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NOTE: Oceanic Transportation of Radioactive Materials: The Conflict Between the Law of the Seas' Right of Innocent Passage and Duty to the Marine Environment

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TEXT:

I. INTRODUCTION

Departing France in February of 1995, the freighter *Pacific Pintail* sailed to Japan laden with radioactive plutonium waste. The ship's dangerous cargo prompted countries on its potential itineraries, such as South Africa, Brazil, Argentina and Malaysia to openly protest its passage through their surrounding waters. However, in sailing around Cape Horn, rough weather forced the ship within Chile's exclusive economic zone (EEZ), the area of water extending 200 nautical miles from Chile's shore.

Chile also had publicly protested the *Pacific Pintail's* sailing within its waters, and it chose to aggressively defend its proclamation. The Chilean navy sent a frigate to force the ship outside the EEZ. Warning the *Pacific Pintail* that they would throw ropes in its propellers if it did not leave immediately, the ship obeyed the frigate's orders and navigated out of Chile's EEZ. Ultimately, the *Pacific Pintail's* cargo safely reached Japan, but only after Chile's, and other countries' stances, forced it to sail clear of their territorial waters

The United Nations Convention on the Law of the Sea (UNCLOS) expressly gives nations the right to pass through a coastal state's seas¹. So long as the passage is "innocent,"² a ship is entitled to travel within a coastal state's EEZ, as well as within the twelve nautical miles that immediately surround it and form its territorial sea.³ According to UNCLOS, this right extends to ships carrying hazardous or radioactive cargo as well.⁴

However, UNCLOS also clearly obligates coastal states' to protect and preserve their marine environments.⁵ This Note examines these conflicting doctrines within UNCLOS: nations' rights of passage and coastal states' obligations to protect and preserve their marine

¹ UNCLOS, art. 17.

² UNCLOS, art. 19. The Meaning of Innocent Passage:

1.) Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State.

2.) Passage of a foreign ship shall be considered to be prejudicial to the peace, good order security of the coastal state if . . . it engages in . . . (a) any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State . . . (h) any act of willful and serious pollution contrary to this convention.

³ UNCLOS, arts. 3, 19, 58, 87.

⁴ UNCLOS, , arts. 17, 23

⁵ UNCLOS, art. 192.

environments. Once a historical background of the problem and the competing doctrines is established, the Note will describe the issue's status quo. Specifically, this Note will analyze how international shipping of radioactive cargo has aggravated the contradiction between the right of innocent passage and the obligation to protect and preserve marine environments. Furthermore, the Note will explore the attempts of UNCLOS and other international agreements to resolve this problem as well as the reasons why these efforts are inadequate. Finally, this Note will consider suggestions that may resolve the conflict between these doctrines.

II. HISTORY

A. *The Right of Innocent Passage*

The doctrine of the right of innocent passage was created centuries ago. Originating in Roman times, the doctrine's codified basis is found within the Code of Justinian of 529 AD. The Romans believed that the oceans were *communis omnium naturali jure* (open to all men by the operation of natural law). However, the collapse of the Roman Empire and the subsequent centuries of European exploration led to various claims over the oceans.

It was during Europe's colonization of the New World that Hugo Grotius wrote the pivotal *Mare Liberum*. Defending the Dutch's attempts to deal in the New World, Grotius argued that the ocean belonged to no one entity, and was consequently free to any who wished to cross it. Today, the concept of freedom of the seas and innocent passage which Grotius proposed is widely accepted as a fundamental principle of customary international law. In fact, its status as customary international law was confirmed in the *Corfu Channel* case of 1949. Ruling that Albania's sovereignty was not violated by the innocent passage of British warships through Albania's Corfu Channel, the International Court of Justice illustrated the global importance and acceptance of the right of innocent passage.

Similarly, the concept of a territorial sea and a nation's sovereignty over it is equally longstanding. Although the seas were commonly held to be open to all, historically, a coastal state could exercise control over its territorial sea. Writing on this subject as well, Grotius explained that, in order to protect itself and aid trade, it was in a state's best interests to claim dominion over the waters immediately surrounding it. But regardless of a coastal state's sovereignty over its territorial sea, Grotius, and the international community, recognized a common custom of permitting innocent passage through those waters. Currently, the right of innocent passage, like the concept of freedom of the seas, is popularly held as customary international law.

B. *The Duty to Protect the Marine Environment*

Although not as old as the ideas of innocent passage and territorial seas, nations have recognized the necessity to protect and preserve their marine environments since the beginning of the 20th century. It was around this time that countries began to realize that the ocean's resources were not infinite. Seal hunters, realizing that their catch sizes were gradually shrinking, created some of the earliest recorded laws protecting the marine environment. Thus, as nations became increasingly aware of the limits of their seas' resources, they grew more concerned with the protection and preservation of their marine environments.

The idea of internationally protecting the marine environment did not arise until 1926. It was then that an international convention attempted to limit the dumping of oil and gas into the oceans. The convention failed, as did a similar one ten years later. But finally, in 1954, the global community adopted its first effective, oceanic anti-pollution law in the International Convention for the Prevention of Pollution of the Sea by Oil. Afterwards, many legislative

acts protecting the marine environment were passed, and today coastal states have a presumed duty to protect their marine environments.

C. Radioactive Materials

With the end of World War II, the world witnessed the destructive advent of a new energy. Devastating cities, nuclear energy demonstrated the potential power it could yield. As this new energy became more commonly used, the world also quickly discovered that its byproduct of radioactive waste was extremely dangerous. Several incidents where radioactive materials were improperly handled proved that indirect or direct exposure to radioactive materials had a deadly effect on human and animal life.

The particular significance of the transportation of radioactive materials via oceanic vessels lies in the nature of the oceans. The oceans are in constant flow, and their currents spread throughout the Earth. Thus, while a radioactive accident on land can be successfully contained within a certain region, such an accident in the ocean may not be so easily checked. Because the oceans' currents would carry nuclear radiation everywhere they ran, a radioactive accident at sea has the potential to contaminate oceans and marine environments throughout the world.

Another critical factor to consider in the oceanic transport of radioactive materials is the potential for terrorist attacks. The amount of radioactive material that is typically shipped has enough radioactive matter to produce several nuclear warheads. Consequently, the possibility that a ship laden with such a dangerous cargo may be hijacked or attacked in order to produce devastating weapons is very real.

Due to these potential harms, transportation of radioactive materials has been internationally regulated almost since its creation. Safety requirements for the shipping of radioactive materials became more stringent as technology advanced and created safer, more reliable alternatives. However, the advancement of technology also led to more uses for nuclear energy, resulting in the need to ship more radioactive materials and the greater possibility of radioactive disasters.

As a result, nations were forced to weigh the importance of protecting their marine environments from potential devastation against the custom of innocent passage. Accordingly, many countries chose to protect their marine environments rather than recognize the right of innocent passage. Following these decisions, coastal states openly, and forcefully, rejected the requests for innocent passage by vessels carrying radioactive materials, such as the *Pacific Pintail*.

III. THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA

Despite the common acceptance of the right of innocent passage and the duty to protect the marine environment as customary international law, they were not jointly codified until the latter half of the 20th century. It would take three United Nations conventions and exhaustive international negotiations before these concepts would be defined in a manner that would satisfy the global community. The 1994 implementation of UNCLOS marked the final solidification of these abstract customs.

Although UNCLOS is the dominant body of law governing the right of innocent passage and the obligation to protect and preserve the marine environment, legislation specifically regulating the transportation of radioactive materials exists. Yet, an acceptable compromise concerning the international transportation of radioactive materials, the right of innocent passage and the obligation to protect the marine environment lies in the evaluation of the strengths and weaknesses of these laws.

A. The Right of Innocent Passage under UNCLOS

One of the first matters addressed by UNCLOS is the right of innocent passage through the territorial sea. Article 17 clearly states that all ships are to enjoy the right of innocent passage through the territorial sea. But the actual definition of innocent passage lies in Articles 18 and 19. Article 18(2) specifies that passage is to be "continuous and expeditious." Article 19(1) goes on to describe innocent passage as "innocent so long as it is not prejudicial to the peace, good order or security of the coastal state." And Article 19(2) defines what is not innocent passage by listing several activities that are inherently contrary to the prior definitions.

B. The Duty to Protect the Marine Environment under UNCLOS

Although the right of innocent passage is one of the first concepts addressed by UNCLOS, the obligation to protect and preserve the marine environment is codified much deeper in the treaty. Article 192 states the general obligation, while Article 194 delineates the measures that coastal states may take to protect their marine environments. More specifically, Article 194(1) explains, "States shall take . . . all measures consistent with this convention that are necessary to prevent, reduce, or control pollution of the marine environment from any source . . ."

C. The Right of Innocent Passage and the Duty to Protect the Marine Environment Under UNCLOS

Both the right of innocent passage and the obligation to protect and preserve the marine environment are distinctly asserted. The particular clarity of these doctrines is based upon their acceptance as international law before UNCLOS crystallized them within an international treaty. A practice that is so popularly accepted over time, as to be considered customary is generally accepted as an international law. Thus, while these concepts have been legally accepted because of their long existence and nations' widespread adherence to them, their actual codification in the UNCLOS treaty ensures their applicability.

IV. THE STATUS QUO: A VIOLATION OF INTERNATIONAL LAW?

Today, ships carrying radioactive materials continue to sail around the world. In fact, the *Pacific Pintail* just completed another voyage in March. Furthermore, Cogema, the French company that ships radioactive materials to Japan, has signed a deal with Japan whereby it is expected to send approximately eighty more shipments of radioactive materials to Japan within the next ten years. Unfortunately, as the number of such shipments increases, so does the possibility of an accident. And as the recent tragedy off Norway's waters involving the Russian nuclear submarine, *Kursk*, has demonstrated, accidents concerning radioactive materials do occur.

Just as shipments of radioactive materials continue, so do coastal states proceed to deny the right of innocent passage to these ships. However, the question remains: is this a violation of international law? Many argue that a coastal state's refusal of innocent passage to these ships is a flagrant violation of international law. Also, in denying innocent passage to these ships, coastal states may be forcing these ships into rougher waters or bad weather. In which case, coastal states may not only be violating the international law of innocent passage, but may also be intentionally endangering the crews and cargoes of ships carrying radioactive materials and contributing to the cause of a disaster.

In defense of their actions, coastal states can argue that they are not violating international law, but simply following it by shielding their adjacent marine environments from a potential radioactive catastrophe. Coastal states may also claim that ships carrying radioactive materials

and entering their waters without their prior consent or notification are violating international law and intentionally endangering their marine environments. Essentially, two international laws, both codified in one treaty, are in violation of each other.

V. ATTEMPTS TO RESOLVE THE PROBLEM

A. *The UNCLOS Compromise: Sea Lanes*

To some extent, UNCLOS foresees the conflict vessels carrying radioactive materials may create between the right of innocent passage and the obligation to protect and preserve the marine environment. UNCLOS responds to this conflict in Article 22, allowing coastal states to create special sea lanes for the transit of ships exercising the right of innocent passage. Notably, Article 22(2) addresses ships carrying "inherently dangerous or noxious substances" and gives coastal states the ability to limit these ships to the special sea lanes the coastal states have delineated.

On its face, this article seems to reconcile the right of innocent passage and the obligation to protect and preserve the marine environment. It appears to uphold the right of innocent passage while simultaneously acknowledging the coastal state's sovereignty and interests in the territorial sea by allowing it to direct potentially hazardous ships. Furthermore, when coupled with the Irradiated Nuclear Fuel Code (INF) and the International Atomic Energy Agency's (IAEA) safety requirements for the transboundary movement of radioactive materials, the resulting combination of legislation seemingly resolves the conflict between innocent passage and protection of the marine environment. However, due to the particularly dangerous nature of oceanic shipping of radioactive materials, many coastal states claim that these measures are inadequate. n74

B. *The Failure of the Compromise*

The most obvious reason why UNCLOS' Article 22 compromise fails is because it underestimates the potential damage a radioactive accident may cause. If a radioactive accident were to occur within a coastal state's territorial sea, that coastal state would be gravely affected. Despite reimbursement via the applicable international laws of damage liability, whereby the polluter "pays," a coastal state could suffer irreparable harm to its marine environment, as well as to its human population. Moreover, if the coastal state is one that depends on its waters for economic survival, the potential damage would be crippling.

The UNCLOS compromise also fails because of inadequate safety precautions on the part of those shipping the radioactive materials. Those supporting the prevalence of the right of innocent passage and the implementation of sea lanes, cite the safety record of the transportation of radioactive materials: to date, no *significant* radioactive accident has occurred involving the oceanic shipment of radioactive materials. Furthermore, the proponents of the right of innocent passage cite the INF and IAEA's safety requirements for transport of radioactive materials.

C. *The Precautionary Principle*

Although the right of innocent passage and the obligation to protect the marine environment conflict when applied to the issue of vessels carrying radioactive cargo, many contend that the right of innocent passage dominates. Citing the customary international law aspect of the freedom of the seas and freedom of navigation, they claim that forbidding innocent passage through a coastal state's seas is a violation of international law.

However, not everyone believes that the right of innocent passage is the dominant theory in the conflict between innocent passage and marine preservation. The precautionary principle mandates that ships transporting radioactive materials have a duty to warn, or notify, coastal states through whose exclusive economic zones the ships plan to pass. Furthermore, the precautionary principle suggests that coastal states may officially deny a ship's request for innocent passage by withholding its requested consent to allow the ship in its waters.

The precautionary principle is based upon the principle of *sic utere tuo, ut alienum non laedas*, or that a nation may do as it wishes with its own resources, but if it may adversely affect another in doing so, that nation should notify the other. As applied to the situation of the *Pacific Pintail*, *sic utere* would allow France and Japan to do as they wished with their radioactive materials, so long as it would not adversely affect other nations, like Chile. However, because the shipment could adversely affect Chile, under *sic utere*, France and Japan would have a duty to warn it of the shipment. Consequently, because the shipment could have adversely affected Chile, it could have denied the *Pacific Pintail* innocent passage through its waters.

Critics of the precautionary principle maintain that it is not international law because it is not popularly accepted or old enough to be custom. Interestingly enough, Article 198 of UNCLOS, requires nations to inform others of "imminent or actual damage" to the marine environment, and is basically a codification of the precautionary principle. Although the precautionary principle's status as customary international law is questionable because it is a relatively novel idea, recent treaties and legislature, such as the United Nations Convention on the Economy and Development and the Basel Convention have begun codifying it into international legal instruments.⁶ Moreover, when one considers that man-made nuclear energy has only existed for half a century, it can be argued that if sufficiently widespread, the precautionary principle is customary international law.⁷

Support for the precautionary principle also can be found elsewhere. For example, in the *Corfu Channel Case*, the ICJ held that Albania should have informed Britain that it had placed mines in the channel. In other words, when Albania did something that could have adversely affected another country, it had a duty to warn them about it.

The precautionary principle's greatest advantage is the ability it gives coastal states to evaluate the potential benefits and detriments of allowing innocent passage by ships carrying radioactive materials. Under the precautionary principle, nations may prepare for, or expect a possible radioactive accident. Consequently, implementation of the precautionary principle would help resolve the conflict between the right of innocent passage and the duty to protect the marine environment.

⁶ See also the Rio Declaration on Environment and Development, June 13, 1992, U.N. Doc. A/CONF.151/26 (vol.I) (specifically declaring that the precautionary principle shall be applied by states in order to protect their environments).

⁷ Essentially, the precautionary principle would satisfy the crucial, necessary elements to become customary international law because one can argue: First, that the principle has been in existence as long as it has been needed and thus satisfies the duration requirement; and second, that although not every nation implements it, it is in widespread use by a great majority of the world's nations, making it a general, consistent practice.