# "A Comparative Analysis of Hong Kong Convention, 2009 and EU Ship Recycling Regulation, 2013"

A dissertation submitted to the School Of Maritime Management,Indian Maritime University in the partial fulfilment of

**Master of Business Administration**
**in**
**International Transportation and Logistics Management**

**BY**

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UNDER THE SUPERVISION AND GUIDANCEOF

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**CHENNAI CAMPUS**

**MAY 2023**

**SCHOOL OF MARITIME MANAGEMENTINDIAN MARITIME UNIVERSITY**

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# Certificate

This is to certify that the project report titled **"A Comparative Analysis of Hong Kong Convention, 2009 and EU Ship Recycling Regulation, 2013"** is a bonafide work done by **Jose Antony Leo (Reg. No: 2103305020)** in partial fulfilment of the requirement for the award of the degree of Master of Business Administration in Indian Maritime University, Chennai.

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External Viva- voce examination conducted on: -

**External Examiner :-**
Place : Chennai
Date :..16./. 05..../2023

## DECLARATION

I, **Jose Antony Leo,** do hereby declare that the dissertation entitled **"A Comparative Analysis of Hong Kong Convention, 2009 and EU Ship Recycling Regulation, 2013"** is exclusively a bonafide work done by me under the supervision and guidance of **Dr. Emil Mathew,** Assistant Professor, School of Maritime Management and is submitted to Indian Maritime University inpartial fulfilment of the requirement for the award of the degree of Master of Business Administration.

I further declare that no part of this report has been previously submitted to any other university or academic body for the award of any degree or diploma.

**Place: Chennai**

**Date: 09../.05./2023**

**JOSE ANTONY LEO**

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## ACKNOWLEDGEMENTS

I sincerely thank to **Dr. B. Swaminathan**, Head of the Department, School of Maritime Management, Indian Maritime University for the encouragement he has given in completing this study. The dissertation entitled **"A Comparative Analysis of Hong Kong Convention, 2009 and EU Ship Recycling Regulation, 2013"** has been done under the supervision and guidance of to **Dr. Emil Mathew,** Assistant Professor, Schoolof Maritime Management, India Maritime University. I'd like to express my gratitude, for the inspiration and guidance she has given for the accomplishment of this work. I owe him a great debt of gratitude for his patient advice and support throughout my studies. His encouragement and inspiration, as well as his faith in my potential, enabled me toaccomplish what I have so far.

I'd want to express my gratitude, Indian Maritime University, Chennai Campus, and all Professors in the Department of SMM for providing me with all of the resources I needed to complete my research and project work.

Finally, I thank all the non-teaching staff and fellows of the university my cordial regards to the employees of the organization for their kind cooperation throughout the period.

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# CHAPTER 1
# BACKGROUND OF THE STUDY

## 1.1 INTRODUCTION

For as long as there has been industrialization and development, finding a balance between the environment, economic progress, and human rights has proven to be a challenge for policymakers in emerging nations. One sector that has recently been under increased pressure from both global and local stakeholders to conduct business sustainably is the shipbreaking industry in developing nations.

Ship recycling is a sort of ship disposal that entails disassembling ships to either obtain salvageable pieces or to obtain raw materials, primarily scrap. Prior to becoming unprofitable to operate due to corrosion, metal fatigue, and a scarcity of parts, modern ships have a lifespan of 25 to 30 years. When a ship is broken up, its components, particularly its steel, can be recycled and used to create new goods. This lessens the need for iron ore that must be

mined and uses less energy during the steelmaking process. The vessels' fixtures and other equipment can also be recycled. Although shipbreaking is environmentally friendly, there are worries regarding its use in developing nations with poor environmental laws. Additionally, it requires a lot of manpower and is regarded as one of the riskiest industries in the world.

The average age of the 1,250 ocean ships that were wrecked in 2012 was 26 years old. 29,052,000 tonnes of ships were destroyed worldwide in 2013, 92% of which happened in Asia. With a 30% global share as of January 2020, Alang Ship Breaking Yard (India) leads Chittagong Ship Breaking Yard (Bangladesh) and Gadani Ship Breaking Yard (Pakistan).

In rich countries as opposed to those in the developing world, the decommissioning process is completely different. The highest bidder receives the contract when shipbreakers bid for the ship in both instances. The vessel is then purchased by the shipbreaker from the international broker who trades in old ships. The cost is about $400 per tonne, and the more lax the environmental regulations, the more expensive it is compared to 2% for labour costs, 69% of the industry's income in Bangladesh comes from the purchase of watercraft. Using tugs or the ship's own propulsion, the ship is transported to the decommissioning spot. The procedure started with "cleaning," in which subcontractors entered the ship to remove loose and combustible goods, many of which were later sold in consignment stores. After that, the cutting teams would begin to disassemble the hull, starting at the stern. Significant chunks of the ship were then cut off and relocated using cranes and rigging salvaged from other ships being scrapped. Scrap metal was loaded into trucks.

Recycling of ships is by far considered the most environmentally-friendly and economically sound way of getting rid of end-of-life ships. Until the 1970s, ships were mainly dismantled in Europe and in the US. However, due to stricter social and environmental protection laws in the Global North, the industry shifted to areas where legal frameworks and enforcement mechanisms are weak. Information consolidated by the NGO Shipbreaking Platform reveals that over the past 10 years, more than 70% of the estimated 800 vessels that reach the end of their operational life annually – representing 80-90% in terms of tonnage – are scrapped on the beaches of Alang in India, Chattogram in Bangladesh and Gadani in Pakistan.

International organisations have placed an increased focus over the past ten years on the need to effectively implement international treaties like the Basel Convention of 1989 and rules set out by the International Labour Organisation (ILO) and International Maritime Organisation (IMO) to address various shipbreaking-related issues. A ship typically has hazardous elements in its structure, therefore the 1992 entry into force of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, which governs international trade in hazardous wastes, makes it relevant for ship disassembly. The Convention forbids the export of toxic waste, including ships, to poor nations, but the shipping sector largely evades this prohibition in order to support the ongoing externalisation of labour and environmental costs.

Instead of putting the Basel Convention into effect, the South Asian shipping industry pushed for another, simpler piece of legislation at the International Maritime Organisation. The Hong Kong Convention (HKC), which was adopted in 2009, has been ratified by India in 2019 but has not yet come into effect. NGOs, the UN Special Rapporteur on Toxics and Human Rights, the Centre for International Environmental Law, European policymakers, and the majority of developing countries party to the Basel Convention have all sharply criticized the Convention's standards for their laxity and for simply rubber-stamping beaching, a practice that is prohibited in major ship-owning nations. In fact, a beach lacks the necessary elements for an environmentally sound ship recycling process. The fundamental issue of containing and collecting the contamination would be impossible to tackle, even if provisions were made at the beaching sites for the treatment of asbestos and Polychlorinated Biphenyls (PCBs), for instance. There must be a proper method for locating, identifying, removing, and disposing of the harmful compounds that are present inside the ship's construction.

The European Union Commission developed the Ship Recycling Regulation (EU-SRR) Code, which is in effect as of December 30, 2018, and requires ship owners to send their ships only to certified green yards, in response to concerns about issues with labour rights and environmental pollution in shipbreaking yards. One-third of the end-of-life ships that are destroyed on South Asian shores are the fault of European shipowners. No shipbreaking yard from India, Pakistan, or Bangladesh has made the EU-SRR's green yard list due to a lack of adequate waste reception facilities, worker safety and health facilities, and cooperation from ship owners to submit the requisite documents. This will serve as a significant discouragement for ship owners.

## 1.2 OBJECTIVES

To understand the implication of the Hong Kong Convention 2009 and European Union Ship Recycling Regulation 2013. And to perform a comparative analysis of the both regulations in brief.

## 1.3 SCOPE OF THE STUDY

- Provide insight about the ship recycling industry and its environmental impacts.
- To make aware of the existing legal frameworks on the industry.
- To provide a research material for future reference on related topics.

## 1.4 RESEARCH METHODOLOGY

The study would be a comparative analysis of two different legal frameworks.

In order to achieve justice to the comparative analysis we would be using a comparative case study analysis method, where in the both cases are analyzed using qualitative tools such as “descriptions” and “explanations”.

## 1.5 LIMITATIONS OF STUDY

Any research study will be restricted in scope by certain inherent limitatios that are part of the research. The study has following limitations:

- Lack of secondary data, since the Hong Kong Conventions has yet to come into existence.

- The various data collected and articles written maybe biased to either one of the subjects in the study.
- Access to data from various ship recycling locations are limited.
- Duration of time is limited.

# CHAPTER 2
# LITERATURE REVIEW

**(Rahman and Mayer 2015)** The international shipbreaking industry provides a recycling service for commercial ships 29 worldwide. More than 90% of end-of-life (EOL) ships are dismantled in five developing 30 nations, a major shift from the historic dismantlement in developed countries due to higher 31 environmental and safety costs that render these activities uncompetitive. Many of 32 the developing nations which now host the ship recycling industry benefit as few have native 33 sources of steel and other recycled materials. For example, with annual economic transactions 34 of about 1.5 billion dollars, the scrap steel meets 60-70% of local steel demand in Bangladesh.

**(Jain et. al., 2013)** On the contrary, ship recycling substantially pollutes the environment as well as poses serious health and safety hazards for the workers (Du et. al., 2018). Realizing the issue, IMO adopted the Hong Kong International Convention (HKC) for ensuring the Safe and Environmentally Sound Recycling of Ships in May 2009. Although the convention has not entered into force yet, it is very close to meet the enforcement requirements (Ali & Pearce, 2020). Compliance of the convention will surely increase costs (both operational and capital) for the existing shiprecycling facilities and hence, it will reduce the offer price for EOL ships ((Jain et. al., 2013; Jain & Pruijn, 2017). However, the impact of the convention is not that simple and straight forward. It has diverse economic impacts on the shipping recycling industry

**(Solakivi et. al. 2021)** The five major ship recycling countries- Bangladesh, India, Pakistan, Turkey and China presently possess around 98% market share (in gross tonnage) of the global ship recycling industry, and Bangladesh is the highest ship recycling country since 2015 (UNCTAD STAT, 2020). However, the convention may change the market scenario and Bangladesh may lose its competitive advantage under the new legal framework. Moreover, the environmental 2 degradation and miserable worker's condition in the ship recycling yards in the South Asia has attracted the attention of global communities. Several NGOs, ship-owner associations and international bodies are consistently pursuing to make the ship recycling industry more environment friendly (Hougee, 2013). As a result, the industry is heading towards 'Green ship recycling' (Urano, 2012; Jain, 2017). The European Regulation on Ship Recycling (EU SRR) is the testimony of the aforesaid concern

In spite of the good intentions of the European Union, the SRR is not being fully effective. Firstly, the SRR mostly includes the EU ship recycling yards with limited capacity. The 7th edition of the EU SRR list represents even less than 1% of the world's capacity (Solakivi et. al., 2021). Secondly, the EU is the world's largest exporter of scrap steel to India, Pakistan,

China, Turkey, and Egypt (WTO, 2021). Hence, it will not be economically profitable to recycle large ships in Europe and then again export the steel to those ship recycling countries. Moreover, the yards in Europe cannot accommodate large ships for recycling (Solakivi et. al., 2021). Alcaide (2017) and Devaux & Nicolaï (2020) suggested the SRR list must include a significant number of South-Asian yards to make the desired impact.

**Yujuico (2014) and Solakivi et. al., (2021)** commended that the ship owning nations should play more responsible role in sustainable ship recycling. The studies suggest that major ship owning nations should provide financial and technical support to the South Asian recycling yards for upgrading their sustainability standards. This sheds light to an important issue of clustering the ship owning nations to determine which cluster should help which recycling state. After identifying the cluster-relationship, international organizations, NGOs, and media should pressurize those clusters to provide support to the recycling nations. Here, I have taken top 10 ship owing nations and top 5 recycling nations according to UNCTAD (2020) to identify the cluster-relationship. The following table shows the preferred demolition locations of the major ship-owning nation. The top ten ship-owing nations have recycled 1449 ships which have been demolished since 2016 to May, 2021 (Clarksons, 2021). The table suggests that India recycles the biggest portion of the fleet owned by Japan, Greece, Norway, U.S.A., Germany and UK while Bangladesh recycles more than half of the total number of demolitions of Singapore and South Korean fleet. On the contrary, China has recycled 61% of its own fleet and 30% of Danish fleet. Pakistan and Turkey do not recycle substantial number of ships owned by any particular country rather they possess a mixed portfolio. However, many European countries (Greece, Norway, U.K and Denmark) prefer Turkey to recycle their ships because of the EU SRR.

**(Zulfikar Ali and Prafula Pearce,2021)** As of April 2019, none of the three South Asian countries had ratified the Convention and the Convention is yet to come into force. It could be because the Convention does not stop the ships being sent to these countries if they are not a party to the Convention. There is no express bar in the Hong Kong Convention from sending ships to Non-Party States from Party States. Whether the South Asian countries ratify and adopt the Hong Kong Convention or not, they may continue to be preferred destinations as long as they can offer high price to shipowners. No compulsion to ratify or accede to the Hong Kong Convention for lack of standards is a major drawback of the Convention.86 Their non-party status has no impact on their unsafe practices of breaking ships. The Hong Kong Convention does not appear to have achieved its intended objectives to promote safe and environmentally

sound disposal of ships. This article therefore questions whether the Hong Kong Convention's ability to regulate interState movement of contaminated ships by introducing the 'cradle to grave' approach is sufficient to protect the rights of workers at the recycling or shipbreaking facilities in the South Asian countries, and their marine environment.

**(Bernike van Werven,2019)** The major weakness of the Regulation is the easy circumvention through reflagging of vessels to non-EU flags. Different possible solutions are available to deal with this, such as the financial incentive, but no agreement on the usefulness of such an instrument is found. Secondly, the enforcement of the Regulation remains a major challenge. The capacity for enforcement has to be enlarged and the cooperation between member states must be improved. Thirdly, it is a challenge to assure that all ship owners will have a proper IHM before 2020. Lastly, it is unclear what role beaching facilities shall have under the EU SRR and there is no agreement on the future of the beaching method overall.

**(Mazyar Ahmad, 2022)** The Act is a step in the right direction towards making India's ship recycling business more environmentally friendly, but much will depend on the rules and regulations that may be created as a result of the Act. It will be necessary to review the long-term implementation and the environmental advantages. The difficulties that are directly or indirectly related to ship recycling activities must also be addressed by policymakers. Consider the effect of shipbreaking operations on the local community's way of life. Local towns in Alang have observed a decrease in the region's fish catch. Implementation, which is thought to be deficient in the majority of the nations where shipbreaking occurs, is the most crucial part of the ship recycling legal regime that requires further strengthening.

**(Alla Pozdnakova, 2018)** The EU's legislative actions may have made the Basel and Hong Kong systems easier to adopt and enforce, respectively. Of course, the fact that two distinct regimes apply to ships in the final stages of their lives depending on the flag they fly is insufficient. The Ship Recycling Regulation, in this author's opinion, offers shipowners greater legal security, clearly defines the obligations of shipowners and recycling facilities, and imposes less severe penalties for violations than the Waste Shipment Regulation. Because of the European approval system, yards in third-party countries may have better conditions as a result. However, the shipping industry has criticised the Ship Recycling Regulation since it raises expenses for ships flying the EU flag and could have an impact on the fleet's competitiveness.

**(Wahidul Sheikh, 2021)** In the 1970s and 1980s, significant Asian ship recycling nations like South Korea and Japan transitioned into major ship building nations. China exhibits a pattern that is comparable. Therefore, there is a huge study gap to determine whether the ship recycling sector aids in the growth of the ship building industry. Additionally, ship recycling has spread throughout the world and is presently based in South Asia. A crucial subject for additional, in-depth research is where the sector will go next. The convention has only been accepted by India among the major South Asian ship recycling nations as of 2019. Therefore, now is the ideal time to investigate how the HKC's ratification is affecting the operations of the Indian ship recycling yards.

**(Ali M and Pearce P, 2020)** The practise of dismantling obsolete ships, often known as shipbreaking, is done primarily for their steel. International shipping firms possess ships that they utilise for trade before selling them primarily to Bangladesh, India, and Pakistan (South Asian nations) for dismantling. These South Asian nations can provide shipowners with appealing prices since they lack the iron ore needed to meet their expanding steel demand. In order to cut costs, hazardous manual methods are used on open beaches in South Asian nations, however these methods actually damage the environment and put the lives of workers in the ship recycling and shipbreaking industries at risk. The International Maritime Organisation (IMO) agreed to create a comprehensive, legally binding framework for risk regulation in 2006, taking into account the problem's associated with ship-breaking activities.

**(Merijn Hougee, 2013)** Following media reports and on-site observations at the shipbreaking beaches, the non-beaching policy of the shipowners under study was devised at the highest levels of management. The corporate workers became aware of the awful conditions as a result, and they then began to learn more about different ship recycling techniques and ways to minimise environmental harm. Detailed inventories of hazardous materials for end-of-life vessels have been produced in order to ease the safe and environmentally responsible disposal of such chemicals since it is necessary to identify these impacts in order to mitigate them. Prior to the beginning of the dismantling, recycling plans are created that include the employment of fundamental technological pollution prevention measures.

# CHAPTER 3

# SHIP RECYCLING INDUSTRY: AN OVERVIEW

## 3.1 INTRODUCTION

The worldwide shipping business includes a significant subsector called ship recycling. By eliminating outdated ships from the market, the ship recycling business balances the supply and demand in the transportation sector. This chapter offers a historical review of the ship recycling sector, creating a solid conceptual foundation for the investigation. It displays the current state of the worldwide ship recycling market as well as the major ship recycling nations and their respective market shares. The commercial procedures and techniques used in ship recycling are also illustrated in this chapter. The study of this chapter will make it easier to comprehend how the regulations and market competition will be critically analysed in the next chapters.

## 3.2 AN OVERVIEW OF THE SHIP RECYCLING INDUSTRY

Ship recycling is a mobile sector that has moved about a lot geographically over the years in search of low labour costs and high scrap steel demand. The industrialised nations are where the sector mostly got its start. The industry for dismantling warships that were destroyed during the Second World War first emerged in the United Kingdom and the United States. However, due to the industry's detrimental effects on the coastal ecosystem, it was quickly heavily discouraged in those nations. Due to the availability of cheap labour and the rising demand for re-rolled steel in these nations in the 1970s, the industry moved to semi-industrialized Asian and Mediterranean nations such as Japan, Taiwan, South Korea, Spain, China, etc.

Taiwan, South Korea, China, and Japan were the leaders in the business in the 1980s, when ship recycling was quite high. However, as their economies expanded, wages rose, and other industries—particularly the ship building sector—became more alluring, the industry in South Korea and Taiwan began to decline in the late 1980s. On the other hand, due to internal policy changes and environmental regulations, China kept recycling ships even though its market share was rapidly decreasing. China is still one of the top five nations worldwide for recycling ships, nevertheless. The sector is currently dominated by Bangladesh, India, and Pakistan, three South Asian nations. China and Turkey currently have greater shipbreaking costs than South Asia, making them less popular destinations than South Asia during the past 10 years. This is because Turkey has labour costs that are 25 times greater than those of Bangladesh and India. China, on the other hand, has made significant financial investments in the construction of dry docks for shipbreaking, whilst India, Bangladesh, and Pakistan have low labour costs and

utilise the less expensive beaching method rather than dry dock. Although dry docking is expensive, it is less harmful to the environment because waste can be safely removed from the ships.

## 3.3 BUSINESS PROCESS OF SHIP RECYCLING

A shipowner who wants to recycle a ship has two options: sell the ship directly to the recycler or sell it to a cash buyer. The cash buyer pays the owner a flat sum of money up front to purchase the ship, plus a percentage of the sale price (typically approximately 3%). Cash purchasers pay shipowners in advance and are compensated after they send 12 ships to recycling yards. In contrast to dealing with the "letter of credit (LC)" in direct transactions, shipowners now have financial stability. Additionally, ship owners favour this procedure because it allows them to reflag their vessels for a higher price while avoiding legal obligations. The cash-buyer process is used in about 80% of recycling transactions as a result.

When a cash buyer buys a ship on a "as is, where is" basis, he takes control of it from its previous port of call, changes the crew, flies a new flag on it and then delivers it at his own risk to the scrap yard. On the other hand, when a ship is purchased for cash on a "on delivery" basis, the ship owner is in charge of making the risky delivery of the ship to the yards. The first strategy is more prevalent because ship owners typically do not want to deal with the extra paperwork and headaches associated with re-flagged EOL ships. In reality, a ship broker manages and negotiates the contract on behalf of the ship owner. The price agreed upon is always expressed in terms of USD per LTD. Although BIMCO has a standard format known as DEMOLISHCON (BIMCO, 2016) for the buying and selling of EOL ships, the cashbuyer and broker choose their own contract format.

A ship recycler, on the other hand, places greater importance on comprehending the cost and revenue-generating variables. Ship recyclers account for both associated variable costs (such as government taxes and tariffs, labour expenses, electricity costs, waste disposal prices, etc.) and fixed capital costs (such as yard fees, ship acquisition costs, etc.) for each deal. The types and quantities of recyclable material that can be removed from ships will influence the amount of revenue that ship recyclers can make. Internal demand and the material's current market price are also relevant factors.

Based on how the ship docks and how much automation is used throughout the recycling process, different types of ship recycling techniques can be identified. A ship can be docked

for recycling using one of four techniques. Beaching is the most common (more than 65%) and environmentally damaging activity done in the intertidal zone of the beach. The beaching method is primarily used in Bangladesh, India, and Pakistan, the three South Asian nations. Slipway is a somewhat modified kind of beaching that is utilised in locations with little tidal variation.

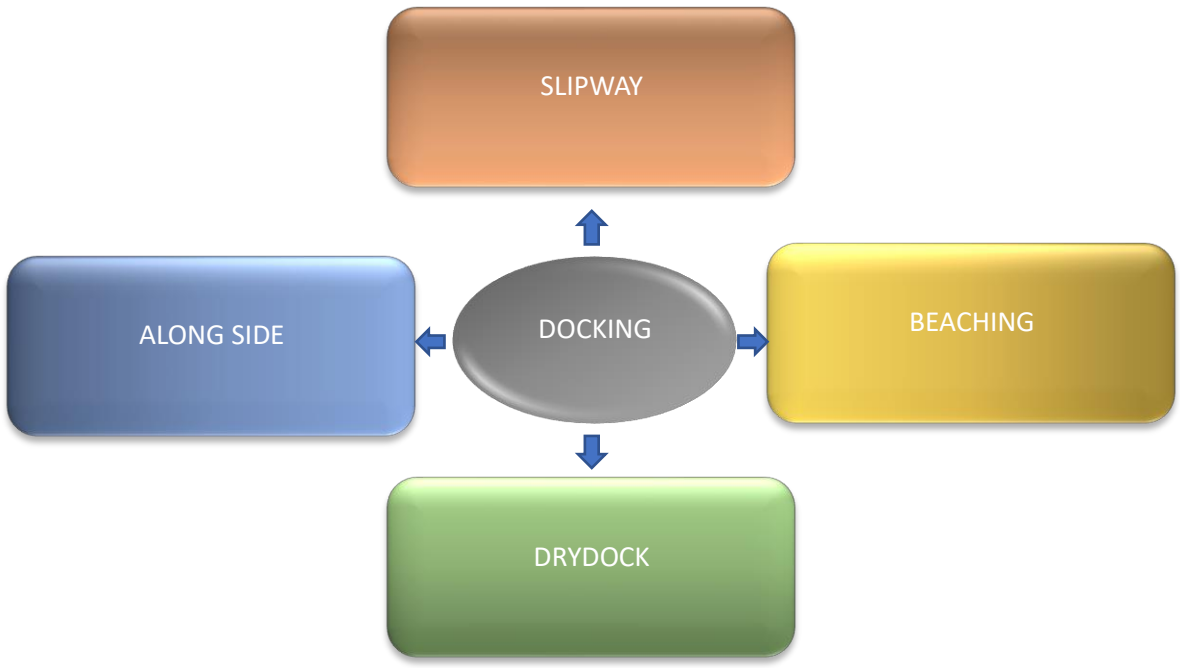


Figure 1 VARIOUS METHODS OF SHIP RECYCLING.

Although some European yards, like Inverkeithing, also employ this technique, it is particularly well-liked in Turkey. Compared to beaching, the slipway method is more environmentally friendly and safe. Ships are floating and moored offshore in the top-down alongside procedures. In order to get to the double bottom, the superstructure and upper components must first be removed. After that, the work moves along the ship into the engine room. China, Belgium, and the USA are the main countries where this strategy is used. The safest and greenest of these four techniques, drydock involves recycling ships in either a floating dock or a dry dock. However, this ship recycling technique is also the most expensive. The Leavesley International facility in Liverpool, Able UK Limited, Harland & Wolff Heavy Industries Limited, Swansea Drydock Limited, etc. are a few of the well-known drydock recycling facilities.

Ship recycling can be divided into three categories based on the amount of mechanisation utilised in the process. Ships are typically recycled by hand on the Indian subcontinent, where a group of workers use gas torches to break the ship into smaller pieces. This process requires the most labour and presents the greatest risk to worker safety. Contrarily, in order to reduce the need for labour and to safeguard the environment, the majority of European ship recycling yards are highly mechanised, with the majority of recycling tasks being carried out by machines (cranes, semi-automatic robots, etc.). Between these two extremes is the intermediate technique, which is widely used in Turkey, China, and some American yards. It is a combined labor-machine process, meaning that lifting is done by cranes while cutting is done by workers using gas torches.

## 3.4 REGULATORY FRAMEWORK OF SHIP RECYCLING: AN OVERVIEW

What will happen to ships when their operational lives comes to an end? Due to its significant environmental effects, it is a problem of the utmost concern. The issue becomes more urgent as the global fleet expands at a pace of around 2.95 percent yearly (UNCTAD, 2022). These ships must be properly recycled in order to avoid having a negative impact on the environment.

The main pieces of legislation that control the ship recycling sector have been covered in this chapter. Even though the Basel Convention from 1989 and the Hong Kong Convention from 2009 are thought to be the two main regulatory frameworks for the ship recycling industry, the adaptation of EU SSR 2013 and its early existence have garnered enough attention for themselves. Although the IMO conventions on ship recycling have been discussed, the EU recycling regulation is intended only for the member states of the EU.

### 3.4.1 Basel Covention 1989

The Basel Convention (1989) on the control of transboundary movements of hazardous wastes and their disposal seeks to safeguard human health and the environment by limiting the movement of dangerous materials and preventing the transfer of hazardous materials from developed to underdeveloped nations. The convention was adopted on March 22, 1989, and it became effective on May 5, 1992. The convention has 190 party states and 53 signatories (UNEP, 2022). The key commitments under the treaty are to reduce waste production at the source, manage trash in the nation where it is produced, reduce transboundary movement of hazardous materials, regulate waste trade, and manage garbage in an environmentally

sustainable way. The Basel Ban Amendment, which forbids the OECD, EU member states, and Liechtenstein from exporting hazardous materials to developing nations, came into effect on December 5, 2019.

Approximately 90% of the world's merchant fleet is owned by developed nations in Europe and Asia, while more than 95% of the ships are recycled in South-East Asian developing nations, making this convention especially pertinent to the shipping sector (UNCTAD, 2022). However, the convention's applicability to the ship recycling industry has some fundamental limitations. The Basel Convention's relevance to the ship recycling sector depends on three essential factors:

(1) EOL ships must be regarded as waste product;

(2) the ships must be exposed to transboundary movement; and

(3) both the importing and exporting countries must be Basel Convention parties.

The majority of the major ship-owning and ship-recycling countries that meet the third element are represented among the 190 party states. The acquisition and selling of a ship constitutes the second factor pertaining to transboundary movement. The sole remaining, and maybe most crucial, debate is whether or not an EOL ship can be considered "waste product."

While it has been argued in a number of articles that an EOL ship that has hazardous materials in its structure should be regarded as "hazardous waste." Therefore, an EOL ship intended for export for recycling is covered by the Basel Convention. However, the current practises of selling an EOL ship for recycling as well as the international scope of the ship recycling industry render the Basel Convention's application ineffective in this regard. Since an EOL ship costs several million dollars, the majority of ship owners attempt to avoid the convention. Since an EOL ship costs several million dollars, the majority of ship owners attempt to avoid the convention. The scholars have identified two key obstacles to the Basel Convention's efficient implementation in ship recycling: the first is determining when a ship becomes garbage, and the second is determining the "country of export" as defined by the convention. Due to these restrictions and difficulties, a distinct international legal framework that can accommodate the particular needs of the ship recycling business is required. The IMO created the Hong Kong Convention as a result of this phenomenon.

### 3.4.2 Hong Kong Convention 2009

The Basel Convention's vagueness over the previously mentioned issues prompted the adoption of the Hong Kong Convention. At a diplomatic conference in Hong Kong on May 15, 2009, the Hong Kong International Convention for the Safe and Environmentally Sound Ship Recycling was approved. The convention's goal is to make sure that EOL ships don't unnecessarily endanger the environment or the health and safety of people. The convention includes ship design and construction so that they can be effectively recycled at the end of their useful life in addition to ship operation and maintenance in order to ensure the objective. The convention is still not in effect. It comes very close to meeting the requirements, though. The current state of the standards has been examined with the aid of secondary quantitative data from Lloyd's List, UNCTAD, and Clarkson Shipping Intelligence Network. The study aids in understanding how close the convention is to taking effect. The obligations that the convention places on significant participants—ship owners and recycling yards—have then been looked at. To determine the precise financial impact of the convention on the ship recycling business, an economic study of those obligations was done. Finally, the convention's main shortcomings have been emphasised, which will aid in the development of a country's strategic policy for ship recycling.

There are a total of 21 articles, 25 rules, and 7 appendices in the convention. The fundamental legal framework for safe and environmentally sustainable ship recycling is established by the articles, and the regulations outline the responsibilities of the parties involved (Appendix-ii). The four chapters of the 25 regulations—general requirements (regulations 1-3), requirements for ships (regulations 4–14), requirements for ship recycling facilities (regulations 15–23), and common reporting requirements for shipowners, recyclers, and competent authorities (regulations 24–25—are divided into the 25 regulations. International merchant ships, flag nations, and ship recycling states that are party to the convention are all subject to its provisions. Warships, non-commercial government ships, domestic merchant ships, and vessels under 500GT are not included.

#### 3.4.2.1 Current status of the Convention

Three conditions are outlined in Article 17 of the convention before it can go into effect. After these conditions have been met for 24 months, the convention will become effective. The requirements are-

a) the convention has to be ratified by atleast 15 states,

b) the combined merchant fleet of the states add upto at least 40% of the world merchant fleet in gross tonnage,

c) and the combined maximum annual ship recycling volume of the states (metioned above in a & b) during 10 years must constitute not less than 3% of their combined merchant shipping fleet in gross tonnage.

To fulfil the criteria listed above, the convention must be ratified not only by the — significant flag states—Panama, the Marshall Islands, Liberia, but also by major ship recycling states—Bangladesh, India, Pakistan, Turkey, and China. The convention was available for signature from 1 September 2009 to 31 August 2010 for a period of one year. Five nations signed the convention at this time. The convention has since been available for ratification or accession. The convention was adopted more than ten years ago, yet it has not yet come into effect. However, the HKC's lack of growth has led some stakeholders to doubt the convention's viability.

| Criteria | Minimum Requirements | Current Status |
|---|---|---|
| Number of Parties | 15 | 17 |
| GT of world merchant fleet | 40% | Approx. 27.72% |
| Recycling Tonnage in Last 10 yrs | 3% | Approx. 2.49% |

Source: based on data from Clarkson SIN, UNCTADSTAT and Llyod’s List until June,2021

Japan, Malta, and Panama all ratified, which was important for the second criteria. While all the ratifications are significant, India and Turkey's ratifications are particularly significant for meeting the third condition. The ratification of Japan in March 2019 is another significant turning point for the convention, not only because of the significant GT that flies the Japanese flag but also because Japan has already supported and assisted India in modernising recycling yards. As a result, Japan's efforts to convince India to ratify the pact were crucial.

| SL. | Country | Signature | Accession/ Ratification | Fleet (GT) | Percentage (%) in World Fleet | Max. Annual Ship Recycling Valume in last 10 years |
|---|---|---|---|---|---|---|
| 1 | France | 19-Nov-09 | 2-Jul-14 | 40,34,741 | 0.29% | 5,102 |
| 2 | Netherland | 21-Apr-10 | 20-Feb-19 | 63,01,478 | 0.45% | 11,288 |
| 3 | Ghana | 2-Aug-10 | | 36,569 | 0.00% | 8,714 |
| 4 | Turkey | 26-Aug-10 | | 48,77,268 | 0.35% | 15,40,800 |
| 5 | India | 27-Aug-10 | 28-Nov-19 | 1,04,40,505 | 0.75% | 1,22,10,082 |
| 6 | Norway | | 26-Jun-13 | 29,50,336 | 0.21% | 6,261 |
| 7 | Congo | | 19-May-14 | 4,757 | 0.00% | 0 |
| 8 | Belgium | | 7-Mar-16 | 59,96,510 | 0.43% | 36,441 |
| 9 | Panama | | 19-Sep-16 | 23,03,75,579 | 16.47% | 3,305 |
| 10 | Denmark | | 14-Jun-17 | 1,38,024 | 0.01% | 56,369 |
| 11 | Malta | | 4-Mar-19 | 8,24,55,008 | 5.89% | 947 |
| 12 | Japan | | 27-Mar-19 | 2,92,33,552 | 2.09% | 45,706 |
| 13 | Germany | | 16-Jul-19 | 71,37,495 | 0.51% | 1,534 |
| 14 | Serbia | | - | - | 0.00% | 0 |
| 15 | Estonia | | - | 3,81,850 | 0.03% | 3,593 |
| 16 | Croatia | | 16-Feb-21 | 10,05,370 | 0.07% | 2,814 |
| 17 | Spain | | 3-Jun-21 | 24,38,287 | 0.17% | 16,656 |
| **Total** | | | | **38,78,07,329** | | **1,39,49,612** |

Source: based on data from Clarkson SIN, UNCTADSTAT and Llyod's List until June,2021

3.4.2.2 Inventory of Hazardous Materials, Survey and Certificates

According to the Hong Kong Convention, every ship must have a list of its hazardous materials. For all new ships, the rule is effective right away, while for older ships, it takes effect five years after the convention takes effect. For the duration of the ship's existence, there is a duty to maintain the inventory.The Inventory is required to be confirmed by the flag state and shall include as Part I a list of all hazardous wastes on the ship, their locations, and approximations of their quantities, as well as a statement that the ship complies with Regulation 4. Appendices 1 and 2 of the treaty contain a list of hazardous wastes. Regulation 4 defines specific requirements for the construction of vessels, which is the "cradle" side of the convention's cradle-to-grave approach. The use of some hazardous compounds is outright prohibited by these regulations. Part II for "operationally generated wastes" and Part III for storage must be added before recycling the ship.

Flag states must ensure that "ships flying their flag or operating under their authority and subject to survey and certification are surveyed and certified in accordance with the provisions of Article 6 of the Hong Kong Convention." The rules mandate: (1) an initial survey before the ship is put into service or before the International Certificate on Inventory of Hazardous

Materials is issued; (2) a renewal survey at intervals no longer than five years; (3) an additional survey at the shipowner's request following a change or significant repair to the ship; and (4) a last inspection before the ship is decommissioned. The surveys are necessary to verify that Part I of the Inventory is accurately maintained. The final survey also verifies that the ship's recycling plan, Parts II and III of the Inventory, and proposed recycling facility has the necessary permissions.

An international certificate on the inventory of hazardous materials will be given out following each initial and renewal survey. An international certificate indicating readiness for recycling is given following the last survey.A ship at the ports or offshore terminals of another party may also be inspected to ensure that it is carrying the appropriate certificates, according to the Hong Kong Convention. A thorough inspection may be performed when a ship does not have valid certificates, there are "clear grounds for believing" that the real state of the ship does not comply with the certificates and Inventory, or there is no mechanism in place to maintain the Inventory.

3.4.2.3 Authorization for Recycling Facilities

In addition to placing a strong emphasis on ship compliance, the Hong Kong Convention also mandates compliance from recycling facilities. The parties concur to take appropriate steps to guarantee that recycling facilities within their respective jurisdictions comply. According to the rules, recycling facilities must set up safeguards for both the management of hazardous wastes and human health. Additionally, recycling facilities consent to only accept ships that follow the convention.

3.4.2.4 Enforcement

Along with the above-mentioned preventative measures, the Hong Kong Convention also has a process for identifying and punishing violations. The parties concur to work together to find infractions. A party may ask for an examination of a suspected ship when it enters the port or offshore terminals of another party if it has evidence that the ship has violated or is about to violate the convention. The "Party carrying out the inspection may take steps to warn, detain, dismiss or exclude the ship from its ports" if it is determined that the ship is in violation of the convention.

When a party has sufficient proof that a recycling facility has violated the convention or will do so in the future, the party may also ask for an investigation of the facility. Article 10 stipulates that there must be consequences for transgressions of the convention. National

legislation shall ban violations of the convention. "Sanctions shall be established under the law of the flag state, wherever the violation occurs" for offences committed by ships. Sanctions for infractions committed by a ship recycling facility must be imposed in accordance with the law of the Party that has control over the facility. The penalties set forth by the countries' legal systems must be "sufficiently severe to deter violations of this convention wherever they occur."

### 3.4.3 European Union Ship recycling Regulation 2013

Since 1993, the European Union has been a party to the Basel Convention and is a significant player in the global environmental sector. In addition to harmonising the international law provisions on environmentally sound ship recycling in the EU, the EU may also contribute to the development and enforcement of more stringent standards than States may be able to achieve through international agreements through its authority to adopt secondary legislative measures that are binding for Member States.

Additionally, regulations may directly govern how shipowners and other private actors behave in the shipbreaking industry. Importantly, the EU is also capable of influencing the safety and environmental standards at the scrap yards situated in third (non-EU) countries to some extent by adopting high standards for EU actors.

The European Parliament and Council passed the Ship Recycling Regulation, 2013 with the goal of enhancing the conditions for ship recycling and advancing the ratification of the Hong Kong Convention. The Hong Kong Convention's provisions serve as the foundation for the Regulation, which substantially adheres to its reasoning. Therefore, the Regulation maintains the overall division of labour between the flag State and the recycling state. But the Regulation has also added some components that make the latter's provisions stronger.

Ships bearing the flag of an EU Member State or an EFTA State party to the EEA Agreement (i.e., Norway, Iceland, and Liechtenstein) are subject to the Ship Recycling Regulation. After the Regulation became effective, ships flying the EU or EEA flags were exempt from the EU's waste export regulations. Even if the ship has European owners, the Waste Shipment Regulation nevertheless applies to recycling ships flying a third-party flag. The Ship Recycling Regulation's definition of "waste" is linked to the definitions in the Waste Shipment Regulation, for example, therefore the Waste Shipment Regulation still has some relevance for ships covered by the Ship Recycling Regulation.

#### 3.4.3.1 EU’s Ship Recycling Facilities

The national authorities of the State where the recycling yard is located are required to give their approval in accordance with the Hong Kong Convention. In addition, the Regulation stipulates that the yard must receive EU Commission approval, regardless of whether it is situated in an EU Member State or a third country. All qualifying yards must be listed on the so-called European list created by the EU Commission in accordance with the Regulation's requirements, according to the RegulatiArticle 15 lays forth the extra requirements for European authorisation of ship recycling facilities located in third-party countries. This clause specifies what proof of compliance with the Regulation's standards must be provided by the applicant facility. Additionally, Article 15 mandates that the yard situated in a third country be examined by an impartial verifier with the necessary credentials (a classification society). The yard also consents to the possibility of a site inspection by commission representatives before and after it is added to the European list by applying for the list. Therefore, in practise, the Commission has the final say regarding the acceptable ship recycling standards for ships sailing under EU flag both inside and outside the EU.

#### 3.4.3.2 Consequences of Non-compliance

The Regulation allows for the possibility of taking action against approved recycling yards in EU Member States that are no longer in compliance with the relevant requirements. The Member State where the yard is located must suspend or withdraw the authorization granted to it or require the yard to take corrective action, as well as immediately notify the Commission. Recycling facilities located in third States are not subject to the same penalties for noncompliance as those in first States, but they are required to inform the Commission of any changes to the previously given information on compliance with standards.

The absence of a take-back requirement for shipowners in the Ship Recycling Regulation marks a substantial departure from the Basel regime and the associated EU Waste Shipment Regulation. The latter envisions a similar, but not identical clause: a recycling facility's right to refuse to accept a ship for recycling if its conditions don't substantially match those described in the inventory certificate. The shipowner is still in charge of the ship in this situation and is required to advise the flag State administration of this.

# CHAPTER 4
# COMPARATIVE ANALYSIS

## 4.1 INTRODUCTION

The ship recycling industry, which is the source for cheap steel for the most of the South Asian nations have been growing for past two decades. As the industry grew from just a regular scrapping unit to a global steel recycling industry they had a lot along the way. And just like any other industry which is new and unregulated will soon be identified by the concerned authorities or organisations brings them under the legal frameworks.

The Hong Kong Convention,2009 and European Union Ship Recycling Regulation,2013 where two such legal framework that was brought at different time frames by different governing bodies that hold a significant power over the entire ship recycling industry. This chapter would be focusing on the comparison on the both above mentioned legal frameworks and will look into various aspects and perspectives in finding the differences and the similarities. The legal framework in itself is never flawless, but they try to bring in the liberal aspects that doesn't exclude any stakeholders of the industry.

### 4.2 HONG KONG CONVENTION: AN ANALYSIS

In order to limit harmful shipbreaking practises, the Hong Kong Convention, which is special to shipbreaking, has developed an international legal process based on national notification and waste management systems. Shipowners and recycling facilities are required by the Hong Kong Convention's national notification system to notify their own State of their intention to recycle a ship. Before issuing an International Ready for Recycling Certificate (IRRC), the notification enables the administration of a flag State to get ready for the necessary survey of a ship's Inventory of Hazardous Materials (IHM). A shipowner's notification comes after an IHM survey, and the IHM survey comes after the IRRC authorises a flag State to recycle a ship.

The recycling company is supposed to notify a competent official of its own state in three phases, just like a shipowner would. First, when preparing to receive a ship, regarding the intention to recycle it, second, when the ship recycling facility has obtained the IRRC, and third, regarding the completion of the intended recycling activity when the recycling of a ship is finished in accordance with the Convention's requirements.

The Convention stipulates that a recycling facility cannot accept a ship that contains any of the dangerous compounds (such as asbestos, PCBs, and ozone depleting substances) mentioned in the Appendix I of the Convention. This is for good management. Importantly, the Convention establishes a "cradle to grave" philosophy, which mandates that ships protect the marine

environment throughout their lifetimes and forbids recycling facilities from accepting ships that do not meet these standards. This results in a number of surveys that must be completed before recycling can start. Prior to starting a transport business or before the International Certificate on IHM is issued, the first survey is necessary. Since it has been in operation, each new ship must maintain an IHM certificate. Secondly, a periodic survey is necessary every five years. Thirdly, if the ship owner requests a second study or if the structure needs to be changed, replaced, or significantly repaired, Finally, before recycling or shipbreaking can start, a survey must be completed. Following the final report and before a ship is sent to a recycling facility, a flag state may issue an IRRC. A ship's lack of any of the hazardous compounds listed in the Convention is demonstrated by the IRRC. These criteria are meant to provide better environmental protection, health, and safety in recycling facilities.

A recycling facility must get survey reports from the ship's owner before it can accept it, and it must also upgrade its physical and technological capabilities to manage the indicated hazardous items safely. Each Party is required by Regulation 15 to establish an appropriate legislative framework to carry out this requirement in a recycling plant.

### 4.2.1 Convention Criticisms

#### 4.2.1.1 problematic approach of Convention’s Notification System

The notification system's fundamental flaw is that recycling States are not required to limit ship export and entry unless a recycling plant voluntarily complies with the reporting requirements. The Convention's reporting requirements do not call for state-to-state notification or authorization, which is the cause. The notification system aims to hold businesses responsible to their own State, yet it offers no means of enforcing the rule. In the event that the reporting requirement is not followed, it offers no legal or other consequences. Due to this significant gap, reporting ceases to be a need and is instead reduced to a directory. A State Party is not required under the Convention to enforce the notification requirement. As a result, the recycling States might be reluctant to enforce the reporting requirements so long as their sectors are creating jobs and increasing government income.

It can be assumed that toxic ships will continue to beach in India, Bangladesh, and Pakistan for recycling as a result of this regulatory gap in enforcing the reporting responsibilities. The widely utilised PIC mechanism of the Basel Convention, which would need a recycling State to obtain approval to receive the ship, may have been added into the Hong Kong Convention. The recycling state would next be required to compare the ship's IHM for harmful

contaminants. The reporting mechanism established by the Hong Kong Convention can be distinguished from the PIC. While the reporting system does not require such consent to halt the transfer of the ship into the recycling State, even if the recycling company has not notified the appropriate authority in the recycling State, the PIC would need it before the ship could be received. As a result, recycling businesses might be able to accept a ship for recycling even when it contains harmful elements without any regulatory interference. For shipbreaking States, the entrance of a ship for scrapping may continue to become a done deal.

4.2.1.2 Dissatisfied requirement of Sound Waste Management

The Hong Kong Convention's condition of sound management may likewise not be met by the unregulated entry of elderly ships into developing nations. A competent authority of a State Party is empowered by the Hong Kong Convention to oversee the establishment of appropriate infrastructure for the sound management of wastes and to enforce advanced training requirements in a shipbreaking facility in accordance with their national legislation. Due to the lack of appropriate legislation requiring compliance in South Asian nations, these standards may not be observed. How to oversee a recycling plant or impose requirements on the State Party is not addressed in the Convention.The ability of the shipbreaking nations to adhere to the international norms outlined in the Hong Kong Convention is seriously questioned by this disparity.

It is obvious that South Asian nations are unlikely to follow the sound management standards of the Convention given that they have not yet passed suitable legislation to upgrade their shipbreaking facilities. Evidence also suggests that, as a result of the prevalent use of beaching, the unregulated recycling sector has grown significantly in these nations since 2009. Since the South Asian countries rely on a funding mechanism from significant shipping nations to improve the standard, there does not seem to be any urgency in these facilities to upgrade the standard. The justification for funding is valid because beaching and other risky practises benefit shipping nations. They may externalise the high expense of their toxic material cleaning, and they also make an average of four to five million USD more each ship demolished in South Asian nations than anyplace else in the globe.

Ironically, the Hong Kong Convention ignores the technical prowess and lack of financial resources of the major shipbreaking nations and only takes worker safety and environmental standards into account. This article makes the case that these nations require international funding in order to meet the Hong Kong requirements for this pragmatic reason. It seems that

the Convention ignores this important topic. The Convention might turn into a "empty suit" if there is no financial backing to alter the practises. This may easily occur if the major countries who engage in shipbreaking refuse to adhere to the environmental and safety criteria after ratifying the Convention in the future, which may be why they have showed little interest in ratifying the Convention.

4.2.1.3 Non-Obligatory Approach towards Ratification

Only one South Asian nation, India, had ratified the Convention as of 2022. The reason could be that even if certain nations are not parties to the Convention, ships can still be sent to them. The Hong Kong Convention does not expressly prohibit Party States from sending ships to Non-Party States. As long as they can charge shipowners a hefty price, South Asian nations may continue to be favoured destinations, regardless of whether they ratify and adopt the Hong Kong Convention. One of the main shortcomings of the Hong Kong Convention is that there is no obligation to ratify or accede to it due to a lack of standards.

4.2.1.4 Failure to criminalize illegal traffic

Comparing the Basel Convention to the Hong Kong Convention, it is clear that the Basel Convention fails to criminalise illicit trade. As was already indicated, parties to the Basel Convention are required to criminalise illicit traffic, whereas parties to the Hong Kong Convention are only required to prohibit violations and create punishments for those violations.

Criminal consequences would be the most effective way to prohibit deliberate disdain for the Hong Kong agreement's regulatory requirements and actions that display a full disregard for them, such as beaching a ship without even trying to abide by the agreement. This is essential because demanding criminal penalties may prevent efforts to develop a better and more relevant sanctions regime. Criminal penalties are not always the best method to ensure compliance. It is more likely that a business body of some kind than a natural person will violate the Hong Kong Convention. Criminal penalties are indeed harsh and likely to deter transgressions, but it won't always be simple to identify a responsible natural person who may be charged with a crime. The outcome is likely to be arbitrary to a degree that is contrary to the fundamentals of justice and undermines the prophylactic intent of such punishments.

4.2.1.5 Limited definition of Hazardous material

The Hong Kong Convention's definition of hazardous material is another matter of scope to take into account. In Appendices 1 and 2, the Hong Kong Convention lists specific substances

as hazardous substances. The Basel Convention's covered wastes that are included in the Technical Guidelines are not included in the Hong Kong Convention, as stated by parties to the Basel Convention. These Technical Guidelines can't be used to illustrate a glaring flaw in the Hong Kong Convention because they are not required. The practical question of whether the Hong Kong Convention offers a similar level of supervision and enforcement as the Basel Convention, however, should take into account their persuasiveness in the Basel Convention's operation.

4.2.1.6 Principle of Sustainable Development

The Hong Kong convention is strongly motivated by the idea of sustainable development, and many of the organisations that have been most loud in their condemnation of the convention favour strict environmental regulations above development. One could argue that the recycling sector benefits from the Hong Kong Convention. With the adoption of relatively inexpensive preventative measures, it largely preserves the sector. It's highly possible that the researchers were worried that a law that was too harshly discriminatory towards the recycling sector "would have acted as a barrier to entry of ship-breaking States into the Convention." This is most certainly the case, and it might even have stopped shipowning States from joining the convention as they profit from the low-cost services provided by recycling states.

## 4.3 SHIP RECYCLING REGULATION

A variety of guidelines and limitations regarding the materials used to construct and outfit the vessels covered by the Ship Recycling Regulation are provided. Article 6 of the Regulation specifies the duties and responsibilities of shipowners throughout the last phase of the ship's existence. Generally speaking, a "ship owner" is "the natural or legal person registered as the owner of the ship, including the natural or legal person owning the ship for a temporary period prior to its sale or handover to a ship recycling facility, or, in the absence of registration, the natural or legal person owning the ship or any other organisation or person, such as the manager or bareboat charterer, who has assumed responsibility for operation of the ship from the owning natural or legal person.

4.3.1 Shipowner’s Perspective

Being the stakeholder of the policy of EU, the shipowners from the member states are very upset with the regulation since there is an international convention. The shipowners are said to

be at the loosing end of the policy, because these regulations are unfairly stringent to the member states where the ships have registered whereas, the foreign flags can follows the less lenient Hong Kong Convention.

Firstly, the level playing field have been distorted by the EU regulation for the member flag state owned ship, because the non-member state need not have to recycle the EOL ships at the specified recycling facilities by the EU. And more over they can have a easier process of transferring the vessel to the ship breakers unlike the European counterparts. This has lead to the owners changing the flag of the vessel to circumvent the regulation and use the south Asian destinations to recycle the EOL ships.

Secondly, the costly process involved in the EU approved facilities are also other reason for the owner's disapproval of the regulations. The general norm of the recycling is the shipowner sells the vessel to the cash buyer, who then hands over to the recycler in Asian countries. But in case of the EU, the shipowner won't be able to sell the EOL ships and he should take the responsibility in bringing the ship into the facility with prior certifications mentioned by the authorities. And moreover the ship should be qualified to enter into the recycling facilities or else the recycler can reject the ships stating its unworthiness.

Thirdly, the limited number of EU-approved facilities have been a major setback to the regulation as a whole. The world fleet ownership as of 2022, almost 40% accounts to the European nations and there are only 45 approved facilities in EU, Norway, UK and USA. This is sited as a limitation since the recycling facilities takes time and not all the facilities can accommodate the large vessels unlike the beaching in South Asia.

Fourthly, the uncertainity regarding the application of the regulation to the flag state only or the ships visiting the EU ports are also included. The regulation does mention about the member state flag to be recycled within EU, but the ships visiting the port or the third flag ships will not be asked to recycle in the EU facilities, which will bring in the substandard ships into the EU and that comes against the Green Shipping policy adopted by the European Union.

## 4.4 ECONOMIC PERSPECTIVE

The legal framework for ship recycling speaks about both the shipowners and the recyclers. The economy that the recycling industry serves is for the recyclers. So it is very much essential to look onto the economic aspect of the both convention and regulation.

Firstly, lets look into the economies they tap into. The Hong Kong Convention being an International Convention, have a wider scope in the world economy and also given the 190 member states in IMO, they obviously look into the whole world. But that doesn't undermine the EU regulations, which accounts to 14.85% of the world economy and 40% of the ship owning nation. The main reason for the regulation was for the safer recycling of the EU flagged ships within the EU economy and in turn create a circular economy in the shipping industry.

Secondly, the wage distribution among the EU nations and non-EU nations. Although not all EU nations have equal wage rates, while comparing to the South Asian nations which hold the major recycling facilities, they are 3-5 times higher. And the due to the large pool of workforce the South Asian nations prefer to stay a labour intensive workforce instead of mechanizing the industry. The wages that is paid in South Asian nations are too low, which comes under the Hong Kong Convention, but the Convention have never focused on the labour force, since it is mainly about the sustainable aspect of the shipping industry.

Thirdly, circular economy working much effectively in non-EU nation than EU nations. This is because the recycled materials mainly the steel is reused into the South Asian nations in a very large extent. The one of top three recycling country-India used 22% of the steel from the recycled material, in which a huge portion comes from the scrapping of big vessels.

So while looking at the economic aspect of the recycling industry the Hong Kong Convention will have the major impact in the industry, not because of the EU nations lesser number, but because the economy of scale is inclined to the South Asian nations which is employing a large workforce and also adding an important ingredient into the economy, ie Steel.

## 4.5 LEGAL PERSPECTIVE

The legal framework are similar since the Ship Recycling Regulation was derived from the Hong Kong Convention. And although the EU have added a few modification and improvements to their regulation they had the reference of the Hong Kong Convention, because-

*"This Regulation is aimed at facilitating early ratification of the Hong Kong Convention both within the Union and in third countries by applying proportionate controls to ships and ship recycling facilities on the basis of that Convention."*

While the Hong Kong failed to come into existence yet the ratification of the same by the EU was a success. And even more they could bring in the Green shipping aspect into the regulation and is considered to be a stringent way of bringing Greener Initiatives.

The regulation has more number of IHM materials included in the ship. And the certificates to be obtained before moving them into the EU approved recycling facilities. More over they also have the criminal enforcement against the violators in much harder way than the Convention itself.

While the Convention does speak about the criminal enforcement, it is been commented to be more lenient towards the shipowners and the ratification of the its member nations have been lagged for over a decade now, although countries like India have already included them in states legal system. Still a ratification of 10 more nations is required for the Convention to come into existence.

## 4.6 ENVIRONMENTAL PERSPECTIVE

The Hong Kong Convention is a significant step towards increasing the sustainability of the maritime industry from an environmental point of view. The difficult and dangerous process of recycling ships has potential negative effects on the environment and society. Poorly run shipbreaking yards can contaminate the soil and water, as well as produce air pollution from burning debris. The individuals who work in these yards may be exposed to toxic products and end up hurt or even killed.

A legal framework is provided by the Hong Kong Convention to guarantee safe and environmentally responsible ship recycling. According to the treaty, ship owners must make sure that their boats are recycled in locations that adhere to strict environmental and safety criteria. The safe handling of materials, the disposal of hazardous items, and the preservation of employee health and safety are all covered by these standards.

The EU Ship Recycling Regulation offers a legal framework to guarantee that ship recycling is done in a way that is both safe and responsible for the environment. Any ship flying the flag of the EU or a country other than the EU that docks or anchors in an EU port is subject to the regulation.The creation of a hazardous material inventory for the ship, which must be delivered to the recycling facility before the ship arrives, is one of the main environmental criteria of the EU Ship Recycling Regulation. Additionally, shipowners are required to have a plan for the secure and ethical recycling of their boats. Additionally, the regulation mandates that ships be

recycled in establishments that have received authorization and certification from the appropriate authorities and that they adhere to a number of safety and environmental standards.

The EU Ship Recycling Regulation also includes requirements to make sure that shipowners are in charge of the ecologically friendly and safe recycling of their ships. Shipowners must make sure that their boats are recycled in a way that reduces the danger to both the environment and human health. The history of the vessel, including its operations, upkeep, and repairs, as well as any known or suspected pollution, must also be disclosed to the recycling facility.

In conclusion, both frameworks offer a legal framework for the environmentally responsible and secure recycling of ships, with specific standards and demands for shipowners and recycling facilities. The regulation encourages more environmentally friendly practises in the maritime sector, minimising the industry's detrimental effects on both human health and the environment. The EU Ship Recycling Regulation can help make the maritime sector and the rest of the world more sustainable by supporting sustainable development goals.

## 4.7 EMPLOYEE PERSPECTIVE

As the Convention speaks for the safe and environmentally sound recycling for ships, the workers or employee safe and sound working conditions is underlooked in the Convention. Although the Convention is not meant to deal with the workers directly being a stakeholder of the Convention, they should have been an article pointing out the working conditions and the welfare of the workers in the recycling facilities.

The pandemic had been a major hit for the recycling industry especially for the worker who did not have any jobs due to lack of ships beaching and curfews in the countries restricted them from moving from the locations. This has lead to deteriorating life style of the workers even further, and although the pandemic has been subsided the effect has been lasting for too long. Since the beaching of foreign ships have drastically reduced and the implementation of the EU regulations have blocked the ships from Europe to recycle in the South Asian countries.

The welfare of the EU approved facilities are in better conditions, compared to the South Asian counterparts. The major recycling country in Europe is Turkey, which has a employee welfare legal system and most of the facilities are dry docking methods, which will be relying heavily on the large machineries for dismantling the ships in the facilities.

As per the reports of ILO, the South Asian countries have been promoting the Occupational and Safety Rules to the worker in the facilities and have made mandatory to use the safety gears while working on the ships. But these interventions are not sufficient because every years there is account of at least 80 accidental deaths in these facilities, from which some deaths reasons are recorded as unknow. Which clearly states the working conditions and the supervision of the Unorganised working force of these nations.

The ILO has been the international body to look into labour welfare and their development in the developing nations, similarly the involvement of the organization along with the Convention can be seen in the South Asian nations.

To conclude, we could say that there is a major set back from the Convention framework to include the workers issue along the sustainable programmes of the Convention. And the EU regulation being more humane and environmental in nature they have been able to inculcate the requirements of the workers in the recycling facilities. So in total the framework tries to circumvent the worker issue and have been given more focus on the sustainable aspects of the shipping recycling while the actual person who are involved in the sector have been forgotten.

## 4.8 SHIPOWNWER'S PERSPECTIVE

The HKC provides a global framework for ship recycling, which is one of its primary benefits. There was no international standard for ship recycling before to the convention, therefore ship owners had to navigate a patchwork of national legislation. The HKC establishes explicit rules for all parties involved in ship recycling, including ship owners, ship recyclers, and flag states. This clarity can assist ship owners in navigating the regulatory environment and ensuring compliance with the law.

Another advantage of the HKC is that it supports safe and environmentally sound ship recycling. The treaty requires ship recycling operations to meet specified worker safety, environmental protection, and waste management standards. Ship owners can demonstrate their commitment to ethical business practises and reduce the possibility of harmful environmental or social repercussions by adhering to these guidelines.

However, the HKC is not without its difficulties. The expense of compliance is one of the most significant challenges. Meeting the HKC criteria can be costly, especially for older ships that were not designed with recycling in mind. To achieve the convention's rules, ship owners may need to adapt their vessels or invest in new technologies, which might be costly.

Another issue is the scarcity of EU SRR-compliant ship recycling facilities. At the moment, just a handful sites worldwide have been certified as EU SRR-compliant. Shipowners that need to sell their vessels may face logistical difficulties as a result. They may have to carry their ships over great distances to a conforming facility, which can be costly and time-consuming. Furthermore, the EU SRR imposes several administrative requirements on shipowners. For example, they must keep an inventory of hazardous materials on board their ships and submit a recycling plan to the appropriate authorities. These regulations can be time-consuming, and they may necessitate the use of additional resources to assure compliance.

In the end while we overlook the entire regulation, they are made to support the big shipping companies from getting away with the regulation while also open to sustainable goals of the century. The convention and regulation doesn't act as criminal guide, rather takes the form of instruction guidelines for the shipping of the future. The purpose of the convention is very much undermined, and the shipowner is the one actually benefitting from the convention although they ask to recycle the ships as per the norms of the convention. In that matter, the EU Ship Recycling Regulation is very much stringent towards the shipowner, but the loopholes are too wide for them to circumvent the regulations quite easily. We could have plenty of examples for the cases that have shown when the shippinh companies sold their vessel to recyclers on false claims and been caught. While we hear the unknown shipping companies a lot the major liners and bulk carriers are even more prudent in doing the business, that at the end of the day they are able to claims not a single ship have been unenvironmentally disposed by these corporations during the ship's life.

## 4.9 TABULAR SUMMARIZATION

*Table 1 Comparison between Hong kong convention & EU Ship Recycling Regulation*

| ASPECT | HONG KONG CONVENTION | EU SHIP RECYCLING REGULATION |
|---|---|---|
| SCOPE | Applies to all ship types with a gross tonnage of 500 or more. | Applies to all ships flying the flag of the EU as well as foreign ships visiting EU ports. |

| | | |
|---|---|---|
| OBJECTIVES | Ensures that ships are recycled in a safe and responsible manner. | Encourages the employment of safe and eco-friendly ship recycling techniques as well as the growth of a sustainable recycling sector. |
| ENTRY INTO FORCE | Not yet in force; needs ratification by 15 states, which together constitute 40% of the gross tonnage of all worldwide commerce shipping. | Entered into force in 2013. |
| HAZARDOUS MATERIALS | Prior to recycling, it is necessary to identify and remove any dangerous materials. | Requires the creation and upkeep of a ship recycling plan and a hazardous materials inventory, as well as the removal of hazardous materials before recycling. |
| SHIP RECYCLING PLAN | Not explicitly required. | Information on how hazardous materials will be removed and how to protect personnel is necessary. |
| CERTIFICATION | Requires an International Ready for Recycling Certificate (IRRC) from the flag state or other recognised body. | Requires a Statement of Compliance (SoC) from a recognised organisation, as well as an Inventory of Hazardous Materials (IHM). |
| FACILITIES | Requires that recycling facilities be accredited by the ship's flag state and adhere to strict requirements for environmental protection and workplace health and safety. | Demands that recycling facilities adhere to strict environmental, occupational health and safety, and labour requirements, be listed on the European List of Ship Recycling Facilities |

| | | |
|---|---|---|
| FINANCIAL GAURANTEES | Not required. | Imposes financial obligations on shipowners to pay for the expense of secure, eco-friendly recycling. |
| ENFORCEMENT | States are required to implement an enforcement mechanism that includes safeguards to assure compliance, inspections, and sanctions for non-compliance. | Dictates that ships be subject to inspections and fines for non-compliance, and calls for EU member states to name competent authorities in charge of enforcement. |
| CRIMINAL LIABILITY | Although there are no particular criminal provisions, it is advised that states make major infractions subject to criminal penalties under their domestic laws. | Includes criminal penalties for a number of infractions, including as failing to produce the necessary documentation, complying with the ship recycling strategy, and refusing to cooperate with inspections. |
| PENALTIES | Individual states are given discretion in this matter. | Includes fines and prison terms of up to two years for specific offences, and permits the seizure of ships in situations of persistent noncompliance. |
| JURISDICTION | Jurisdiction of the flag state over offences committed on ships. | Permits both the flag state and the port state to have jurisdiction over transgressions made by ships. |

| | | |
|---|---|---|
| CORPORATE LIABILITY | There are no particular corporation liability provisions. | Contains guidelines for corporate responsibility that hold businesses accountable for offences committed by its ships. |
| WORKER SAFETY | Demands the creation of a ship recycling plan that incorporates safeguards for the health and safety of personnel. | Demands the creation of a ship recycling plan that incorporates safeguards for employees' health and safety, including suitable training and protective gear. |
| LABOUR STANDARS | Recommends that nations align their domestic legislation with the International Labour Organization's (ILO) Guidelines for the Safe and Environmentally Sound Recycling of Ships. | Requires adherence to the Maritime Labour Convention, 2006, as well as other pertinent international labour standards, notably the Hong Kong Convention of the ILO. |
| WORKER'S RIGHTS | There are none that specifically address workers' rights. | Requires adherence to pertinent labour laws, particularly those relating to associational freedom, collective bargaining, and anti-discrimination. |

*Source: The Hong Kong Convention, 2009; EU Ship Recycling Regulation, 2013*

The above mentioned tabular summarization is just the overview of comparing both the convention and the regulation based on various aspects pertaining the industry and the legal framework. Although they have been majorly covered, this tabular conclusion is not exhausted, but can be expanded even more given the newer aspect or perspective of the author. To give a critical analysis of the both legal framework on ship recycling industry, this summarization would be a great aid.

# CHAPTER 5
# CONCLUSION

# CONCLUSION

Aiming to ensure the secure and environmentally sound recycling of ships, the Hong Kong Convention, established in 2009, and the EU Ship Recycling Regulation, adopted in 2013, are two key rules. The scope, methodology, and standards of the two regulations vary, despite the fact that they have comparable goals.

From an environmental standpoint, both regulations offer a framework for regulation to guarantee that ship recycling is done in a secure and environmentally responsible manner. They demand that shipowners make sure their vessels are recycled in locations that adhere to strict environmental and safety regulations. Additionally, they contain measures to guarantee that shipowners are accountable for the secure and environmentally responsible recycling of their ships.

The two regulations' scopes are one of their main distinctions. The EU Ship Recycling Regulation only applies to ships flying the EU flag and ships flying other flags that call at EU ports or anchorages, but the Hong Kong Convention is a global accord. In terms of the number of ships it covers, this indicates that the EU rule has a more constrained scope.

The two standards have different specifications for recycling facilities. According to the Hong Kong Convention, ship recycling facilities must be accredited by the appropriate authorities, be authorised, and adhere to strict environmental and safety criteria. On the other hand, a list of facilities that have been approved by the EU for the recycling of ships is included in the EU Ship Recycling Regulation. One of these factories, which must adhere to strict safety and environmental regulations, must recycle ships.

Overall, the comparison of the EU Ship Recycling Regulation with the Hong Kong Convention demonstrates the value of regulatory frameworks in fostering environmentally friendly practises in the shipping sector. Although the two regulations' approaches differ, they both offer crucial guidelines for shipowners and recycling facilities to follow in order to ensure the environmentally friendly and safe recycling of ships. It will be crucial to keep track on and assess these laws as the shipping sector develops and expands in order to make sure that they continue to be effective in promoting sustainability and safeguarding public health and the environment.

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