

REVISITING THE SHIPBREAKING INDUSTRY IN INDIA: AXING OUT ENVIRONMENTAL DAMAGE, LABOUR RIGHTS' VIOLATION AND ECONOMIC MYOPIA

*Paridhi Poddar & Sarthak Sood**

India commands the largest share of the world's shipbreaking industry, which is largely attributable to the method for breaking ships employed in its yards. Being labour-intensive, this method called beaching, not only generates employment but also requires little capital investment, which were factors that suited its use in the Indian market conditions. However, use of this method invited widespread criticism from various factions on account of the hazards it poses to labourers' health and the environment. The international community, and subsequently the Indian lawmakers, have made efforts to regulate shipbreaking with a view to curtail these hazards. Despite these positive developments, environmentalists and labour rights activists have not been successful in securing a ban on the beaching method altogether. However, in 2013, the European Parliament came up with a regulation which, it is argued, would effectively exclude beaching as a disposal method for European vessels, and consequently for the Indian yards. In light of the afore-mentioned regulation and certain other developments, this paper argues that in the long run, from environmental, labour rights' and economic perspective, phasing out beaching in favour of an alternate method called dry-docking would be the most sustainable approach for India, even though it is capital-intensive and would reduce the jobs currently offered by the sector. This paper also proposes the ways in which the requisite capital for making a shift to dry-docking could be arranged.

I. INTRODUCTION

When a ship outlives its service life and loses its operational market value, the ship-owner usually seeks to recover his investment from the market value ascribed to the scrap metal remains of the ship. Sending an end-of-life ship for recycling generates revenue for the ship-owner, where the recycling

* 3rd and 2nd year students of the W.B. National University of Juridical Sciences, Kolkata. We would like to express our sincere gratitude to Mr. Saurabh Bhattacharjee, Mr. Nizamuddin Siddiqui, and Mr. Shashank Singh for their valuable suggestions and guidance while writing this paper. All errors, however, remain solely ours.

facility pays for a ship typically on a per light displacement tonne ('LDT') basis, which includes the weight of a ship's hull, machinery, equipment and spares.¹ The supply of ships for dismantling is inversely related to the freight rates earned by shipping vessels, which itself is a function of global demand for maritime transport and supply of new vessels.² Thus, the shipbreaking industry suffers from market volatility due to the cyclic nature of shipping and ship-building, both of which depend upon the global economic price for steel. In addition, escalation in cost of maintenance of worn-out ships also results in an increase in the market for ship-recycling business.³

When end-of-life ships are dismantled, their steel hulls and other components are salvaged and recycled back into the market.⁴ The steel so generated is particularly preferred for production of bars and rods which are used in the construction industry, on account of its superior quality.⁵ Besides steel, various other items on board the ship such as furniture, kitchen utensils, sanitary ware, old electrical items etc. are also sold in the market.

Ships are purchased for recycling by more than 300 yards across the world, of which yards in developing economies are characterised by common features such as cheap labour supply, lax regulatory framework for tax, import, and environmental controls, favourable geographical conditions and a demand for inexpensive superior quality steel.⁶ In India, the industry is confined to Alang and Sosiya, two villages of the Bhavnagar district of Gujarat and to Darukhana, Mumbai, both of which are situated on the Arabian Sea coast. Together these yards dismantle more than 30% share of the global ship-recycling volume by Dead Weight Tonnage (DWT) and more than 40% share

¹ Directorate for Impact Assessment and European Added Value (IMPA), European Parliament, *Financing the Environmentally Sound Recycling and Treatment of Ships: Impact Assessment of A Substantive Amendment to the Proposal for a Regulation on Ship Recycling*, 10 (February, 2013), available at [http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2013/496739/IPOL-JOIN_ET\(2013\)496739_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2013/496739/IPOL-JOIN_ET(2013)496739_EN.pdf) (Last visited on December 2, 2015).

² ICRA Limited, *Ship Breaking Industry: Key Trends and Credit Implications*, 3 (September 25, 2012), available at http://www.icra.in/Files/ticker/Ship%20Breaking%20Industry%20Note_25Sept2012.pdf (Last visited on September 8, 2015).

³ Jean-Florent Helfre, *Controversial Shipbreaking Dismantles Stakeholder Trust*, 1-2 (April, 2013), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2013/06/Sustainalytics-Shipbreaking-Report-April-2013.pdf (Last visited on December 6, 2015).

⁴ See John F. Sawyer, *Shipbreaking and the North-South Debate: Economic Development or Environmental and Labor Catastrophe?*, 20 PENN ST. INT'L L. REV. 535 (2002).

⁵ ICRA Limited, *supra* note 2, 5. However, re-rolling method of procuring steel from the ships, which is used mainly in South Asia, gives poorer quality rods than the smelting method where the grade of steel can be adjusted. Re-rolling method further presents environmental risks as, unlike the smelting method, toxic-laden paints and other hazardous materials on the ship steel are not treated at high enough temperatures thereby causing polluting emissions.

⁶ Rolando D. Legaspi, *Ship Recycling: Analysis of the Shipbreaking Countries in Asia*, 17 (2000) (Ph.D. dissertation, World Maritime University, Sweden), available at http://commons.wmu.se/cgi/viewcontent.cgi?article=1383&context=all_dissertations (Last visited on December 12, 2015).

by number,⁷ and thus contribute around 1-2% to the domestic demand for steel.⁸ While the yards in Mumbai have a limited size of operation,⁹ the yards in Alang and Sosiya beached more than 6,318 vessels between 1983 and 2013, which amounts to breaking almost one ship a day and producing three million metric tonnes of scrap metal annually.¹⁰ Shipbreaking in these yards is primarily labour intensive – in 2010, while around 60,000 workers were directly employed in the yards, more than 500,000 workers derived their livelihood from various ancillary industries associated with shipbreaking.¹¹

Ships in Alang are dismantled through the beaching process due to the all-seasonal tidal changes on the shores.¹² Alang also enjoys the advantage of strategic location near significant trade routes. However, the industry has largely flourished in Alang on account of a lax implementation of environmental and labour laws.¹³ This is evidenced by the fact that frequent accidents caused due to lack of safety gear have resulted in 470 casualties in Alang in a period of three decades;¹⁴ nonetheless, not even a single yard owner has been convicted for these accidents.¹⁵

Despite all its drawbacks, theoretically, shipbreaking has many advantages – it promotes sustainable development by reducing the need for mining of natural resources¹⁶ and it contributes to production of steel which

⁷ Nanda Gopal K. Reddy & N. Manoharan, *Ship Recycling: An Important Mile Stone for India*, 7(6) INDIAN JOURNAL OF SCIENCE AND TECHNOLOGY 15, 16 (2014).

⁸ ICRA Limited, *supra* note 2, 5.

⁹ United Nations General Assembly, Human Rights Council, *Report of the Special Rapporteur on the Adverse Effects of The Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights, Okechukwu Ibeanu*, ¶35, UN Doc. A/HRC/15/22/Add.3 (September 2, 2010) ('Human Rights Council').

¹⁰ Geetanjoy Sahu, *Workers of Alang-Sosiya: A Survey of Working Conditions in a Ship-Breaking Yard, 1983-2013*, 49(50) ECONOMIC & POLITICAL WEEKLY 52, 53 (2014).

¹¹ Human Rights Council, *supra* note 9, ¶34. However, due to import of cheap Chinese steel, many yards in Alang have shut down and it is estimated that today less than 5000 workers are employed.

¹² Julie McElroy-Brown, *ShipBreaking at Alang, India: "What is the right thing for this place?"*, 3 (2006), available at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/2630/McElroyBrown_project.pdf (Last visited on December 6, 2015).

¹³ Legaspi, *supra* note 6.

¹⁴ Sahu, *supra* note 10, 53 (the death toll is expected to be higher as most deaths are not registered and deaths due to chronic occupational diseases including cancer and respiratory disorders are not taken into consideration). *But see* NGO SHIPBREAKING PLATFORM, *South Asian Quarterly Update #5* (April 10, 2015), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/09/SOUTH-ASIA-QUARTERLY-UPDATE-5.pdf (Last visited on January 21, 2016) (the gross violation of human rights in Alang due to the lackadaisical attitude of the concerned authorities has not been replicated in other smaller ports, for instance, the Kerala Pollution Control Board has taken strict action of banning of ship-breaking activity at Beypore).

¹⁵ Sahu, *supra* note 10, 56.

¹⁶ International Labour Organization (ILO), *Proper Ship Breaking: A Test for Globalization and Decent Work*, November 3, 2008, available at http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_100105/lang--en/index.htm (Last visited on January 21, 2016). *See*

helps in generation of employment. Shipbreaking is also a more environment-friendly and economically feasible method of disposing ships than its alternatives like mothballing, in which ships are stored for an indefinite period of time, which not only entails exorbitant maintenance costs but also poses serious environmental risks.¹⁷

In addition, the shipbreaking industry is slated to experience a steady growth, irrespective of the frequent demand depression faced by the steel industry, on account of two reasons. *First*, a regulation framed by the International Maritime Organization ('IMO') which requires phasing out of worn-out single-hull tankers is expected to create immediate demand for dismantling services.¹⁸ *Second*, the over-capacity of the world fleet is expected to sustain this demand for the next three decades, unless the global market conditions witness drastic changes.¹⁹ This is because around 40% of the world's tonnage, with an average life of approximately 20.34 years, was built in between 2009 and 2012.²⁰ As a consequence of this, by 2035, approximately 40% of the current world fleet would be available for dismantling.

In this article, we analyse the current legal framework governing this industry, in order to point out the lacunae that have resulted in gross mismanagement of the shipbreaking activity. In light of this, we would recommend legal changes needed to ensure a sustainable development of this industry. Besides this, we would highlight some of the structural changes that must be implemented to give a competitive advantage to the Indian yards. Part II of this paper discusses the international conventions framed for governing this industry, followed by an analysis of the domestic cases. It also outlines the salient provisions of the Shipbreaking Code, 2013 ('Code')²¹ which presently governs the industry in India. Part III chalks out how the Code has failed to address the environmental and worker safety concerns associated with shipbreaking. Part IV advocates that there is an urgent need to shift from beaching to dry-docking by highlighting the environmental, labour welfare and economic benefits that

also K.P. Jain, J.F.J. Pruyt & J.J. Hopman, *Critical Analysis of the Hong Kong International Convention on Ship Recycling*, 7(10) INTERNATIONAL JOURNAL OF ENVIRONMENTAL, CHEMICAL, ECOLOGICAL, GEOLOGICAL AND GEOPHYSICAL ENGINEERING 438, 439 (2013).

¹⁷ ROBIN DES BOIS, *Shipbreaking: Bulletin of Information and Analysis on End-of-life Ships* #34, February 9, 2014, available at <http://www.robindesbois.org/english/shipbreaking/shipbreaking34.pdf> (Last visited on December 6, 2014).

¹⁸ International Maritime Organisation (IMO), *Tanker Safety: Preventing Accidental Pollution*, available at <http://www.imo.org/en/OurWork/Safety/Regulations/Pages/OilTankers.aspx> (Last visited on December 6, 2015) (all single-hulled tankers are to be phased out by the anniversary of their date of delivery in 2015 or when they reach 25 years of age, whichever comes earlier).

¹⁹ ICRA Limited, *supra* note 2, 3.

²⁰ United Nations Conference on Trade and Development (UNCTAD), *Review of Maritime Transport* (2011), available at http://unctad.org/en/Docs/rmt2011ch2_en.pdf (Last visited on November 30, 2015).

²¹ The Shipbreaking Code, 2013, available at http://egazette.nic.in/WriteReadData/2013/W_12_2013_219.pdf (Last visited on December 5, 2015).

dry-docking entails. Part V discusses some of the models which can be used for routing in investments for implementing the proposal outlined in Part IV. Part VI presents our concluding remarks.

II. LEGAL FRAMEWORK GOVERNING THE SHIPBREAKING INDUSTRY

A. INTERNATIONAL CONVENTIONS

1. Basel Convention

The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal, 1989 ('Basel Convention')²² is the most comprehensive global environmental treaty for regulating hazardous wastes. It operates on the principle of 'prior informed consent', which requires state parties to export hazardous wastes only if the state of import consents to the same in writing.²³ The Basel Convention thus deems any transboundary movement to be illegal if it is carried out without consent or in contravention of its provisions.²⁴ It also obligates the parties to co-operate in the development, improvement and achievement of environmentally sound management of hazardous wastes²⁵ and provides a framework of technical guidelines for the same.²⁶

However, since the Basel Convention was not specifically drafted to govern ship-recycling, practical difficulties were experienced,²⁷ particularly with regard to the application of the definition of 'waste' and 'state of export' to ships.²⁸ Article 2(1) of the Basel Convention defines 'wastes' as "substances or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national law".²⁹ Similarly, 'state of export', on which the Basel Convention imposes the duty for the prevention of

²² Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, March 22, 1989, 1673 U.N.T.S. 126 ('Basel Convention').

²³ Basel Convention, Art. 4(1)(c).

²⁴ Basel Convention, Art. 9(1).

²⁵ Basel Convention, Art. 10.

²⁶ Basel Convention, Art. 4(8). Pursuant to this, the technical guidelines pertaining to "environmentally sound management of the full and partial dismantling of ships" were released. See generally United Nations Environment Programme, Secretariat of the Basel Convention, *Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships* (2003), available at <http://www.basel.int/Portals/4/Basel%20Convention/docs/meetings/sbc/workdoc/techships-e.pdf> (Last visited on January 21, 2016).

²⁷ See Saurabh Bhattacharjee, *From Basel to Hong Kong: International Environmental Regulation of Ship-Recycling Takes One Step Forward and Two Steps Back*, 1(2) TRADE LAW AND DEVELOPMENT 193 (2009).

²⁸ *Id.*, 208-213.

²⁹ Basel Convention, Art. 2(1).

transboundary harm, is defined as a state “from which a transboundary movement of hazardous wastes is planned to be initiated or is initiated”. In order to avoid the applicability of these provisions, ship-owners often did not declare their intention of sending ships for recycling at the ports from where the ships set sail, but in international waters or in the territorial waters of the state where the vessel would be scrapped.³⁰ Due to this, ship-owners were able to escape from the regulations framed by the port state for the implementation of the Basel Convention.

The issue was brought before the 47th session of the IMO Marine Environmental Protection Committee (‘MEPC’) in March 2000, which decided that the IMO should develop recommendatory guidelines for governing ship-recycling.³¹ Following this, Guidelines on Ship-Recycling, 2003³² were adopted by the 23rd assembly of the IMO in December, 2003 with the aim of providing guidance to the stakeholders as to ‘best practice’ of shipbreaking.

However, it was soon realised that shipbreaking has become a polluting activity, primarily because ships are not manufactured keeping in mind the implications of dismantling. In order to mandate construction of sustainable ships, in December 2005, the 24th assembly of the IMO passed a resolution requesting the MEPC to develop a “new legally binding instrument on ship recycling” for regulating the “design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling [...]”³³ As a consequence, the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (‘Hong Kong Convention’)³⁴ was drafted and adopted in the International Conference on the Safe and Environmentally Sound Recycling of Ships which took place at Hong Kong in May, 2009.

³⁰ Geir Ulfstein, *Legal Aspects of Scrapping of Vessels: A Study for the Norwegian Ministry of Environment*, 8 (March 9, 1999), available at http://www.shipbreakingplatform.org/ship-brea_wp2011/wp-content/uploads/2011/11/MD1999dismantling-ships-academic-survey.pdf (Last visited on December 6, 2015).

³¹ International Maritime Organization, *Summaries of the 47th session of Marine Environment Protection Committee (MEPC)*, March 4-8, 2002, available at http://www.imo.org/blast/mainframe.asp?topic_id=109&doc_id=1753 (Last visited on December 2, 2015).

³² See IMO Resolution A. 962(23), Doc A. 23/Res. 962 (March 4, 2004). See also IMO Resolution A. 980(24), Doc A. 23/Res. 980 (February 3, 2006) (the 2004 guidelines were subsequently amended in 2005).

³³ See IMO Resolution A. 980(24), Doc A. 23/Res. 980 (February 3, 2006).

³⁴ Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, May 19, 2009, SR/CONF/45.

2. Hong Kong Convention

The Hong Kong Convention details out the procedure to be followed for survey and certification of ships³⁵ as well as for the authorisation of ship-recycling facilities.³⁶ It requires the states to prohibit and/or restrict the installation and use of hazardous materials listed in Appendix 1 to the Convention on ships flying their flags or whilst in their ports, shipyards, ship repair yards or offshore terminals.³⁷ It allows inspection of ships for the purpose of verifying that there is on board either an International Certificate on Inventory of Hazardous Materials or an International Ready for Recycling Certificate, which, if valid, shall be accepted.³⁸ It obligates the states to frame laws imposing sanctions, adequate in severity, on the ships and ship-recycling facilities contravening the requirements of the Convention.³⁹ The regulations appended to the Convention also list the various requirements which need to be met, such as preparation of a ship-recycling plan, presence of an inventory of hazardous materials on board the ships etc.

Despite this, the Hong Kong Convention has attracted criticism for its departure from various settled principles of environment law and trade law. For instance, it has diluted the requirement of 'prior informed consent', which was a *sine-qua-non* for the export of hazardous substances under the Basel Convention.⁴⁰ Similarly, it does not follow the polluter-pays principle as it does not stipulate any obligations on the ship-owners to either pre-clean the ships or bear the costs of environmental pollution caused by hazardous substances on board. More significantly, it does not take any steps to ban the beaching method,⁴¹ but leaves it to the states to employ a safe and sound method of shipbreaking.⁴²

It is to be noted that the Hong Kong Convention has yet not come into force and the recent global developments also do not show any surge in the ratification of this Convention.⁴³ Since it currently does not affect the legal

³⁵ Hong Kong Convention, Art. 5.

³⁶ Hong Kong Convention, Art. 6.

³⁷ Hong Kong Convention, Reg. 4.

³⁸ Hong Kong Convention, Art. 8.

³⁹ Hong Kong Convention, Art. 10.

⁴⁰ See Bhattacharjee, *supra* note 27.

⁴¹ Jain, Pruy & Hopman, *supra* note 16, 441.

⁴² Hong Kong Convention, Reg. 17.

⁴³ See Dr. Nikos Mikelis, *EU Moves Ahead on Ship Recycling Convention*, July 7, 2014, available at <http://www.maritime-executive.com/article/EU-Moves-Ahead-on-Ship-Recycling-Convention-2014-07-07> (Last visited on November 26, 2015) (Art. 17 of the Hong Kong Convention states that it shall come into force when ratified by at least 15 states, representing 40% of world merchant shipping by gross tonnage and combined maximum annual ship-recycling volume of not less than 3% of their combined tonnage. Presently, the Hong Kong Convention has been ratified by three nations, Norway (June 26, 2013), Republic of Congo (May 19, 2014) and France (July 2, 2014). Of late, countries like Belgium, China, Turkey and

framework governing the shipbreaking industry in India, a detailed analysis of its short-comings is outside the scope of this paper.⁴⁴

B. DOMESTIC LAWS

1. From Clemenceau to Blue Lady

In the Indian context, concerns against shipbreaking were raised for the first time when two heavily toxic French vessels were sent to India for dismantling.

The first controversy arose in 2006 when a decommissioned French aircraft carrier called the *Clemenceau*, with its chequered record,⁴⁵ started for dismantling in India. A campaign began, led by Greenpeace, to prevent the *Clemenceau* from dumping toxic wastes in the Indian waters.⁴⁶ The matter finally came up before the Supreme Court in *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India*,⁴⁷ which barred the entry of the ship until further orders and asked a committee of technical experts to form a panel to assess the hazards posed by it. The French Government, however, recalled the ship before any further litigation could take place.⁴⁸

The stance taken by the Supreme Court differed strikingly when the matter pertaining to another French vessel, a passenger-liner called the *Blue Lady*, came up before it in 2007 in *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India*.⁴⁹ This case en-

Japan are taking steps towards the ratification of the Convention. However, the Convention stipulates that ratification must be done by countries representing 40% of the world's fleet by gross tonnage, a condition which may be difficult to satisfy unless either one of the top open-register nations, namely Panama, Liberia, Marshall Islands, Singapore, and Bahamas or India, ratifies it).

⁴⁴ For a discussion on the criticisms levelled against the Hong Kong Convention, see generally Jain, Prunyn & Hopman, *supra* note 16, 438-446.

⁴⁵ Marcos Orellana, *Shipping and Le Clemenceau Row*, February 24, 2006, available at <https://www.asil.org/insights/volume/10/issue/4/shipbreaking-and-le-clemenceau-row> (Last visited on December 4, 2015).

⁴⁶ Greenpeace, *Victory: Toxic Warship Clemenceau Turned Back to France*, February 15, 2006, available at <http://www.greenpeace.org/international/en/news/features/clemenceauship-breakingvictory150206/> (Last visited on December 4, 2015).

⁴⁷ *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India*, WP (C) No. 657 of 1995, order dated 17-2-2006. See generally *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India*, WP (C) No. 657 of 1995, order dated 14-10-2003 (the Court expressed concerns over the environmental damage caused by the shipbreaking industry and laid down guidelines for promoting safe ship-recycling).

⁴⁸ BBC News, *French 'Toxic' Ship Returns Home*, May 17, 2006, available at <http://news.bbc.co.uk/2/hi/europe/4988664.stm> (Last visited on December 5, 2015).

⁴⁹ See *Research Foundation for Science, Technology and Natural Resource Policy v. Union of India*, (2007) 15 SCC 193.

tered the stage of litigation, and thus, opened up a window to the Indian jurisprudence on the issue. The Supreme Court recognised that precautionary and polluter-pays principles were a part of the Indian environmental law,⁵⁰ but at the same time, allowed their dilution by permitting the *Blue Lady* to be dismantled in Alang, following a skewed report⁵¹ prepared by the Technical Experts Committee ('TEC') on Management of Hazardous Wastes.⁵² The Court justified its position by emphasising that environmental degradation ensuing from the breaking of the *Blue Lady* would be balanced out by the industrial opportunities it would generate⁵³ – in the words of the Court, dismantling of the *Blue Lady* could provide employment to 700 workers and yield 41,000 metric tons of steel.⁵⁴ It should be noted here that the *Blue Lady* had been beached “on humanitarian grounds due to stormy waters” prior to the final judgement⁵⁵ – in effect, the court was faced with a *fait accompli* and can be said to be forced to accept the breaking of the ship.

Activists voiced fierce criticism against the pro-economic stance taken by the Court.⁵⁶ The flaws that run through the reasoning of the judgment are not difficult to decipher. *First*, while the Court measured the economic benefits derived from shipbreaking through parameters like skill development, generation of employment etc.,⁵⁷ the environmental implications were not measured in any concrete form.⁵⁸ *Second*, in pitting economic returns from shipbreaking against environmental repercussions caused by it, the Court committed the fallacy of weighing short-term gains against long-term implications.

Nonetheless, the Court took the remarkable step of ordering the then Government to frame a comprehensive code for governing the shipbreaking industry.⁵⁹ In its order, the Supreme Court made various recommendations which were aimed at making the best of the *status quo*, i.e. making beaching as safe as possible. The Court emphasised upon the need for formulation of a custom-made systematic plan specifying the breaking process for every ship.⁶⁰ Besides this, the Court also laid down guidelines regarding each stage of the

⁵⁰ *Id.*, ¶9.

⁵¹ Frederico Demaria, *Shipbreaking at Alang (Sosiya): An Ecological Distribution Conflict*, ECOLOGICAL ECONOMICS 9 (2010).

⁵² Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶14.

⁵³ *Id.*, ¶10 (citing T.N. Godavarman Thirumalpad v. Union of India, (2002) 10 SCC 606, ¶35).

⁵⁴ *Id.*, ¶7, ¶11.

⁵⁵ *Id.*, ¶2; Florent Pelsy, *The Blue Lady Case and the International Issue of Ship Dismantling*, 4(2) LEAD 137, 139 (2008).

⁵⁶ Demaria, *supra* note 51, 9.

⁵⁷ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶11.

⁵⁸ Demaria, *supra* note 51, 10.

⁵⁹ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶10.

⁶⁰ *Id.*, ¶5.

shipbreaking process (i.e. categorisation of ships, anchoring, beaching) as well as regarding various clearances which were required for health and safety purposes.⁶¹ Pursuant to these directions, the Code was formulated by the Central Government in 2013.

2. Salient Features of the Code

Intended to be a comprehensive affair, the Code covers various aspects of the industry, some of the salient aspects of which are discussed below.

3. Regulation of beaching to enhance environmental safety

a. Multiple stages of clearances

The shipbreaking process under the Code is divided into two broad stages – anchoring and beaching. When an end-of-life vessel enters into a port area, it is allowed to drop off its anchors onto the seabed to tether itself.⁶² It is here that the first round of clearances starts as the ship-owner is required to seek permission for the ship to enter the Indian waters.⁶³ Once anchored, the second round of clearances focuses on the permission to beach the vessel, which is obtained by the recycler by submitting certain documents – the most significant of which is a recycling plan.⁶⁴ Subsequently, the anchored vessel is boarded by several authorities for physical verification⁶⁵ before the final permission is issued by the State Maritime Board ('SMB') or the Port Authority.⁶⁶

b. Formulation of Plan

In order to obtain permission for beaching, the Code requires the recycler to formulate a plan with two components, the Ship Recycling Facility Management Plan ('SRFMP') and the Ship Specific Recycling Plan ('SSRP'). In order to obtain approval of the SRFMP, the Code lists out the minimum facilities that must be possessed by a yard – these include provision of adequate lighting facilities, storage godowns for hazardous and other wastes, shelter/rest room and lunch room for labourers, latrines and urinals, first-aid, drinking water etc.⁶⁷ This approval is granted to a recycling facility once in every five years,

⁶¹ *Id.*, ¶¶3-5.

⁶² The Shipbreaking Code, 2013, ¶3.1.1.

⁶³ The Shipbreaking Code, ¶3.3.1 (requires the ship-owner to send an application in the format prescribed in Annexure-I); ¶3.3.2 (gives a list of documents to be sent to the State Maritime Board or the Port Authority at least 3 weeks before the expected time of arrival of the ship).

⁶⁴ The Shipbreaking Code, 2013, ¶4.1.1.

⁶⁵ The Shipbreaking Code, 2013, ¶4.1.2 (contains the list of authorities who would board and physically verify the vessel).

⁶⁶ The Shipbreaking Code, 2013, ¶4.1.4.

⁶⁷ The Shipbreaking Code, 2013, ¶5.2.

and is subject to review every six months.⁶⁸ Once the SRFMP is approved, the recycler is required to submit the SSRP – this specifies the details of the ship to be dismantled, work schedule, equipment available, hazardous wastes on board and their disposal plan as well as proof of gas-free and fit-for-work certification.⁶⁹

c. Power to say no

For importing stringency into the rules, the Code permits the authorities to deny permission of entry or beaching to vessels not fulfilling the requirements of the Code.⁷⁰ The idea of the power to send back a contaminated ship can be traced back to the Supreme Court order⁷¹ as well as the Basel Convention,⁷² according to which, parties have the right to prohibit import of hazardous wastes. At the same time, the Code provides for imposition of penalties and fines including cancellation of the recycler's licence, in case non-compliance is discovered at the time of inspections or examination of records.⁷³

4. Regulation of worker employment conditions

a. Worker Safety and Health

The Code has listed out the basic facilities which must be available at the yards for ensuring worker health, such as – availability of proper equipment, adequate open space, sufficient area for storage of fire-fighting equipment, water hoses and sand-boxes, personal protective equipment etc.⁷⁴ In addition, it provides specific instructions for training of labourers⁷⁵ and mandates issuance of identity cards as well as maintenance of records containing the particulars of workers.⁷⁶

The Code requires that workers be allowed to enter the enclosed areas of the ships which have oxygen deficiency or a flammable atmosphere only with adequate breathing apparatus and first-aid.⁷⁷ It also categorically states that handling of dangerous waste materials like asbestos should be done by workers specially trained for the same.⁷⁸ In order to prevent accidents which occur due

⁶⁸ The Shipbreaking Code, 2013, ¶5.2.2.

⁶⁹ The Shipbreaking Code, 2013, ¶5.3.

⁷⁰ The Shipbreaking Code, 2013, ¶3.3.3, ¶4.1.4.

⁷¹ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶8.

⁷² Basel Convention, Art(s). 8, 9(2)(a).

⁷³ The Shipbreaking Code, 2013, ¶4.2.5.

⁷⁴ *Id.*, ¶6.1.

⁷⁵ *Id.*, ¶5.2.5(iii), ¶6.1.8(a), ¶6.3.2(ix).

⁷⁶ *Id.*, 2013, ¶6.3.

⁷⁷ *Id.*, 2013, ¶7.15.

⁷⁸ *Id.*, ¶6.3.2(vi).

to the collapse of materials and workers from elevated parts of the ship, the recyclers are required to install effective barriers and fencing.⁷⁹ Recognising that most workers employed in shipbreaking yards are illiterate, the Code requires the use of signs and symbols for warning workers against hazards.⁸⁰ In order to raise workplace standards, the Code lays down that the recyclers would have to implement a housekeeping facility whereby all scrap, debris, waste oil etc. would be removed in an environmentally sustainable manner.⁸¹

The Code also mandates implementation of an Occupational Health and Safety ('OSH') system, which is a systematic plan aimed at bringing recycling facilities to reasonable standards through continuous review, planning and implementation.⁸² OSH system aims to prevent work-related injuries and diseases⁸³ in two ways – *first*, by establishing emergency-preparedness arrangements⁸⁴ and *second*, by instating a system of reporting, recording and notification of work-related injuries, deaths and ill-health.⁸⁵

b. Terms of Employment

Besides prescribing guidelines for workplace safety, the Code also regulates the terms of employment of labourers by importing provisions from various labour welfare legislations. For example, it requires workers engaged in breaking/cutting ships to be registered either under Employees State Insurance Corporation or Workmen Compensation Act.⁸⁶ Similarly, it invokes the Factories Act to stipulate maximum weekly and daily hours, holidays, wages for overtime etc.⁸⁷ The Code also requires the Labour Department to ensure compliance with legislations stipulating minimum wages for workers.⁸⁸ In order to protect the livelihood of workers inflicted with occupational injuries and diseases, the Code mandates the recyclers to re-employ such workers in less-prone areas of the shipbreaking process.⁸⁹

III. 'DISMANTLING' THE SHIPBREAKING CODE, 2013

The Code is a comprehensively drafted piece, nonetheless tangible benefits sought to be achieved by it have yet not materialised. The

⁷⁹ *Id.*, ¶7.13.

⁸⁰ *Id.*, ¶7.16.

⁸¹ *Id.*, ¶7.11.

⁸² *Id.*, ¶7.1.1.

⁸³ *Id.*, ¶7.2.1

⁸⁴ *Id.*, ¶7.4.

⁸⁵ *Id.*, ¶7.5, ¶7.6, ¶7.7.

⁸⁶ *Id.*, ¶6.2.1(i).

⁸⁷ *Id.*, ¶6.1.5(i), ¶6.1.5(ii).

⁸⁸ *Id.*, ¶8.3.5

⁸⁹ *Id.*, ¶6.12.2

implementation gap suffered by the Code is evident from allegations that vessels are being allowed to be dismantled in Alang either without proper verification⁹⁰ or through fake documentation⁹¹ and that no serious efforts have been put to bring the labour welfare provisions into effect.⁹² It is also claimed that the presence of multiple authorities for obtaining certifications without any *inter-se* co-ordination has created a gap,⁹³ which is fuelled by widespread bureaucratic corruption.⁹⁴

This section of the paper aims at chalking out some of the aspects of shipbreaking that have either not been adequately addressed or completely omitted by the Code.

A. ENVIRONMENT BASED PROVISIONS

In its 2007 order, the Supreme Court did not accept the suggestion that ships making way for Indian yards should obtain a certificate of total decontamination before leaving the foreign port.⁹⁵ However, in a future order emanating from the same writ petition, it noted that the Indian authorities were bound by the norms laid down in the Basel Convention.⁹⁶ In light of this observation, it is argued that no ship should be allowed into the Indian waters without prior decontamination in its home country,⁹⁷ as the Basel Convention requires that transboundary movement of hazardous wastes should be reduced to the minimum,⁹⁸ which is possible only when ships are pre-cleaned at the home port.

⁹⁰ See *Letter sent by Gopal Krishna, ToxicsWatch Alliance & addressed to Mr. Barun Mitra, Chairman, ShipBreaking Scrap Committee, Joint Secretary, Ministry of Shipping* (April 5, 2015), available at <http://www.toxicswatch.org/2015/04/rampant-use-of-fake-documents-in-ship.html> (Last visited on November 27, 2015).

⁹¹ Express News Service, *Alang: Toxic Ship's Documents Fake*, November 9, 2009, available at <http://archive.indianexpress.com/news/alang-toxic-ship-s-documents-fake/539006/> (Last visited on November 27, 2015).

⁹² Sahu, *supra* note 10, 53.

⁹³ NGO SHIPBREAKING PLATFORM, *South Asian Quarterly Update #3*, (October 9, 2014), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/09/SOUTH-ASIA-QUARTERLY-UPDATE-3-.pdf (Last visited on December 1, 2015).

⁹⁴ The Hindu, *Corruption and Poor Law Enforcement Set Death Traps for Alang Workers*, August 18, 2014, available at <http://www.thehindu.com/news/national/other-states/corruption-and-poor-law-enforcement-set-death-traps-for-alang-workers/article6326662.ece> (Last visited on September 9, 2014).

⁹⁵ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶7.

⁹⁶ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, WP (C) No. 657 of 1995, order dated 30-7-2012, ¶14.

⁹⁷ See *Letter sent by Gopal Krishna, ToxicsWatch Alliance & addressed to Prakash Javadekar, Union Minister of State for Environment, Forests & Climate Change* (September 29, 2015), available at <http://www.toxicswatch.org/2015/09/imminent-illegal-entry-of-end-of-life.html> (Last visited on December 2, 2015).

⁹⁸ Basel Convention, Art. 4(2)(d). See also Basel Convention, Art. 4(2)(e) (prohibits Contracting States from indulging in export of hazardous wastes with developing countries, if they have

However, the Code in its present form does not mandate any certification of decontamination to be prepared by the competent authority of the state of export, even for the most hazardous substances used in the construction of ships. It rather only requires the recycler to remove all loose and hazardous substances on board the vessel once it has been anchored in the Indian waters for obtaining permission for beaching.⁹⁹ It is thus suggested that the Code should mandate pre-cleaning of ships even before permission for anchoring is extended, as this would substantially reduce the environmental risks posed by beaching.

B. LABOUR WELFARE PROVISIONS

1. Omission of application of significant labour laws

The Code renders various provisions of The Factories Act, 1948, applicable to the shipbreaking industry, without requiring the yard premises to satisfy any numerical or definitional requirements as under the Act.¹⁰⁰ However, it is completely silent on the applicability of other significant labour welfare legislations, such as The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 ('Inter-State Migrant Workmen Act') and The Trade Unions Act, 1926 ('Trade Unions Act'). It is argued that without directly importing the rights under these legislations within the Code, their application within the shipbreaking industry would become difficult, primarily on account of the high numerical threshold and definitional requirements that are to be satisfied.

The shipbreaking yards in Alang employ around 35,000 unorganised workers, who have migrated from the poorer regions of the country.¹⁰¹ In order to save themselves from being subjected to labour laws, ship-owners contract out the work to *mukadams*. These contractors then hire workers for different yards on a casual basis, depending upon the availability of ships and the type of work to be performed.¹⁰² Thus, while each yard employs approximately

reason to believe that the wastes in question will not be managed in an environmentally sound manner), Art. 2(9)(a) (states that transboundary movement of hazardous wastes would be allowed only if the State of export does not have the technical capacity and the necessary facilities to dispose of the wastes in question in an environmentally sound and efficient manner).

⁹⁹ The Shipbreaking Code, 2013, ¶4.3.

¹⁰⁰ The Factories Act, 1948, §2(m) (the Act defines factory as a premises whereon ten or more workers if the manufacturing process is carried out with the aid of power, or whereon twenty or more workers if the manufacturing process is carried out without the aid of power, are working).

¹⁰¹ Sahu, *supra* note 10, 53.

¹⁰² INTERNATIONAL METALWORKERS' FEDERATION, *Status of Shipbreaking Workers in India - A Survey on Working and Socio-Economic Conditions of Shipbreaking Workers in India*, 6, (March, 2006), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2011/11/IMF-Shipbreaking-workers-India-2007.pdf (Last visited on November 27, 2015).

250 to 300 workers on a day, workers keep shifting from one plot to another through different contractors.¹⁰³ Absence of a contract of employment and hiring on a permanent basis by an identifiable employer renders it very difficult for workers to assert their rights under existing legislations.

In light of this, the Code should have directly entitled these workers to some of the significant rights guaranteed under the Inter-State Migrant Workmen Act.¹⁰⁴ The applicability of this Act would provide necessary safeguards to migrant workers in the shipbreaking industry, given that they often lose their bargaining power when to come to work in an alien work environment. Thus, the Code should provide for prohibition on employment of inter-state migrant workmen without registration,¹⁰⁵ mandatory requirement of a license for recruitment and employment of such workmen by contractors;¹⁰⁶ duty of contractors to issue passbooks to workmen with details of period of employment, wage rates etc.;¹⁰⁷ responsibility of the contractor for the payment of displacement allowance¹⁰⁸ and journey allowance,¹⁰⁹ and payment of wages by the contractor and on his failure by the principal employer.¹¹⁰

Added to the problem of migration is the lack of job security, as the yard owners often threaten workers with overnight dismissal without offering any reasonable grounds.¹¹¹ Lack of trade unionism¹¹² is a major factor behind pathetic working conditions, unpaid leave, unauthorised deductions and documented delays in the payments of wages that Alang workers are subjected to.¹¹³ Thus, it is argued that importing rights of collective bargaining from the Trade Unions Act¹¹⁴ without the mandate of numerical or definitional thresh-

¹⁰³ *Id.*, 7.

¹⁰⁴ The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979, §1(4) states – “It applies— (a) to every establishment in which five or more inter-State migrant workmen (whether or not in addition to other workmen) are employed or who were employed on any day of the preceding twelve months; (b) to every contractor who employs or who employed five or more inter-State migrant workmen (whether or not in addition to other workmen) on any day of the preceding twelve months” (‘Inter-State Migrant Workmen Act, 1979’).

¹⁰⁵ Inter-State Migrant Workmen Act, 1979, §6.

¹⁰⁶ Inter-State Migrant Workmen Act, 1979, §8.

¹⁰⁷ Inter-State Migrant Workmen Act, 1979, §12.

¹⁰⁸ Inter-State Migrant Workmen Act, 1979, §14.

¹⁰⁹ Inter-State Migrant Workmen Act, 1979, §15.

¹¹⁰ *Id.*, §17.

¹¹¹ Human Rights Council, *supra* note 9, ¶55.

¹¹² INTERNATIONAL METALWORKERS’ FEDERATION, *supra* note 102, 1 (no major trade unions are present in the shipbreaking, except for SMEFI Maharashtra).

¹¹³ NGO SHIPBREAKING PLATFORM, *Dire Working and Living Conditions in Indian Shipbreaking Yards*, (December 18, 2014), available at <http://www.shipbreakingplatform.org/platform-news-dire-working-and-living-conditions-in-indian-shipbreaking-yards/> (Last visited on November 27, 2015).

¹¹⁴ Trade Unions Act, 1926, §4 states – “[...] no Trade Union of workmen shall be registered unless at least ten per cent or one hundred of the workmen, whichever is less, engaged or employed in the establishment or industry with which it is connected are the members of such Trade Union

olds is essential for an effective implementation of the Code. The Code should provide trade unions (whether registered or unregistered) with the right to immunity from civil suits on the ground that the act induces some other person to break a contract of employment etc.¹¹⁵ as well as from punishment for criminal conspiracy for agreement made between members for the purpose of furthering the object of the trade union,¹¹⁶ as guaranteed under the Trade Unions Act.

2. Need to prohibit adolescent labour

Even after recognising shipbreaking as a hazardous process,¹¹⁷ the Code fails to prohibit employment of adolescent workers between the age of 15 and 18 years in the shipbreaking yards.

The need for prohibition of employment of adolescents in hazardous employments was recognised under Article 3 of the Minimum Age Convention, 1973,¹¹⁸ which states that “the minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety [...] of young persons shall not be less than 18 years.” The Child Labour (Prohibition and Regulation) Amendment Bill, 2012¹¹⁹ sought to implement the mandates of this Convention, though it has yet not received the approval of the Parliament.

Considering the rampant employment of adolescents in the shipbreaking industry and the danger it poses to their life and health, and given that no existing legislation in India prohibits employment of adolescents in the age group of 15 to 18 years in hazardous works, it is argued that the Code should have enacted such a prohibition for the shipbreaking industry.

C. PROVISIONS RELATING TO ENFORCEMENT

1. Interpretation of the Scope of the Code

The Code renders the Ministry of Shipping as the body whose decision on any question arising out of the interpretation of the Code shall be final. However, the Draft Code on Regulations for Safe and Environmentally

on the date of making of application for registration: Provided further that no Trade Union of workmen shall be registered unless it has on the date of making application not less than seven persons as its members, who are workmen engaged or employed in the establishment or industry with which it is connected [...]”.

¹¹⁵ The Trade Unions Act, 1926, §18.

¹¹⁶ *Id.*, §17.

¹¹⁷ The Shipbreaking Code, 2013, ¶4.2.2(e).

¹¹⁸ Convention Concerning Minimum Age for Admission to Employment, June 19, 1976, C-138 I.L.O.

¹¹⁹ Child Labour (Prohibition and Regulation) Amendment Bill, Bill No. LXII of 2012, Cl. 6.

Sound Ship Recycling vested this power with the Ministry of Steel,¹²⁰ to which the shipbreaking industry was also allocated under the unamended Government of India (Allocation of Business) Rules, 1961.¹²¹ In order to forestall any objections, these Allocation Rules were subsequently amended in 2014¹²² to bring shipbreaking under the Ministry of Shipping.

NGO ToxicsWatch Alliance has considered this to be an anomaly as it alleges that the said change was brought due to lobbying by the European Union ('EU') and asserts that the Ministry of Shipping is incompetent for handling matters pertaining to secondary steel production.¹²³ In its response, the Ministry of Shipping has claimed that the shift was necessary for better marketing of the Indian beaches with a view to attract more end-of-life ships.¹²⁴

While the Ministry of Shipping has actively set up a Scrap Committee¹²⁵ and even proposed changes to the Code,¹²⁶ we believe that it lacks the expertise needed to handle shipbreaking. This is because administrating the shipbreaking activity would involve understanding the technicalities and hazards associated with steel recycling. However, the Ministry of Shipping does not have the requisite experience in production or manufacture related matters, except for ship-building.¹²⁷ On the other hand, the Ministry of Steel is consistently involved in the planning and development of iron and steel production facilities¹²⁸ and thus possesses the expertise for handling steel recycling. For this reason, it is argued that the power of interpretation of the Code and regulation of the shipbreaking industry should both vest with the Ministry of Steel.

¹²⁰ Ministry of Steel, Draft Code on Regulations for Safe and Environmentally Sound Ship Recycling (September 30, 2010), Cl. 1.3.7.

¹²¹ Government of India (Allocation of Business) Rules, 1961, available at http://cabsec.nic.in/files/allocation/abr_rules_archive_299.pdf (Last visited on October 27, 2015).

¹²² Government of India (Allocation of Business) Three Hundred and Sixth Amendment Rules, 2014, available at [http://nmcg.nic.in/pdf/Gazette_Notification_01082014_NGRBA%20\(1\).pdf](http://nmcg.nic.in/pdf/Gazette_Notification_01082014_NGRBA%20(1).pdf) (Last visited on October 29, 2015).

¹²³ See *Letter sent by Gopal Krishna, ToxicsWatch Alliance & addressed to E.K. Bharat Bhushan, Chairperson, Inter-Ministerial Committee on Shipbreaking* (March 29, 2013), available at <http://www.toxicswatch.org/2013/03/statement-of-concern-on-flawed-proposal.html> (Last visited on January 22, 2016).

¹²⁴ The Hindu, *Ship-breaking Industry Shifted from Steel to Shipping Ministry*, August 3, 2014, available at <http://www.thehindubusinessline.com/economy/logistics/shipbreaking-industry-shifted-from-steel-to-shipping-ministry/article6277505.ece> (Last visited on December 6, 2015).

¹²⁵ Ministry of Shipping, Constitution of Ship Breaking Scrap Committee, F. NO.-SR-12011/3/2012-MG (July 22, 2014), amended via Ministry of Shipping, Constitution of Ship Breaking Scrap Committee – Modification thereof, F. NO.-SR-12011/3/2012-MG (February 7, 2015).

¹²⁶ Ministry of Shipping, Changes proposed in the Shipbreaking Code, 2013, SR-19021/2/2014-MG (September 11, 2015).

¹²⁷ Government of India (Allocation of Business) Rules, 1961, *supra* note 121 (the Ministry of Steel is responsible for subjects such as maritime shipping and navigation, lighthouses, ship-building, inland waterways and traffic etc.).

¹²⁸ Government of India (Allocation of Business) Rules, 1961, *supra* note 121.

2. Change in the scheme of inspections

The Code at present seeks to ensure compliance with its provisions by providing for supervision at two levels. *First*, the Director of Industrial Safety and Health ('DISH') or of the equivalent State Department is required to carry out regular inspections and to initiate legal action in case of non-compliance with the provisions of the Factories Act.¹²⁹ *Second*, the SMB or the Port Authority is responsible for the overall supervision of the recycling activity.¹³⁰ Despite these rigorous provisions, yard owners are seldom booked for misfeasance discovered during inspections.¹³¹

For this reason, the Code should introduce certain procedural safeguards in the way inspections are conducted. *First*, SMBs should publish a policy paper detailing how inspections are to be conducted, including the requisite number of visits, collection of relevant evidence, qualifications of the concerned inspectors, composition of the team of inspectors, time for communication of the findings of inspectors to the concerned authority etc. *Second*, a record of the findings of the inspections must be maintained by the concerned authorities and should be made public in pursuance of the right to information. *Third*, in order to ensure that the findings of inspections are not distorted due to bureaucratic corruption, elected representatives from the workers' union must be included in the inspection teams.¹³²

While it is true that introducing the above recommended changes may not *ipso facto* address the implementational ineffectiveness of the Code, these would indeed become instrumental in ameliorating the present condition. However, we believe that in the long run, the situation can be addressed only when the Legislature takes a major stride and declares dry-docking as the only legal method for shipbreaking. The following section of the paper points out how dry-docking furthers environmental protection and labour welfare, and justifies why it would be the most economically sound model for a major ship-breaking hub like India.

¹²⁹ The Shipbreaking Code, 2013, ¶4.2.2(e), ¶6.1.7.

¹³⁰ *Id.*, ¶6.10.1.

¹³¹ Sahu, *supra* note 10, 56.

¹³² See generally Guidelines for the Inspection of Ships under the Hong Kong Convention, 2012 adopted by Res. MEPC.223 (64) (October 5, 2012).

IV. TOWARDS THE PANACEA: MAKING A SHIFT TO DRY-DOCKING

A. ENVIRONMENTAL PROTECTION JUSTIFICATION

1. The Nature of the Job

Hazardous waste generated from shipbreaking can be divided into two categories based on its source.¹³³ It could either be a part of operational substances aboard the ship (battery electrolyte, kerosene)¹³⁴ or of the structure of the ship itself.¹³⁵ Shipbreaking in particular releases compounds such as Polyvinyl Chloride ('PVCs') and Polychlorinated Biphenyls ('PCBs') which are found in plastic flooring and as insulating material in circuits,¹³⁶ Tributyltin Compounds ('TBTs') which are used as anti-fouling substances on the hulls of large ships,¹³⁷ asbestos which is found on thermal system insulation and surfacing materials,¹³⁸ as well as waste oils, metal paints and heavy metals like mercury, arsenic, and cadmium.¹³⁹ The dismantling process also releases non-hazardous waste material like fiberglass, cement tiles etc.¹⁴⁰ While some of these materials are recyclable, materials like asbestos and PCBs are non-recyclable and thus pose additional hazards at the time of their disposal.¹⁴¹

¹³³ IL&FS Environment, *Technical EIA Guidance Manual for Ship Breaking Yards*, 3-10 (August, 2010), available at http://environmentclearance.nic.in/writereaddata/Form-1A/HomeLinks/TGM_Ship%20Breaking%20Yards_010910_NK.pdf (Last visited on December 2, 2015).

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ Aage Bjorn Andersen, *Worker Safety in the Shipbreaking Industry* 28 (ILO pub. Sectoral Activities Program, Working Paper no. 167, 2001); U.S. Environmental Protection Agency, *Polychlorinated Biphenyls (PCBs)*, available at <http://www.epa.gov/wastes/hazard/tsd/pubs/pubs/effects.htm> (Last visited on December 2, 2015) (PCBs have been shown to be carcinogenic in humans, affecting immune systems and mental development along with reproductive capabilities of the human body).

¹³⁷ Andersen, *id.*, 28. See also Extensive Toxicology Network, *Tributyltin*, September, 1993, available at <http://pmep.cce.cornell.edu/profiles/extoxnet/pyrethrins-ziram/tributyltin-ext.html> (Last visited on January 21, 2015) (TBTs have adverse ecological effects on aquatic ecosystems).

¹³⁸ Bhattacharjee, *supra* note 27, 199.

¹³⁹ Andersen, *supra* note 136, 20.

¹⁴⁰ Ramapati Kumar, *Ship Dismantling: A Status Report from South Asia*, 17 (2013), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2013/07/ship_dismantling_en.pdf (Last visited on December 3, 2015). For break-up of waste materials, hazardous and non-hazardous, produced at Alang per 250 ships dismantled, see generally IL&FS Environment, *supra* note 133, 3-9.

¹⁴¹ Research Foundation for Science, Technology and Natural Resource Policy v. Union of India, (2007) 15 SCC 193, ¶14.

2. The nature and impact of beaching

The beaching method makes little effort to mitigate the potential environmental harm of these substances. Beaching involves crashing an end-of-life vessel ashore during high tides.¹⁴² When the tides recede, workers use gas torches to cut the ship up into segments, which are pulled up to the beach for further dismantling. The whole process takes place on the sandy wetness of the beach, thereby allowing pollutants to directly percolate into the soil and the atmosphere.¹⁴³

The structural indifference of beaching towards the environment is evident from the studies undertaken to record the impact of beaching on Alang's ecosystem. These studies have reported inflated levels of TBTs (by 10 to 100 million times over the accepted limit) and asbestos in the soil,¹⁴⁴ along with the presence of other pollutants in the sea and ground water. While there is a dearth of studies on the impact of shipbreaking on marine life near the Alang beaches, similar studies conducted in Bangladesh which also follows the beaching method have concluded that there was a relatively low abundance of zooplanktons, which are essential to the marine ecosystem, in the affected areas due to an alarming rate of heavy metal pollution in the sediments.¹⁴⁵ Ecologically insensitive shipbreaking also amplifies the exposure of workers to toxins, as is evident from a recent study conducted by National Institute of Occupational Health ('NIOH'), Gujarat which showed that 15 out of 94 workers demonstrated symptoms of asbestos poisoning,¹⁴⁶ which is primarily caused by pollutants released during shipbreaking.

¹⁴² INTERNATIONAL FEDERATION FOR HUMAN RIGHTS (FIDH), *Where Do the "Floating Dustbins" End Up?: Labour Rights in Shipbreaking Yards in South Asia- The cases of Chittagong (Bangladesh) and Alang (India)*, 53, (December, 2002), available at <https://www.fidh.org/IMG/pdf/bd1112a.pdf> (Last visited on September 4, 2015).

¹⁴³ For a general picture of the conditions prevalent on the beaches of Alang and Chittagong where ships are dismantled, see Alan Taylor, *The Ship Breakers*, November 24, 2014, available at <http://www.theatlantic.com/photo/2014/11/the-ship-breakers/100859/> (Last visited on December 3, 2015); *World's Biggest Ship Breaking Yard*, March 8, 2011, available at <https://www.youtube.com/watch?v=6gu7yvFD4oc> (Last visited on December 5, 2015) (conditions of shipyards in Alang); *The Ship-Breakers: "Asbestos is Everywhere"*, available at <http://ngm.nationalgeographic.com/2014/05/shipbreakers/dangers-video> (Last visited on December 7, 2015) (conditions of shipyards in Chittagong).

¹⁴⁴ GREENPEACE, *Ships for Scrap III: Steel and Toxic Wastes for Asia*, 15 (2001), available at <http://www.greenpeace.org/international/Global/international/planet-2/report/2001/3/ships-for-scrap-iii-steel-an.pdf> (Last visited on December 4, 2015).

¹⁴⁵ YOUNG POWER FOR SOCIAL ACTION, *Ship Breaking Activities and its Impact on the Coastal Zone of Chittagong, Bangladesh: Towards Sustainable Management*, 30 (July, 2006), available at <http://shipbreakingbd.info/report/Ship%20Breaking%20Activities%20and%20its%20Impact%20on%20the.pdf> (Last visited on December 6, 2015); Noman Siddiquee et al., *Heavy Metal Pollution in Sediments at Shipbreaking areas of Bangladesh*, available at <http://core.ac.uk/download/pdf/11020139.pdf> (Last visited on December 6, 2015).

¹⁴⁶ Sahu, *supra* note 10, 54. See generally Wei Te-Wu et al., *Cancer Incidence of Taiwanese Shipbreaking Workers Who Have Been Potentially Exposed to Asbestos*, ENVIRONMENTAL RESEARCH 132 (2014) (a recent study conducted in Taiwan, which was the hub of shipbreaking

3. Can beaching ever be safe?

The proponents of the beaching method argue that it would not be a polluting activity, once use of harmful materials in the construction of ships would be banned after the adoption of the Hong Kong Convention.¹⁴⁷ These arguments do not take into consideration that the Hong Kong Convention, with merely five signatories, it is far from coming into force.¹⁴⁸ Even if it is assumed otherwise, since the average operating period for a ship is 20 to 30 years,¹⁴⁹ several ships which were manufactured in the previous decades and which are currently being manufactured would remain operational for many years. Thus, beaching would remain a polluting activity for at least three more decades, i.e. until the time all such polluting ships are phased out.

4. The alternative of dry-docking

Dry-docking can address most of the concerns associated with shipbreaking as it minimises the release of toxins into the environment. This is because in dry-docking the ship is removed from the waters and dismantled only within a cement enclosure.¹⁵⁰ The essential benefit of the enclosure is that waste material can be stored in the individual docks, which can then be cleaned regularly.¹⁵¹

In addition to containment, adoption of the dry-docking method would also facilitate pre-cleaning of ships, which is not effective in case of beaching. This is because in the beaching method, the vessel is required to be operational to run it against the tides,¹⁵² which implies that hazardous substances in the engines and other parts of the ship (needed for its mobility) cannot be pre-cleaned. As a consequence, in case of beaching, wastes are generally handled by the recycling-country and not the polluter-country, thereby

activity till early 1980s, showed that those who had worked in the ship-breaking yards of Taiwan were more likely to develop cancer even at a younger age as opposed to the control group); Tim Povtak, *Asbestos Puts Ship-breaking Workers at Risk for Many Cancers*, August 04, 2015, available at <http://www.asbestos.com/news/2015/08/04/cancer-incidence-high-ship-breaking-industry/> (Last visited on December 5, 2015).

¹⁴⁷ Bhattacharjee, *supra* note 27, 216-17.

¹⁴⁸ Mikelis, *supra* note 43.

¹⁴⁹ Bhattacharjee, *supra* note 27, 200.

¹⁵⁰ Occupational Safety & Health Administration (OSHA), *Process: Dry-Docking and Launching*, available at <https://www.osha.gov/SLTC/shipbuildingrepair/drydocking.html> (Last visited on December 5, 2015).

¹⁵¹ Metallurgical and Engineering Consultants Limited (MECON), *IA/EMP Studies for Proposed Upgradation of Alang-Sosiya Ship Recycling Yard*, 24 (December, 2015), available at http://www.gpcb.gov.in/pdf/GUJARAT_MARITIME_BOARD_BHV22_EXE_SUMM_ENG.PDF (Last visited on December 7, 2015).

¹⁵² Sometimes, vessels reach beaching yards with the help of tugs, for instance the *Clemenceau* was planned beached and was towed to India. However, the same is not commonly practiced as it increases the associated costs of transportation.

violating the polluter-pays principle.¹⁵³ On the contrary, in dry-docking, since ships are broken in an enclosed area using mechanised means, they need not be operational at the time of dismantling and can be towed to reach the docks. This allows decontamination to take place in the port from which the ship sets sail. In this manner, dry-docking can reduce the overall environmental hazards currently faced by the recycling countries.

B. LABOUR WELFARE JUSTIFICATION

1. Enhancing Worker Safety

The proponents of beaching argue that dry-docking must be rejected as it would result in loss of jobs due to mechanisation of the shipbreaking process. However, we argue that loss of employment should not be a ground for rejecting dry-docking as it enhances labour welfare by promoting workplace safety when compared with beaching.

While beaching is a labour intensive form of shipbreaking, it poses two kinds of hazards to workers: *first*, it results in injuries and deaths due to frequent accidents and explosions on the sites and *second*, it directly exposes workers to various fatal diseases. Beaching poses the risk of accidents because the shifting sand on the tidal beaches cannot support basic infrastructure like cranes which are needed for mechanisation of some dangerous parts of the process, such as lifting of heavy components of the ship.¹⁵⁴ Beaching therefore chiefly relies upon gravity to remove large chunks of steel plates from the ships, which often causes disabling injuries to workers who are crushed under the weight of the plates. Further, in case of occurrence of an accident, beaching renders it impossible to bring emergency aid like fire-fighter equipment and ambulances to the workers, as ships are anchored on the tidal mudflats. Besides direct injuries, in the absence of any containment on the shores in the beaching method, harmful chemicals are directly released into the environment. Beaching thus exposes the workers to life-threatening diseases such as cancer and impairment to immunity, liver and reproductive organs caused due to exposure to PCBs¹⁵⁵ as well as ulceration of the respiratory tract and other congenital defects caused due to inhalation of PVCs.¹⁵⁶ This is in addition to diseases caused due to inhalation of fumes, smoke, oil and fuels.

With the mechanisation of the process through use of cranes for removing the chunks of steel as opposed to reliance upon gravity, dry-docking would go a long way in reducing the occurrence of accidental injuries

¹⁵³ Bhattacharjee, *supra* note 27, 228.

¹⁵⁴ NGO SHIPBREAKING PLATFORM, *Problems and Solutions*, available at <http://www.shipbreaking-platform.org/problems-and-solutions/> (Last visited on November 23, 2015).

¹⁵⁵ Andersen, *supra* note 136, 28.

¹⁵⁶ *Id.*

and deaths. Similarly, since toxins are released in an enclosed area and subsequently disposed through proper channels, dry-docking would also reduce the incidence of occupational diseases in workers, thereby augmenting workplace safety.

2. Revival of safer means of occupation

The beaching method creates a conflict of interest, in terms of use of the beach waters by the ship-recyclers and the local fishing community, which has experienced loss of livelihood due to the impairment of the coastline due to release of toxic pollutants during beaching. Dry-docking, which limits the marine space exposed to hazardous wastes, would revive fishing, once the coastline at Alang is cleaned and restored. This could serve as a safer alternative means of livelihood for at least some of the workers who may be rendered redundant due to dry-docking, as well for those who have sustained occupational injuries and diseases in the shipbreaking industry.

C. ECONOMIC JUSTIFICATION

The minimal requirements of infrastructural investment in beaching gave the Alang a competitive edge over its counterparts in Europe and China which rely on the capital-intensive method of dry-docking. It is not denied that the infrastructural costs in dry-docking are higher than that in beaching. However, it must be noted that beaching entails economic costs which are often not taken into consideration by ship-recyclers while analysing its economic viability, on account of the difficulty in measuring such costs in monetary terms.¹⁵⁷ For instance, it takes 3 to 4 months to dismantle a 5,000 LTD ship in the labour-intensive beaching facilities in third world countries.¹⁵⁸ A majority of the Indian yard owners finance the purchase of ships through a Letter of Credit ('LOC').¹⁵⁹ As a result of this arrangement, the beaching process often runs a higher interest rate, which gets multiplied due to stoppage of operations on accounts of accidents and explosions. The time consumed in dismantling ships by beaching thus adversely impacts both liquidity and profitability of the ship-breakers.

Apart from this, a deeper analysis of the recent legal developments that have taken place would suggest that it would be prudent to make an early shift towards dry-docking, even when the economic logic is allowed to dominate over all other considerations. The EU has recently brought the

¹⁵⁷ R. Scott Frey, *Breaking Ships in the World-System: An Analysis of Two Ship Breaking Capitals, Alang India and Chittagong, Bangladesh* 9 (CSSJ Working Papers, Paper No. 13-01, 2013).

¹⁵⁸ FIDH, *supra* note 142, 54; ICRA Limited, *supra* note 2, 6.

¹⁵⁹ ICRA Limited, *supra* note 2, 6.

European Regulation on Ship Recycling ('EU Regulations')¹⁶⁰ into force in 2013 to facilitate "early ratification of the Hong Kong Convention".¹⁶¹ While the EU Regulations do not specifically proscribe beaching, it would be argued below that the stringent thresholds of environmental safety prescribed by these Regulations could be met only by the dry-docking method, thereby rendering beaching redundant.

1. Stringency of the norms

Article 6(2) (a) of the EU Regulations requires that EU-flagged ships be recycled only in facilities that are approved, i.e. included in the 'European List'. Facilities would be included in the European List only when they meet the requirements under Article 13(1).¹⁶² Although these requirements are substantially similar to those set out in the Hong Kong Convention,¹⁶³ the EU Regulations lay down certain additional requirements which include – operation of recycling facilities from built structures; demonstration of control of any leakage in the inter-tidal zones and containment of hazardous substances only on impermeable floors with effective drainage systems.

While the EU Regulations have not explicitly banned beaching, the press releases of the European Parliament clearly suggest that these Regulations intended to completely scrap off dismantling by beaching.¹⁶⁴ Even otherwise, the words employed in Article 13(1), in effect, permit shipbreaking by methods which provide for adequate containment for released toxins, which is not possible in case of beaching which takes place on open shores. The requirements laid down in Article 13(1) thus aim to animate the shift to dry-docking.

2. Establishment of an effective regime

Once the EU Regulations come into force, they would establish an effective regime because they contain provisions which would ensure compliance by both recycling facilities and the ship-owners.

Article 15 of the EU Regulations requires a ship-recycling company intending to recycle ships flying the flag of an EU Member State to submit an application to the European Commission accompanied by 'evidence' that it

¹⁶⁰ Regulation of the European Parliament and of the Council on Ship Recycling, November 20, 2013, Reg. (EU) No. 1257/2013, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R1257> (Last visited on December 1, 2015) ('EU Regulations').

¹⁶¹ EU Regulations, Preamble, ¶5.

¹⁶² *Id.*, Art. 13.

¹⁶³ *Id.*, Preamble, ¶5; Dr. Nikos Mikelis, *An analysis of the European Regulation on Ship Recycling*, available at http://www.gmsinc.net/gms/pdf/2013-11-18_GMS_Tokyo_Conf/The_Eu_Regulation_on_ship_recycling.pdf (Last visited on November 27, 2013).

¹⁶⁴ *Id.*

complies with the requirements set out in Article 13. Article 15(4) states that a certificate of compliance and its renewal would be given following a site inspection by an independent verifier, subject further to a mid-term review. Once approved, Article 13(2) requires the owner of the facility to send the recycling plan, report readiness for commencement of recycling and send a statement of completion of recycling to the 'administration of the flag state'. Through these provisions, unlike the Hong Kong Convention which mandates the states under whose jurisdiction recycling facilities are situated to ensure compliance,¹⁶⁵ the EU Regulations vest the jurisdiction in the flag state.¹⁶⁶ This would not only provide the European Commission with the jurisdiction to enforce the Regulations,¹⁶⁷ but also address the problem of use of fake documentation that has burgeoned in sub-standard yards like Alang due to bureaucratic corruption.

Besides this, the EU Regulations have also instated a mechanism to deter owners of EU-flagged vessels from sending vessels to sub-standard yards. Article 22 requires the Member States to prescribe "effective, proportionate and dissuasive" penalties for infringement of the Regulations. Besides this, Article 30(1) requires the European Commission to bring certain infringements of the EU Regulations under the scope of Directive 2008/99/EC, which "establishes measures relating to criminal law in order to protect the environment more effectively".¹⁶⁸ By virtue of Article 3, this directive deems acts affecting the environment to be offences, whether committed intentionally or with serious negligence. But besides threat of imposition of sanctions, the EU Regulations under Article 29 also aim to provide financial incentives to ship-owners who facilitate safe ship-recycling.

The EU Regulations also provide for an effective redressal mechanism in case of a breach of the mandates thereunder. For instance, Article 23 of the EU Regulations allows natural or legal persons affected or likely to be affected by its breach or having a sufficient interest in environmental decision-making to request the European Commission to take action. The provision thus vests a non-governmental organisation¹⁶⁹ with the competence to initiate action, thereby increasing the scope of filing of complaints against defaulters.

¹⁶⁵ Hong Kong Convention, Art. 4(2).

¹⁶⁶ Mikelis, *supra* note 163.

¹⁶⁷ *Id.*

¹⁶⁸ Directive of the European Parliament and of the Council of on the Protection of the Environment through Criminal Law, November 19 2008, Dir. No. 2008/99/EC, Art. 1, available at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2008.328.01.0028.01.ENG&toc=OJ:L:2008:328:TOC (Last visited on December 1, 2015).

¹⁶⁹ In order to be entitled to make a request for action, a non-governmental organisation shall fulfil the conditions laid down in Regulation of the European Parliament and of the Council on the Application of the Provisions of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters to Community Institutions and Bodies, September 6, 2006, Reg. (EC) No. 1367/2006, Art. 11, available at <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:O>

All these provisions would put in place a robust legal framework which would systematically and substantially reduce the business for beaching yards, thereby compelling recyclers to transit in favour of dry-docking.

3. Enforcement of the Regulations – Is the threat urgent?

Article 32 of the EU Regulations provides that they shall become applicable¹⁷⁰ on December 31, 2018, or six months after the date that the combined maximum annual ship-recycling output of the ship-recycling facilities included in the European List constitutes not less than 2.5 million LDT, whichever is earlier, but not earlier than December 31, 2015. This implies that, unlike the Hong Kong Convention which does not stipulate a date on which the Convention would compulsorily come into force, the EU Regulations would become applicable latest by December 31, 2018. This implies that Indian yards would begin to experience the effect of these provisions in less than two years' time.

In addition, various provisions of the EU Regulations have already come into effect from December 31, 2014 – these include Article 13 (requirements for approval of ship-recycling facilities), Article 14 (authorisation of recycling facilities located in a Member State), Article 15 (inclusion of recycling facilities located in a third country in the European List) and Article 16 (establishment of the European List).¹⁷¹ Amongst these, pursuant to Article 16(2), the European List shall be published not later than 31 December 2016, thereby informing the ship-owners of the facilities with which they should not ideally deal, even before the formal enforcement of the Regulations.¹⁷²

In fact, the impact of the EU Regulations has become perceptible in the increasing environmental sensitivity among European ship-owning companies, which have now started to divert their ships to safer recycling yards.¹⁷³

J.L._2006.264.01.0013.01.ENG&toc=OJ:L:2006:264:TOC (Last visited on December 2, 2015).

¹⁷⁰ The EU Regulations have made a distinction between the date of entry into force and that of application. Art. 31 of the EU Regulations states that the “Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.” Pursuant to this, while the Regulations have come into force since December 30, 2013, they would become applicable only as per Art. 32.

¹⁷¹ EU Regulations, Art. 32(2).

¹⁷² EU Regulations, Art. 26 (allows the Member States to authorise recycling of ships in the facilities included in the European List in the transitional period between December 31, 2016 and the date of entry into force of the Regulations, in which case, Reg. (EC) No. 1013/2006 on Shipment of Waste shall not apply).

¹⁷³ South Asian Quarterly Update #5, *supra* note 14 (more than 32 multinational companies have refused to be associated with substandard shipbreaking activities); NGO SHIPBREAKING PLATFORM, *Responsible Shipowners - Clean and Safe Ship Recycling Off the Beach*, available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/01/List-of-responsible-ship-owners.pdf (Last visited on January 22, 2016) (various ship-brokers such as Sea2Cradle, Grieg Green, Hapag-Lloyd and Wilhelmsen Green Recycling Services enter

China, presently being the only nation capable of sustainable ship-recycling with its modern facilities, has thus started to take a toll of the business earlier secured by Alang.¹⁷⁴ Considering that transiting to dry-docking would take up a substantial amount of time, for both attracting investment and establishing the infrastructure, the threat of loss of business faced by Indian yards is indeed urgent.

4. Potential Impact on the shipbreaking business

A question that arises from the above discussion is what would be the extent to which Indian markets would be affected by the changes brought in by the EU Regulations, which are only applicable to ships that carry the flag of an EU Member State. The question can be answered by an analysis of the statistics pertaining to the share of EU ships in the total number of ships beached at Alang. Out of the 151 ships that sailed to the South Asian yards in 2014, around 39 ships were owned by the EU countries.¹⁷⁵ Thus, on a *prima facie* level, one can conclude that the EU Regulations would approximately hit one-third of the gross tonnage currently broken in South Asian yards.¹⁷⁶ However, the impact would in fact be more severe, as the problem of Flag of Convenience ('FOC') would soon be addressed by the EU.

a. *Flags of Convenience*

In international maritime law, the flag which a vessel hoists represents its nationality, or the country in which the vessel is registered.¹⁷⁷ It is a symbol of the jurisdiction, rules and regulations to which the vessel is subjected.¹⁷⁸ In order to be registered in a country, the vessel is required to fulfil the conditions prescribed by the domestic law of the country.¹⁷⁹ FOC refers to a practice by ship-owners under which their ships fly the flags of nations with

into business only with green yard owners performing the breaking activities off the beach); NORWEGIAN SHIPOWNERS' ASSOCIATION, *Says No to Beaching of Ships*, available at <https://www.rederi.no/aktuelt/2015/nei-til-beaching-av-skip/> (Last visited on January 22, 2016) (the Norwegian Shipowners' Association, though not part of the EU, became first to declare that they would no longer support beaching).

¹⁷⁴ Straits Times, *Tide turns against India's ship breakers*, August 1, 2015, available at <http://www.straitstimes.com/asia/tide-turns-against-indias-ship-breakers> (Last visited on October 30, 2015).

¹⁷⁵ South Asian Quarterly Update #5, *supra* note 14.

¹⁷⁶ Patrizia Heidegger, *Dirty and Dangerous Shipbreaking*, April 17, 2015, available at <http://iims.org.uk/dirty-and-dangerous-shipbreaking/> (Last visited on October 27, 2015).

¹⁷⁷ Tina Shaughnessy & Ellen Tobin, *Flags of Inconvenience: Freedom and Insecurity on the High Seas*, 5 U. PA. J. INT'L L. 1, 2 (2006-2007).

¹⁷⁸ United Nations Convention on the Law of the Sea, 1833 UNTS 3 / [1994] ATS 31 / 21 ILM 1261 (1982), Art. 94 ('UNCLOS').

¹⁷⁹ UNCLOS, Art. 91.

a lax regulatory framework.¹⁸⁰ These are generally grey or black listed under the Paris Memorandum of Understanding (MoU), and include countries such as Antigua and Barbados, Belize, Bolivia, Cyprus, etc.¹⁸¹

The problem of FOCs emerged due to a lacuna in the law concerning registration of ships under the United Nations Convention on the Law of the Sea, 1982 ('UNCLOS'). Whereas Article 91 of the UNCLOS requires the establishment of a 'genuine link' between the State and the ship for the purpose of registration, the nationality of the ship-owner had no role to play whatsoever. This implied that a ship-owner based in country X could get his ship registered in country Y, thereby subjecting his ship to Y's jurisdiction. In addition, reflagging is a cheap process as it costs as little as \$1,000 (mostly in legal fees) and takes as little as 24 hours, for which vessels do not even need to dock in the territorial waters of a state.¹⁸² As a consequence, EU ship-owners frequently fly the flags of states with weak regulations on environmental and labour safety.

Mindful that the menace of reflagging may dilute the impact of the EU Regulations, the EU is set to take steps to rectify this problem. For instance, on the instance of the European Commission, NGO Shipbreaking Platform has proposed the creation of financial instruments that would provide incentives to end-of-life ships that use EU ports, in order to discourage reflagging.¹⁸³ Once such a mechanism is implemented and complemented with ap-

¹⁸⁰ Justin C. Mellor, *Missing the Boat: The Legal and Practical Problems of the Prevention of Maritime Terrorism*, 18 AM. U. INT'L L. REV. 341, 396 (citing Rt. Hon. The Viscount Rochdale, Committee of Inquiry Into Shipping: Report (1970) which defined FOCs as registries which fulfil the following six criteria which include – permissibility of registration by non-citizens; easy registry access, usually with foreign consulates available and unrestricted transfer from the registry; minimal to non-existent taxes; small size of the country of registry such that tonnage charges may produce substantial effects on national income; ships are free to use non-national labour; the country of registry has neither the power nor the administrative framework to effectively impose domestic or international regulations nor does it wish to exert control over the companies).

¹⁸¹ Paris MoU on Port State Control, *White, Grey and Black List*, July 1, 2015, available at <https://www.parismou.org/sites/default/files/WGB%20lists%202014.pdf> (Last visited on November 21, 2015); INTERNATIONAL TRANSPORT WORKERS' FEDERATION (ITF), *Flags of Convenience*, available at <http://www.itfglobal.org/en/transport-sectors/seafarers/in-focus/flags-of-convenience-campaign/> (Last visited on January 22, 2015) (list of FOC registries which are being actively lobbied against by ITF for their abysmal worker safety records).

¹⁸² ENVIRONMENTAL JUSTICE FOUNDATION, *Lowering the Flag: Ending the Use of Flag of Convenience by Pirate Fishing Vessels*, 7 (2009), available at <http://ejfoundation.org/sites/default/files/public/Lowering%20the%20flag.pdf> (Last visited on December 4, 2015).

¹⁸³ See Jan Willem van Gelder, Karlijn Hogenhuis-Kouwenhoven & Bondine Klooststra, *Financial Mechanisms to Ensure Responsible Ship Recycling: A Research Paper Prepared for the NGO Shipbreaking Platform*, January 22, 2013, available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2013/01/Financial-mechanisms-for-responsible-ship-recycling-22_01_2013-FINAL.pdf (Last visited on December 1, 2015). In this paper, NGO Shipbreaking Platform has proposed three options for raising the funds necessary for recovering the additional costs incurred by ship-breakers by sending their ships to compliant yards. *First*, it recommends the creation of a Ship Recycling Fund that raises funds from a special fee charged by all ships calling at the EU ports. *Second*, it recommends that the EU ports

appropriate legislative changes, the menace of FOC would substantially reduce. This would thus increase the overall loss of business that would be suffered by existing substandard yards.

b. Impact on the business of Indian yards

In 2014, out of all the vessels dismantled globally, while only 7-8% carried an EU flag, 26% were in fact under EU ownership.¹⁸⁴ In the same year, out of the ships dismantled on the beaches of South-East Asia, while only 7.7% carried an EU flag, 32% belonged to EU based owners.¹⁸⁵ Out of the 205 vessels dismantled in South Asia which did not carry an EU flag, 64 had been EU-flagged for more than half of their operational life.¹⁸⁶ In strictly Indian context, out of the 64 ships dismantled in India in the first quarter of 2015, 8 carried an EU flag while another 24 vessels originally belonged to European owners, with strong evidence to suggest that they were re-flagged to non-EU states to avoid regulation.¹⁸⁷ This means that if the problem of FOC were addressed, precisely 32 of the 64 ships dismantled in India in this quarter would have been EU-flagged. This suggests that while the EU Regulations can currently injure 12.5% of the business secured by Indian shipyards, the same may escalate to as high as 50% of the overall business, once the menace created by FOCs is curtailed.

Without necessary reforms in the practice of the Indian yard owners, enforcement of the EU Regulations would prove to be a catastrophic setback for the Indian shipbreaking industry. Seen from another perspective, if necessary reforms are enacted in time, the legal developments in the EU could help India to tap an even larger share of business – both from the substandard yards of Bangladesh and Pakistan, which do not have the infrastructure to make a

require the ships entering the ports to present insurance certificates that would cover the additional costs incurred by ship-owners in responsible recycling. *Third*, it recommends that ship-owners calling at EU ports be required to present a Ship Recycling Account Certificate, which would be issued by the ship-owner's bank on payment of an annual deposit for 20 years during the lifetime of the ship. The deposit would be refunded by the bank only on proof of responsible recycling. The paper concludes that the third option would be the most preferable as it incorporates the polluter pays principle and eliminates implementational problems associated with other options. See generally Milieu Environment Law and Policy, *Study in Relation to Options for New Initiatives Regarding Dismantling of Ships*, available at http://ec.europa.eu/environment/waste/ships/pdf/fund_note.pdf (Last visited on January 22, 2016).

¹⁸⁴ NGO SHIPBREAKING PLATFORM, *What a difference a flag makes: Why Shipowners' responsibility to Ensure Sustainable Ship Recycling Needs to Go beyond Flag State Jurisdiction*, 25 (April 2015), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/04/FoCBriefing_NGO-Shipbreaking-Platform_-April-2015.pdf (Last visited on December 4, 2015).

¹⁸⁵ *Id.*

¹⁸⁶ NGO SHIPBREAKING PLATFORM, *supra* note 184.

¹⁸⁷ ROBIN DES BOIS, *Shipbreaking: Bulletin of Information and Analysis on End-of-life Ships #39*, 14 (April, 2015), available at <http://www.robindexbois.org/english/shipbreaking/shipbreaking39.pdf> (Last visited on December 4, 2015).

shift to dry-docking as well as from the green yards of China and Turkey, which unlike the Indian yards do not enjoy the advantage of cheap labour.

V. MAKING DRY DOCKING A REALITY

In a volatile market which is stifled by competition, it would be imprudent to presume that lack of safety standards is only an outcome of the misfeasance of the shipyard owners. A part of it is attributable to the market volatility from which the industry suffers,¹⁸⁸ which implies that the responsibility for bringing in the requisite infrastructural development cannot be solely imposed on ship-recyclers. A shift from beaching to dry-docking is possible only through conceptualisation of a long term financial model to cover the costs associated with the same. This requires commitment by government, as the existing international instruments, such as the Hong Kong Convention, have failed to create any global ship-recycling fund that could be used to extend financial aid for upgradation of substandard recycling yards.¹⁸⁹ This section puts forth certain strategies, a policy mix of which would promote ‘voluntary industry action’.

A. FOREIGN DIRECT INVESTMENT

Prohibition of the beaching method would render most of the yards non-existent for the EU vessels. Since the aim of the EU Regulations is to promote environmental well-being and not to revive the recycling volumes of the European yards, there is a scope to initiate negotiation with the European Commission to make investments in the Indian sub-continent to find suitable replacements for its own ships.¹⁹⁰ In a major development in 2015, the Japanese Government extended US\$ 180 million for the upgradation of 70 yards in Alang, in order to arrange for recycling facilities compliant with the

¹⁸⁸ ICRA Limited, *supra* note 2, 8 (the credit profile of the Indian shipbreaking companies remains weak due to fluctuations in demand for steel, increase in competitive pressures, escalating operational costs as well as due to depreciation in the value of INR); See Live Mint, *Rupees’ Slide Pinches Alang Ship Breakers*, September 19, 2013, available at <http://www.live-mint.com/Opinion/NZimINFfsYmjbOSIUo617L/All-Above-Board--Rupees-slide-pinches-Alang-ship-breakers.html> (Last visited on December 4, 2015).

¹⁸⁹ Bhattacharjee, *supra* 27, 227 (Contrary to the Hong Kong Convention, Article 14 of the Basel Convention envisages the establishment of appropriate funding mechanisms by the Contracting States on a voluntary basis for providing training and technology transfers for minimisation of generation and management of hazardous wastes, as well as of a revolving fund to provide interim assistance in case of occurrence of accidents due to transboundary movement of wastes).

¹⁹⁰ Reuters, *Is it End of the Line for South Asia’s Ship Graveyards?*, July 16, 2015, available at <http://www.reuters.com/article/2015/07/17/shipbreaking-southasia-insight-graphics-idUSL3NOZK06H20150717> (Last visited on November 24, 2015) (Mark Clintworth, head of shipping at the European Investment Bank, said that his bank and the European Commission could provide investment for South Asian ship scrappers for developing environment-friendly new facilities).

Hong Kong Convention for its own ships.¹⁹¹ While the aid was extended in the form of a loan and not as capital under the Foreign Direct Investment ('FDI') route, nonetheless, it indicates that funding for infrastructural investments in dry-docking can be raised from governments keen on identifying themselves with green recycling.

The FDI Manual for the year 2015-16 has not listed shipbreaking as a specific head, and hence, it falls under the residuary clause. This implies that FDI up to 100% under the automatic route is permissible in the shipbreaking industry.¹⁹² With 'Make in India' at the forefront of the agenda, the Central Government is further taking steps to promote the 'ease of doing business' in the country,¹⁹³ which would enhance the possibility of attracting investments in the industry.

B. PUBLIC-PRIVATE PARTNERSHIP (PPP)

The problem of sub-standard yards can be also addressed if ship-recycling yards in Alang are developed under the Public-Private Partnership ('PPP') model. While the proposal has been discussed in the official circles often,¹⁹⁴ it has not been brought into action.

In a PPP, public capital is leveraged in order to attract investment by private players. PPPs are particularly advantageous as they allow exploitation of the expertise and cost-reducing technologies provided by the private sector.¹⁹⁵ While the Central Government could not conclude the National PPP Policy, 2011¹⁹⁶ a substantial amount of investment for infrastructural development of other sectors of the economy has been routed under the PPP model, particularly highways, water and sanitation, ports, municipal waste management

¹⁹¹ Recycling International, *Shipbreaking at Alang in Line for Major Facelift*, January 15, 2015, available at <http://www.recyclinginternational.com/recycling-news/8449/ferrous-metals/india/shipbreaking-alang-line-major-facelift> (Last visited on December 2, 2015).

¹⁹² Consolidated FDI Policy, 2015, Cl. 6.2 reads – "In sectors/activities not listed below, FDI is permitted up to 100% on the automatic route, subject to applicable laws/regulations; security and other conditionalities." Under the automatic route, the investor is not required to obtain any approval from the Central Government for making the investment.

¹⁹³ See generally *Make in India, Ease of Doing Business*, available at <http://www.makeinindia.com/eodb> (Last visited on December 5, 2015).

¹⁹⁴ Indian Express, *Move to Develop Alang on PPP Model Initiated*, October 26, 2009, available at <http://archive.indianexpress.com/news/move-to-develop-alang-on-ppp-model-initiated/533350/> (Last visited on December 2, 2015); Business Line, *MSTC Plans Ship Recycling Yard at Gujarat*, November 18, 2013, available at <http://www.thehindubusinessline.com/economy/logistics/mstc-plans-ship-recycling-yard-at-gujarat/article5364652.ece> (Last visited on December 2, 2015).

¹⁹⁵ Department of Economic Affairs, Ministry of Finance, *Guidelines for Formulation, Appraisal and Approval of Central Sector Public Private Partnership Projects (2008)*, Preface.

¹⁹⁶ National PPP Policy, 2011, Draft for Consultation, available at <http://www.pppinindia.com/The-PPP-Process.php> (Last visited on December 2, 2015).

system and urban transport.¹⁹⁷ Despite inflow of investments for the development of ports for providing impetus to sea transportation and trade,¹⁹⁸ use of such investments for development of shipbreaking yards has not been implemented.

It is thus required that the Central Government accelerates the process of revitalisation of Alang yards through the PPP model. This can be preferably executed under the Build-Own-Operate-Transfer ('BOOT') scheme, which implies that private sector would be responsible for the design, construction and operation of the shipyards over the project term, with ownership and control reverting to the public sector at the end of the contract.¹⁹⁹ If the tender and negotiation process is properly conducted, the Central Government can particularly forge savings in lieu of the costs which would be higher if the design and construction were to be done by the Government.

C. REDUCTION IN TAX RATES

The Code states that the ship, together with all that is contained in the ship, shall be subjected to the Import and Export policy of the Central Government.²⁰⁰ Tax has a negative co-relation with the volume of tonnage dismantled by the ship-breakers. As a consequence, the ship-breakers have raised concerns over the level of taxes levied on the activity.²⁰¹ In a major relief to ship-owners, in July 2014, the Government of Gujarat announced a reduction in customs duty on imported end-of-life vessels from 5% to 2.5% per ton.²⁰² However, the industry is still subjected to multiple taxes, which include additional custom duty of 10%, landing charges of 1%, central excise duty of 16%, sales taxes on steel of 2% on central sales and of 4% on local sales as well as port charges of 12%.²⁰³ While it is not contested here that these charges are not legally applied, the figures render it clear that recyclers operating under a high tax burden would not be willing to invest in safer techniques unless they are provided with some respite.

¹⁹⁷ See Niti Aayog, *Investment in Infrastructure: Strengthening PPP Policy Framework*, ¶3.1.1 available at http://niti.gov.in/mgov_file/NIT1%20Brief5.pdf (Last visited on December 4, 2015) (since January 2006, 281 PPP projects in the central sector have been approved, involving an investment of Rs. 3.09 lakh crore).

¹⁹⁸ Ministry of Shipping, *Completed Private Sector/Captive Port Projects*, November 15, 2011, available at <http://shipping.nic.in/showfile.php?lid=89> (Last visited on December 5, 2015); Ministry of Shipping, *Projects under Implementation/Construction*, available at <http://shipping.nic.in/showfile.php?lid=90> (Last visited on December 5, 2015).

¹⁹⁹ International Institute for Sustainable Development, *Financing Sustainable Public Private Partnerships*, 4 (February, 2013), available at http://www.iisd.org/pdf/2013/ppp_financing.pdf (Last visited on December 3, 2015).

²⁰⁰ The Shipbreaking Code, 2013, ¶8.3.8.

²⁰¹ See Recycling International, *Import duty leaves India's Scrap Industry 'Bleeding'*, February 10, 2015, available at <http://www.recyclinginternational.com/recycling-news/8507/ferrous-metals/india/import-duty-leaves-india-039-s-scrap-industry-039-bleeding-039> (Last visited on September 24, 2015).

²⁰² South Asian Quarterly Update #3, *supra* note 93.

²⁰³ FIDH, *supra* note 142, 55.

D. PROVISIONS OF SUBSIDIES

Indian ship-breakers may not be able to offer competitive prices to ship-owners if the splurge in infrastructural costs of dry-docking were to be borne by them. Provision of subsidies to green ship-recyclers or to ship-owners sending their ships to green yards would thus check potential loss of business due to negative impact of infrastructural costs on profitability. For instance, a rebate programme run by the Chinese Government provides an additional \$200 per ton to ship-owners recycling their vessels in the Chinese yards.²⁰⁴ This government-funded incentivisation has led the Chinese ship-owners to send 29 out of the 40 ships dismantled in the third quarter of 2015 to be broken domestically, as opposed to resorting to cheaper South Asian yards.²⁰⁵

E. INCREASE IN EXPENDITURE MADE BY GMB

Under the Code, the SMB is responsible for providing a minimum of facilities such as potable drinking water supply, drainage/sewerage system, street lighting facilities, internal roads and connectivity to the highways, common sanitary blocks for labours as well as other welfare centres etc. within a maximum time span of two years.²⁰⁶ The Code also vests the SMB with the power to allocate the plots to the ship-recyclers for the purpose of recycling.²⁰⁷

In Alang, the Gujarat Maritime Board ('GMB') is vested with these responsibilities, in return for which the industry provides it with an approximate revenue of seventy crore every year.²⁰⁸ However, the current scenario presents a bleak picture of GMB's functioning. For instance, even after bringing the Code into force, the GMB has merely constructed twelve bath stand-posts and six toilets for a workforce of 35,000 workers. Ship-breakers also complain about the lack of basic amenities like water and electricity,²⁰⁹ as well as of the revision of rates charged by the GMB for various facilities. Even the plots given by the GMB in 2011 for the beaching process were leased at a premium of about ten times above the then prevailing market prices.²¹⁰ Thus, there is a need to correct the gap that exists between the revenues earned by the GMB and consequent investments made by it on infrastructure by means of governmental intervention.

²⁰⁴ NGO SHIPBREAKING PLATFORM, *Ship Technology – Market Analysis: Ship Recycling In China* (October 22, 2015), available at <http://www.shipbreakingplatform.org/ship-technology-market-analysis-ship-recycling-in-china/> (Last visited on November 24, 2015).

²⁰⁵ NGO SHIPBREAKING PLATFORM, *South Asian Quarterly Update #7*, (October 16, 2015), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/10/SOUTH-ASIA-QUARTERLY-UPDATE-7-final.pdf (Last visited on November 26, 2015).

²⁰⁶ The Shipbreaking Code, 2013, ¶8.3.

²⁰⁷ The Shipbreaking Code, 2013, ¶5.2.1.

²⁰⁸ Sahu, *supra* note 10, 52-53.

²⁰⁹ FIDH, *supra* note 142, 54.

²¹⁰ ICRA Limited, *supra* note 2, 7.

F. ADDRESSING COMPENSATION ISSUES THROUGH CSR

In Bangladesh, PHP Group, a large industrial conglomerate and one of the leading shipbreaking yards in Bangladesh, promised NGO Shipbreaking Platform to take care of the injured workers found by the Platform and its members from its own funds.²¹¹ In the Indian context too, funds can be arranged for this industry through the Corporate Social Responsibility ('CSR').

§135 of the Companies Act, 2013, requires every company having net worth of rupees five hundred crore or more, or turnover of rupees one thousand crore or more or a net profit of rupees five crore or more during a financial year to earmark funds as part of its CSR. It also mandates that companies give preference to the local areas or areas in which they operate for spending these funds.²¹² Schedule VII allows the company to use these funds for undertaking activities for eradicating poverty and promoting health care,²¹³ ensuring environmental sustainability²¹⁴ and promoting slum area development.²¹⁵ In pursuance of this provision, the Government of Gujarat has recently conceptualised the Gujarat Corporate Social Responsibility Authority, which would be responsible for channelising the funds parked by the industries as part of their CSR for a systematic development of social infrastructure in the state.²¹⁶ It is suggested that companies in Gujarat be encouraged to use their CSR funds towards the improvement of housing facilities and diagnostic healthcare of workers, besides emergency relief work in case of accidents and explosions. The companies can also pool their CSR funds for the construction of dry-dock in Alang, thereby contributing to environment sustainability.

VI. CONCLUSION

The activity of breaking ships down into recyclable components on the face of it provokes a utopian imagery of economic growth, employment generation and environmental sustenance going hand-in-hand. While this is the ideal end of shipbreaking, often debated are the means associated with it. Both means discussed – beaching and dry-docking – have their merits and demerits. Speaking contextually, the labour intensive method of beaching unleashes broad economic benefits, an argument which has shaped the opinion of the

²¹¹ NGO SHIPBREAKING PLATFORM, *South Asian Quarterly Update #6*, (July 30, 2015), available at http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2015/07/SOUTH-ASIA-QUARTERLY-UPDATE-6_final.pdf (Last visited on December 2, 2015).

²¹² The Companies Act, 2013, Proviso to §135.

²¹³ The Companies Act, 2013, Schedule VII, Entry (i).

²¹⁴ The Companies Act, 2013, Schedule VII, Entry (iv).

²¹⁵ The Companies Act, 2013, Schedule VII, Entry (x).

²¹⁶ India CSR, *Gujarat Government to Help Firms Use CSR Funds*, June 13, 2015, available at <http://www.indiacsr.in/en/gujarat-govt-to-help-firms-use-csr-funds/> (Last visited on December 2, 2015).

Indian judiciary on this issue. However, the environmental and health hazards posed by beaching are neither negligible nor unknown. Dry-docking, being safer and more environment-friendly, has thus emerged as a more internationally accepted method of shipbreaking. However, being capital intensive, use of this method may have a huge ramification upon the economic viability of the industry.

At the level of policy-making, these considerations open up a larger debate, a debate of present benefits versus future goals. At one hand, we have a recent effort by the Indian Government in the form of the Shipbreaking Code, 2013, which aims to make beaching safer and environmentally more sustainable. While giving it the credit it deserves, the lack of efficacy of the Code is evident in the widespread flouting of most of the guidelines. For this reason, the paper proposes that the Code would achieve effectiveness only when the alternative method of dry-docking is explored.

An analysis of the international trends further indicates the need to bring in the long pending change in the methodology of shipbreaking. An awakening in the international community has already led to enactment of the Hong Kong Convention for the regulation of the end-of-life vessels. Although the Hong Kong Convention has still not been enforced, regulations have been passed by the EU to prohibit shipbreaking in structures without the facility of containment – which is expected to bring radical changes in the operation of the industry, unleashing the trend against beaching. This trend is complemented by existing research which elucidates on the environmental well-being and labour welfare that is promoted by dry-docking.

It is on the basis of these considerations that the paper argues that it would be rather myopic on part of the policy-makers to disregard the changes in the international arena and continue with beaching. While some inconvenience is bound to follow in making a shifting, various financial mechanisms can be used to distribute the costs of infrastructural developments among the government, private sector, ship-recyclers, SMBs as well as foreign governments. It is hoped that these concerns would eventually be balanced in the long run with Indian recycling facilities enjoying a larger share of the global business.

