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OPPORTUNITY OR TOXIC COLONIALISM?**

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ABSTRACT

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One of the recurring themes in international environmental law and policy is the North-South divide over questions regarding the relationship between environmental protection and economic growth. This divide is particularly evident on the issue of the transportation and disposal of hazardous substances. This research paper aims to investigate the growing international environmental issue of shipbreaking, an issue that sees the competing objectives of economic growth, public health, international politics and environmental protection clash head on. After a discussion of the shipbreaking process and the threat it poses due to its environmental and health effects, this paper will analyze the interplay of international environmental law, economics and politics that have occurred in determining the current state of global shipbreaking. This paper will focus particularly on the case of the asbestos filled French warship Clemenceau, which in 2005 began a journey to the Alang shipyard in India to be decommissioned. Eventually, a mix of court decisions and NGO involvement forced the ship to return to France. Through an analysis of the Basel Convention, other applicable international law, judicial decisions on the Clemenceau case and subsequent writings of publicists, this paper will examine the current international legal regime with regard to shipbreaking and discuss current efforts being made to strengthen and improve it

KEYWORDS: International Environmental Law, Environmental Law and Policy, Neo-Colonialism, Shipbreaking, Globalization, Clemenceau case, Transboundary pollution

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1.THE SHIPBREAKING DILEMMA: ECONOMIC OPPORTUNITY OR TOXIC COLONIALISM?

One of the recurring themes in international environmental law and policy is the North-South divide over questions regarding the relationship between environmental protection and economic growth. This divide is particularly evident on the issue of the transportation and disposal of hazardous substances. As Hunter et. al argue, "despite the potential dangers, developing nations have strong and immediate economic incentives to accept hazardous waste from other nations."¹ Developed states, on the other hand are concerned about the environmental catastrophes that occur as a result of this but offer few alternatives.² This research paper aims to investigate the growing international environmental issue of shipbreaking, an issue that sees the competing objectives of economic growth, public health, international politics and environmental protection clash head on. After a discussion of the shipbreaking process and the threat it poses due to its environmental and health effects, this paper will analyze the interplay of international environmental law, economics and politics that have occurred in determining the current state of global shipbreaking. This paper will focus particularly on the case of the asbestos filled French warship *Clemenceau*, which in 2005 began a journey to the Alang shipyard in India to be decommissioned. Eventually, a mix of court decisions and NGO involvement forced the ship to return to France. Through an analysis of the Basel Convention, other applicable international law, judicial decisions on the *Clemenceau* case and subsequent writings of publicists, this paper will examine the current international legal regime with regard to shipbreaking and discuss current efforts being made to strengthen and improve it.

Although thinking of the end of ships often "conjures thoughts of merchant vessels torpedoed by German U-boats...and the tragic loss of the Titanic...the majority of ships do not die nobly in battle or ram icebergs in maiden voyages; they grow old, fall into disrepair (and) are sold for scrap on the international shipbreaking market."³ Shipbreaking, defined as "the process in which ships are dismantled and their steel hulls, components and parts are recycled,"⁴ is both a source of economic growth and responsible for a number of environmental and health problems. Although, shipbreaking historically "occurred in the same industrialized countries that built and used the ships, countries have recently found it more economical and expedient to simply outsource ships overseas for shipbreaking."⁵ Two thirds of the 200 to 600 ships dismantled globally every year are currently taken apart on the beaches and river banks of the Indian subcontinent.⁶ That the shipbreaking industry is now almost entirely situated in

¹ David Hunter et al., *International Environmental Law and Policy* 3rd Ed., New York: Foundation Press, 2007: 944.

² John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 535.

³ John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 535.

⁴ *Ibid.*, 535.

⁵ David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20: 216.

⁶ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

developing countries can be explained by differences in environmental regulation and the cost of labor. Whereas a shipbreaker in South Asia makes \$1-2 a day, a laborer in the Netherlands makes \$250 a day for performing the same work.⁷

For these developing countries, ship breaking is an important source of raw materials, with Bangladesh deriving 90% of its steel from end of life ships.⁸ More importantly, the shipbreaking industry provides employment for "tens of thousands of unskilled, illiterate workers in India, Pakistan and Bangladesh who have nowhere else to turn."⁹ Most of these workers are economic migrants coming from the poorest regions of their countries.¹⁰ Unfortunately, while shipbreaking offers economic growth to these nations, it also brings grave environmental consequences due to the chemicals that are released in the process.¹¹

Most ships are loaded with polychlorinated biphenyls(PCBs), asbestos, mercury, tributyl tin(TBT), lead based paints, sodium chromate-treated mud ballasts, oils, and toxic bilge waters, each of which present harmful risks when released into the environment.¹² PCBs, used throughout ships in cable insulation, transformers and other capacities, are toxic, carcinogenic and present significant environmental and health risks.¹³ PCBs not only affect workers involved in the shipbreaking industry through direct exposure but also have the potential of harming aquatic and human life on a much larger scale. When released into the oceans during the shipbreaking process, PCB contaminates through bioaccumulation, where the chemicals become more toxic as they move up the food chain.¹⁴ The United States outlawed the manufacture of PCBs in 1979 through the Toxic Substances Control Act owing to the fact that exposure to these chemicals leads to cancer, reproductive failures and hormone imbalances.¹⁵ It is perhaps most alarming that those who eat PCB contaminated fish face an even greater health threat than shipbreaking industry workers directly exposed to it.¹⁶

Usually found in the ship insulation, asbestos fibers "pose a serious health risk to workers who inhale the fibers."¹⁷ Shipyard workers are at constant risk of contracting asbestosis, a disease of the lung; Asbestos exposure is also the only known cause of mesothelioma, a cancer of the lungs, chest cavity and abdomen.¹⁸ Exposure to lead, a

⁷ Ibid.

⁸ Ibid.

⁹ John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 542.

¹⁰ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007

¹¹ Matt Cohen, 'Shipbreaking Exports: Balancing Safe Disposal With Economic Realities,' *Environs Environmental Law and Policy Journal* 28: 239.

¹² Ibid., 240.

¹³ John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 539.

¹⁴ Christopher Noland, 'The Ghouls That Won't Go Away-The Dire Environmental Consequences Posed By the Ghost Fleet in the James River , ' *William and Mary Environmental Law and Policy Review* 30 (Winter 2006): 530.

¹⁵ Ibid., 531.

¹⁶ David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20: 218.

¹⁷ Ibid., 218.

¹⁸ Ibid., 218.

toxic substance found commonly in paint, damages the nervous system and impairs hearing, vision and muscle coordination.¹⁹ TBTs, also found in paint and highly toxic, causes severe reproductive defects in aquatic organisms when released into the water.²⁰ Oily waste, or bilge water, which accumulates in the lowest part of the ships hull, when spilled into the ocean during shipbreaking, also "threatens the survival of many aquatic species and organisms."²¹ Thus, it is evident that the release of these chemicals during the shipbreaking process constitutes a grave threat to public health and the aquatic environment. Cumulatively, the negative effects of shipbreaking are felt by the shipbreakers and the general population alike. The wide-ranging environmental consequences of shipbreaking make it imperative to examine the legal framework that exist both domestically and internationally to control its harmful effects.

As stated earlier, today, almost all shipbreaking occurs in developing countries and "shipbreaking is virtually non-existent in developed nations."²² The extensive removals of toxic pollutants from ships that must occur to bring shipbreaking in line with domestic environmental regulation in these countries make the process grossly uneconomical. On the other end of the spectrum, in Bangladesh, the second largest shipbreaker in the world, "the race to the bottom of environmental and safety standards has been fully realized where regulations are non-existent."²³ If a complete absence of domestic environmental law is indeed required to make shipbreaking an economically viable endeavor, the question is whether it acceptable in international law for developed states to send their ships to developing countries for shipbreaking. In the United States, the enactment of the Toxic Substances Control Act, which prohibits the export of PCBs, led to a virtual moratorium on the sale and transportation of obsolete vessels to developing countries for dismantling since 1994.²⁴ However, many other sources of international treaty and customary law are also directly and indirectly applicable to the question of shipbreaking.

The 1989 Basel Convention on the Control of Transboundary Movements of Wastes and Their Disposal (Basel Convention) was a groundbreaking treaty that aimed to require "nations to internalize the disposal costs of their own hazardous waste in their own countries."²⁵ It had three main objectives; to minimize the amount and the hazard level of wastes generated worldwide, to ensure that wastes be disposed of as close to the source of generation as possible and to promote the environmentally sound management and disposal of hazardous wastes.²⁶ At present, there are 170 states party to the Basel Convention, with the United States, Afghanistan and Haiti being the only three signatories yet to ratify it.²⁷ Although it is "generally agreed that the Parties did not

¹⁹ Ibid., 219.

²⁰ Ibid., 219.

²¹ Ibid., 219.

²² John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002):540.

²³ Ibid., 548.

²⁴ Takako Morita, 'N.I.M.B.Y. Syndrome and the Ticking Time Bomb: Disputes Over the Dismantling of Naval Obsolete Vessels.' *Georgetown International Environmental Law Review* (Summer 2005): 739.

²⁵ John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 554.

²⁶ David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20: 220.

²⁷ Basel Convention's Ratifications < <http://www.basel.int/ratif/convention.htm> > Accessed 12th March 2008.

consider the shipbreaking industry when they adopted the Basel Convention,"²⁸ several provisions of the Convention are applicable to this issue.

Article 2(1) defines 'wastes' as "substances or objects which are...intended to be disposed of by the provisions of national law." Ships may well be covered by this definition, and if not, the pollutants contained in it certainly are. Article 4.2(e) calls on parties to "take the appropriate measures to not allow the export of hazardous wastes or other wastes to a State ...particularly developing countries...if it has the reason to believe that the wastes in question will not be managed in an environmentally sound manner." Article 4.2(g) is particularly relevant in addressing the responsibility of developing countries themselves; it obliges states to "prevent the import of hazardous wastes and other wastes if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner." All the dangerous pollutants that are released during shipbreaking, including lead and asbestos, are included in the Annexes to the Convention. Even though the Convention may have not originally been envisioned as an instrument to apply to the question of shipbreaking, recent decisions have brought shipbreaking within its ambit. In 2007, the EU Commission released a Green Paper on ship dismantling which went far in resolving the ambiguity on whether obsolete ships constituted 'waste' in international law. The Commission declared that "in international waste shipment law it is recognized that a ship may become waste as defined in Article 2 of the Basel Convention and at the same time it may be defined as a ship under other international rules."²⁹ Furthermore, although it is yet to come into force, the 1995 Basel Ban Amendment explicitly calls for a ban on the movement of all transboundary waste from developed OECD countries to developing, non OECD countries. The Basel Ban would go far in addressing one of the glaring loopholes of the Convention; the movement of hazardous substances between parties and nonparties to the Convention is completely exempted and unregulated.³⁰ The EU, which has ratified the Basel Ban, acknowledges that the export of ships which constitute waste "to a non OECD country is prohibited under the Basel ban...and any dismantling must take place under environmentally sound conditions in an OECD country."³¹ These decisions, together with the US government's moratorium give some indication of an emerging international consensus; that the export of obsolete ships containing hazardous chemicals to developing countries for dismantling is a violation of the Basel Convention and international environmental law.

Although the Basel Convention stands out as the principle source of international law covering the topic of shipbreaking, it is not the only treaty based source of the same. The Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention) is also relevant with regard to the issues involving shipbreaking. PCBs, released during shipbreaking, are regulated under the Stockholm Convention and parties may export

²⁸ John Sawyer, 'Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?' *Penn State International Law Review* 20 (Spring 2002): 554.

²⁹ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

³⁰ David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20:222.

³¹ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

PCBs “only for the purpose of environmentally sound disposal.”³² Furthermore, in Article 1(d)(iv), States party to the Convention agree to “take appropriate measures so that such wastes, including products and articles upon becoming waste are not transported across international boundaries without taking into account relevant international rules, standards and guidelines.” It can be argued that as this article specifically includes the words ‘products...upon becoming waste’, ships destined for disposal that contain PCBs fall within the scope of the Convention. Thus, states party to the Stockholm Convention have an obligation to ensure that disposal of their ships is going to be conducted in an environmentally sound manner before allowing them to leave their waters. Some scholars have gone so far as to contend that the Stockholm Convention obliges parties to actively “provide technical assistance to developing countries to which it wishes to send its own ships for dismantling.”³³

The transportation of old, rusting vessels across the world for shipbreaking may also run afoul of the Law of the Sea. Article 19 of the Law of the Sea states that “passage of a foreign ship shall be considered prejudicial to the peace, good order or security of the coastal State if in the territorial sea it engages in...any act of willful and serious pollution contrary to [the] Convention.” Any spillage of the hazardous chemicals present on ageing ships on their voyage to be dismantled could potentially lead to the ship’s flag state being liable under this Convention.

The transportation of contaminated end of life vessels for shipbreaking across international waters also runs into difficulties with international customary law relating to transboundary pollution. In the *Trail Smelter Arbitration*, a landmark case on the subject of transboundary pollution, the tribunal found that “no State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein.”³⁴ Although this does not constitute much legal precedent on its own, the repeated affirmation of the principle that states being responsible for transboundary harms caused to other states by private entities presents strong grounds for it to be considered part of customary international law. Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration both embody this principle by articulating that “States have... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States.” Applied to the case of shipbreaking, this principle dictates that developed countries should refrain from sending, or allowing private companies within their territory to transport obviously contaminated end of life ships to countries where they know that the dismantling of the ship will result in environmental damage.

From the legal analysis it is evident that, though the issue of shipbreaking has not been specifically addressed, there is enough evidence that the practice of transporting contaminated ships to countries where environmental regulation is weak or

³² David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20: 220.

³³ Takako Morita, 'N.I.M.B.Y. Syndrome and the Ticking Time Bomb: Disputes Over the Dismantling of Naval Obsolete Vessels.' *Georgetown International Environmental Law Review* (Summer 2005): 734.

³⁴ David Hunter et al., *International Environmental Law and Policy* 3rd Ed., New York: Foundation Press, 2007: 549.

absent for dismantling is in violation of existing international environmental law. As Morito argues, in most cases the decision

to export hazardous wastes to developing countries that are members of the Basel Convention, such as Bangladesh, India, Pakistan, and China, with the knowledge that these receiving countries often fail to manage the waste in an environmentally sound manner is...a clear violation of Article 4(2)(e) of the Basel Convention (and other international treaties). The purpose of all these international instruments is to internalize the cost of disposing of hazardous waste within the Member State's own boundaries, rather than to permit it to 'ship' its domestic problems abroad.³⁵

These provisions of international treaty and customary law confront the reality that developed countries have to dispose of their ageing fleet and developing countries often depend on the shipbreaking industry as a source of employment. The case of the French warship *Clemenceau* illustrates perfectly the tension that exists between environmental protection, international trade and economic development. Briefly,

Clemenceau, the French warship...was an extraordinary ship which was the pride and grace of the French Navy. This giant came to the end of her use life and was disarmed in 1997. The ship, with its deadly toxic contaminants inclusive of 130 tons of asbestos, was marked for destruction. In 2004 and 2005, French subcontractors did some very superficial asbestos removal and claimed that 90% of the asbestos had been cleared from the ships...(although) environmentalist groups argued that in reality only 30% of the asbestos was removed. The *Clemenceau*, former pride of France, departed from Toulon of France to India (for dismantling) on December 14, 2005.³⁶

Even as the ship began its slow journey to India, environmentalist groups in India held rallies calling for the ship to turn back and filed a complaint with the Indian Supreme Court Monitoring Committee on Hazardous Wastes (SCMC). At the same time, at the Alang ship yard, which provides employment for 100,000 labourers, "workers...unfurled a banner saying 'Greenpeace Go Back' and largely supported the industry, seeing it as their only opportunity to make a living."³⁷ The SCMC conducted detailed hearings on the *Clemenceau* and heard from scientists, environmental NGOs, the French Government,

³⁵ Takako Morita, 'N.I.M.B.Y. Syndrome and the Ticking Time Bomb: Disputes Over the Dismantling of Naval Obsolete Vessels,' *Georgetown International Environmental Law Review* (Summer 2005): 737.

³⁶ Aparna Meduri, "Clemenceau Case- A Tug Between Environment, Health and Employment." *Social Science Research Network*. March 3, 2006.

³⁷ Devadatta Gandhi, 'The Limits and Promise of Environmental Ethics: Eco-Socialist Thought and Anthropocentrism's Virtue,' *Environs Environmental Law and Policy Journal* 31 (Fall 2007): 52.

represented by the French Ambassador and representatives of the shipbreaking industry. In its final judgment, the SCMC announced that it was perturbed at the “apparently careless and casual manner in which... the vessel was allowed to leave French waters for its export to India without a detailed inventory.”³⁸ The SCMC found the transportation of Clemenceau to India both a violation of domestic and international law through the Indian Hazardous Waste Rules and the Basel Convention respectively. It contended that

Ships containing unacceptable quantities of asbestos are hazardous waste. France, being party to the (Basel) Convention, has not fulfilled its obligations as required under Article 4, the movement of the Clemenceau between France and India is not as per Article 6; therefore the movement of the Clemenceau can be considered as “illegal traffic” as per Article 9 of the Convention. The Committee feels that it is amply clear that the movement of the Clemenceau is in violation of the provisions of the Basel Convention which in itself is an expression of the international community to control transboundary movement of hazardous wastes and their disposal so as to protect the environment.³⁹

Article 4, which forbids the transportation of hazardous wastes to states where environmental protection is weak or absent, has already been discussed earlier in the paper. Article 6 embodies the international customary law principle of ‘prior informed notification and consent’ by calling for the State exporting the hazardous waste to notify the importing State, providing detailed information of the hazardous waste present in the object being transported. It also, in Article 6(3), forbids the “State of export...to commence the transboundary movement until it has received written confirmation that the notifier has received the written consent of the State of import; and the notifier has received from the State of import confirmation of a contract between the exporter and the disposer specifying environmentally sound management of the wastes in question.” Article 9 of the Convention clearly states that any transboundary movement of hazardous wastes or other wastes without notification or consent “shall be deemed as illegal traffic.” As the facts of the case show, France did not notify India regarding Clemenceau or attempt to obtain its consent. Hence, the SCMC found it fairly straightforward to rule that

The movement of the Clemenceau from France to India in its partially decontaminated state would be a violation of the Basel Convention on the Transboundary Movement of Hazardous Wastes. Allowing the transboundary movement would also indicate that India too would be in violation of the Basel

³⁸ “Final Report on Clemenceau.” *Supreme Court Monitoring Committee on Hazardous Wastes*. <http://www.scmc.info/special_issues/final_report_to_clemenceau_3.html> Accessed March 15, 2008.

³⁹ Ibid.

Convention provisions. By selling the vessel...for a mere 100,000 Euros, France has rid itself of a major environmental and public health problem. India, on the other hand, will...welcome a major liability, thus effectively be assisting France to get rid of its liability. In light of the above, this Honorable Court may direct the Central Government to take appropriate steps to ensure that the *Clemenceau* does not enter India or its sovereign waters.⁴⁰

In wake of the SCMC ruling and international outcry, French President Jacques Chirac issued a *suo moto* order to recall the *Clemenceau* to France on 15th February 2006.⁴¹ In France it remains to the present day, its fate yet to be determined.

In one sense, the outcome of the *Clemenceau* case was an outstanding victory for the proponents of international environmental law. The SCMC was very clear in its interpretation that “sending such seriously contaminated vessels to India constitutes dumping of hazardous materials in India which is not permitted either by Indian law or international law.”⁴² Yet, although the SCMC argued in its ruling that “the *Clemenceau*’s import is of no special gain to either the country or its economy,”⁴³ not everyone shared this opinion, not least the “40,000 employees (who were) eagerly waiting for the ship to earn their bread and butter.”⁴⁴ Indeed, Devadatta Gandhi describes the shipbreaking dilemma perfectly when he argues that shipbreakers “face an extremely difficult situation economically when deprived of employment, while of course facing grave health and safety risks if they do break the ships.”⁴⁵ Already, the SCMC has identified the more stringent environmental regulations and monitoring present in India as a result of its ruling on *Clemenceau* as being one of the reasons for the decline of the shipbreaking industry in India.⁴⁶ In a classic case of ‘the race to the bottom’, India’s adherence to and enforcement of international environmental law has been principally responsible for “driving the ship breaking business from India to Bangladesh and China...rendering many workers unemployed.”⁴⁷ The *Clemenceau* case thus illustrates that while international environmental law has provided an important tool for developing countries to reject the import of contaminated end of life ships, its regime is not comprehensive enough at present to ensure that violators cannot simply send their ships to States who place less importance on environmental and health protection.

⁴⁰ “Final Report on *Clemenceau*.” *Supreme Court Monitoring Committee on Hazardous Wastes*. <http://www.scmc.info/special_issues/final_report_to_clemenceau_3.html> Accessed March 15, 2008.

⁴¹ Aparna Meduri. “*Clemenceau* Case- A Tug Between Environment, Health and Employment.” *Social Science Research Network*. March 3, 2006.

⁴² “Final Report on *Clemenceau*.” *Supreme Court Monitoring Committee on Hazardous Wastes*. <http://www.scmc.info/special_issues/final_report_to_clemenceau_3.html> Accessed March 15, 2008.

⁴³ *Ibid*.

⁴⁴ Aparna Meduri. “*Clemenceau* Case- A Tug Between Environment, Health and Employment.” *Social Science Research Network*. March 3, 2006.

⁴⁵ Devadatta Gandhi, ‘The Limits and Promise of Environmental Ethics: Eco-Socialist Thought and Anthropocentrism’s Virtue,’ *Environs Environmental Law and Policy Journal* 31 (Fall 2007): 52.

⁴⁶ “Note on Ship Breaking.” *Supreme Court Monitoring Committee on Hazardous Wastes*. <http://www.scmc.info/special_issues/note_on_shipbreaking.htm> Accessed March 15th 2008.

⁴⁷ *Ibid*.

Progress towards solving the shipbreaking dilemma requires the needs of all the stakeholders need to be taken into consideration. For developed states such as the United States, compliance with international environmental law has led to over 250 ships being left to rot in the James River in Virginia as “the inability to scrap ships abroad coupled with the lack of adequate funding for expensive domestic scrapping programs led to an increase in the number of ships placed in storage.”⁴⁸ Approximately 100 1960s era warships and other government vessels flying EU flags, most of them French and British, are due for decommissioning over the next ten years.⁴⁹ Indefinite storage of these ships, as practiced in the United States, is hardly a viable option due to the high cost of maintenance and the fact that this option brings environmental concerns of its own.⁵⁰ Thus, for all practicable purposes, shipbreaking will continue to be a reality due to the need for developed states to dispose of most of the highly contaminated 1960s era fleets.

It is said that supply often creates its own demand. However, while shipbreaking has benefited the economies of many developing nations, it is clear that the industry has worked in a manner that is not environmentally sustainable. One in six workers in the Alang ship yard in India suffers from asbestosis and 200 shipbreakers in Bangladesh died in accidents from 1998 and 2003; NGOs estimate the total death toll from shipbreaking at several thousands.⁵¹ Developed nations need to find a market to scrap their ageing ships, developing nations need to continue to participate in the industry for economic reasons and the overarching public health and environmental concerns of shipbreaking create a pressing need for the international community to find provide a socially and environmentally sustainable solution to this dilemma.

Actors at both the regional and international level have taken several steps to find a solution to the shipbreaking dilemma. On 20th December 2006, The EU Council acknowledged that the environmentally sound management of ship dismantling was a priority for the EU.⁵² In a Green Paper it published in 2007, it pledged to strengthen the enforcement of the existing EU Waste Shipment Regulation, improve the EU ship dismantling capabilities in EU and other OECD countries and made several recommendations.⁵³ These included calling for more technology transfer from developed to developing countries, encouraging voluntary action by ship owners to decontaminate their ships and making it mandatory for them contribute towards an international ship dismantling fund that would be designed to improve dismantling facilities in developing countries.⁵⁴ Such a fund would incorporate the ‘polluter pays’ principle that according to

⁴⁸ Matt Cohen, 'Shipbreaking Exports: Balancing Safe Disposal With Economic Realities,' *Environs Environmental Law and Policy Journal* 28:243.

⁴⁹ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

⁵⁰ David Dodds, 'Breaking up is hard to do: Environmental Effects of Shipwrecking and Possible Solutions Under India's environmental regime,' *Pacific McGeorge Global Business & Development Law Journal* 20: 211.

⁵¹ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

⁵² *Ibid.*

⁵³ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

⁵⁴ *Ibid.*

the OECD “implies ...that it is for the polluter to meet the costs of pollution control.”⁵⁵ Designed to internalize pollution externalities, this principle calls for the polluting party to “take those actions necessary to ensure that polluters...bear the full environmental and social costs of their activities.”⁵⁶ Furthermore, the EU declared its support for a binding international instrument on shipbreaking.⁵⁷

The issue of shipbreaking was first brought to the attention of the International Maritime Organization’s (IMO) Marine Environment Protection Committee in 1998 and it was soon decided that the IMO would be the international organization that would lead the international effort to “develop a realistic and effective solution to the problem of ship recycling.”⁵⁸ In December 2003, nonbinding IMO Guidelines on Ship Recycling were adopted, and by December 2005, it was decided that the IMO should develop a new legally binding instrument on ship recycling.⁵⁹ The new instrument would regulate:

The design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling..., the operation of ship recycling facilities in a safe and environmentally sound manner; and the establishment of an appropriate enforcement for ship recycling (certification/reporting requirements).⁶⁰

Progress towards enacting a binding instrument has moved rapidly onwards since 2005. International co-operation has been highlighted by the establishment and frequent meetings of the Joint ILO/IMO/Basel Convention Working Group on Ship Scrapping which has aimed to co-ordinate the work of the three organizations on ship recycling and to encourage collaboration.⁶¹ The Basel Convention and ILO participants have “been consistently encouraged to participate...in IMO meetings so as to contribute to the process of the development of the new Convention.”⁶² Furthermore, as envisaged in the EU Green Paper, an International Ship Recycling Trust Fund was instituted in May 2006 with the purpose of being a source of financial support for “technical co-operation activities, and in particular, for encouraging developing nations towards safe and environmentally sound management of ship recycling.”⁶³

⁵⁵ David Hunter et al., *International Environmental Law and Policy* 3rd Ed., New York: Foundation Press, 2007: 518.

⁵⁶ *Ibid.*, 519.

⁵⁷ Commission of the European Communities, 'Green Paper On better ship dismantling,' EU COM(2007) 269, 2007.

⁵⁸ Nikos Mikelis, 'Developments and Issues on Recycling of Ships,' *The East Asian Seas Congress* December 12th 2006

⁵⁹ *Ibid.*

⁶⁰ Nikos Mikelis, 'Developments and Issues on Recycling of Ships,' *The East Asian Seas Congress* December 12th 2006

⁶¹ *Ibid.*

⁶² *Ibid.*

⁶³ *Ibid.*

It is expected that the legally binding international Convention on Ship Recycling will be finalized by early 2009. So far, although negotiations are ongoing, it is expected that the Convention will include the following key elements:

a mandatory requirement for an inventory of hazardous materials, specific to each ship, and an associated International Certificate for a Ship Inventory of Hazardous Materials; a new surveying regime... including surveys during the life of the ship, and a final survey prior to recycling; the introduction of the 'Recycling Plan', developed by the recycling yard to specify the manner each ship will be recycled; (and) the authorization of recycling facilities by their States.⁶⁴

Through its inventory declaration, surveying and certification regime, enforced with the possibility of imposing sanctions on Flag States responsible for violators, the proposed Convention is set to incorporate the international customary law principle of prior informed notification and consent. However, though the IMO's proposed Convention seeks to "establish common standards for all ship recycling operations, without distinction as to...the economic situation of the country in which they are carried out,"⁶⁵ it remains to be seen whether the Convention can arrest the alarming 'race to the bottom' effect which is at the core of the shipbreaking dilemma.

In conclusion, though the issues confronting the shipbreaking industry are complex and multifaceted, it is very clear that the current global status quo is unsustainable and undesirable. That the industry provides employment and economic opportunity for the developing world cannot hide the fact that shipbreaking as conducted today in many of these countries constitutes an unacceptable environmental and public health problem. This paper has shown that the international movement of contaminated ships for recycling to countries where environmental safeguards are poor or absent is in violation of international treaty law codified in the Basel Convention and the Stockholm Convention and international customary law regarding transboundary pollution. Yet, the *Clemenceau* case underlines the reality that this illegal movement continues to occur unchecked in many cases due to negligence and the economic imperatives that exist for both the sending and receiving parties to conduct the trade. In the particular instance of the *Clemenceau*, only the strong intervention of the Indian Supreme Court and its accurate finding that the movement was illegal under Indian and international law saw France having no choice but to recall the vessel. In other countries with a less involved government and judiciary and an absent environmental movement, such 'Clemenceaus' would enter unchecked, bringing with them their hidden, lethal cargo of hazardous waste. Though the *Clemenceau* case is a small victory for international environmental law, the unfortunate reality of the 'race to the bottom' ensures that in sheer economic terms, India's loss is another, less environmentally conscious nation's gain.

⁶⁴ Ibid.

⁶⁵ Nikos Mikelis, 'Developments and Issues on Recycling of Ships,' *The East Asian Seas Congress* December 12th 2006.

Shipbreaking is fraught with danger but provides vital employment.⁶⁶ Therein lies the shipbreaking dilemma and necessity on the part of all stakeholders dictates that the practice must continue. This paper has shown that although there is already much current international environmental law applicable to shipbreaking, its failure to curb environmentally hazardous shipbreaking operations necessitates the creation of a separate international legal instrument to deal with the problem. In this respect, the IMO's establishment of an international fund to enable technology transfer and its proposed binding international Convention on ship recycling has the potential to go a long way in presenting a socially and environmentally sustainable solution to the shipbreaking dilemma. A strictly enforced regime involving surveying, certification and notification can arrest the vicious cycle of the 'race to the bottom' and instead reward developing countries that make a genuine effort to bring about the environmentally sound management of their shipbreaking industry.

⁶⁶ Devadatta Gandhi, 'The Limits and Promise of Environmental Ethics: Eco-Socialist Thought and Anthropocentrism's Virtue,' *Environ Environmental Law and Policy Journal* 31 (Fall 2007):53.

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