requirements for safety and security.

The presence of these complications is not likely to affect the innocent status of

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[83] The Canaport LNG proposal in Saint John was subject to federal environmental impact assessment requirements, which included consideration of shipping options, see Jacques Whitford Environmental Ltd., *Environmental Impact Statement – Liquefied Natural Gas Marine Terminal and Multi-Purpose Pier prepared for Irving Oil Ltd.* (23 March 2004), online: <http://www.ceaacee.gc.ca/010/0003/0012/report_e.htm>.

[84] Salerno Testimony, *supra* note 16.

[85] U.S., United States Coast Guard, *Navigation and Vessel Inspection Circular: Guidance on Assessing the Suitability of a Waterway for LNG Traffic* (NVIC 05-05) at para 5(g), outlining risk management measures, including use of exclusion zones.

LNG transport, notwithstanding that the outcome clearly impacts Canadian sovereign interests. The approach of *UNCLOS* is not to balance the competing sovereign rights of the coastal and maritime states. Instead the approach is to privilege the right of free navigation over the rights of coastal states, except on the narrow grounds of non-innocence. This was a deliberate choice that favours certainty over context. Passage is presumed innocent, leaving the determination of the acceptability of passage in the particular circumstances in the hands of the flag state, with the burden of demonstrating non-innocence on the impacted state. The failure of the rule of innocent passage to account for risk-based activities is unsurprising given the premium these rules place on predictability. Nevertheless, this structure appears to be at odds with the prevailing preventative and precautionary posture of international and domestic environmental policy and, as such, warrants a closer examination of the application of the general principles of transboundary environmental harm to the Passamaquoddy LNG terminal proposals.

PART THREE: RISK-BASED ACTIVITIES IN INTERNATIONAL ENVIRONMENTAL LAW[86]

Risk-based shipping activities are not solely regulated through the international rules respecting passage, but are also regulated by international environmental law. Of particular salience here are the rules regarding transboundary environmental harm, which regulate the extent to which activities under the jurisdiction of one state may adversely affect the environmental quality of another state. To the extent that the transport of LNG through the Head Harbour Passage is a potential source of transboundary harm, this proposed activity will be subject to the restrictions imposed by these rules. My intent in this section is not to delineate the substance of these rules in great detail since they are the subject of numerous commentaries.[87] Instead, I examine the basic structure of the rules, their application to the Passamaquoddy Bay LNG controversy and their coherence with the rules regarding innocent passage. What underlies this analysis is the understanding that the rules regarding innocent passage do not operate in isolation from the remainder of international law, but rather are part of a system that aspires to broad coherence.[88] There is no *a priori* ordering of the rules regarding transboundary pollution and innocent passage. Both are

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[86] The analysis of the harm principle contained in this section is developed in greater detail in N. Craik, *The International Law of EIA: Process, Substance and Integration* (Cambridge: Cambridge University Press, 2008) c. 4.

[87] See e.g. Phoebe Okowa, *State Responsibility for Transboundary Air Pollution in International Law* (New York: Oxford University Press, 2000) c. 3; Xue Hanqin, *Transboundary Damage in International Law* (Cambridge: Cambridge University Press, 2003) c. 5; and Günther Handl, "Transboundary Impacts" in D. Bodansky, J. Brunnée & E. Hey, *The Oxford Handbook of International Environmental Law* (New York: Oxford University Press, 2007) at 531.

[88] See Alan Boyle, "Relationship between International Environmental Law and Other Branches of International Law" in D. Bodansky, J. Brunnée and E. Hey, *The Oxford Handbook of International Environmental Law* (New York: Oxford University Press, 2007) 125 at 128, noting "One of the most important approaches to the integration of different bodies of law is based on techniques of interpretation, taking into account of one treaty or legal norm in order to assist in the interpretation or application of another treaty or norm. The idea that treaties can in this way have a dynamic or living interpretation is an important contribution to coherence in international law."

equally authoritative. Consequently, if it is shown that the rules of innocent passage are discordant with general principles of international environmental law, then there may be a need for a reconciliation of these sets of rules.[89]

This is not an abstract concern. The structure of the rules of innocent passage does not embrace the preventative and precautionary approach that informs much of international environmental law. In particular, by restricting non-innocence to "willful and serious pollution", the rules of innocent passage leave coastal states vulnerable to potential environmental harm from risk-based activities.[90] While the rules respecting innocent passage do not restrict the coastal state from enacting regulatory laws to reduce or prevent pollution, where the potential environmental harm arises from the risk associated with the transit itself (due to the nature of the cargo, the navigational constraints and proximity to human activities, or a combination of these factors), the coastal state cannot proactively prevent the risk by refusing passage. To state the problem in terms of the Head Harbour Passage controversy, the law favours the risk preferences of the United States over those of the Canadian government, notwithstanding that the primary risk itself may be borne by Canada.

The rules respecting transboundary environmental harm are anchored by two related general principles: the harm principle and the duty to cooperate. The harm principle, codified in Principle 21 of the *Stockholm Declaration*, imposes a duty on states "to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states."[91] Despite the unqualified wording of Principle 21, the duty to prevent harm is generally understood as requiring states to act with due diligence to prevent significant transboundary harm.[92] Consequently, only harm that exceeds the threshold of "significance" triggers the obligation to prevent harm and, in meeting the requirements to prevent harm, states are not obligated to take unreasonable measures to prevent transboundary harm, nor are they liable for unforeseeable harm.

The threshold of "significant transboundary harm" is generally thought to be

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[89] Support for this approach may be drawn from Article 31(3)(c) of the *Vienna Convention on the Law of Treaties*, 23 May 1969, 1155 U.N.T.S. 331, which provides "any relevant rules of international law applicable in the relations between the parties" shall be taken into account in interpreting treaties. See also C. McLachlan, "The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention" (2005) 54 I.C.L.Q. 279.

[90] *UNCLOS, supra* note 21, art. 19(2)(h).

[91] *Declaration of the United Nations Conference on the Human Environment*, 16 June 1972, UN Doc. A/conf/48/14/Rev. 1, reprinted in 11 I.L.M. 1416 at Principle 21; reaffirmed in *Rio Declaration*, supra note 61 at Principle 2.

[92] See International Law Commission, "Commentaries to the Draft Articles on Prevention of Transboundary Harm from Hazardous Activities", in *Report of the International Law Commission, Fifty-third Session*, UN GAOR, 56th Sess., Supp. No. 10, UN Doc. A/56/10 (2001) 377 at 390-96. See also Handl, *supra* note 87 at 535, 538.

lower than "serious" harm.[93] In the case of risk-based activities, determining the likelihood of significant harm should account for both the probability of occurrence and the magnitude of the potential harm.[94] For example, in its *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities*, the International Law Commission adopts a risk-based approach to "significance". The approach is explained in the Commentary to the *Draft Articles* in the following terms:

> The definition in the preceding paragraph ["risk of causing significant transboundary harm" refers to the combined effect of the probability of occurrence of an accident and the magnitude of its injurious impact"] allows for a spectrum of relationships between "risk" and "harm", all of which would reach the level of "significant". The definition refers to two types of activities under these articles. One is where there is a low probability of causing disastrous harm. This is normally the characteristic of ultra-hazardous activities. The other one is where there is a high probability of causing significant harm. This includes activities which have a high probability of causing harm which, while not disastrous, is still significant.[95]

As distinct from the rules of innocent passage, where an activity can only be prevented if the harm is actual or imminent and of a serious nature, the harm principle captures a broader class of potentially harmful activities, including those where the harm is probabilistic. Moreover, the harm principle is not oriented towards intentionally threatening behavior, but rather is directed towards ensuring that states act reasonably where their activities have consequences for other states.

The same threshold condition of an activity posing a risk of significant transboundary harm also triggers the second general principle, the duty of cooperation that operates reciprocally between the source state and the potentially affected state.[96] The duty to cooperate requires the source state to notify the affected state of the activity in question, to provide sufficient information to the affected state of the potential environmental impacts and to enter into consultations with the affected state where the affected state is concerned about the environmental impacts of the activity.[97] The preferred, but by no means exclusive, approach for states to implement these obligations is by conducting an environmental impact assessment and by providing rights of participation to the affected state within that process.[98]

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[93] International Law Commission, *ibid.* at 388. See also K. Sachariew, "The Definition of Thresholds of Tolerance for Transboundary Environmental Injury Under International Law: Development and Present Status" (1990) 37 Nethl. Int'l L. Rev. 193.

[94] International Law Commission, *ibid.* art. 2, commentary at para. 2.

[95] *Ibid.* commentary at para. 3.

[96] The duty to cooperate is reflected in the *Rio Declaration*, *supra* note 61, Principle 19. See also Alan Boyle, "The Principle of Co-operation: the Environment" in A.V. Lowe & C. Warbrick, eds., *The United Nations and the Principles of International Law: Essays in Memory of Michael Akehurst* (London: Routledge, 1994) at 120.

[97] International Law Commission, *supra* note 92, arts. 8, 9.

[98] The leading international instrument in this regard is the *Convention on Environmental Impact Assessment in a Transboundary Context*, 25 February 1991, (1991) 30 I.L.M. 802, in force 14 January

The duty to cooperate is reciprocal in the sense that the affected state is obligated to cooperate with the source state in order to reach a mutually satisfactory outcome and must enter into consultations with the source state in good faith. The duty to prevent harm and the duty to cooperate are widely accepted as customary rules in international environmental law[99] and are codified in a number of multi-lateral environmental agreements, including *UNCLOS* in relation to marine pollution.[100] While states have accepted the duty to prevent harm in the abstract, the application of the rule to specific activities has proven to be elusive. In large part, the difficulty arises because of the absence of clear standards for determining acceptable levels of transboundary harm.

The harm principle is best understood as operating both retroactively, as a liability principle where environmental harm has occurred and damages are sought, and prospectively, as a preventive measure, prior to any harm occurring.[101] As a preventative measure, the harm principle largely imposes procedural constraints. It is clearly understood that the duty to prevent harm and to cooperate does not require prior authorization by the affected state. As noted by the arbitration panel in the *Lac Lanoux Arbitration,* an affected state cannot exercise a veto over a proposed project simply by virtue of being affected by the proposal.[102] In cases where a significant transboundary impact can unequivocally be demonstrated the source state is under an obligation to refrain from the activity or mitigate the harm. Conversely, where the impacts are clearly benign, the source state can proceed with the activity. The trouble lies in cases where the parties cannot agree on the acceptability of the impacts. Unsurprisingly, many disputes regarding transboundary harm revolve around disagreements over whether the impacts will exceed the threshold of significance.[103] In cases involving risk-based activities, the determination of harm is further complicated by the requirement to assess both the extent of potential harm and the probability of its occurrence.

A consequence of the uncertainty surrounding the determination of harm is that the harm principle takes on a procedural character. Consider the approach taken by

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1998, (*Espoo Convention).* For a general discussion, see Craik, *supra* note 86.

[99] See *Legality of the Threat or Use of Nuclear Weapons,* Advisory Opinion, [1996] I.C.J. Rep. 226 Advisory Opinion of 8 July 1996, at para. 29.

[100] *UNCLOS, supra* note 21, Part XII.

[101] The dual nature of the harm principle is reflected in the work of the International Law Commission that divided its consideration on transboundary harm into questions of prevention and question of liability, the former resulting in the *Draft Articles on Prevention of Transboundary Harm, supra* note 92, and the latter resulting in the *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities*, UN Doc. A/CN.4/L662.

[102] *Lac Lanoux Arbitration, (France v. Spain)* (1957), 24 I.L.R. 101 at 140.

[103] For example, the disputes in *Gabcikovo-Nagymaros Project (Hungary v. Slovakia)*, [1997] I.C.J. Rep. 7, the *MOX Plant Case (Ireland v. United Kingdom),* Provisional Measures, (2002) 41 I.L.M. 405 (ITLOS), and *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* (2006), unreported, online: International Court of Justice <www.icj-cij.org>, all concerned with disagreements over the extent of the harm the proposed activity presented to an affected state.

the International Law Commission in the *Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities*. Where after good faith consultations the parties cannot agree on a mutually acceptable outcome, the source state is permitted to proceed with the activity, although it is still obligated to take into account the interests of the affected state in carrying out the activity.[104] In the event of subsequent harm occurring, the harm principle may still operate retrospectively to impose liability (in the absence of due diligence), but as a preventative principle, the default decision-maker remains the source state.

Prior to actual harm, the impacted state has the right to require that the source state fulfill its procedural obligations, but in the absence of bad faith, or breach of an existing standard, the activity in question cannot be enjoined on substantive grounds. The procedural nature of the harm principle is evident in the approach to siting nuclear facilities near borders, which requires notification and consultation, but does not qualify the proponent state's discretion to locate nuclear facilities near borders.[105] It is also evident in the form of arguments in international disputes involving potentially harmful activities, where potentially affected states have sought to prevent the carrying out of proposed activities on the basis of non-compliance with procedural due diligence obligations, as opposed to framing those arguments in substantive terms.[106]

Martti Koskeniemi has observed that this structure arises because the harm principle is required to balance two competing sovereign rights: the right to economic development and the right to be free from environmental harm.[107] Neither right trumps the other, but rather they operate in opposition to one another. This dynamic would be less troublesome if there were clear standards of acceptable transboundary harm, but this is rare in international environmental law, and even rarer in relation to risk-based activities. The solution for the International Law Commission is to impose a scheme of equitable balancing whereby the parties in their consultations are obligated to achieve a solution by equitably weighing the relevant factors and circumstances, a necessarily contextual approach.[108] While it is doubtful that equitable balancing is customary law, this approach is reflective of the difficulties in trying to order these competing rights in particular cases, without

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[104] International Law Commission, *supra* note 92, art. 9 (3).

[105] Discussed in P. Birnie & A. Boyle, *International Law and the Environment*, 2d ed., (New York: Oxford University Press, 2002) at 469-70.

[106] For example in both the *MOX Plant Case (Ireland v. United Kingdom) (Annex VII Arbitration)*, pleading and orders online: Permanent Court of Arbitration <http://www.pca-cpa.org> and in the *Gabcikovo v. Nagymaros Project Case, supra* note 64, the applicants framed their arguments relating to transboundary harm largely in terms of the source state failing to conduct adequate environmental assessments. Similar arguments have been made in *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* I.C.J. (2006), pleadings and order online: International Court of Justice <http://www.icj-cij.org>, although here Argentina has claimed a qualified treaty right to prior authorization of a pulp mill located on the Uruguay side of a shared watercourse.

[107] Martti Koskenniemi, "Peaceful Settlement of Environmental Disputes" (1991) 60 Nordic J. Int'l L. 73 at 75.

[108] International Law Commission, *supra* note 92, art. 10.

privileging one right over the other on a more abstracted level. The result is that states are required to engage in an information-rich and highly contextual decision-making process that is oriented towards a mutually satisfactory agreement. While, as a formal matter, the source state retains the discretion to unilaterally carry out the proposal, the obligation to consult requires the source state to account for the interests of the affected state in good faith.[109]

The dynamic of opposing sovereign rights very clearly underlies the Passamaquoddy Bay LNG dispute. In addition, the decision to approve the proposals is highly discretionary in that there are few applicable international standards that govern the proposal. Consequently, the structure of the international environmental rules places procedural obligations on the United States to notify, assess and consult in good faith, but does not prevent the United States from unilaterally proceeding with the LNG proposals once it has satisfied its procedural obligations. To be clear, the harm principle is not ambivalent towards the outcomes of substantive decisions; it clearly requires states to favour environmentally benign outcomes. The difficulty, which is exemplified by the LNG controversy, is that defining the line between acceptable and unacceptable environmental risks involves a broad range of considerations, making abstract pre-commitments to outcomes difficult. The LNG proposals also point to the inherently political nature of decisions involving risk-based activities in that the controversy is in some measure about different risk tolerances, and risk tolerances in turn are likely to reflect both the material interests of the parties and community values about the relative importance of environmental resources. The proceduralism of international environmental law is a response to the unwillingness of the international community to privilege one set of values over the other in the abstract and its preference to implement the harm principle with reference to a known context.

The application of these rules of international environmental law to the transport of LNG proposals has to date been implemented through the extension of domestic environmental impact assessment to include an assessment of impacts on Canadian interests. The United States in its domestic law has long accepted the principle that activities under its jurisdiction with potential transboundary impacts must be subject to environmental assessment, which would include timely notification of potential transboundary impacts and opportunities for participation.[110] United States' domestic policy explicitly acknowledges that accounting for transboundary impacts through the EIA process implements the United States' due diligence obligations to potentially affected states.[111] In the Passamaquoddy Bay

[109] See Cameron Hutchison, "The Duty to Negotiate International Environmental Disputes in Good Faith" (2006) McGill Intl. J. of Sustainable Development Law and Policy 117. Hutchison makes a distinction between the duty to consult and the duty to negotiate, arguing that the latter imposes a more onerous obligation on the source state to accommodate the rights and interests of an affected state.

[110] Executive Order No. 12114, 3 C.F.R. § 356 (1980), reprinted in (1979) 18 I.L.M. 154; and *Council on Environmental Quality Guidance on NEPA Analyses for Transboundary Impacts,* issued July 1, 1997, online: National Environmental Policy Act <http://www.nepa.gov/nepa/regs/transguide.html>.

[111] *CEQ Guidance on transboundary Impacts, ibid.*

controversy, the proposals are in fact subject to U.S. federal EIA requirements, and notification and the opportunity to participate in the approvals process has been given to both federal and provincial governments in Canada.[112]

PART FOUR: TWO APPROACHES TO HAZARDOUS ACTIVITIES

A comparison of the structure of the rules of innocent passage with the general international environmental law obligations regarding transboundary harm reveals both similarities and differences. At the heart of both sets of rules is the need to balance the interests of the source or flag state, on the one hand, with those of the affected or coastal state, on the other. To confer a veto on the affected (coastal) state in either regime risks paralyzing state activities. The International Law Commission explains this possibility in the following terms:

> In this context...the party that was likely to be affected might, in violation of good faith, paralyze genuine negotiation efforts. To take account of this possibility, the article [Article 9 of the ILC *Draft Articles on the Prevention of Transboundary Harm*] provides that the State of origin is permitted to go ahead with the activity, for the absence of such an alternative would, in effect, create a right of veto for the States likely to be affected. The State of origin, while permitted to go ahead with the activity, is still obligated, as a measure of self-regulation, to take into account the interests of the States likely to be affected. As a result of consultations, the State of origin is aware of the concerns of the States likely to be affected and is in a better position to seriously take them into account in carrying out the activity.[113]

There is no logical necessity in avoiding paralysis to prefer the source state over the affected state. The favouring of the source (flag) state as the default decision-maker indicates that international law, when faced with having to choose between competing sovereign rights, tends to privilege those rights associated with the exercise of territorial sovereignty (on the understanding the flag ship jurisdiction is an extension of territorial sovereignty). Significantly, the precautionary principle has not resulted in shifting the burden to show an absence of significant environmental harm onto the source state, but rather precaution requires a comprehensive and inclusive analysis of the potential impacts of disputed activities, including the requirement to account for the impact of scientific uncertainty on the range of predicted outcomes.[114]

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[112] The notification and opportunities to participate are being implemented through the Federal Energy Regulatory Commission proceedings for each LNG proposal. The EIA, for which the Federal Energy Regulatory Commission is responsible, is being carried out under the authority of the *National Environmental Policy Act,* 42 U.S.C. §§ 4321-4370(f).

[113] International Law Commission, *supra* note 92, art. 9, Commentary 10.

[114] See J. Wiener, "Precaution" in Bodansky, Brunnée & Hey, *supra* note 88 at 597, discussing different versions of the precautionary principle and noting a lack of consensus regarding a version requiring a shift in burdens to show no harm. See also J. Peel, *The Precautionary Principle in Practice: Environmental Decision-making and Scientific Uncertainty,* (Sydney: The Federation Press, 2005) at 222-27, arguing that the dimensions of precaution are largely procedural in their orientation.

In the absence of a direct contradiction between the rules of innocent passage and those regarding transboundary environmental harm, there is no need for secondary rules structuring the formal relationship between the obligations. As a matter of positive law, both sets of rules can co-exist since neither rule requires the source state to obtain prior authorization before engaging in a risk-based activity. The potential impact of the rules regarding transboundary harm on innocent passage is contemplated under *UNCLOS*. Article 211, which addresses marine pollution from vessels, provides that coastal states may not unilaterally impose domestic rules regarding vessel source pollution in such a way as to interfere with the right of innocent passage.[115] This article should not however be interpreted as displacing the broader requirements of the harm principle. First, Article 211 speaks only to marine pollution, whereas the current proposals have implications for a much broader set of Canadian interests. Second, the procedural obligations that must precede any unilateral action under the duty to prevent harm do not preclude a right of innocent passage. Instead, when read together, the obligations require that the United States engage Canada in a good faith attempt to accommodate Canadian interests and rights. Thus, the operation of the harm principle supplements the narrow range of matters to be considered under a determination of whether an activity is non-innocent by requiring a state that proposes an activity that poses a risk of transboundary harm to account for a broader range of considerations as a precondition to unilateral action.[116]

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[115] *UNCLOS, supra* note 21 at arts. 211(3), 211(4).

[116] Consider the range of considerations found to be of relevance by the International Law Commission in the *Draft Article on Prevention of Transboundary Harm*:

> (*a*) The degree of risk of significant transboundary harm and of the availability of means of preventing such harm or minimizing the risk thereof or repairing the harm;
>
> (*b*) The importance of the activity, taking into account its overall advantages of a social, economic and technical character for the State of origin in relation to the potential harm for the State likely to be affected;
>
> (*c*) The risk of significant harm to the environment and the availability of means of preventing suchharm, or minimizing the risk thereof or restoring the environment;
>
> (*d*) The degree to which the State of origin and, as appropriate, the State likely to be affected are prepared to contribute to the costs of prevention;
>
> (*e*) The economic viability of the activity in relation to the costs of prevention and to the possibility of carrying out the activity elsewhere or by other means or replacing it with an alternative activity;
>
> (*f*) The standards of prevention which the State likely to be affected applies to the same or comparable activities and the standards applied in comparable regional or international practice.

As noted, the privileged place of territorial sovereignty tends to favour source state authority where it comes into conflict with the sovereign right to be free from harm. The presumption is that a state retains the discretion to control activities within its jurisdiction in the absence of clear international rules. In the Head Harbour Passage, the Canadian government seeks to retain control over activities that are, in its view, being carried out within its territory, in this case, the transportation of LNG. Canada seeks the right to have the final say based on its superior territorial claim. While the structure of the rules of transboundary harm may be explained in terms of territorial sovereignty, they do not allocate sovereignty; rather, they presume two valid competing claims rooted in sovereign rights, resulting in the need to balance those competing rights through a careful consideration of the particular facts of the dispute. The rules of innocent passage, on the other hand, allocate sovereignty and, as such, are less equivocal. The relationship between the rules of innocent passage and the rules of transboundary harm is that the former determines which state retains the discretion to unilaterally pursue activities, while the latter provides for the conditions under which that decision should be made.

In practical terms what does the reconciliation of the rules of innocent passage with the rules of transboundary environmental harm mean? First, the result is that risk-based activities, such as the transport of hazardous and noxious goods, shall be subject to meaningful consultation between the source state and any affected state where the threshold requirement of risk of significant environmental harm is met. The extent and nature of consultation will depend upon the nature of the activity in several different ways. For example, it is not reasonable to suggest that any shipping activity will be subject to case by case consultation given that most shipping activities are temporary and not subject to immediate and direct flag state oversight. On the other hand, it does seem reasonable for nuclear shipments to be subject to prior notification and, even perhaps some consultation, in light of the level of risk associated and state involvement in the transport of nuclear material by sea. Similarly, in cases like the Passamaquoddy Bay LNG terminal proposals, which involve the development of permanent facilities and regular transiting through coastal waters, there is a more compelling case for *ad hoc* assessment, particularly in the absence of clear standards.

The rules of innocent passage have little regard for the particular context of their application, preferring the predictability that accompanies bright line rules. Thus, where international environmental law requires a source state to consider and account for the potential consequences of its proposed activities on an affected state in light of the specific physical and legal facts, the rules of innocent passage require no such considerations. As a consequence, the rules of innocent passage on their own fail to confer legal relevance on many of the facts that underlie the dispute between Canada and the United States over LNG tanker transit through the Head Harbour Passage. The availability of innocent passage turns to a significant degree on the status of the Head Harbour Passage, without regard for the particular navigational constraints and environmental risks that the transport of LNG poses. Nor do the rules of innocent passage account for the geographical and historic complexities surrounding the Passamaquoddy Bay.

On the other hand, the more contextually oriented rules respecting transboundary harm require the United States to take into account the full range of concerns regarding the human safety and environmental risks the proposals entail, including a consideration of the risk tolerances of the affected state. Here the formal status of the Head Harbour Passage is subordinate to the actual impacts, activities and affected interests implicated by the proposal. Both sets of rules involve a balancing of competing rights, but whereas the rules of innocent passage are prepared to predetermine that balance across a class of decisions, the rules on transboundary harm postpone the decision until there is a set of known facts.[117]

An obligation to engage in good faith consultation does not provide an indication of the extent, if any, to which a source (flag) state must actually accommodate the interests of the affected state. Cameron Hutchison has argued that there is a more onerous obligation on states to attempt to reach a mutually satisfactory agreement where a proposed activity impinges on a right of a state (such as the right to be free from transboundary harm), as opposed to a mere interest.[118] There is unlikely to be a clear dividing line between a mere interest and an enforceable right, but Hutchison's approach captures the equitable notion that as the impacts on the affected state increase there shall be a corresponding increase in the duty on a source state to take seriously the position of the affected state. It remains doubtful that, as a matter of positive international law, equity imposes substantive obligations on states.[119] States have turned to equity as a basis to resolve environmental disputes, including Canada and the United States in the *Trail Smelter Arbitration.*[120] However, as in the *Trail Smelter Arbitration*, the turn to equity may be viewed as a political choice, as opposed to a legal obligation.[121] Nevertheless, whether expressed in terms of good faith or a procedural form of equity, framing the Passamaquoddy Bay controversy as a transboundary harm problem, in addition to a right of passage dispute, points to a robust set of procedural requirements that must be satisfied prior to unilateral action being taken. At the heart of these procedural good faith obligations is "a genuine intention to achieve a positive result."[122]

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[117] The use of inchoate rules and standards as a way to postpone and delegate decisions until there is a more certain factual context for their application is a common tool of domestic law. See e.g. discussion in Henry Hart & William Eskridge, *The Legal Process: Basic Problems in the Making and Application of Law* (Westbury, Conn.: Foundation Press, 1994) at 139-40.

[118] Hutchison, *supra* note 109 at 141 noting "The duty to negotiate in good faith is activated at the point when an affected state's right, as opposed to interest, is engaged by the proposed use. Efforts at negotiated agreement to accommodate the engaged right are to be stronger and for a longer period than the duty to consult in good faith."

[119] See e.g. Patricia Birnie & Alan Boyle, *International Law and the Environment*, 2d ed. (New York: Oxford University Press, 2002) at 146-47.

[120] *Trail Smelter Arbitral Decision (United States v. Canada)*, 3 R.I.A.A. 1905.

[121] In the *Trail Smelter Arbitration*, the *compromis* specified that the panel "give consideration to the desire of the high contracting parties to reach a solution just to all parties concerned". *Convention for Settlement of Difficulties Arising From the Operation of Smelter at Trail B.C.*, signed 5 April 1935, in force 3 August 1935, reproduced in *Trail Smelter, ibid.* 1907 at Article IV.

[122] *Gulf of Maine Case (United States v. Canada)*, [1984] I.C.J. Rep. 292 at 299.

While the ongoing regulatory process, including the environmental assessment process, in the United States provides an opportunity for the consideration of Canadian concerns, it should be regarded as insufficient in light of the United States good faith obligations. Given its rights under international environmental law, Canada cannot be considered simply another interested party entitled to be consulted, but rather it is owed greater consideration to ensure its international rights are upheld. Moreover, it is likely that any truly meaningful resolution will require consideration of the respective legal rights of the parties in relation to control and use of the Head Harbour Passage, which in turn suggests that Canada can insist upon direct state to state negotiations at a diplomatic level.

Finally, as a normative matter, there may be advantages to the parties seeking to resolve this dispute in light of substantive equitable considerations. Neither party's formal position fully recognizes the interests of the other. As noted above, the willingness of the International Court of Justice to view historic waters claims in a contextual fashion, and to resolve those claims by fashioning specific rules that account for the varied historic uses and claims of the parties indicates some potential for disputes of this nature to be determined on equitable principles as a matter of positive law in any event. There is again some coherence between the law of sea and international environmental law in that both recognize the importance of context and equity as emerging principles to mediate competing sovereign claims.

CONCLUSION

Resolving disputes about risk-based activities with potential transboundary impacts, such as the transport by sea of LNG, is likely to pose continuing challenges to the international community. However, the rules of innocent passage and those relating to transboundary harm operate in strongly complementary ways. The highly contextual examination that is required under the harm principle requires the source or flag state to account for the specific concerns of the affected state. The sensitivity to context required by the harm principle includes, in my view, a duty to take into account both physical and juridical facts, and as such, weight should be given to Canadian expectations that arise from their historic claim of sovereignty over the waters of the Head Harbour Passage. In the context of the rules of transboundary harm, the status of the Head Harbour Passage does not operate as a trump card, but rather gives weight to the underlying Canadian concerns regarding the unacceptable impacts of the LNG terminal proposals.

To avoid paralysis, the rules of innocent passage privilege the rights of free navigation over coastal state rights, except where there is clear agreement on the conditions of abridging those rights. Article 19(2) of *UNCLOS* is best seen as representing that level of consensus reached in 1982, but international agreement on unacceptable risks to coastal states is not static. This is clearly seen in relation to the exclusion of damaged and dilapidated ships, where the presumption of innocence has shifted. It cannot be said that such a shift has occurred on an abstract level in relation to ships carrying hazardous cargoes. However, the requirements of international environmental law provide an avenue for state cooperation in relation to determining

acceptable levels of risk from transportation of hazardous material on a case by case basis.[123]

[123] An alternative, and more multi-lateral, model is the International Maritime Organization's regime of Particularly Sensitive Sea Areas, which provides for special protection for areas of ecological, socio-economic vulnerability, see *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas,* IMO Assembly Resolution A.982(24), adopted 1 December, 2005.

APPENDIX 1: PASSAMAQUODDY BAY