

● CRITICAL ANALYSIS ON IMPLEMENTATION AND IMPACT OF BASEL CONVENTION ON THE TRANSBOUNDARY MOVEMENT OF END-OF-LIFE SHIPS FOR RECYCLING IN SOUTH ASIAN COASTS –NEED FOR SUSTAINABLE APPROACH



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Abstract

On 5th December 2019, long waited Basel Ban Amendment- 1995 came into force, imposing absolute ban on the export of hazardous waste from the countries listed in the Annex VII (Liechtenstein, European Union & Organisation for Economic Co-operation and Development (OECD), to the countries not listed in Annex VII of the Basel Convention. The Basel regime considers obsolete ship as hazardous waste therefore the countries listed in the Annex VII are prohibited from exporting their obsolete ships for recycling to the non- annex VII countries, but in reality 40 percent of ships in the verge of End of Life Journey reaching South Asian Countries (Non -annex VII countries) are from the countries listed in Annex VII. Therefore this article critically analyses the implementation and impact of Basel Convention on the trans boundary movement of end of life ships for recycling in South Asian Coasts.

Key words

Basel Ban Amendment, Global Ship Recycling Industry, Ship Recycling in South Asian Countries, Basel Convention 1989, Marine Environment, Hong Kong Convention

Introduction

Ship Recycling is a preordained part of International shipping and it is inherently sustainable way of disposing obsolete ships¹, if recycled in a scientific & environmentally sound manner. Generally, operational life span of a ship is between 20 and 25 years, subjected to various periodical survey and certifications as stipulated by the International Maritime Organization in its Conventions. However, in addition to the age, many commercial and technical factors influence the End-of Life Journey of a ship², such as; unjustifiable repair costs, regulatory requirements, advent of new technologies and decrease of resale value in the secondhand market³, technical obsolescence on

¹Saurabh Bhattacharjee, "From Basel to Hong Kong: International Environmental Regulation of Ship-Recycling Takes One Step Forward & Two Steps Back" 1 (2) Trade, Law & Development, National Law University, Jodhpur Publication 193 (2009). See also Kanu Priya Jain Improving the Competitiveness of Green Ship Recycling, Ph.D. Thesis submitted to Delft University of Technology, available at: <https://doi.org/10.4233/uuid:3e74dea2-c01b-4b23-8194-2faec501a3c7> (last visited August 10, 2023).

²Ibid.

³Juan Ignacio Alcaidea, Francisco Piniella, et al. "The Mirror Flags" Ship Registration in Globalized Ship Breaking Industry" 48 Transportation Research Part D, Transport & Environment 378-392 (2016), available at: <https://doi.org/10.1026/j.trd.2016.08.20>.

account of wear & tear⁴ etc., and increasing price for scrap metal may be one of the factor influencing the ship owners to opt for ship recycling.

Presently, shipbreaking industry is engrained in southern part of the Asia specifically in Bangladesh, India and Pakistan (Non-annex VII countries) though 90 percent of the global shipbuilding points, in terms of tonnage, are located in China, the Republic of Korea and Japan⁵. Reasons for the swift growth of shipbreaking industry, especially in southern part of the Asia are well known among the shipping community, such as availability of labour relatively at low cost, less procedural entangles and relatively lenient approach towards the environmentally sound management of hazardous waste and materials⁶ etc.

Initially, shipbreaking activities were carried-out by industrialised port cities of the United States and the United Kingdom⁷. During 1960s, shipbreaking activities were taken over by the Taiwan and occupied the position of world's largest shipbreaking country until the end of 1980 till Japan, South Korea and China enter the global shipbreaking industry⁸. Therefore in the late 1980s East Asia was the world's point of convergence for shipbreaking⁹. However, the global shipbreaking industry straitened in the late 1980s and started to resurge in 1992, by that time the ship-recycling industry evidenced geographical shift from East Asia (except China) to South Asian countries namely, Bangladesh, India and Pakistan. One of the reasons for geographical shift may be adoption of the Basel convention, which considers obsolete ships as hazardous waste, accordingly obligated the member states to dispose obsolete ships in an environmentally sound manner. Managing the waste as per guidelines issued by the Basel Convention on Environmentally Sound Management of waste was a costly affair in the developed countries, consequently the ship recycling industry has evidenced an eventual shift from developed countries to developing countries and evolved as a major industry in southern part of the Asia.

At present, Chittagong in Bangladesh, Alang in India and Gadani in Pakistan are the prime ship recycling points accounting for 92 percent of the ship recycling, contributing significantly to the nation's need for secondary iron and steel, creating employment, adding to the Gross Domestic Product (GDP) of respective countries. However these ship recycling yards are exposed for many controversies due to the inadequate as well as unscientific infrastructure, lack of transparency and accountability in day-to-day affairs, serious violations¹⁰ of environmental standards, compromised labour safety and welfare standards etc.

⁴Tomi Solakivi, et al, "The European Ship Recycling Regulation & its market implications: Ship Recycling Capacity & Market Potentia" 294 *Journal of Cleaner Production* (2021), available at: <http://doi.org/10.1016/j.jclepro.2021.126236>

⁵Gopal Krishna Choudhary, "An analysis of the creation of a global ship recycling fund in the framework of the Hong Kong International Convention for the safe and Environmentally Sound Recycling of Ships" *World Maritime University Dissertations* 102, available at: https://commons.wmu.se/all_dissertations/102 (last visited on 13th March 2023)

⁶Ibid.

⁷Ibid.

⁸Ibid.

⁹Ibid.

¹⁰Supra note no 2. See also Ebe Daems and Gie Garis, Behind the Hypocrisy of Better Beaches, NGO Shipbreaking Platform, available at: www.shipbreakingplatform.org (last visited August 10, 2023)



Recently the Governments of South Asian Countries, those are engaged in the shipbreaking activities, have ratified (except Pakistan) the Hong Kong Convention 2009, consequently passed national legislations¹¹ in their respective countries to keep checks and balances on the violations, to ensure safe and environmentally sound recycling of ships at par with the international regulations as specified in the International Convention for the safe and environmentally sound recycling of ships, popularly known as the Hong Kong Convention 2009¹² in addition to Basel Convention. However the Hong Kong Convention, the most aspiring IMO convention on ship recycling will come into effect from 26th June 2025.

With these initiatives the South Asian Countries are striving to gain competitive advantage in the global ship recycling market and India has asserted that they are willing to grab 50% of global ship recycling market in the near-future¹³, from the present share of 26 percent¹⁴. Similarly, other South Asian countries, namely, Bangladesh and Pakistan are also competing to base their economy on the ship recycling industry. Therefore the question is, whether these countries are efficient enough to address the environmental concerns, may arise as a consequence of wanton recycling activities in the South Asian Coasts.

In addition, the Basel Ban Amendment has introduced absolute ban on trans-boundary movement of EOL ships for recycling from Annex VII countries to Non-Annex VII countries. Wherefore, meticulous study and insight of the Basel Convention in light of the Basel Ban Amendment 2019 is vital to learn the market drift. Above and Beyond the ship recycling industry has evidenced geographical shift, many times due to many reasons including stringent international environmental legislation, therefore it is essential to investigate into the chances of geopolitical shift that may occur on the strict implementation of Basel Ban Amendment 2019.

The most adjourned amendment that inflict absolute ban on trans-boundary movement of obsolete ships, intending to improve the human health & environment came into force on December 5th 2019 and with this amendment the Basel regime has become a stringent piece of the International environmental jurisprudence, banning export of hazardous waste including EOL ships. Despite of Basel Regime, the trans-boundary movements of EOL ship from Annex VII countries to Non-Annex Countries are apparent during 2019-2021& also in 2022. Further, South Asian Countries engaged in ship recycling activities are Non- annex VII countries and non-parties to the Basel Ban Amendment but gained competitive advantage in the Global shipbreaking industry. Therefore in-depth study of the implementation and implications of the Basel Convention (after Ban amendment) is a core objective of the article.

In addition, various research studies have estimated that the gross tonnage of EOL ships will increase 3-5times by 2050, which calls for immediate action towards the creation of

¹¹Recycling of Ships Act, 2019.

¹²Hong Kong Convention, 2009.

¹³Union Budget 2021 | Ship Recycling capacity to double by 2024, generate 1.5 lakh jobs, available at: <https://www.thehindu.com/business/budget/union-budget-2021-ship-recycling-capacity-to-double-by-2024-generate-15-lakh-jobs/article33716110.ece#:~:text=Finance%20Minister%20Nirmala%20Sitharaman%20on,will%20generate%201.5%20lakh%20jobs.> (last visited August 10, 2023)

¹⁴Review of Maritime Transport, 2019.

required infrastructure, capacity building, stringent and inclusive ship recycling regulations, having pragmatic and scientific coverage of whole lot of activities related to recycling of EOL of ships.

Therefore the questions are;

- Whether Basel regime would be a panacea for increasing environmental degradation & related concerns in the South Asian Coasts, due to ship recycling activities?
- Whether the Basel Convention is efficient enough to regulate trans-boundary movement of EOL Ships from Annex VII countries to Non-Annex VII countries?
- Does ban imposed by the Basel ban amendment is going to impact the supply of ships for recycling industry in South Asian Coasts?
- Is Basel Ban Amendment 2019 together with European Union Ship Recycling Regulation, play an instrumental role in causing a phenomenal geo political shift of the ship recycling industry from Non-annex -VII Countries to the Annex-VII countries of Basel Convention?
- Whether the ship recycling yards in South Asian Countries are fully equipped to recycle the estimated gross tonnage of EOL ships without causing environmental degradation? What is the way-out?

I. International legal framework on transboundary movement of EOL ships for recycling in South Asian Coasts:

An average sized ship measuring 6,000 tonnages can release approximately 1,000 tons of asbestos and other toxic materials. These toxic materials and polychlorinated Biphenyls (PCB's) are, lead, barium, cadmium, chromium, zinc, pesticides, organo-mercury compounds, copper oxides, arsenic, solvents, paint, plastic, rubber, oil hydro carbon residues and asbestos, grease, ballast, bilge and non-indigenous organisms etc. However, the presence of these hazardous waste and materials in the sea water not only damaging the marine eco-system but also enters the human body via biological magnification.

A Greenpeace¹ study on major ship recycling yards in Asia revealed horrific data on the level of TBTs in sediments at the Alang Ship Yards, were 10 to 100 million times higher than internationally recognized limits¹⁵. In Bangladesh, thousands of protected mangrove trees have been cut to facilitate additional shipbreaking yards. NGOYPSA, estimates that at least 60,000/ mangrove trees has been cut along the coast near the city

¹⁵Saurabh Bhattacharjee, "From Basel to Hong Kong: International Environmental Regulation of Ship-Recycling Takes One Step Forward & Two Steps Back" 1 (2) Trade, Law & Development, National Law University, Jodhpur Publication 193 (2009).



of Chattogram, in the past few years, having extremely deleterious effect on the coastal ecology¹⁶.

The issues pertaining to trans-boundary movement of hazardous waste/EOL ships were first addressed in the United Nations Conference on the Human Environment 1972 (Stockholm Conference-1972) and later in Rio Declaration in 1992. The Stockholm Conference recommended for the establishment of UNEP, initially with the purpose to provide an international mechanism for the exchange of environmental information and to coordinate with the developing countries in outlining environmental policies. In 1982, an ad hoc working group of environmental experts met in Montevideo, Paraguay and formally decided to tackle the trans-boundary movement and disposal of toxic wastes. In 1985, UNEP issued the Cairo Guidelines and Principles for the Environmentally Sound Management of Hazardous Wastes. Further in June 1987 UNEP has established a draft convention on trans-boundary movement of hazardous waste and created an ad hoc working group composed of legal and technical experts to work towards the formulation and adoption of convention on the control of trans-boundary movement of hazardous wastes and their disposal. The efforts of working group came in to fruition in 1989 with the adoption of the convention on the control of trans-boundary movement of hazardous wastes and their disposal.

Further part XII of United Nations Convention on Law of Seas 1982 in its Articles¹⁷ imposes general obligations on the state parties to protect and preserve the marine environment by taking individual and joint measures, are necessary to prevent, reduce & control pollution of the marine environment by using best practicable means at their disposal. Another important International Convention in this context is Convention for the Safe and Environmentally Sound Recycling of Ships, popularly known as Hong Kong Convention -2009. However Hong Kong Convention will enter into force on 26th June 2025.

II. Effectiveness of the Basel convention on the conservation of South Asian Coasts against pollution caused due to the ship recycling activities

The ship recycling industry is intensively regulated by the Basel Convention 1989 with its various annexes, protocols, amendments and guidelines, from time to time, with other regulatory frameworks. Basel Convention 1989 defined the waste and categorized the obsolete ships as hazardous waste because of the hazardous materials used in ship building.

In 2002, Basel Secretariat has released a comprehensive guide, recommending minimum standards for Environmentally Sound Management of Ship Recycling, called "Technical Guidelines for Environmentally Sound Management of the Full & Partial Dismantling of Ships"¹⁸ (hereafter called as Technical Guidelines for Environmentally

¹⁶The Toxic Tide, 2022 Shipbreaking Records, available at: <http://Offthebeach.org/2022>, (last visited August 10, 2023)

¹⁷United Nations Convention on the Law of the Sea, 1982, arts. 192, 194(1), 195 & 210

¹⁸Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships, Secretariat of Basel Convention, Basel Convention Series/SBC No2003/2, Page 27-28, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/publication/wcms_117942.pdf (last visited August 11, 2023)

Sound Management of Ship Recycling adopted in COP-6 on December 2002) to ensure safe and sustainable ship recycling.

The Technical Guidelines has issued schemes on the structure, design and facilities of the ship recycling yards. Accordingly, hazardous waste reception and treatment facilities are mandatory part of the ship recycling yards. Beaching is not only considered as an unscientific method of recycling but also categorized as a most dangerous and heavily polluting shipbreaking method. Because, in "Beaching" sewage, oil, heavy metal, toxic material, plastic and other harmful waste and materials enter the coastal waters directly in an uncontrolled manner, therefore the Technical Guidelines has kept the "Beaching" out of its ambit. But in practice, ships are dismantled through the "Beaching" in the beaches of South Asian Coast, evidently opposite to the Technical Guidelines of Basel Secretariat¹⁹.

However, Beaching is supported by the Hong Kong Convention -2009 and also recognized as environmentally sound method of ship recycling in the Supreme Court of the South Asian Countries. This may be because of lack of technical expertise or shortfall of required resources to implement the technical guidelines or to avoid the huge cost involved in environmentally sound management of ship recycling etc. are the matter of concern. Further text of the Basel Convention focuses on safe and methodical disposal of toxic wastes and influences the parties to treat the hazardous waste in the country of origin. But due to insufficiencies and contradictions exist in the Basel Convention 1989, influenced the vigilant Basel members to adopt Basel Ban Amendment in 1995 March 22nd in the third meeting of conference of parties and it came into force on 5th December 2019. Basel Ban Amendment recommends the efficient waste management at the source, per se.

The Basel Ban Amendment intends to ban the actual physical movements of hazardous wastes from the international borders of Annex VII countries to Non-Annex VII countries, including EOL Ships. The Basel Ban Amendment has introduced a new paragraph to the preamble of the Basel Convention, adding Article 4-A and Annex -VII to the Basel Convention 1989. With these additions the Basel Convention intends to prohibit trans-boundary movements of hazardous wastes, detailed in the Article 1(i) (a), destined for operations from the countries listed in Annex VII to the countries not listed in Annex VII, in other words EOL ships from the parties of Basel Ban Amendment and the states listed in Annex VII (OECD, EU & Liechtenstein) to the states not listed in Annex-VII.

In fact, Basel Ban Amendment is not applicable to non-parties and Ban amendment has neither prohibited the trans-boundary movement of EOL ships among and between the countries listed in Annex VII nor prohibited the trans-boundary movement of EOL Ships among and between the non-Annex countries.

Again there is no ban on the trans-boundary movements of EOL ships, if the countries have concluded bilateral, multilateral or regional agreements under Article 11 paragraph 1 and 2 of the Basel Convention, however such parties are still under the

¹⁹Lin Lin, Kuishuang Feng, et al. (2022) "Unexpected side effects of EU Ship Recycling Regulation: Call for Global Cooperation on Greening the Ship Breaking Industry" 17 (4) Environmental Research Letters (2022) available at: <https://doi.org/10.1088/1748-9326/ac5a68> (last visited August 11, 2023)



obligation to dispose the waste in an Environmentally Sound Manner. It is important to note that European Union has excluded the EOL ships out of coverage of the definition of waste via Waste Shipment Regulation, hence EU flagged ships are not covered under the Basel Convention, thus trans-boundary movements of EU flagged ships are not regulated by the Basel convention.

Recycling of EU flagged ships are regulated by EUSRR which imposes mandatory obligations on the parties that EU flagged ships shall not be recycled in the recycling yards not listed in the EUSRR certified yard' list. No ship recycling yards in South Asian Countries are listed in the EUSRR approved list, encouraging the involvement of cash buyers via flag- hopping. The flag hopping has emerged as a prevalent pathway to facilitate the EOL journey of ships to the substandard recycling yards of the South Asian Coasts and has been further amplified radically after 2013 EUSRR. However, the EUSRR and cost and complexity involved in environmentally Sound Management of ship recycling guidelines of the Basel regime may be the reasons for increased involvement of cash buyers in the global shipbreaking industry.

Further Annex V-A & B of Basel Convention seeks information including details of the owner/s and purpose of the trans-boundary movement, scheme for the environmentally sound management of EOL ships etc. But, in practice implementing these regulations have become a big challenge because the ship owners are reluctant to disclose the purpose while departing from the EU ports. Therefore, though the Basel regime has established well-thought-out legal framework with positive spirit to control the trans-boundary movement of EOL ships but became ineffectual in implementing these regulations effectively, resulting into increased & unregulated ship recycling in South Asian sub-standard ship recycling yards, which is evident from the following table.

Table -1 Total Number of European Union Listed/Certified Recycling Facilities/Yards²⁰

Countries	Total Numbers	Method of Recycling
Annex -VII Countries (EU,OECD & Liechtenstein)	91	Alongside slipway/ wet birth/Dry Dock/Along dismantling ramp/Floating and slipway landing
Non-Annex-VII Countries (South Asian Countries involved in Ship Recycling)	Nil	Beaching

III. European Union Regulatory Framework for the trans-boundary movement of EOL ships for Recycling:

European Union ship owners control around 40 percent of world's merchant fleet stands approximately one third of the total tonnage, recycled in the yards of the South Asia (UNCTAD 2019). European Union is the single largest market, exporting EOL ships for

²⁰Commission implementing decision (eu) 2022/2462 of 14 December 2022, amending Commission Implementing Decision (EU) 2016/2323 establishing the European List of ship recycling facilities pursuant to Regulation (EU) No 1257/2013 of the European Parliament and of the Council, Text with (EEA relevance) available at: http://data.europa.eu/eli/dec_impl/2022/2462/oj (last visited August 10, 2023)

recycling especially to non-annex countries in South Asia (Bangladesh, India and Pakistan). Therefore it is vital to understand the regulatory frame work of European Union applicable to the trans-boundary movement of EOL ships ready for recycling.

Presently the trans-boundary movement of hazardous waste, excluding EOL ships²¹, in European Union is regulated by Waste Shipment Regulation that reflects the letter and spirit of the Basel Convention as well as European Union Ship Recycling Regulation that resembles the Hong Kong Convention. Thus EU Flagged ships are not regulated by the EU Waste Shipment Regulation as well as Basel Convention, however the EUWSR remains applicable to all non-EU-Flagged ships that are distained for recycling and depart from any port within the EU. Waste Shipment Regulation recognizes the provisions of Basel Ban amendment but excluded the EU flagged EOL ships from its coverage, hence WSR is applicable to hazardous waste and not to EU Flagged EOL ships Accordingly hazardous wastes shall not be exported from the EU to non-OECD country but to this context Hazardous waste does not include EOL ships therefore apparently majority of EU flagged ships are recycled in the Non-EU certified and substandard yards at the South Asian Coasts against the regulations of European Union Ship Recycling Regulation, is no longer a secret.

Table-2 Annual Ship Recycling data of both Annex VII & Non-Annex VII Countries of Base Convention²²

Year	2018	2019	2020	2021	2022
Country	In GT	In GT	In GT	In GT	In GT
Asia	1,85,13,603	1,17,72,224	1,69,65,252	1,44,83,521	72,22,736
Southern Asia	1,72,16,401	1,02,95,555	1,50,69,367	1,32,58,729	65,01,924
Europe	93,297	40,261	1,17,593	1,20,713	92,180
Middle Income Developing economies	1,33,12,666	1,00,22,201	1,20,06,522	1,06,10,453	52,39,647
OECD (Organisation for Economic Cooperation & Development)	9,64,884	12,16,599	17,96,224	13,16,177	6,65,550

The keen examination of five years UNCTAD data reveals the Global fall of shipbreaking activities in 2019 and surge in 2020 but we cannot ignore the number of EOL ships recycled in South Asian Coasts and consequential coastal pollution. The Ban Amendment prohibits trans-boundary movements of hazardous wastes from annex-VII countries to non-annex VII countries but vessels are reaching ship recycling yards of South Asian Countries, is certainly not a coincidence rather lack of compliance by the parties to the Basel Convection or lack of effective implementation mechanism in place.

²¹EU Waste Shipment Regulation, art. 2(3)

²²UNCTAD/ STAT, available at: <https://unctadstat.unctad.org> (last visited on September 10, 2023)



The national regulatory framework of South Asian Countries are still emerging, India being a member of Basel Convention ratified the Basel Convention in June 1992 and brought into force on 22nd September 1992. On ratification of the convention India has introduced Hazardous and Other Wastes (Management & Trans-boundary Movement) Rules of 2016; recently in 2019 these rules were amended. India has not ratified the Basel Ban Amendment²³. November 28th 2019 India has ratified the Hong Kong Convention - 2009 consequently established Ship Recycling Act 2019 to bring Indian Shipbreaking Industry at par with the International Standards recommended by the Hong Kong Convention-2009. Bangladesh is a signatory and also has accessed to the Basel Convention in April 1st 1993. On 26th June 2023, Bangladesh has signed the International Convention for the Safe and Environmentally Sound Recycling of Ships 2009, popularly known as Hong Kong convention -2009

Pakistan is a member of Basel Convention but not ratified Basel provisions in their domestic legislations hence the export of EOL vessels does not require prior consent of the importer causing sever pollution Pakistan is not a member to the Hong Kong Convention -2009 and it lacks comprehensive effective sectorial regulations to regulate the ship recycling activities, though it is active in ship recycling and shares significant portion in ship recycling market, since 1947, after independence The ship recycling activities are regulated by the mandatory basic custom checks, general as well as environmental laws of the Baluchistan²⁴ Environment Impact Assessment Regulations 2000 has almost become futile due to lack of sources for regular monitoring of the ship recycling yards.

IV. Implications of Basel Ban Amendment on the Export of EOL ships for recycling in the South Asian Coasts(From Annex VII countries to Non-Annex VII Countries):

Waste Shipment Regulations excluded the EOL ships from the coverage of Basel Convention, unilaterally, of course, by using the wide discretion conferred on the Basel parties to define waste; therefore Basel Ban Amendment is not applicable to EU Flagged ships. State parties consider Article 11 of the Basel Convention as a pathway to export EOL ships for recycling by circumventing Basel Ban Agreement but the commission has clearly mentioned that the parties shall not use Article 11 to circumvent the Article 4-A of the Basel Convention and recycling EOL ships in an environmentally sound manner is still a mandatory obligation of the parties. In addition Basel Convention is the only international legal framework regulating trans-boundary movement of EOL ships presently and will continue to be in existence even after 26th June 2025.

Further IMO' European Union Ship Recycling Regulation is the only dedicated regional framework aimed to facilitate early ratification of the Hong Kong Convention and its focus is on the periodical survey, certification, preparation of inventory of hazardous materials of ships and ensuring ship recycling in environmentally safe and sound manner in the EU certified yards. Therefore in the presence of EUSRR, Basel Ban amendment is somewhat weak.

²³Mazyar Ahmad, "Ship Recycling in India-Environmental Stock Taking" 6:3 Indian Law Review 465-478(2022) available at, <https://doi.org/10.1080/24730580.2022.2082100>. (last visited August 10, 2023)

²⁴The Baluchistan Ship Breaking Industry Rule 1979, see also Pakistan Environmental Protection Act, 1997

Hong Kong Convention -2009 will be effectual from 26th June 2025, which has been ratified by India and Bangladesh, with the aspiration of enhancing recycling activities in their respective coasts. In this scenario we cannot anticipate the geopolitical shift of recycling industry from the present Non-Annex VII countries to Annex-VII country, with immediate effect, at the same time we can't deny eventual shift of the recycling industry from Non-Annex Countries to the Annex VII countries, because EUSRR prohibits EU flagged ships being recycled in the yards not certified by the EUSRR and presently no ship recycling yards of Non-Annex countries are in the certified list of the EUSRR. However due to lack of compliance to the Basel Convention or challenges associated with the effective implementation of the Article 4-A of Basel Convention converting the South Asian Coasts as toxic colonies, externalizing the cost and causing degradation of coastal eco system.

V. Conclusion

Ship recycling is a sub-sector of global shipping, recovering million tons of ferrous & non-ferrous metal scrap for recycling and an enormous amount of machinery, equipment and other fittings for reuse, annually, ship recycling also acts as an equalizer of demand and supply, by removing obsolete ships from the shipping industry. But we cannot ignore the fact that ship recycling activities are releasing million tons of hazardous toxic waste and materials to the coastal eco-system, killing thousands of people directly and incidentally, externalizing the cost of the countries involved in the ship recycling. The problem is further worsening as the South Asian Countries are using unscientific and insufficient method of recycling called "beaching". Presently, the Basel Convention 1989 is the only international convention establishing well-thought-out legal framework with positive spirit to control the trans-boundary movement of EOL ships and also to ensure the environmental sound management of EOL ships. But becoming ineffectual in implementing these regulations effectively, because of the insufficiencies and contradictions exists in the convention. Further European Union has ratified the convention by maintaining reservations for the EOL ships, thus out of the ambit of Basel convention, resulting into increased & unregulated ship recycling in South Asian sub-standard ship recycling yards, in dark, resulting into irreversible environmental degradation and converting the South Asian Coasts as a new toxic colonies. Hong Kong Convention will come into force from 26 June 2025 that permits beaching may look encouraging too but the increased ship recycling activities can pose potential threat to the human elements and environment. Therefore, the world community by considering the importance of maintaining wholeness of environment for survival of human species, needs to extend their cooperation and technology support to the South Asian Countries engaged in ship recycling to establish scientific, comprehensive and cost effective replacement for the Beaching. However, it is important to note that, in 2013 Basel Secretariat has conducted feasibility study on cost-effective alternative to the beaching as it was funded by European Union.