SHIP-BREAKING INDUSTRY IN INDIA: ECONOMIC, SOCIAL AND LEGAL POSITION

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ABSTRACT

Not all ships die a hero like Titanic, most of the ships go off to dismantling yards for the process of scrapping the ferrous and non-ferrous items of a ship. In contrast to the ship-making industries, ship-breaking is labour intensive and finds its home where there is cheap abundant labour to offer. Such labour intensive work is suitable for places like India, China and Bangladesh where there is a quest for development. It not only generated employment but also gives impetus to many local industries. However, this came at the price of the environment and labour welfare owing to the hazardous substance present in those wasteful ships. This paper argues that how the negative externalities have subdued the economic benefits the onset of the ship-breaking industry was supposed to give and how environmental menace outweighs the benefits. This paper has also shown legal aspects and environmental aspects, and how the shipbreaking industry, owing to many perils involved, has become a case of a mere numerical growth without development.

Keywords: Ship-Breaking, Recycling, Hazardous Waste, BASEL Convention, Environment Protection Act.
INTRODUCTION

Hazardous wastes or even waste for that matter have somehow always found some space in the Third-world countries even though there is a legal regime in place to protect such causalities and curb such ‘garbage imperialism’ \(^1\). One of the baleful form of such ‘garbage imperialism’ is modelled by shipbreaking industry where end-of-life ships have outlived their economic utility and their operational costs exceed the operational profits. In addition to contributing to recycling for the cause of environment, dismantling a ship fulfils not only a country’s domestic need for steel and other non-ferrous items, but it also generates employment and economic opportunity for the locals. Alternatively, sinking ships for becoming an artificial reef can become one of the ways an end-of-life ship can be disposed of. \(^2\) However, it has major decontamination cost and poses all the more serious environmental issues involved which have made it not pragmatically possible and hence, dismantling the ships became the most viable method for disposing of the end-of-life ships.

The advent of advanced technologies amplified the need for shipbuilding because of the need for ships for global trade. Since ships were being manufactured rapidly, there will also be a time when these ships deplete and there arose the necessity for disposing of the ships in the most economical way possible. An end-of-life ship although gives negative operational profits to the owner, but still becomes subject of interest for the amount to steel, and other non-ferrous items like engines, motors, generators, etc. it holds. These incentives emerge as an opportunity for developing countries to take interest in this activity as scrapping an end-of-life ships meets not only the steel demand of the country (for e.g. Bangladesh, which has no indigenous resources for steel production and this, imports end-of-life ships for scrapping) but also emboldens the economic growth through increased employment opportunities and supporting other ancillary industries to support the ship-breaking industry. This also explains why this particular industry is dominated in South-Asian countries like India, Pakistan, Bangladesh, Turkey, China. \(^3\)

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\(^3\) TONY GEORGE PUTHUCHERRIL, *FROM SHIPBREAKING TO SUSTAINABLE SHIP RECYCLING: EVOLUTION OF A LEGAL REGIME* 11 (2010).
However, beneath this façade lies an environmental war zone. What remains thereof once pristine beaches are now ruins of warships, puddles of oil, depleting marine biodiversity, and sheets of asbestoses? From an environmental and labour welfare perspective, the ship-breaking industry can appear to be in unacceptable conditions and has been condemned by prestigious NGOs like Greenpeace and NGO Shipbreaking Platform. These NGOs materialized the ground realities present beneath the economic façade of the scrapping industry. These shipbreaking yards produce lethal diseases into air, water and soil which makes the coastal habitats heavily polluted. In light of these evils discovered the viability only in terms of economic value cannot be the only basis for continued practices of these industries.  

A taxing question, one potent of having solutions, has been raised regarding real merits and demerits of this industry and the intrusion it does upon humans and the environment.

**IMPLICATION OF SHIP-BREAKING ON ECONOMIC GROWTH AND DEVELOPMENT**

Compared to shipbuilding industries, which are capital intensive, the shipbreaking industry is majorly labour intensive. Ships are although built at an elevated price, they are bought in for recycling at a highly negotiated price as per their lightweight ton. Although ship breakers can use mechanized methods of breaking a ship and thereby, increasing their productivity, they mostly rely on labours for dismantling of the gigantic ships for the reason that such large one-time investment would not be profitable because of the margin they earn. In a ship, most of the parts are reusable- for e.g.- the hull, machinery, equipment, fixtures, generators, batteries, and even furniture. Although steel scrapes are formulated the majority of the ship recycling yard revenue in terms of tonnage, the most lucrative revenue is earned from the non-ferrous items i.e. engine, furniture, etc. Effectively, nothing goes to waste if the ship recycling mode of ship disposal is applied. Thus, this can lead to benefit of the economy in terms of providing employment, and raw materials to various industries.

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4 David Dodds, *Breaking up Is Hard to Do: Environmental Effects of Shipwrecking and Possible Solutions under India’s Environmental Regime*, 20 PAC. MCGEORGE GLOB. BUS. DEV. LAW J. 207 (2007).
7 PUTHUCHERRIL, *supra* note 3 at 2.
Where all the shipbuilding industries are concentrated in major parts of western countries, the countries at Indian subcontinent, where there is abundant cheap labour, finds home to the majority of ship-breaking industries. Bangladesh has by far the most dominated the market of ship-breaking in recent years, in terms of tonnage produced from ship-breaking. The Indian market has not been left very behind in this scenario as it is by far the most favoured destination to break ships, deducing from the number of ships transferred from flag-state for the purpose of ship-breaking. With the recent development of China deciding to stop importing end-of-life ships, effective from 2019, India, Bangladesh, Pakistan (the major player countries for ship-breaking industries) are going to be benefited more. Out of the total 862 ships sent for dismantling, 668 (77%) ships were sent to yards located at South-Asian region. The breakup those ships sent for dismantling country wise (major countries) are given in the figure below (Fig. no. 1). Although India has the highest number of ship dismantled, the gross tonnage retrieved from dismantling was the highest in Bangladesh which suggests that Bangladesh is a more preferred destination for dismantling larger ships.

Fig. no - 1 Number of Ships Dismantled Worldwide

Source: NGO Shipbreaking Platform Annual Report 2016

11 NGO SHIPBREAKING PLATFORM ANNUAL REPORT 2016, supra note 8.
Alang-Sosiya Ship Breaking Industry (hereinafter referred to as ‘Alang’), which is managed by Gujarat Maritime Board, situated in Gujarat (Bhavnagar district) accounts for 98% of the total shipbreaking in India. It is laudable to note that after this industry was established in Bhavnagar district, Alang has created an estimate of 29064 jobs in 2004 alone. Although, the majority of the workers there are migrants, particularly belonging to the state of Bihar, Orissa, Uttar Pradesh, the employment opportunity has increased exponentially and has also created an employment multiplier effect in the sectors of LPG, Oxygen, and other materials that are supplied for assisting ship breaking. After the Blue lady case, it was expected from the Indian ship-breaking sector to initiate the employment opportunity in that particular region and thereby, ultimately diminishing unemployment overall in the country which makes this industry relevant for the purpose of economic growth.

Despite such dazzling figures regarding employment created by this sector, this industry is mired with poor working conditions and low standard of life of the workers. The laborers employed, majorly attributing in the informal sector of employment, missed out the benefits provided by central and state government and are hardly subjected to on-site safety controls inspection. In addition to poor work conditions, ship breaking industry poses an imminent threat to the surrounding environment and ultimately takes a toll on the local communities, workers, fishery, agriculture, health and attributing to global warming. It is also interesting to note that the shipbreaking industry only contributes 1-2% of the domestic demand of ship given that it is the 4th in world steel production. This calls for the question where in a country it only contributes a trifling amount of steel is this industry, where social cost outweighs more than the social benefits reaped, necessary for economic progress. These “hazardous work” of this segment enough to discredit the economic advantages.

14 Id. at 106.
NEGATIVE EXTERNALITIES OF SHIP BREAKING INDUSTRIES

The image of the Shipbuilding industries is habitually linked to high-end technology coupled with high-income countries who have had keep pace with recent technological advancement. In sharp contrast with this supplementary industry, the ship-breaking industry has always been associated as ‘hazardous', ‘dirty' and ‘dangerous' job. This murky nature of the job might be the explanation why this industry's situs shifted from high-income countries (the 1960s) to low and medium-income countries (1990s). The prerequisites that govern the establishment of scrapping sites at these situses could be the availability of abundant low-cost labour and less-stringent environmental regulations. As the western countries evolved to rationalize their environmental regulations, China following their pursuit, the situs has been shifted to South-Asian countries. For an industry which has provided such quantities of job opportunity of people of the particular region where it has been established, the quality of these jobs has been compromised somewhere in the light "unacceptable high rates of fatalities, injuries and work-related disease" associated with it. While 95% of the end-of-life ship is recycled, the rest 5% consists of the hazardous wastes materials out of the ships which are asbestos, lead, polychlorinated biphenyls (PCBs), residual oil and mercury.

The menaces created by this industry broadly categorized into two categories:

1. Dangerous substances and
2. Accidents on scrapping yards.

With many reports on accidents caused due to an explosion, it has been debunked by NGOs that the labourers are not given safety equipment like helmet and goggles to safeguard against inhalable dangerous gases. Approximately 5000 cases of accidental deaths have been recognized. In addition to these tools, several irreversible diseases like asbestosis's, cancer which have been contacted by the labourers working at the site and will also occur if there is

17 STOPFORD, supra note 5 at 459.
19 China to Stop Recycling Foreign-Flagged Ships, supra note 9.
20 Paul J Bailey, Is there a decent way to break up ships?, ILO DISCUSS. PAP. (2000).
21 Dodds, supra note 4 at 220.
22 End of Life Ships: The Human Cost of Breaking Ships, supra note 16.
no measure taken against the hazardous wastes created by the scrapping activity and the exposure of the workers to the same. Not only hazardous wastes but lack of employer responsibility and accountability for providing safety gears to the workers also contribute to this cause. Some of the recognized hazardous wastes are listed below.

1. Asbestos fibres, dust
2. Heavy and toxic metals (lead, mercury, cadmium, copper, zinc etc)
3. Organometallic substances (tributyltin etc)
4. Lack of hazard communication (storage, labelling, material safety data sheets)
5. Batteries, fire-fighting liquids
6. PCBs and polyvinyl chloride (PVC) (combustion products)
7. Welding fumes
8. Volatile organic compounds (solvents)
9. Inhalation in confined and enclosed spaces
10. Compressed gas

The problem arises where almost 95% of the scrapping yards use the bleaching method to recycle the ship. 23 Other than high technicalities and low-technological investment, low mudflats which are expansively available in the south-Asian region, are few of the reasons which this method is predominantly used in Indian subcontinent where 90% of the steel is scrapped. However economical might this method be, it gives impetus to not only environmental degradation but also compromises the labour health and safety. In sharp contrast to this method, the Dry-dock Method is practically safer to use as the ship never contacts the costal borderlines and every waste is disposed of in best possible manner. 24 Albeit, it is costly to implant such method, the social benefits exceed the social cost which is paid in normal Bleaching Method.

Ship breakers do not build the ship with the thought of future sustainable dismantling in mind, the technical guild lines given by UNEP also proposes that the ship during its life cycle, prior to sending off for dismantling, should not have any hazardous substance onboard so that best practices can be employed during scrapping off the ship. However, no visible results have been viable since though guild lines.

Any growth with negative environmental and human impact will only constitute growth for short term and will never be development per se. Such externalities involved are ultimately are paid by the government and the public by incurring welfare loss (deadweight loss) and by incurring Marginal Social Cost through providing health, safety equipment’s, compensation, environmental restoration cost. Shipbreaking industry has created more private social costs than marginal benefits. In such a case, there has be to a legal regime to regulate such social costs incurred and curb any further environmental degradation that is happening.

As it has already been opined by the ILO that this industry is a hazardous industry for the demerits outweighs the merits far than it would have been expected. It has been feared by NGOs and activists that the very reason this country attracts ship breaking industry might as well become the cause of underdevelopment of employees and workers. It has been noted that such a large labour force being employed are overworked but underpaid workers. On account of these environmental, safety and health issues involved in the ship-breaking industry, there has be minimal enforced legislation in order to govern them and thus it calls for universally accepted code on labour safety and waste management designed specifically for this industry.

**LEGAL REGULATION GOVERNING THE SHIP BREAKING INDUSTRY**

**The Basel Convention**

For decades the shipbreaking industry did not have any specialised legislation, convention or treaty for sustainable disposal of wastes or for its management. The overarching convention

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that used for the purpose of regulating the waste management in Ship-scraping industry was
The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and
their Disposal 1989. It was used a regulatory mechanism for ship-breaking industry and ship
wastes were considered under the head of 'waste'. The main concern that this convention deal
is with the ‘transboundary' movement of wastes as dumping wastes in third world countries
was becoming a problem in the 1980s. 26 Although this dumping waste became an income and
employment generation source for the developing countries, they still posed greater harm to
the environment and safety and health of the workers itself27.

The convention works on three indispensable principles. Firstly, the principle of minimisation
suggests that the production of hazardous waste should be reduced altogether. It even imposes
liability upon the producers or exporter of the same. Secondly, the ‘proximate principle'
suggests that the waste should be disposed of as possible to their point of production as
mentioned in Article 4 (2)(d). Thirdly, the disposition of the hazardous waste has to be
undertaken in a manner which is ‘environmentally sound’ and where exporter believes that the
waste is to managed soundly.28

In the scenarios where the ship is concerned there have been many debates regarding if a ship
is a ship or a hazardous waste. It has been recognised by the convention that a ship becomes a
hazardous waste when the same contains such wastes. However, this doesn’t settle the fully
operational applicability of the BASEL convention to ship scrapping industry. The 1st principle
followed by the convention is somewhat haphazard for the ship scrapping industry for it would
be difficult to identify the real owner of ship responsible for such waste as the end-of-life ships
are sold for dismantling after the ship has given 20-30 years, (depending upon the size of the
ship) operational profits. Moreover, the ships during its construction process might contain
materials which were permissible to use at the time of manufacturing but the aftermaths of
those used are realising now and hence, banned now. The 2nd principle also fails to rationalize
in this industry as ships are transferred inter-countries many times before it has been finally
dispersed of. The 3rd principle also proven to be ineffective because of debate of nature of end-

28 G A L L E Y, s u p r a n o t e 2 6 a t 3 ; P o d d a r a n d S o o d, s u p r a n o t e 2 4 a t 2 4 9 .
of-life ships. Although Technical Guidelines were given by both International Maritime Organisation and Basel Convention, they were not legally binding upon the parties and only provided base guidelines to be followed by the ship-crapers and thus, did not prove to be an effective legal tool.

Since there was no specialised convention for the ship recycling industry, this problem was raised in the 47th session of the International Maritime Organisation Marine Environmental Protection Committee (‘MEPC’) which postulated that IMO should develop regulatory guidelines for ship-recycling industry, given the growth and employment that are accounted in this particular sector. However, in the beginning IMO failed to acknowledge how the shipbreaking industry can pollute the environment and have hazardous effects on the district it is being performed in. As a corollary, Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships was adopted to safeguard the environment against ship dismantling risk.

**The Hong Kong Convention**

The HKC convention materialised from the various factors like mounting concerns for unhealthy practices of shipbreaking industry, failure of application of Basel convention unequivocally on the ship-dismantling industry, interventions from NGOs (especially from Greenpeace and NGO Shipbreaking Platform), and the foremost lack of enforcement of various guidelines given by IMO for this particular activity.

The HKC lays down a detailed procedure for survey and certification of ships as well as the sanction of ship-recycling facilities. It prohibits the state to install or use the hazardous wastes mentioned in the appendix and obligates them to make specialised law for imposing a sanction upon the ship-recycling facilities if they are contravening the convention. The convention has been although signed, it is still remaining to come in force.

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30 Id.
DOMESTIC LAWS OF INDIA

India’s Hazardous Waste Rules 1989 were introduced under the provisions of Environmental Protection Act, 1986 (which enacted the ideologies of BASEL convention which India ratified). In 1997, the Supreme Court prohibited the absolute import of hazardous wastes. Here, supreme also created a High powered committee to minter the enforcement of these rules and submit a subsequent report on the investigation of hazardous wastes. Although, it critically examined the industry as ‘a very serious problem’, but no proper enforcement was taken place in this industry until the constitution of Gujarat Maritime Board was formed for the purpose of safeguarding interests of the workers at the ship-breaking industry. It gave the "Prevention of Fire and Accidents for the Safety and Welfare of Workers and Protection of Environment During Ship Breaking Activities Regulations, 2000 to curb the accidental deaths at work site of scrapping yards and ensuring the workers are given proper safety equipment. Since this sector employees a majority of unorganised sector in India, labour welfare legislation for Interstate migrant workmen (regulation of conditions of service) Act, Labour law Act, Industrial Disputes Act, Factories Act (as amended 1987) only apply selectively to this sector.

THE JUXTAPOSITION OF CLEMENCEAU AND BLUE LADY

The case of Clemenceau ship, which initially intended to be scrapped in Alang, illustrates how many European countries have taken the stand of banning the import of ‘hazardous wastes’. It was originally a French warship which was around Mediterranean sea during its last voyage years for decontamination. Due to the nature of the ship, the European authorities were reluctant to import the ship for scrapping. However, the lucrative quality and quantity of steel of and other non-ferrous material tend to attract the importers for scrapping it down. The controversy arose in 2006 when the ship was supposed to be carried to India for dismantling and NGOs (Greenpeace) contravened and challenged this decision by saying that this would bring environmental hazards as it has between 500 to 1000 tonnes of asbestos and other hazardous materials onboard. The Supreme Court in this matter applied this principle of

31 Research Foundation For Science V. Union Of India, , 2005 13 SCC 186.
‘Polluters Pay’ and disallowed the commission for bringing the ship on the territorial waters of India because of the hazards posed by the ship to the environment and labours’ health.

In juxtaposition to this stance taken by the Supreme Court, the end-of-life ship The Blue Lady (another French vessel), was allowed to be commissioned in Indian territories for scrapping. Although the supreme court affirmed the principle of ‘Polluters Pay’ principle in the Clemenceau case, it failed to regard the possible environmental degradation threat it posed during the delivery of the judgement. The court here took pro-economic and short-term pragmatic stance for the ship brought in 41,000 MT of steel($ 12.3 Million of Value) and establishes other industrial and employment opportunity and failed to aptly address the issues raised by NGOs regarding environmental consequences of such commission.

The Court in spite of allowing such commission gave remarkable steps of ordering the government of frame a comprehensive code to govern the complexities of the Ship-breaking Industry and also gave direction and guidelines for the Blue Lady to be dismantled in the best environmental friendly way possible. Although no real impetus has been given to this finalisation of this code, one can hope for the best to govern the majority chunk of unorganized sector employed in ship-breaking sector.

CONCLUSION

In light of the issues discussed regarding the complexities involved in the ship-breaking industry and the environmental and labour welfare hazards it poses to our society, this industry calls for a highly regularized legal mechanism where garbage imperialism has to be checked. Developing countries have to resist the temptation of growing in economic terms without even bothering about the developmental question by the means of importing garbage and generate work virtually from toxic waste. Such low standards of environment protection will lead to patent degradation of economic values which endangers both human and other organism society.

32 Id.
33 {Citation}
In a mechanised manner, workers health and safety are not to be compromised where there could be an incentive given to industries for following the safety rules. Not only this will promote government benefits to unorganised sector of labour but also make sure that the industry is not derogating away with the fundamental human rights of the labours. Although being a labour-intensive industry, it is peculiarly suitable to the Indian economy, such employment proves to be at the expense of their health and safety where negatives externalities produced outweighs the boons of the work. Like China, India too can opt for banning of import of wastes such as ship-breaking. Since China has decided to do that the international market for the ship-breaking industry will grow even further as a whole chunk of the market holder is going to be reduced and that will be distributed to preferable places like India or Bangladesh.

It is suggested that a universal regulatory framework, which gives effect to both environmental protection and labour health and safety, particular to the ship-recycling industry has to be materialised. Although some efforts have been made to do the same through the Hong-Kong convention, the nations have not given it much impetus and not considered it taxing or potent enough, deducing from the pace it is working. Moreover, domestic laws have to be developed to organise the un-organised sector. Awareness of such rules and regulation are still of a predominant issue as the labours will not follow these rules and question the authority for the same if they are not aware of it. Law without awareness will only solve the purpose of a portraying itself high-legalised society: the compelling question still lies in the enforcement proceedings of those laws and effective adherence of the same.