Curtin Law School

Injustice to Workers in the Shipbreaking Industry in South Asia: A Quest for a Civil Liability Framework in International Law

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DECLARATION

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material, which has been accepted for the award of any other degree or diploma in any university.

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LIST OF WORKS RELATED TO THIS STUDY

Parts of this thesis have been published, accepted, and submitted for publication or presented in two conferences and symposium

1. Mohammad Zulfikar Ali, 'Shipbreaking Industry- Responsibility of the Maritime Industry' (November 2020) 19 *Perspective Australian New Zealand Society of International Law* 21-26. **This article is a part of Chapter 1 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

2. Mohammad Zulfikar Ali and Prafula Pearce, 'Effectiveness of the Hong Kong Convention on Ship Recycling in India and Bangladesh' (2019) 5 *Curtin Law and Taxation Review* 69-87. **This article is a part of Chapter 5 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

3. Mohammad Zulfikar Ali and Prafula Pearce, 'The South Asian Shipbreaking Industry and its Unsafe Mining Practices' (2020) *Aspects of Mining and Mineral Science* 565-568. DOI:10.31031/AMMS.2020.05.000607. **This opinion piece is a part of Chapter 1 and 3 of the thesis**. **For the flow of the thesis, I have made changes to this Chapter.**

4. Mohammad Zulfikar Ali and Prafula Pearce, 'Developing the Concept of a Combined Approach in Shipbreaking Regulation: A Comparative Analysis of International Law, Recent Indian and Bangladeshi Judicial Decisions and Legislations' (Conference Paper, International Conference on Comparative Law, 20 February 2021). **This conference paper is a part of Chapter 4 of the thesis**. **For the flow of the thesis, I have made changes to this Chapter.**

5. Mohammad Zulfikar Ali and Prafula Pearce, 'Comparative Legal Analysis of Shipbreaking Regulations in India, Bangladesh, and Pakistan: Implication on Human Tragedy and Compensation to Victims' in Joshua Aston et al (eds) (co-authored with Dr Prafula Pearce) *Comparative Law* (Thomson Reuters, 2021) (in press). **This book chapter is a part of Chapter 4 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

6. Mohammad Zulfikar Ali, 'Comparative Legal Analysis of Shipbreaking Regulations in India and Bangladesh' (November 2021) *Australian Journal of Asian Law* (under review). **This article is a part of Chapter 4 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

7. Mohammad Zulfikar Ali, 'Legal Challenges in Bangladesh's Implication of the ILO Safety and Health in Shipbreaking Guidelines for Asian Countries and Turkey' (Symposium Paper, Law, Technology, and Labour Governance Symposium, 12 March 2020. **This paper is a part of Chapter 5 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

8. Mohammad Zulfikar Ali and Md. Nahid Islam, 'Deciphering the Recycling Crisis of Australia's Offshore Structures- A Proposal for A Bilateral Agreement Between Bangladesh and Australia' in Anita Medhekar et al (eds) *Strategic Cooperation and Partnerships Between Australia and South Asia: Economic Development, Trade and Investment Opportunities Post-Covid-19* (IGI Global Publishing, 2021) (in press). **This book Chapter includes some parts of Chapter 3 of the thesis. For the flow of the thesis, I have made changes to this Chapter.**

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ABSTRACT

Shipbreaking is the process of breaking up old ships mainly for their steel. International shipping companies own and use ships for their trade and finally sell them predominantly to Bangladesh, India, and Pakistan for breaking up. As these South Asian countries have no iron ore deposits to support their growing steel demand, they need irons from ships and shipbreaking companies usually offer attractive prices to shipowners. The shipbreaking businesses in South Asian countries break ships on open beaches using dangerous manual methods that pollute the environment and cause deaths, injuries and diseases to workers in the shipbreaking industry, for which workers generally receive no compensation.

Despite making good profits and knowing the problems, shipowners have not taken any responsibility for compensating shipbreaking workers who are injured or suffer a work-related disease (e.g. through short-term or chronic exposure to occupational health hazards such as mutagens, carcinogens, and asbestos-containing material), or for the families of workers who face deaths at shipbreaking facilities. These problems are likely to continue unless shipowners take responsibility for shipbreaking workers' deaths, injuries and diseases by subscribing to a civil liability and compensation framework. Before 2009, the *Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal*, 1989 (the *Basel Convention*) was the only mechanism to deal with accountability issues. However, the Basel Convention only deals with transfer of waste and has not been successful in making the shipowners accountable due to the difficulty in determining the point in time when a ship turns from being a 'ship' to 'waste'. In response, the International Maritime Organization (IMO) developed the *Hong Kong Convention for Safe and Environmentally Sound Disposal of Ships*, 2009 (the *Hong Kong Convention*). The *Hong Kong Convention* has failed in holding shipowners accountable for workers' deaths, injuries and diseases in the shipbreaking industry. The *Hong Kong Convention* implements a preventive model to limit the deaths and injuries through a national level certification system and requires developing countries with shipbreaking industries to improve their shipbreaking standards. The *Hong Kong Convention* has thus left the issue of liability and compensation for shipbreaking-related deaths and injuries unresolved.

This study acknowledges these gaps in legal and regulatory framework and proposes an international civil liability framework based on a shipbreaking liability certificate (SLC) for every commercial ship. Supported by a mandatory shipbreaking insurance, the SLC is for both long and short-term shipowners to take responsibility and pay compensation to workers who face injuries or suffer a work-related disease and to the families of workers who have died. This would also change the industry practice by updating the SLC after each transfer of ships throughout their lifecycle.

The philosophical approach used for proposing the SLC is rectificatory global justice that refers to rectifying an injustice, arguing that shipbreaking is a matter of global injustice for not shifting liability of compensation to shipowners under the existing legal frameworks. The thesis uses a combination of case study and reform-oriented doctrinal legal research methodology to compare the problems within the shipbreaking industry with other global industries, and analyse the features of civil liability frameworks that brought about changes in other industries. The results of the analysis showed that incorporation of last active insurance, direct claim, strict and joint liability, limitation of liability and insurance for financial security features into the SLC framework would be the keys to tightening the change of ownerships from cradle to grave, providing adequate and prompt compensation to workers for their economic loss, and bringing about changes in the industry practice and regulatory standards of the shipbreaking industry. The proposed SLC framework has profound implications not only for making changes in one specific industry, but also for future attempts to create a civil liability mechanism for other inter-state industries.

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I dedicate this thesis to the workers who faced deaths, injuries, or work-related diseases in the shipbreaking industry.

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LIST OF ABBREVIATIONS

AD	Appellate Division
BAN	Basel Action Network
BC	Basel Convention
BDA	Balochistan Development Authority (Pakistan)
BELA	Bangladesh Environmental Lawyers' Association
BIMCO	Baltic and International Maritime Council. Trade Organisation representing shipowners, brokers, agents and others
BMTF	Baia Mare Task Force
BSBA	Bangladesh Shipbreakers Association
CFC	Chlorofluorocarbon
Civ	Civil
Class NK	Nippon Kaiji Kyokai (Japanese Classification Society)
COP	Conference of Parties
CRISAL	Contract Regarding a Supplement to Tanker Liability for Oil Pollution
CSME	Centaurus Special Maritime Enterprise, a Liberian shipping company
CSR	Corporate Social Responsibility
DEFRA	Department of Environment, Food and Rural Affairs
DNV	Det Norske Veritas
DoE	Department of Environment (Bangladesh)
DWT	Deadweight tonnage- the carrying capacity of a ship when fully loaded, including cargo, bunkers, water (boilers, ballast and portable), stores, passengers and crew
EC	European Community
ECA	Environmental Conversation Act (Bangladesh)
ECHR	European Court of Human Rights
EMSA	European Maritime Safety Agency
EU	European Union
EWCA	The Court of Appeal of England and Wales
EWHC	The High Court of Justice
FIDH	International Federation of Human Rights
FNV	Federati Nederlands Vakbeveging- a federation of Netherlands Trades Union
GMB	Gujarat Maritime Board
GMS	Global Marketing Systems (cash buyer)
GPCB	Gujarat Pollution Control Board
GT	Gross tonnage- the nonlinear measure of a ship's internal volume
HCD	High Court Division
HCFC	Hydrofluorocarbons
HKC	Hong Kong Convention
HRC	Human Rights Committee (UN)
IA	Intervention Application
ICHM	International Certificate on Inventory of Hazardous Materials
IEE	Initial Environmental Examination
IHM	Inventory of Hazardous Materials
ILC	International Law Commission
ILO	International Labour Organisation
ILPI	International Law and Policy Institute
IMCO	Inter-governmental Maritime Consultative Organisation
IMF	International Metal Workers' Federation
IMO	International Maritime Organization (UN)

ILO	International Labour Organization
IRRC	International Ready for Recycling Certificate
ISRA	International Ship Recyclers Association
ITOPF	International Tanker Owners Pollution Fund
LDT	Light displacement tonnage- the actual weight of the ship, excluding cargo, stores, fuel, ballast passengers and crew and used to calculate steel value of a ship
LNG	Liquefied Natural Gas
MARPOL	International Convention for the Prevention of Pollution from Ships 1973 as modified by the 1978 Protocol (MARPOL 73/78)
MEA	Multilateral Environmental Agreement
MEPC	Marine Environment Protection Committee
MoEF	Ministry of Environment and Forest (Bangladesh)
MoU	Memorandum of Understanding
MTS	Maran Tankers Ship holdings Limited
NGO	Non-Government Organisation
NOC	No Objection Certificate
OCIMF	Oil Companies International Marine Forum
OECD	Organisation of Economic Co-operation and Development
OEWG	Open-ended Working Group
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PIC	Prior Informed Consent
PIL	Public Interest Litigation
PLD	Pakistan Legal Decision
PPE	Personal Protective Equipments
QB	Queen's Bench
RINA	Royal Institute of Naval Architects. Also Registro Italiane Navale Classification Society
RMG	Readymade Garments
SC	Supreme Court
SDPI	Sustainable Development and Policy Institute
SDR	Special Drawing Rights (Currency defined by the International Monetary Fund)
SLC	Shipbreaking Liability Certificate
SPCB	State Pollution Control Board
SRF	Ship Recycling Facility
SRO	Statutory Regulatory Order (Bangladesh)
SRP	Ship Recycling Plan
SRR	Ship Recycling Regulation
STOPIA	Small Tanker Oil Pollution Indemnification Agreement
TBT	Tributyltin
TBTO	Tributyltin Oxide
TOPIA	Tanker Oil Pollution Indemnification Agreement
TOVALOP	Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution
UKHL	The United Kingdom House of Lords
ULCC	Ultra Large Crude Carrier, Tanker of 320,000 DWT and above
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea 1982
UNCTAD	United Nations Conference on Trade and Development
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Program
UNGA	United Nations General Assembly
UNGP	United Nations Guiding Principles

VLCC	Very Large Crude Carrier, Tanker of 200,000 to 320,000 DWT
WSR	Waste Shipment Regulation
WTO	World Trade Organisation
YPSA	Young Power in Social Action

CHAPTER ONE : INTRODUCTION

I PROLOGUE

Shipbreaking is a risky industry for both humans and the environment. A report from the International Labour Organisation (ILO) stated that 'shipbreaking is one of the most dangerous occupations'.[1] Other recent media and non-government organisation (NGO) reports make this same point, reporting the regular deaths and injuries, particularly in India, Bangladesh and Pakistan's shipbreaking industry.[2] These three countries, located in the South Asian region, break 90% of the world's end-of-life ships, by offering high sale prices to international shipowners.[3] In 2009, the United Nations (UN) also considered the South Asian shipbreaking practice 'a serious issue of international human rights affecting the enjoyment of several human rights, including the right to life, the right to the highest attainable standard of physical and mental health, and the right to health and safety in working conditions'.[4]

Note: Part of this Chapter has been published in two journals. The references are mentioned below:

1. 'Shipbreaking Industry- Responsibility of the Maritime Industry' (November 2020) 19 *Perspective Australian New Zealand Society of International Law* 20-26.
2. 'The South Asian Shipbreaking Industry and its Unsafe Mining Practices' (2020) *Aspects of Mining and Mineral Science* 565-568.

[1] International Labour Organisation, *Shipbreaking: A Hazardous Work* (Webpage) https://www.ilo.org/safework/areasofwork/hazardous-work/WCMS_110335/lang--en/index.htm#:~:text=In%20addition%20to%20taking%20a,the%20soil%20and%20coastal%20waters.

[2] Mike Schuler, 'NGO Shipbreaking Platform: Use of Polluting South Asia Scrap Yards Accelerating' *gcaptain News* (online at 1 February 2017) https://gcaptain.com/ngo-shipbreaking-platform-use-of-polluting-south-asia-scrap-yards-accelerating/ .

[3] South Asia is a subregion of Asia. It includes Bangladesh, Bhutan, India, Pakistan, Nepal, Sri Lanka, and Maldives. Afghanistan is also a part of this region. Besides South Asia, 'Indian subcontinent' is also used when referring mainly to India, Bangladesh, and Pakistan. Among these eight countries, only India, Bangladesh and Pakistan have shipbreaking industry in their jurisdiction. 'South Asian shipbreaking countries' is a term that the thesis refer to the shipbreaking industry established in India, Bangladesh, and Pakistan. The dominant position of the South Asian shipbreaking industry reflects the high local steel demand in India, Bangladesh and Pakistan – the ships that come for breaking are the only source of domestic iron ore resources to support the growing steel demand in these countries: at Shawkat Alam and Abdulla Faruque, 'Legal Regulation of the Shipbreaking Industry in Bangladesh: The International Regulatory Framework and Domestic Implementation Challenges' (2014) 47 *Marine Policy* 46; Juan Ignacio Alcadia, Francisco Piniella and Emilio Rodriguez-Diaz, '"The Mirror Flags": Ship Registration in Globalised Ship Breaking Industry' (2016) 48 *Transportation Research Part D*, 378; see also Chapter 3.

[4] Okechukwu Ibeanu, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc. A/HRC/12/26 (15 July 2009). *(UN Special Report on Shipbreaking)*

Workplace deaths, injuries, and diseases are the main downsides of the shipbreaking industry, even though shipbreaking is an essential industry practice for the global maritime industry by resolving its overcapacity problem in merchant fleets.[5] More than a hundred workers die and many face serious physical injuries every year.[6] Along with traumatic and other injuries arising from the hazardous and manually intensive nature of the shipbreaking work, workers may suffer work-related diseases because of short-term or chronic exposure to occupational health hazards, such as mutagens, carcinogens, and asbestos-containing materials, among others.

Despite these significant occupational health and safety concerns,[7] there is no global or regional mechanism specific to shipbreaking that aims at compensating the workers who face deaths, or injuries, or work-related diseases. International shipowners earn millions of dollars from selling ships to South Asia,[8] but can still escape responsibility for ensuring safe working conditions and paying compensation through an opaque transfer process discussed in Part III below, by which a ship is taken out of service and sold for breaking without exposing the chain of ownership from cradle to grave. The nature of employment in this industry also allows shipowners to evade responsibility.

The thesis is motivated by the need to investigate the legal gap. In particular, it raises a vital question on the accountability for the human consequences that occur in the major shipbreaking industry in South Asia and inquires into whether the shipowners should undertake responsibility for the deaths, injuries and work-related diseases under a new international civil liability framework. In response to the inquiry and legal gap this current study argues that an international civil liability framework that aims at compensating workers who face injuries or become ill due to exposure to hazardous materials, or the family of deceased workers, is required. To that end, an important

[5] Olalekan Adekola and Md Jahir Rizvi, 'How to Recycle a Huge Ship- Safely and Sustainably' *The Conversation* (e-article, 24 August 2020) https://theconversation.com/how-to-recycle-a-huge-ship-safely-and-sustainably-143519#:~:text=Shipbreaking%20itself%20is%20important%20and,aluminium%20and%20plastics%20for%20recycling;

[6] See Chapter 3 for detailed statistics on this.

[7] Anand M. Hiremath, Sachin Kumar Panday, and Shyam R. Asolekar, 'Development of Ship-specific Recycling Plan to Improve Health Safety and Environment in Ship Recycling Yards' (2016) *Journal of Cleaner Production* 279, 280.

[8] See Chapter 3 that explains that yearly income of the maritime industry is around 2400 million USD from selling ships to South Asia; also see Ozan Sahiner, *Ship Breaking – Is It the Answer to The Shipping Industry's Overcapacity Problem?*(Blog Post, 24 February 2017) < https://www.morethanshipping.com/ship-breaking-answer-shipping-industrys-overcapacity-problem/>

contribution of the thesis is to propose a compulsory shipbreaking liability certificate (SLC) and shipbreaking liability insurance for all shipowners so that everyone has financial responsibility towards the end consequences of an end-of-life ship and a responsibility to act accordingly to change the existing unsafe shipbreaking practices.

The responsibility for the compensation payment and change in the industry practice must lie primarily with the international shipowners.[9] A basic reason for this is that the existing legal frameworks allow international shipowners to prioritise profiteering at the expense of the health and safety of the workers, knowing that the South Asian shipbreaking yards lack the financial capacity to create safe working and environmental protection arrangements in their yards. It is a fact that the South Asian shipbreaking industry has the responsibility to pay adequate compensation to workers, but the business model promoted by the shipping industry largely accounts for the failure of shipbreaking yards to protect the workers from these extreme consequences and to pay adequate compensation. As explained in Chapter 3, the South Asian shipbreaking businesses pay high prices to purchase end-of-life ships from international shipowners – the purchase of the ships accounts for 82% of the total shipbreaking cost. These high payments limit the financial resources of these yards to improve workplace health and safety, or to pay an adequate amount of compensation.

Part III of this Chapter examines the problems in relation to transnational processes of selling ships including the involvement of shipowners, shipbreaking methods, and the issues regarding compensation claims to signify the flaws and injustice in the governance structure of the shipbreaking and maritime industries. Before analysing the key issues in Part III, Part II below defines the key terms used in the thesis. Part IV explains the research objective and identifies the key questions before discussing the theoretical framework of the study subsequently in Part V. Part VI explains the motivation of the study and Part VII discusses the significance of the study ahead of Part VIII, which discusses the methodology of the study. Explaining the methodology, Part IX discusses the methods and techniques used for the study. Then Part X explains structure of thesis followed by a discussion on the limitations of the thesis in Part XI.

[9] Wei-Te Wu et al, 'Cancer Attributable to Asbestos Exposure in Shipbreaking Workers: A Matched-Cohort Study' (2015) 10(7) *Plos One* 6, 6.

II DEFINING THE KEY TERMS

Shipbreaking, as practised in South Asia (India, Bangladesh and Pakistan), means the process of breaking up a whole ship, which involves removing reusable materials, such as steel scraps, iron, aluminium, furniture, and electronic materials found in an end-of-life ship. The International Maritime Organization (IMO), in contrast, refers to this process as ship recycling because a shipbreaking yard can reuse and reprocess most of the materials found in an old ship.[10] For the purpose of the thesis, the term 'shipbreaking' is used since the thesis mainly focuses on issues relating to beaching, cleaning, and cutting ships for steel scraps and other reusable materials in the shipbreaking yards. Issues relating to manufacturing by-products, such as iron rods, made by recycling the materials from a ship, are beyond the scope of the thesis.

Another reason to use the term 'shipbreaking' in the current study is to send the right message about the existing practice of breaking ships in South Asia. Whilst the term 'ship recycling', as used in the only international convention on shipbreaking, the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling* (*Hong Kong Convention*), sounds reasonable,[11] use of the term 'ship recycling' is problematic for two practical reasons. First, 'ship recycling' is a concept used for good industrial practice, but it demonstrates a false image with respect to the poor shipbreaking practices used in the South Asian shipbreaking industry.[12] Second, arguing that breaking ships is a good industrial practice in South Asia, behind the veil of the term 'ship recycling', allows international shipowners to externalise the dangerous shipbreaking process to South Asia, earning profits from selling the ships and creating potential dangers, leading to deaths, injuries and work-related diseases for the low cost shipbreaking workers.[13]

The thesis uses the phrase 'shipbreaking industry' to refer generally to the shipbreaking businesses that operate in particular coastal locations within India,

[10] Under art 2(10) of *the Hong Kong International Convention for the Safe and Environmentally Sound Recycling*, the term 'ship recycling' is used instead of shipbreaking: at *The International Convention for the Safe and Environmentally Sound Disposal of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force). (*The Hong Kong Convention)*

[11] Ibid.

[12] The South Asian shipbreaking industry does not follow a standard shipbreaking method, because they have to spend a high cost in purchasing ships from shipowners rather than spending cost in improving the standard of shipbreaking: see Chapter 3 and Part II of this Chapter.

[13] See Chapter 5.

Bangladesh and Pakistan. The phrase ‘shipbreaking workers’ is used to refer to workers within the shipbreaking industry, and the phrase ‘shipbreaking nations’ to refer to India, Bangladesh and Pakistan, all of which are developing countries. Importantly, the phrase ‘shipbreaking yards’ is used to refer to shipbreaking companies who purchase ships for the purpose of breaking on the beaches of South Asia. The thesis uses the phrase ‘international shipowners’ because the activities involved in owning and operating a ship, even those of ship-owing companies based in a single jurisdiction, are inherently trans- or multi-national in character. International shipowners own and use ships for the maritime trade and finally sell them – for breaking up. As discussed below, the term, ‘shipowners’ in the thesis refers to both long-term and short-term shipowners.

In referring to shipowners, the thesis sometimes uses terms such as ‘shipping industry’, ‘maritime industry’, and ‘shipping companies’ – these terms are intended to include both long-term or original and short-term shipowners. Long-term or original shipowners include those persons or entities who may use a ship for commercial operation from its first registration. Short-term shipowners are persons or entities who may purchase a ship for a short time and negotiate the price for selling a ship to a shipbreaking yard. Cash buyers or brokers who purchase ships from the original owners and negotiate the sale with shipbreaking yards also fall into the category of short-term shipowners.

With reference to responsibility of shipowners, the thesis uses the term ‘civil liability’ and ‘shipbreaking liability’ – these terms are intended to argue for legal responsibility of shipowners for paying compensation to the shipbreaking workers (who face deaths, injuries or work-related diseases). Civil liability as used in this study is different from criminal liability in that the thesis does not argue for imposing criminal fines or sentences on shipowners. It also differs from state liability in that the civil liability argues for the liability of private shipowners rather than major shipping nations for failing to protect workers from deaths, injuries or work-related diseases in the shipbreaking industry. The thesis also uses the term 'civil liability framework' that generally refers to the 'shipbreaking liability certificate (SLC) framework' discussed in Chapter 9 of the thesis.

As briefly stated in Part III, the thesis identifies three main problems that have created a situation for the developing countries to accept the dangerous shipbreaking industry as it is.

III ANALYSING THE PROBLEMS WITHIN THE SOUTH ASIAN SHIPBREAKING INDUSTRY

A *Problems with Inter-State Transfer Process of Ships*

The final journey of a ship starts after an agreement for sale is concluded between a shipowner and an intermediary cash buyer, who buys a ship for a temporary period. The means by which it ultimately reaches a shipbreaking yard typically involves a number of parties, processes, and business practices.

Following the agreement for sale, the transfer process begins with the payment of 10% of a ship's price as booking money to an original shipowner, who generally prefers using a cash buyer to purchase a ship. One of the main reasons for using the cash buyer is to avoid renegotiation, with the sale price fixed at the beginning. As the price of steel fluctuates rapidly, when the price falls, purchasers (shipbreaking yards) may renegotiate to seek a decrease from the agreed price; therefore, cash buyers take the risk and ensure the agreed payment to shipowners. A cash buyer simply purchases a ship with cash and resells it to the South Asian shipbreaking industry for scrapping by using a Letter of Credit (L/C). Ninety per cent of the world's old ships go to shipbreaking yards through this dominant brokerage service.[14]

In a recent case of *Hamida Begum v Maran (UK) Limited*, the Court of Appeal of England and Wales found that the defendant, Maran (UK) Limited (Maran), incorporated in the Cayman Islands, acted as a demolition broker for the owner of a ship named the Maran Centaurus. Maran sold the ship to a Bangladeshi ship breaking yard (the Zuma shipbreaking yard) using a cash buyer, Hsejar Maritime Inc., a company incorporated in Nevis.[15]

[14] Tony George Puthurcherril, *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Matinus Nijhoff Publishers, 2010) 32.
[15] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. (10 March 2021) *(Maran Shipping)* [8]*;* See also Jamie Curle, Sarah Ellington and Daniel D'Ambrosio, *Shipping Agent Potentially Responsible for Alleged Negligent Disposal of Ship in*

The facts of the case show that Maran was involved in the management of the ship as an independent contractor, and that the ship was registered to Centaurus Special Maritime Enterprise, incorporated in Liberia.[16] On behalf of the owner, Maran made enquiries, obtained quotes for selling the vessel, and steered the negotiations for the deal using a cash buyer, Hsejar Maritime Inc. The cash buyer also took the credit risk of selling the ship (worth USD 16 million).[17] On 5 September 2017, cash buyer, Hsejar Maritime Inc. reflagged the ship from Greece to Palau and changed the name from the Maran Centaurus to the EKTA. The ship left Singapore on 22 September with a very low quantity of fuel and reached Bangladesh on 30 September 2017 for breaking.[18] The Bangladeshi shipbreaking yard later broke the ship – see Chapter 2 for further discussion on this case.[19]

The involvement of a cash buyer also assists the original owner in concealing their State identity and allows them to circumvent costly regulatory restrictions, such as pre-cleaning. For instance, the European Union *Waste Shipment Regulation* does not allow a ship to transfer beyond the EU jurisdiction unless the exporting State or the owner pre-cleans the toxic materials found in the body of a ship.[20] Sending ships without pre-cleaning is also not permissible under the relevant international laws. For example, the *Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal (Basel Convention)* (discussed in Chapter 5) is an important inter-State mechanism on shipbreaking that does not support such a practice.[21] In particular, an amendment to the *Basel Convention* that entered into force in December 2019 bans the transfer of waste from the Organisation of the Economic

Bangladesh (Web Page, 3 August 2020) , https://www.lexology.com/library/detail.aspx?g=84ba8284-3468-4d9b-82ec-6103bf4051cc

[16] Ibid *Maran Shipping* [6]

[17] Ibid [8].

[18] Ibid [13].

[19] Ibid.

[20] *Regulation No 1013/2006 of the European Parliament and of the Council on the Shipment of Wastes* [2006] OJL 190/1. *(Waste Shipment Regulation)*; David Azoulay and Nathaniel Eisen, 'Legality of the EU Commission Proposal on Ship Recycling' (Research Report No 1101, Centre of International Environmental Law, December 2012) 3 https://www.shipbreakingplatform.org/wp-content/uploads/2020/09/CIEL-Legality-EU-Proposals-on-Ship-Recycling-2020.pdf .

[21] *The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992) (*The Basel Convention*) United Nations Environment Program, *Basel Convention Controlling Transboundary Movements of Hazardous Wastes and Their Disposal* (Web Page, Overview) < http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx>

Co-operation and Development (OECD) member countries to developing countries.[22] Shipowners from developed countries therefore try to evade this responsibility by using the cash buyer's brokerage service. The cash buyers conceal the identity of original owners through the reflagging and renaming of a ship. Reflagging and renaming a ship is an easy process that can take just 24-48 hours by using websites. In some cases, before a ship reaches a shipbreaking yard, the cash buyers may already have reflagged or renamed the ship several times.[23] The NGO Shipbreaking Platform, an international organisation that works in this area defines this common practice of reflagging, 'a platform that breaks the genuine link between the country that operates the ship for international trade and flag of a country with which it sails before sailing to a shipbreaking yard'.[24] Critically, by breaking this link, shipowners can sell ships without disclosing the nature and amount of the internal wastes of a ship. The non-disclosure of wastes stored in a ship's body has proved disastrous, especially for South Asian countries with minimal capacity to identify the wastes. The thesis argues that a proper legal approach is to apply international law principles to regulate such an appalling business practice and warrant that the responsible parties provide an adequate remedy to shipbreaking workers (see Chapter 2).

Whether, under prevailing shipbreaking methods in the South Asian shipbreaking industry, a shipbreaking worker can have an adequate level of prevention is discussed below.

B *Problems with Shipbreaking Methods in South Asia*

The World Bank has identified three major problems in methods used in South Asia's shipbreaking industry.[25] First, long-term shipowners sell ships to developing South Asian countries without pre-cleaning the hazardous materials from a ship's structure.[26]

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[22] United Nations Environment Program, *Decision III/1: Amendment to the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal*, 22 September 1995, UN Doc UNEP/CHW.3/35 (entered into force 5 December 2019).

[23] Puthurcherril (n 14) 32.

[24] Flag state is the country where a ship is registered. It may be different from its original country of registration where a ship is primarily registered for commercial operation: at NGO Shipbreaking Platform, *Flag of Convenience* (Web Page) https://www.shipbreakingplatform.org/issues-of-interest/focs/

[25] Maria Sarraf et al, 'Ship Breaking and Recycling Industry in Bangladesh and Pakistan,' (Report No. 58275-SAS, World Bank, 2010) 1. *(World Bank Report 2010)*

[26] Pre-cleaning means the process of discharging all contaminated items of a ship by the shipping companies or the owners before sending them for dismantling. This is very important because all the problems in the South Asian shipbreaking industry begin as a consequence. Disposal of the wastes is

A ship in its structure may contain hazardous materials, such as, asbestos, heavy metals, mineral oil, bilge and ballast water, Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Tributyltin (TBT), lead paints, mercury, fuel deposits, and other harmful substances.[27] Since the materials remain in the body of a ship and are important to maintain operational capacity of the ship, 'in-built wastes' or 'internal wastes' is their commonly used name. Unless a shipbreaking yard identifies, removes and disposes these in-built wastes properly before breaking a ship, their exposure can harm water, air, and soil quality in the surrounding environment.[28] Mishandling of the materials can also cause different work-related diseases or explosions and kill dozens of workers at a time.

Second, the South Asian shipbreaking industry uses the beaching method to break the ships and, thus, the ships are cleaned on shallow open beaches often near coastal mangrove forests. Beaching means anchoring ships on sandy beaches for dismantling. It is a traditional method of bringing ships as close as possible to the intertidal zones of coastal areas. This helps to cut ships without using inbuilt safety structures. By using the beaching method, the South Asian shipbreaking industry discharges all toxic substances into the seawater, resulting in air pollution, soil erosion, soil contamination and water pollution, contamination of coastal regions, and loss of biodiversity.[29] Field research suggests that the release of toxic waste affects mangrove forests and threatens critical habitats.[30] Examples of the impact of pollution from the shipbreaking industry

very expensive and risky. NGO Shipbreaking Platform, Why Ships are Toxic? *Issues of Interest* (Webpage) https://shipbreakingplatform.org/issues-of-interest/why-ships-are-toxic/

[27] Md. Shakhaoat Hossain et al, 'Impact of Ship-breaking Activities on the Coastal Environment of Bangladesh and a Management System for Its Sustainability' (2016) 60 *Environmental Science and Policy* 84, 84-85.

[28] NGO Shipbreaking Platform, 'Annual Report 2016' (Research Report, NGO Shipbreaking Platform, 2017) 4 < https://shipbreakingplatform.org/wp-content/uploads/2018/02/NGO_Shipbreaking_Platform_Annual_Report_2016_05-web-page.pdf.

[29] Gopal Krishna, 'High on Hazard, Alang Poses Big Threat to Environment and Health of Local Communities, Migrant Workers', *Financial Chronicle* (online at 21 December 2012) http://www.mydigitalfc.com/industry/high-hazard-463

[30] Mohammad Maruf Hussain and Mohamamad Mahmudul Islam, 'Ship Breaking Activities and Its Impact on the Coastal Zone of Chittagong, Bangladesh: Towards Sustainable Development' (Research Report, Young Power in Social Action, Chittagong, Bangladesh, 2006); Federico Demaria, 'Shipbreaking at Alang-Sosiya (India): An Ecological Distribution Conflict' (2010) 70 *Ecological Economics* 250, 251-255.

are the 'toxic hotspots' or 'sacrifice zones' in Alang of India, Sitakunda of Bangladesh and Gadani of Pakistan.[31]

Third, the South Asian shipbreaking industry breaks ships by using dangerous manual methods, e.g., workers cutting ships with a fire torch or workers carrying steel plates on their shoulder. Such practices cause frequent incidents of deaths and injuries of workers. Causes of these incidents include fire explosions due to unseen gas in a ship's chamber (49%); the fall of plates and parts of ships in the process of scrapping (25%); inhalation of toxic gas (16%); and workers falling from heights (8%).[32] Thirty five per cent of workers have asbestos-related diseases from long-term exposure of the hazardous materials of end-of-life ships.[33]

Following Part examines whether, under the prevailing employment conditions in the South Asian shipbreaking industry, an injured or sick worker or the family members of a deceased worker can seek an adequate amount of compensation.

C *Non-transparent Employment System Leading to Limited Scope to Claim Financial Remedy*

Currently, it is hard for an injured worker or family member of a deceased worker to obtain an adequate compensation.[34] In the event of a worker's death, a family member may receive compensation between USD 341 and USD 2273,[35] if a national newspaper or an electronic media has published the news. Generally, media reports incidents when the number of casualties is high, whereas incidents with low causality rates remain unreported. This suggests that many injuries and deaths remain unreported and uncompensated. Further, evidence from Bangladesh shows that in order to get even such a small amount of compensation, an injured worker or the family members of a

[31] International Metalworkers Federation, 'Special Report: Cleaning up shipbreaking the world's most dangerous job' (Research Report, 15 December, 2015) 10 http://www.industriall-union.org/cleaning-up-ship-breaking-the-worlds-most-dangerous-job
[32] N. M. Golam Zakaria, Mir Tareque Ali and Khandakar Akhter Hossain, 'Underlying Problems of Ship Recycling Industries in Bangladesh and Way Forward' (2012) 9(2) *Journal of Naval Architecture and Marine Engineering* 91, 98.
[33] Venkiteswaran Muralidhar, Md Faizul Ahasan, and Ahad Mahmud Khan, 'Parenchymal Asbestosis Due to Primary Asbestos Exposure Among Ship-breaking Workers: Report of the First Cases From Bangladesh' (2017) *BMJ Case Report* 1, 4.
[34] International Metalworkers Federation, 'Status of Shipbreaking Workers In India - A Survey' (Special Report, IMF-FNV Project in India, 2007) 12.
[35] Puthurcherril (n 14) 36.

deceased worker must sign a no-claim agreement.[36] The agreement is to show that the shipbreaking yard owner has no future legal responsibility for the incident and that the amount is just a grant, not a right of the worker. Shipbreaking industries also use a non-transparent appointment system to escape liability for paying even a small amount of compensation. Sections 1 and 2 below discuss this unjustified system.

1 Non-transparent Appointment System

The South Asian shipbreaking industry requires a large number of workers because the conventional shipbreaking practice involves significant manual labour, such as workers' cutting the ships with bare hands and carrying the heavy steel plates on their shoulders. In the majority of cases, workers do these tasks with no personal protective equipment.

Shipbreaking yard owners also do not appoint the workers directly. Instead, the owners outsource their appointment to contractors who work as managers in the yards.[37] The workers are accountable to these external managers for their total employment period. The orders and decisions of the managers are final for them.[38] The involvement of managers thus breaks the direct legal link between the employers and workers.[39]

2 No Job Contract, Appointment Letter or Identity Card

The deprivation of labour rights to shipbreaking workers starts from the very first day of their appointment. Managers do not provide them a letter of appointment or any identification (ID) card.[40] Managers also do not enrol them properly as workers. No one maintains a worker's particulars in a record book.[41] Without an appointment letter and ID, a worker's legal status is weak. On the other hand, this employment practice

[36] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 105-106; Taqbir Huda, 'Justice in Practice: Why is the Price of Killing a Worker only Tk 2 Lakh' *The Daily Star e-paper* (online 11 July 2021) <E-paper(http://epaper.thedailystar.net> .
[37] International Metal Workers Foundation (n 34) 12.
[38] Antoine Bernard (ed) '*Where Do the Floating Dustbins End Up? Labour Rights in Ship Breaking Yards in South Asia: the Cases of Chittagong (Bangladesh) and Alang (India)*' (International Federation for Human Rights, December 2002) 1-10.
[39] Ibid 19-21.
[40] Karim (n 36) 126.
[41] Ibid.

benefits both long and short-term shipowners, allowing them to escape liability to provide compensation for workers.

As a result, the imbalance between the profit earned by the international shipowners based in developed countries and the economic loss of workers in the shipbreaking industry based in South Asian developing countries is a question of global injustice. The question of global injustice is raised in this study arguing that shipowners promote the industry in South Asia for their profit only with knowledge about South Asia's poor shipbreaking and employment standards.

Briefly, addressing the global injustice issue, the study aims to tighten the change of ownership from the cradle to grave practices, and provide a remedy system to the workers who face death, injuries and work-related diseases. The importance of the thesis lies in the fact that, because of unsafe working conditions around breaking hazardous ships at the under resourced shipbreaking yards these workers face physical injuries, work-related diseases, and deaths, while shipowners are protected from any consequences. Although the remedy system proposed under the thesis does not aim to address environmental problems directly, it may indirectly help to reduce them. This outcome depends on the improvement of the shipbreaking yard's facilities, subject to the effectiveness of the proposed framework discussed in Chapter 9 of the thesis.

IV RESEARCH OBJECTIVE AND QUESTIONS

The principal objective of the thesis is to argue for a civil liability framework, for providing adequate and prompt compensation to workers who face death, injuries or work-related diseases in the shipbreaking industry, and for tightening the change of ownership practices from cradle to grave of a ship. Critically, the proposed framework would provide a necessary supplement to the existing international legal frameworks relating to shipbreaking, because those frameworks only follow a preventive model. Given the on-going deaths, injuries, and levels of work-related disease in the South Asian shipbreaking industry – the legal frameworks are not enough to ensure workers' health and safety and to prevent further shipbreaking-related damages (see Chapter

5).[42] Further, because there has been no discussion within the maritime industry or the international community generally, about introducing a compensatory model, the proposed framework would fill in the gap.[43]

With the aim of bridging the gap, this thesis examines why the shipbreaking industry has remained outside the regulatory ambit of international liability law, and proposes the liability framework as a necessary instrument to fill a significant gap in the existing regulatory structure for the industry. The thesis therefore frames its main research question as**:**

What legal and liability framework is required to make the international maritime industry accountable for the harms to human life and health (workers' deaths, physical injuries, and work-related diseases) in shipbreaking countries?

Before answering this question, it is necessary to identify the basic problems within the international maritime industry – its extension into the South Asian shipbreaking industry – that inhibit or prevent the extension of legal liability for deaths, injuries and diseases suffered by shipbreaking workers, including weaknesses in existing domestic and international regulatory approaches, and through a comparison with the EU approaches to regulation of shipbreaking. The thesis will also use a comparative approach to draw analogies from other industry-led global regulatory reforms that have successfully imposed liability on responsible parties for the payment of compensation to affected workers and communities, and will evaluate commonalities, weaknesses and strengths for the thesis to make recommendations for a suitable liability framework. Those recommendations are embodied in the civil liability framework, a global shipbreaking liability certificate (SLC), proposed in Chapter 9.

In this context, the thesis will also address the following specific research questions:

1. Why has the shipbreaking industry become so well established in South Asian countries despite its impacts on the environment and on the welfare of workers?

[42]Mohammad Zulfikar Ali and Prafula Pearce, 'Effectiveness of the Hong Kong Convention on Ship Recycling in India, Bangladesh and Pakistan' (2019) 5 *Curtin Law and Taxation Review* 69, 83-85.
[43] Mohammad Zulfikar Ali, Shipbreaking Industry - Responsibility of the Maritime Industry (November, 2020) 19 *Australia New Zealand Society of International Law Perspective* 4:19, 25.

2. What are the inadequacies in the national laws of the South Asian shipbreaking countries to prevent work-related deaths, injuries, or diseases and to compensate an injured or ill worker or the family members of a deceased worker?
3. What are the inadequacies of international legal frameworks to prevent work-related deaths, injuries, or diseases and to compensate an injured or diseased worker or the family members of a deceased worker?
4. What can the global shipbreaking industry learn from regulatory and financial measures of the EU in relation to shipbreaking?
5. What can the shipbreaking industry learn from the legal reforms in other industries where catastrophic events, deaths, injuries, illnesses of workers and environmental damages have brought about significant regulatory changes to the industries concerned?
6. What can be the salient features of a new international framework that can bring changes to the workers compensatory and regulatory regime in the South Asian shipbreaking industry?

V THEORETICAL FRAMEWORK

The philosophical approach for this research is the rectificatory global justice approach,[44] with a focus on remedying an injustice.[45] The proposition that 'a regulatory system is required when an injustice is globally constructed' underpins the theoretical framework.[46] This thesis adopts the theoretical framework with the aim of remedying future injustice rather than rectifying past injustices.[47] It acknowledges that the current problems, such as beaching, transferring ships to developing countries for breaking without pre-cleaning, and the manual labour and workplace hazards inherent

[44] See Goran Collste, *Global Rectificatory Justice* (Palgrave McMillan, 1st ed, 2015) 17.
[45] Ibid.
[46] Gregory Ticehurst and Anthony Veal, *Business Research Methods: A Managerial Approach* (Pearson Education, 2000)
[47] Goran Collste referred some to historical injustice issues to apply the theory of rectificatory justice. His study acknowledges the past abuse of human rights in the context of shipbreaking, but it proposes to use it for regulating future injustice instead of the past abuses: at Collste (n 44) 76-77.

to traditional shipbreaking methods, as unfortunate necessities, may not be phased out soon.[48]

Before establishing a case to use the rectificatory justice theory it is important to establish whether shipbreaking is an injustice to the developing countries. The injustice argument in the current research stems from two reasons. The first is that an international instrument in place, namely the *Hong Kong Convention*, provides neither a mechanism for funding the developing countries to support them in meeting the prescribed standards, nor a provision so that shipowners undertake responsibility for the work-related deaths, injuries and diseases. The second is that the maritime and shipbreaking industries jointly perpetuate a system whereby the shipowners send off their waste to poor developing countries for breaking, and in so doing violate the principles of duty of care, good faith, preventing the abuse of others' rights, and due diligence (see Chapter 3 that discusses the annual profit of shipowners).

On the other hand, Hadjiyianni and Kloni argue that shipbreaking is not an injustice to developing countries. Rather shipbreaking is an example of a circular economy approach because the business is deeply rooted within the society and economy of developing counties.[49] The industry minimises the wastes of ships and contributes to the economic development of shipbreaking countries. The European Commission defines circular economy as a 'transition where the value of products, materials and resources is maintained in the economy for as long as possible and the generation of waste minimised'.[50]

According to the circular economy approach, exporting ships to developing countries for steel is not illegal or unjust.[51] The legality of the industry using the circular economy approach makes it nearly impossible to impose liability on shipowners for

[48] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 230.
[49] Ioanna Hadjiyianni and Anna Kloni, Regulating Shipbreaking As a Global Activity: Issues of Fragmentation and Injustice (2021) *Journal of Environmental Law* 211, 215; see more generally Gordon Walker, *Environmental Justice, Concepts, Evidence and Politics* (Routledge, 2012) 98.
[50] European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Closing the Loop – A EU Action Plan for the Circular Economy*, COM (2015) 614/2, EU Commission: Brussels, Belgium, 2015 cited in Christian Jageuken et al, 'The EU Circular Economy and Its Relevance to Metal Recycling' (Special Issue 2016) 1(2) *Public Policy Directions for Directions for Recycling, Waste Management, Resource Recovery and Circular Economy* 242, 243-250.
[51] Hadjiyianni and Kloni (n 49) 215.

selling the hazardous ships.[52] This thesis, however, discounts the circular economy approach, contending that the circular economy approach has a limit, and that developed countries should not use it to justify clear risks to human lives. The thesis applies the rectificatory justice approach to argue that in order to rectify the injustice, any industry that causes such work-related deaths, injuries, and diseases must have a remedy system.

The thesis defines rectificatory justice, mainly relying on Aristotle and Sen's concepts of corrective and remediable justice, particularly using the idea of 'balance between business profit and human consequences'. Aristotle, who is widely regarded to be the first to state this kind of justice,[53] finds a similarity between rectificatory and corrective justice, and argues that corrective justice is important to benefit the victims and balance things by means of a penalty or take-away from the gain of the accused.[54] Amartya Sen's approach with respect to justice is also persuasive. According to Sen, the goal of justice is to identify an injustice, which is curable.[55] If not in full, a society should at least try to eliminate remediable injustice.[56]

To date, research on shipbreaking has not used the concept of rectifying the injustice as proposed by Aristotle and Sen since the existing research has not identified the causes of injustice in the shipbreaking industry.[57] Shipbreaking industry represents a clear example of injustice by its failure to recognise and account for the interests of the workers.[58] In this context, Hadjiyianni and Kloni note that the *Hong Kong Convention* encourages inter-State technical assistance and technology transfer, but the Convention does not provide for the generation or supply of funds by maritime nations so that developing countries can invest in meeting the *Hong Kong*

[52] Ibid.
[53] G. Stanley Whitby, 'Justice' (1942) 52 (4) *Ethics* 399, 400.
[54] Peter Singer, 'Famine, Affluence and Morality' (1972) 1 *Philosophy and Public Affairs* 229, 229-233.
[55] Amartya Sen, 'Rawls versus Bentham: An Axiomatic Examination of the Pure Distribution Problem' (1974) 4 *Theory and Decision* 301, 302-309 https://doi-org.dbgw.lis.curtin.edu.au/10.1007/BF00136651;.
[56] Amartya Sen, *The Idea of Justice* (Allen Lane, 2009) 7.
[57] See Hadjiyianni and Kloni (n 49) 220; Pogge argues that inter-State businesses are designed in a way to serve the interest of Western States. Poor countries do not have the resources to pursue their interests at the negotiating tables where international agreements are agreed: at Thomas Pogge, *World Poverty and Human Rights, 2008* (Cambridge: Polity Press, 2nd ed, 2008), 17-18, cited in Kasper Lippert-Rasmussen, 'Global Injustice and Redistributive Wars, Law' (2013) 1 *Ethics and Philosophy*, 69-71.
[58] Corinna Mieth, 'Global Injustice: Individual Duties and Non-Ideal Institutional Circumstances' (2012) 12(1) *Civitas-Revista de Ciencias Sociais* 47, 47-50.

Convention's standards of safe ship recycling (see Chapter 5). The current research corroborates this argument and applies the concept of rectificatory justice, examining these weaknesses in the *Hong Kong Convention* (see Chapter 3).[59]

Weeramanty's notion of the postcolonial theoretical framework is instrumental to form the basis of the global injustice argument in the shipbreaking industry. He argues that the international laws adopted after the end of colonialism have provided enormous power without responsibility to western nations.[60] Use of this theoretical framework is crucial to conceptualise that shipbreaking is a matter of global injustice because the international laws that apply (or ought to apply) to the shipbreaking industry provide no liability and remedy system for work-related deaths, injuries and diseases. The thesis develops the proposition of injustice on the ground that the shipbreaking industry, as one component of the global maritime industry, does not impose any liability for work-related deaths, injuries, diseases, and environmental problems on the international shipowners, who are the parties that benefit most from the industry.[61] The thesis also draws on Pogge's claim that global institutions have established an economic order that is inherently biased in favour of developed nations.[62] Using Pogge's claim, the thesis further posits that this bias is evident in the design of the *Hong Kong Convention*, which mainly favours the shipping nations. The *Hong Kong Convention* allows companies from major shipping countries to sell ships with hazardous materials to shipbreaking companies in developing countries without any responsibility for the work-related deaths, injuries and diseases caused from breaking the ships (see Chapter 5).[63] In other words, the effect of the *Hong Kong Convention* is to enable a business model that allows international shipowners to profit from the sale of end-of-life ships into a competitive South Asian shipbreaking market (which reflects the high demand for recycled material in the three South Asian nations,

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[59] Ensuring human rights is a global issue: at the United Nations, *Global Issues Overview* (Web page) https://www.un.org/en/sections/issues-depth/global-issues-overview/ ; Brooke Ackerly, *The Hardest Cases of Global Injustices: The Responsibility to Inquire in Justice, Sustainability, and Security: Global Ethics for the 21st Century* (Palgrave McMillan, 2013) 27-30.

[60] Christopher George Weeramanty, *Universalising International Law* (Martinus Nijhoff Publishers, 2004) 85.

[61] Stephen M. Gardiner, 'Ethics and Global Climate Change' (April 2004) 114(4) *University of Chicago Press Journals* 580, 555-600; Alpana Roy, 'Postcolonial Theory and Law: A Critical Introduction' (2008) 29 *Adelaide Law Review* 315, 317.

[62] Thomas Pogge, 'World Poverty and Human Rights' (2005) 19(1) *Ethics and International Affairs* 1-7.

[63] Md Saiful Karim, 'Recycling of Ships' in *Prevention of Pollution of the Maritime Environment from Vessels: Potential Limit of the International Maritime Organisation*' (Springer, 2015) 98-100.

who lack the mineral resources to make steel), and to escape financial responsibility for cleaning hazardous substances from the ships and for compensating shipbreaking workers.

International shipowners are well aware of the dangers involved in breaking the unclean ships, but nonetheless are content to keep earning a significant profit by selling ships to developing countries for breaking.[64] The ultimate burden of the shipbreaking accidents is borne by poor workers.[65] This is a clear derogation from three liability principles – namely, duty of care, good faith and prevention of abuse of rights, and due diligence.[66] According to these principles, a party to a business transaction has fiduciary duties to provide a minimum standard of protection to the other party and ensure that the other party does not face any foreseeable harm. A concerned party to a business transaction must not intend to abuse the rights of others. Overall, the principles mean that, if a party fails to protect the interest of others in a business relationship, the parties in control of the business have legal responsibility. These international law principles provide a strong legal and normative foundation to argue that shipowners should have liability for compensating the workers who face deaths, or injuries, or diseases from the exposure to hazardous substances in the shipbreaking industry.

The theories and the principles discussed above, guide the thesis to explore the social and economic realities of the workers in the shipbreaking industry[67] and develops a regulatory mechanism – the SLC and insurance – to remedy and control the work-related deaths, injuries, and diseases.[68]

[64] Ingvild Jenssem et al, 'Impact Report 2018-2019' (Research Report, NGO Shipbreaking Platform, 2020) 4 https://shipbreakingplatform.org/wp-content/uploads/2020/06/NGOSBP-Bi-Annual-Report-18-19.pdf .
[65] George Cairns, 'A Critical Scenario Analysis of end-of-life Ship Disposal: The Bottom of the Pyramid as Opportunity and Graveyard' (2014) 10(3) *Journal of Critical Perspectives on International Business* 172, 172-175.
[66] Karim (n 63).
[67] Ishtiaque Ahmed, 'Unravelling Socio-Economic and Ecological Distribution Conflicts in Shipbreaking in Bangladesh for Addressing Negative Externalities in Law and Policy Making,' 2020 (29) 2, *Minnesota Journal of International Law* 159, 187.
[68] Cairns (n 65).

VI MOTIVATION OF THE STUDY

The shipbreaking industry benefits the international maritime industry and provides an important source of employment and recycled steel for South Asian countries.[69] Much of the current literature on the shipbreaking industry focuses on the benefit of the industry to South Asian countries. There is less literature on the effects of the industry on the rights of workers. Contribution of the industry towards the economy of the South Asian countries is crucial, but the benefits must not come at the expense of the uncompensated deaths, injuries, and exposure to diseases of shipbreaking workers. The current regulatory approaches on the industry also do not consider the rights of workers. These gaps in the literature and legal frameworks of shipbreaking motivate the study. In particular, two key issues that arise regarding the current regulatory approaches motivate this study explained below.

A *Limited Possibilities for Domestic Reforms in South Asian Countries*

In the context of national law, individual State mechanisms in South Asian nations have so far been unsuccessful, in the absence of any pressure from an international body for the nations to comply with worker safety and environmental standards.[70] Where shipbreaking yards have implemented stricter regulatory frameworks, shipping companies have not supported these countries but have re-directed their business to countries with less stringent regulatory controls. Between 2005 and 2006, when India implemented stricter regulations, the shipbreaking industry in Bangladesh benefitted,

[69] Broadly, the shipbreaking industry is also considered as a part of the maritime industry and that is why the International Maritime Organization, which mainly governs the maritime industry, has introduced the *Hong Kong Convention* specifically to regulate the shipbreaking industry. See Md Saiful Karim, 'Recycling of Ships' in *Prevention of Pollution of the Maritime Environment from Vessels: The Potential Limit and Limits of the International Maritime Organisation* (Springer, 2016) 85-90.

[70] Puthurcherrill convincingly argues that ships and work-related deaths, injuries and diseases are beyond any legal relationship, because they operate in two different jurisdictions. Ships sail on international waters, whereas shipbreaking yards are operated on within the jurisdiction of an individual state. However, he argues this lack of connectivity does not strike down the argument that international law should apply, especially if the international and host parties have an association and business link - for example, because shipping industries or private shipowners initiate the business process by showing interest to sell a ship for breaking, and it ends when a ship finally reaches to a shipbreaking yard, passing through the hands of Flag of Convenience states (FoCs) and cash buyers (see Chapters 3 and 5): at Tony George Puthurcherril 'Limitations of a National Response to Regulate Global Shipbreaking Industry - A Study of the Indian Experience' in David Freestone (ed), *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Matinus Nijhoff Publishers, 2010) 53.

with a sharp rise in the number of ships being taken there for breaking. Thus, significant domestic legislative reforms to better safeguard worker health and safety and to protect the environment are unlikely, because of concerns that greater compliance costs (and consequent reductions in the prices offered for ships) will cause business to go to other competing shipbreaking locations within South Asia (and possibly elsewhere). The regime of competition creates a 'race to the bottom' situation for the workers. The thesis thus proposes a mechanism that will address the root of this problem.

B *Weaknesses in the Application of International Legal Frameworks*

Until 2009, the only international regulatory mechanism for the shipbreaking industry was the *Basel Convention*. The *Basel Convention*'s objective is to reduce the generation of waste and restrict the movement of waste, through measures aimed at keeping waste closest to the place of production. However, shipowners circumvent the *Basel Convention* by arguing that the Convention only applies to the transfer of wastes, not ships. Since a ship is not waste, the central argument has been that the transfer of ships for breaking is beyond the scope of the *Basel Convention*. The core problem for the application of the *Basel Convention* to the shipbreaking industry is a definitional one, namely, whether ships are 'wastes'. Art 2(1) of the *Basel Convention* is relevant as it defines 'wastes' as 'substances or objects, which are disposed of, or are intended to be disposed of, or are required to be disposed of by the provisions of national law'.[71] Therefore, the legal transformation of a ship to waste depends on whether the owner or the management company 'intends' the ship to be 'wastes'. This approach means that the *Basel Convention* only applies to the shipbreaking industry if it can be inferred – whether expressly, such as by a declaration of intent, or by the conduct of the shipowner – that the owner or the management company intends that the ship is on its last journey for dismantling. The intention must be deduced from the express or implied activities of the immediate owner; if the immediate owner does not evince such an intention (whether expressly or by their conduct), then the *Basel Convention* cannot be applied.

[71] In general, the *Basel Convention* regulates the inter-State movement of wastes.

In response to the difficulty of applying the *Basel Convention* to older ships, the International Maritime Organization (IMO) adopted the *Hong Kong Convention*. The *Hong Kong Convention* has introduced a 'cradle to grave approach' for ensuring occupational safety and health. According to this approach, flag States must prepare an inventory of hazardous materials (IHM) for each ship before starting their commercial operation. The IHM requires that detailed information about toxic substances contained in the ship be prepared and maintained as a written record. Regulation 5(4) of *the Regulation for Safe and Environmentally Sound Recycling of Ships, 2009* (adopted under the *Hong Kong Convention*) provides that at the completion of the lifecycle of a ship,[72] flag States are required to supply the IHM to the shipbreaking industry or the recycler. Every shipbreaking industry must then prepare a ship-specific plan ('the plan') for breaking with respect to a ship's IHM. Under reg 16 of *the Regulation for Safe and Environmentally Sound Recycling of Ships, 2009,* the plan is required to include all the information regarding management of hazardous materials identified by the IHM. Therefore, under the *Hong Kong Convention,* the shipbreaking industry is required to meet certain standards in 'the area of planning' and 'training to workers' in case of emergency operation, preparedness for accidents and spills, and other matters.[73]

Although the *Hong Kong Convention* introduced these new approaches, in practical terms the *Hong Kong Convention* is yet to enter into force, mainly because it has not yet obtained a required number of ratifications from the major shipbreaking countries in South Asia.[74] The principal argument of the South Asian shipbreaking countries is

[72] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force) Annex ('*Regulation for Safe and Environmentally Sound Recycling of Ships)* provides that every ship is required to keep a certificate on Inventory of Hazardous Materials (IHM) to provide notice about existing toxic materials of a running ship: at reg 5(4). ('*Regulation on International Ship Recycling'*)
[73] *Regulation on International Ship Recycling*, regs 18(1) and 18(4).
[74] There are three requirements to entry into force of the *Hong Kong Convention*. First, the *Hong Kong Convention* requires 15 states, second, it requires the States that have acceded to it or have ratified it represent not less than 40 per cent of the world's merchant shipping fleets. The critical part for the *Hong Kong Convention*'s entry into force is its third condition, which provides that the combined maximum annual ship recycling volume of the States that have acceded to it or have ratified it must constitute not less than 3% of their combined merchant shipping tonnage. Data on shipbreaking between 2007 and 2018 shows that the States acceded into the Convention have capacity of 1714,973 GT only, which is much less than the required 16,003,720 gross tonnage (i.e. 3% of the tonnage condition of 533,457, 349 gross tonnage of their combined fleets) to meet the 3% capacity. After India acceded into the *Hong Kong Convention* the capacity has increased significantly but it still requires either Bangladesh and Pakistan or China to accede into the Convention to meet the requirements: See generally Nikos Mikelis, 'The Recycling of Ships' (2018) April, *Future of the Ship*

that the *Hong Kong Convention* does not include a mandatory obligation on the shipping companies for 'pre-cleaning' the toxic ships before sending them off to developing countries for dismantling. Instead, the *Regulation for Safe and Environmentally Sound Recycling of Ships* merely provides that 'ships destined to be recycled shall conduct operations in the period prior to entering into the ship recycling yard to minimise the amount of cargo residues, fuel oil, and wastes remaining on board'.[75] This means shipowners have no liability to pre-clean their ships before the ships start their last journey. The *Hong Kong Convention* also does not question the issues of tightening the ownership from cradle to grave, pre-cleaning, beaching, and conventional shipbreaking practice (see Chapter 5).

Despite these major weaknesses as an international legal instrument for regulating the shipbreaking industry, the maritime industry argues that the *Hong Kong Convention* is adequate and appropriate and is capable of resolving any problems – and, therefore, it is unnecessary to consider the question of liability for work-related deaths, injuries and diseases suffered by workers or to tighten the change of ownership from cradle to grave.[76] Challenging those assumptions, this study argues that a treaty-based civil liability mechanism is required to address the liability of both long-term and short-term shipowners for the work-related deaths, injuries, and diseases while breaking their end-of-life ships.[77]

VII SIGNIFICANCE OF THIS RESEARCH

The research makes an original contribution to the existing shipbreaking literature and enhances the knowledge in this field. First, the thesis examines the gaps in the *Hong Kong Convention* and the *Basel Convention* and argues that international shipowners should bear the responsibility for workers' deaths, injuries, and illness and that there must be a regulatory framework to monitor this accountability and compliance. The *Hong Kong Convention* prioritises the improvement of standards in shipbreaking countries while proposing no mechanism to form a global shipbreaking fund to support

Recycling Sector 27; Nikos Mikelis, 'The Recycling of Ships' (2nd ed, *Global Marketing System*, October 2019) 36-38.

[75] *Regulation on International Ship Recycling*, regs 5(1), 17.

[76] Maersk, 'Breaking the Stalemate' *Case Studies* (Web Page, 25 October 2019) https://www.maersk.com/news/articles/2017/01/03/breaking-the-stalemate

[77] Maersk, 'Maersk Tightens Its Ship Recycling Procedures', *Case Studies* (Web page, 04 April 2019) https://www.maersk.com/news/articles/2019/04/04/maersk-tightens-its-ship-recycling-procedures

the improvement of standards in the shipbreaking yards financially.[78] An international legal framework is a crucial legal step that enables tracing of the chain of ownership for a ship prior to the ultimate sale of the ship for dismantling, so that both long-term and short-term shipowners have legal responsibility (see Chapter 9).

In addition to tracking the chain of ownership, mandatory regulations are required in order to bring about a meaningful change in the international maritime industry's corporate behaviour. The international shipowners should undertake responsibility for a safe and sustainable working environment for shipbreaking and, where the preventive model fails, must compensate the injured, or ill workers, or the family members of deceased workers.

Second, in addition to the *Hong Kong Convention*, an industry-based standard is required in order to protect the right to life and health of workers. Drawing on analogies from successful regulatory changes for other global industries (see Chapters 7 and 8), the thesis proposes that the shipping industries should undertake responsibility and introduce the SLC and accompanying shipbreaking insurance under a legal framework adopted under the auspices of the IMO.[79] The ability to identify and track the last owner of a ship is an important objective of the SLC, and the function of the insurance would be to pay compensation to victim workers (or their families). The legal framework to introduce the SLC and insurance would expressly provide that a shipping company or other entity owning the ship must not sell a ship for breaking unless the SLC and insurance is in place. If a ship were sold without the SLC and insurance, the last holder of shipbreaking insurance would be liable. International

[78] Joshin John and Sushil Kumar, 'A Locational Decision Making Framework for Shipbreaking Under Multiple Criteria' (2016) 7(1) *International Journal of Strategic Decision Sciences* 76, 78-81.
[79] The *International Convention on Load Lines*, adopted on 5 April 1966, IMO Doc. No. 9159 (entered into force 21 July 1968) (*The Load Lines Convention)* provides that every ship has to maintain a load lines certificate from the very first day of a ship's operational life: at art 3(1) ; *International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 29 November 1969, [1969] UNTS 319 (entered into force 19 June 1975) *(1969 Civil Liability Convention)*; the Convention was replaced by the *1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 27 November 1992, [1992] UKTS 86 (entered into force 30 May 1996) *(1992 Civil Liability Convention)* provides that a ship has to carry a certificate of insurance on board at all times. Without the insurance, the ship will not be allowed to trade or enter or leave the ports of Member States: at art 7; See R. Bhanu Krishna Kiran, 'Liability and Compensation for Oil Pollution Damage: An Examination of IMO Conventions' (2010) 3(4) *National University of Juridical Science Law Review* 399, for detailed discussion on the issue of liability and compensation in oil pollution damage.

maritime insurance industries would govern the insurance and the IMO would govern the SLC (see Chapter 9).

The proposed SLC framework will not only introduce compensatory liability for the ship sellers, but will also encourage companies to comply with the requirements of the *Hong Kong Convention*'s cradle to grave approach that refers to be concerned on the issue of sound shipbreaking from the beginning to end of a ship's life. The framework would thus supplement the existing global framework, given that the *Hong Kong Convention* deals only with occupational health and safety and does not address the issue of compensation for workplace injuries, fatalities and diseases (see Chapter 5). Nevertheless, the IMO may require support from major shipping industries and their nations to introduce such a mechanism. In this context, the thesis argues that the proactive role of the European Union in regulating their shipping industries (see Chapter 6) has set an example for other shipping countries to follow suit. The European Union (EU) has already introduced the *European Union Ship Recycling Regulation 2013* and there is strong support in the EU to introduce a similar shipbreaking liability framework to that which the current study proposes for the global shipbreaking industry.[80]

The importance of the proposed framework lies within the current gap in the literature around accountability, workers' rights, and compensation for work-related deaths, injuries and diseases and critical analysis of legal mechanisms, with a focus on compensation. Literature review in this area indicates that neither the international community nor the shipowners have taken ownership of the work-related deaths, injuries and diseases caused by the shipbreaking industry.[81] Shipowners do not want to bear the high cost of safe and proper disposal of wastes since they can save millions of dollars and externalise the cost of shipbreaking (including waste disposal) by selling ships to South Asian countries. They can also earn millions of dollars from the sale of ships. This business practice by international shipping companies or shipowners ignores the lack of resources available to developing countries to improve

[80] *The European Union Regulation for Ship Recycling*, opened for signature 20 November 2013, [2013] OJ (L 330/1 (entered into force 31 December 2018). (*EU Ship Recycling Regulation*); The EU Director General for Environment, *Financial Instrument to Facilitate Safe and Sound Ship Recycling* (Web Page) https://ec.europa.eu/environment/waste/ships/pdf/financial_instrument_ship_recycling.pdf

[81] Karim (n 36) 25.

environmental and worker safety standards for their shipbreaking industries. Thus, unless an international civil liability framework is adopted, by which shipowners undertake responsibility, the problems identified in this thesis will continue.

Third, an important significance of the thesis lies in its new theoretical approach. The philosophical approach of the thesis is to apply the theory of rectificatory global justice. Considered further in Part VII below, the research, by applying the theory of rectificatory justice, will make an original contribution to developing a civil liability framework and an appropriate justification for that framework. The civil liability of shipowners within the philosophical domain of global rectificatory justice has been largely unexplored in this area. The thesis resolves the gap, conducting a legal analysis of the shipbreaking-related case laws and legislations.

A review of the literature on the shipbreaking industry shows that previous researchers have mainly highlighted the constraints of relevant international conventions and guidelines. No research appears to have been undertaken to evaluate the prospects for significant change within the shipbreaking and broader maritime industry using both the case study and doctrinal research methods to draw analogies with similar significant reform actions in other industries.

Previous studies have also conducted legal analyses, but have mainly focused on improving the standard of the shipbreaking process using their discipline-based research methodologies. For example, some scientific studies have used environmental impact modelling in an attempt to prioritise prospects for a better shipbreaking process.[82] Economists have used quantitative methodology to design a

[82] Shyam R Asolekar, 'Greening of Ship Recycling In India: Upgrading Facilities in Alang' (Conference Paper, Annual Ship Recycling Conference, 7-8 June 2012) 3; Arun Kr Dev, 'Various Aspects of Sound Ship Recycling' (Conference Paper, The International Conference on Marine Technology, 11-12 December 2010) 7; Anand M. Hiremath, Atik K. Tilwankar, and Shyam R. Asolekar, 'Significant Steps in Ship Waste Recycling Vis-à-Vis Wastes Generated in a Cluster of Yards in Alang: A Case Study' (January 2015) (87) *Journal of Cleaner Production* 520, 521-530; Shrinivas Reddy Mallampati et al. 'Quantification and Classification of Ship Scrapping Waste at Alang-Sosiya, India' (2003) 46 *Marine Pollution Bulletin* 1609, 1609-1614; Shrinivas Reddy Mallampati et al, 'An Assessment for Energy Potential of Solid Waste Generated From Ship-Scrapping Yard at Alang' (2004) 30(2) *Journal of Solid Waste Technology and Management* 90, 92-95; Shrinivas Reddy Mallampati et al. 'Distribution, Enrichment and Accumulation of Heavy Metals in Coastal Sediments of Alang-Sosiya Ship Scrapping Yard, India' (2004 b) 48 (11-12) *Marine Pollution Bulletin* 1055, 1056-1059; Shrinivas Reddy Mallampati et al, 'Modelling the Energy Content of Ship-Scrapping Waste at Alang-Sosiya, India Using Multiple Regression Analysis' (2005) 25(7) 1 *Waste Management* 747, 749-753; M.G. Carvalho et al. 'Optimisation of MSW Collection Routes for Minimum Fuel Consumption Using 3D GIS Modelling' (2009) 29 (3) *Journal of Waste Management* 1176,1176-1185; Sonak et al. 'Shipping Hazardous Waste: Implications for

model for accelerating economic growth while preventing the extreme damage to the environment.[83] Marine scientists have investigated the negative consequences of the industry to the coastal environment using the quantitative and environmental impact assessment methodologies.[84]

Environmental activists have also received widespread public attention in shipbreaking research. For example, the International Federation of Human Rights (FIDH), the International Law and Policy Institute (ILPI), and the ILO have focused on workers' rights using life cycle assessment, critical scenario analysis, onsite assessment, and legal analysis methods.[85] Recently, Puthurcheril,[86] Galley,[87] and Karim,[88] have provided legal analyses for the operation of the shipbreaking industry. These studies have examined the shipbreaking regime using social justice, judicial enforcement, and environmental justice theories. The EU has begun using the criminal justice theory to deter their shipowners from selling ships to developing nations (see Chapter 6: Part IV).

Economically Developing Countries' (2008) 8 *Politics, Law and Economics* 143, 143-159; K Sivaprasad, 'Development of Best Practices for Sustainable Shipbreaking' (PhD Thesis, Cochin University of Science and Technology, India, 2010).

[83] Mo Zhu et al. 'Incentive Policy for Reduction of Emission from Ships: A Case Study' (December 2017) 86 *Journal of Marine Policy* 253, 253-256; Zakaria, Ali, and Hossain, (n 32) 91, 94-95; GB Upadhyay, 'The Problems and Prospects of Shipbreaking Industry in India With Reference to Alang Ship Breaking Yard' (PhD Thesis, Bhavanagar University, India, 2002); World Bank Report (2010).

[84] MM Hossain and KL Islam, 'Shipbreaking Activities and Its Impact on the Coastal Zone of Chittagong: Toward Sustainable Management' (*Young Power in Social Action*, Chittagong, Bangladesh, 2006); SJ Pathak, 'Impact of Alang Shipbreaking Activity on Water Sediment Quality of the Intertidal Ecosystem at Alang-Sosiya Complex and Surrounding Areas' (Gujarat Ecology Commission, Ecological Restoration and Planning for Alang-Sosiya Shipbreaking Yard, Gujarat, 1997).

[85] International Law and Policy Institute, 'Shipbreaking Practices in Bangladesh, India and Pakistan (An Investor Perspective on the Human Rights and Environmental Impacts of Beaching' (Norway, 2016); Aage Bjorn Anderson, 'Worker Safety in the Shipbreaking Industries' (Issues Paper No WP 167, International Labour Office, February 2001) 13-14 http://www.ilo.org/safework/info/publications/WCMS_110357/lang--en/index.htm ; Antoine Bernard (ed) '*Where Do the Floating Dustbins End Up? Labour Rights in Ship Breaking Yards in South Asia: the Cases of Chittagong (Bangladesh) and Alang (India)*' (International Federation for Human Rights, December 2002) 35. <http://webcache.googleusercontent.com/search?q=cache:0bF81mvE2mAJ:www.fidh.org/IMG/pdf/bd1112a.pdf+&cd=1&hl=en&ct=clnk&gl=au&client=firefox-a>; International Metalworkers Federation, *Special Report – Cleaning Up Shipbreaking the World's Most Dangerous Job* (Web Page, 15 December 2015) http://www.industriall-union.org/cleaning-up-ship-breaking-the-worlds-most-dangerous-job

[86] Tone George Puthucherril, 'Trans-boundary Movement of Hazardous Ships for Their Last Rites: Will the Ship Recycling Convention Make a Difference?' in David Freestone (ed), *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Martinus Nijhoff Publishers, 2010) 283, 286

[87] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 9.

[88] Karim (n 36) 79.

Studies have also measured the issues raised by the relationship between the North and South, and the world system,[89] but the focus has been on studying and improving the preventive model of shipbreaking and funding to improve the shipbreaking process in South Asia.[90] There is a dearth of research on the development of a comprehensive legal framework to tighten the change of ownership from cradle to grave of a ship and address liability for work-related deaths, injuries, and diseases and analysis of a financial mechanism within which compensation as an effective remedy can be introduced. This thesis fills in the gap in the existing research on the shipbreaking industry. The thesis also analyses the international and domestic laws and their gaps in shipbreaking. Further, this thesis also establishes the philosophical and practical bases for the rectificatory global justice theory in order to rectify the injustice caused by the existing postcolonial legal orders in shipbreaking.

Fourth, following several case studies, this thesis builds on earlier work not just in shipbreaking, but also in the international waste trade and the international transfer of oil, where legal mechanisms of compensation to the victim have introduced positive changes.[91] It illustrates the application of the legal frameworks in oil transport, waste trade, and transboundary watercourses regimes (see Chapters 7 and 8), which have recently been subject to intense scrutiny. Drawing on lessons from these regimes, the thesis posits that the application of a civil liability approach is essential in order to prevent undesirable human consequences. This study will stimulate a new public and industry debate about the accountability of shipping companies.

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[89] European Commission, 'Ship Dismantling and Pre-cleaning of Ships' (Environment Report No 64622-02-1, European Commission Directorate General, 2007); Saurabh Battacharjee, 'From Basel to Hong Kong: International Environment Regulation of Ship Recycling Takes One Step Forward and Two Steps Back' (2009) 1 (2) *Journal of Trade Law and Development* 193, 229; Robert Scott Frey, 'Breaking Ships in World-system: An Analysis of Two Shipbreaking Capitals, Alang-Sosiya, India and Chittagong, Bangladesh' (2015) 21 (1) *Journal of World-Systems Research* 25, 27; Ishtiaque Ahmed, 'Ungovernable Ships At The End of Lives and The Response of The Hong Kong Convention: A Critical Appraisal of the Treaty on Shipbreaking from the Perspective of South Asian Shipbreaking Nations' (2020) 18 *Santa Clara Journal of International Law* 124, 125-126; Federico Demaria, 'Shipbreaking at Alang-Sosiya (India): An Ecological Distribution Conflict' (2010) 70 (2) *Ecological Economics* 250, 252-254.

[90] Emmanuel Yujuico, 'Demandeur Pays: The EU and Funding Improvements in South Asian Ship Recycling Practices' (2014) 67 *Transportation Research* 340, 344.

[91] Robert R Kuehn, 'A Taxonomy of Environmental Justice' (2000) 30 *Environmental Law Reporter News and Analysis* 10681, 10681; Ioanna Hadjiyianni and Anna Kloni, 'Regulating Shipbreaking As a Global Activity: Issue of Fragmentation and Injustice' (2021) *Journal of Environmental Law* 211, 219-220.

Fifth, an original contribution of the thesis is its methodological approach in shipbreaking research. It follows both reform-oriented doctrinal legal research and case study methodologies. The reform-oriented doctrinal legal research has permitted a moral inquiry into whether the shipowners bear a responsibility for the deaths, injuries, and work-related diseases in the shipbreaking industry and whether the existing regulatory frameworks of shipbreaking have achieved this responsibility. The case study methodology, in particular, has permitted the investigation and formulation of the civil liability framework. Therefore, the current study has found the combination of doctrinal legal research and case study methodology is an appropriate and ideal approach for this thesis.

A civil liability mechanism with financial liability of all shipowners,[92] across the life span of a ship, will enhance knowledge in this area. This study particularly provides a strong legal and philosophical basis for the compensatory mechanism, to the ultimate benefit of shipbreaking workers, local communities, the shipping industry, host States of the shipbreaking industry, the International Maritime Organization, cash buyers, lawyers, researchers, NGOs working in the field, and international organisations, such as the International Labour Organisation (ILO).

VIII METHODOLOGY

Reform-oriented doctrinal legal research with descriptive, critical and normative components and case study methodologies are used for the study. Reform-oriented doctrinal legal research refers to a study that recommends for changes to law after an elaborate evaluation of the existing laws and legal concepts.[93] Case study methodology is a systematic process of getting an in-depth understanding of a phenomenon.[94] Use of the combined methodology is to understand the problems within the shipbreaking industry (and its nexus with the broader international maritime industry) and to explore

[92] Art 12, *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992). *(Basel Convention)*

[93] Terry Hutchinson and Nigel Duncan, 'Defining and Describing Legal Research' (2012) 17 (10) *Deakin Law Review* 83, 84-87.

[94] Gideon Sjoberg et al, 'The Case Study Approach in Social Research' in Joe Feagin, Anthony Orum and Gideon Sjoberg (eds), *A Case for the Case Study* (The University of North Carolina Press, 1991) 39 cited in Terry Hutchinson, *Researching and Writing in Law* (Thomson Reuters, 4th ed, 2018) 144.

issues of liability and compensation in similar industrial contexts where reforms have brought about change in industry practices. The next few paragraphs explain what the methodologies are and why the study is using them.

Generally, a doctrinal research approach depends on the literal meaning of existing legal frameworks, and develops interpretations to solve legal problems.[95] Gawas recommends this method for reforming the law and legal system.[96] Using this method, researchers can build their own legal framework after composing a detailed analysis of legal rules found in primary sources, including cases, statutes, treaties, and regulations.[97] The research for the thesis thus uses the doctrinal methodology.

Social construction refers to 'dependence on contingent aspects of something in our social lives.'[98] Conceptually, the thesis recognises the operation of the shipbreaking industry and its regulation by the three South Asian States and the international maritime industry is socially constructed within the socio-economic fabric of the economies, social structures, legal systems and governmental capacities and actors of India, Bangladesh, and Pakistan. The economic and political circumstances of the international maritime industry consisting of international shipowners, the IMO as a regulatory body, systems for transferring vessel ownership, flag-of-convenience arrangements, and reliance on international agreements are vital to regulate commercial activity. The thesis recognises this, understanding how the domestic and international regulatory arrangements for the South Asian shipbreaking industry are socially produced and maintained – which is to ask *how* those arrangements were created and then *how* those arrangements may be changed (through legal and regulatory reform) to practicably improve workplace health and safety and to allow workers and their families to receive compensation where workers face deaths, injuries, or contract a work-related disease. The focus is particularly on understanding how domestic and international legal frameworks have evolved, and how they may change. In this context, the proposed remedy – the SLC and insurance – is a 'social

[95] Margaret A McKerchar, 'Philosophical Paradigm, Inquiry Strategies and Knowledge Claims: Applying the Principles of Research Design and Conduct to Taxation' (2008) 6(1) *Journal of Tax Research* 5, 14.
[96] Vijay M. Gawas, 'Doctrinal Legal Research Method: A Guiding Principle In Reforming The Law and Legal System Towards The Research Development' (September 2017) 3(5) *International Journal of Law* 128, 128.
[97] Dawn Watkins and Mandy Burton, *Research Methods in Law* (Routledge, 18 July, 2013) 9.
[98] Paul A. Boghossian, *What is Social Construction?* (Web Page) https://as.nyu.edu/content/dam/nyu-as/philosophy/documents/faculty-documents/boghossian/Boghossian-Paul-socialconstruction1.pdf

construct', and the thesis sets out how the design of the remedy proceeds from existing features of regulatory arrangements for civil liability and compensation in other industries and how the remedy is a practicable supplement to the existing international legal framework.

Importantly in proposing the remedy system, the thesis posits that the 'balancing' of work-related deaths, injuries, and diseases only for the sake of economic development that currently underpins the shipbreaking industry in developing countries is not acceptable, and must be reformed.

Therefore, broadly the research for the study falls into doctrinal legal research with the normative component that refers to what '"the law" *ought to* be'.[99] It also includes: (a) a critical component that questions the domination of powerful parties over the powerless in a specific legal context (workers or their families seeking financial redress for work-related deaths, injuries and diseases they have suffered) and (b) a descriptive component that seeks to explain the laws as they are. The normative component proceeds from the underlying descriptive and critical components.[100]

This aspect of the methodology for the thesis draws on the approach advocated by Lieblich, which integrates descriptive and critical components with normative analysis within the doctrinal legal research framework. Lieblich argues that to propose a new legal framework (the normative component), a researcher must first look at what the law is (the descriptive component) and how the law interacts within the relation between powerful and powerless in inter-State issues (the critical component).[101] The research questions and research objective for this thesis reflect these three elements. Broadly, after investigating the laws relevant to shipbreaking and a critique of the power relations that exist amongst international shipowners (including long-term and short-term owners, shipbreaking companies and contractors, the South Asian nation-States, and workers), the thesis argues for a new legal framework.

The normative component underpins this research as the thesis argues for a new civil liability framework using the rectificatory justice theory. A normative question seeks to answer the question: *What ought to be the nature and feature of a law to solve the*

[99] Eliav Lieblich, 'How To Do Research in International Law? Basic Guide for Beginners' (2021) 62 *Harvard International Law Journal Online* 42, 45-46 [6]-[8].
[100] Ibid.
[101] Ibid 50.

research problem?[102] For example, Gabriella Blum asks 'what ought to be the rules for the targeting of combatant in armed conflict?'[103] In the current research, the main research question (indicated in Part IV of this Chapter) asks a similar normative question for legal reform in relation to shipbreaking. This normative primary research question for this research is: *What legal and liability framework is required to make the international maritime industry accountable for the harms to human life and health (workers' deaths, physical injuries, and work-related diseases) in shipbreaking countries?* The answer to this question includes the related normative claim that the correct approach for such a liability framework is to make international shipowners accountable for the workers' deaths, injuries, and work-related diseases that shipbreaking entails.

Despite the obvious relevance of the normative question to reform-oriented legal research, Lieblich argues that it is often difficult to find an ideal principle that 'would help to present argument of what the law should be'.[104] Therefore, the normative researcher must use legal theory as a 'yardstick' to propose a legal reform.[105] He cites, by way of example, Blum's argument from an ethical, *extra-legal* vantage point to support legal reform for the conduct of soldiers in targeting of combatants in armed conflict.[106] The current research similarly uses the theory of rectificatory justice as a normative yardstick. By using this theory, the study argues for a new civil liability framework to address the work-related deaths, injuries and diseases occurring within the jurisdiction of the shipbreaking countries, but at a critical – and profitable, for shipowners – terminus of the global extent of the international maritime industry.

Before proposing the civil liability framework, the study applies a descriptive approach to investigate the problems in the current legal regulatory regimes for shipbreaking, particularly in relation to how laws operate – or fail to operate – to prevent work-related deaths, injuries, and diseases in the shipbreaking industry. This aspect of the thesis involves the first three sub-questions indicated in Part IV of this Chapter. These questions are descriptive in nature since they seek to investigate the

[102] Lieblich (n 99) 46.
[103] Gabriella Blum, 'The Dispensable Lives of Soldiers' (2010) 2(1) *Journal of Legal Analysis* 69-120, 115.
[104] Lieblich (n 99) 46.
[105] Ibid.
[106] Blum (n 103).

laws as they are.[107] An underlying objective of this descriptive component of the thesis research is 'to gather, organise, and describe the law; provide comments of a researcher on the sources used; then identify and describe the underlying theme and how each source is linked to each other'.[108] To draw comparisons for how current legal frameworks respond to incidents at shipbreaking workplaces, this research collects, synthesises and analyses domestic and international regulatory regimes that are triggered after industrial incidents in other similar industries. This comparative analysis assists in developing elements and justifications for the civil liability framework, namely the SLC, proposed in Chapter 9.

The descriptive, critical and normative components of research are intertwined. A descriptive component can also follow upon, or support, a critical question – for example, to ask whether a law is reasonable in a given situation.[109] Further, in a narrow sense, critical analysis is not different from normative analysis since a critical question seeks to examine what is wrong with an existing law before asking the normative question – what would be the *right* legal approach?[110] Both critical and normative analyses involve a questioning of power imbalances. In this context, Koskenniemi has suggested that one of the ways to conduct critical research is to describe law as a product of domination in a relationship.[111] For instance, a recent study argues that humanitarian laws are for the interest of developed countries against the interest of developing nations.[112] This thesis uses critical analysis to question the moral validity of shipbreaking laws and argues that shipbreaking in developing countries is a case of injustice because the shipbreaking industry benefits developed countries while causing work-related deaths, injuries and diseases to shipbreaking workers.

Critical analysis also requires a theory to support the argument that the law is unjust and unfair or, put another way, to provide the evaluative criteria by which the law is

[107] Lieblich (n 99) 46.
[108] S.N Jain, 'Doctrinal Research and Non-Doctrinal Legal Research' (1975) 17 *Journal of the Indian Law Institute* cited in Vijay M. Gawas, 'Doctrinal Legal Research Method: A Guiding Principle In Reforming The Law and Legal System Towards The Research Development' (September 2017) 3(5) *International Journal of Law* 128-130, 129; Indiana University Bloomington, *Legal Dissertation: Research and Writing Guide* (Web Page) https://law.indiana.libguides.com/dissertationguide
[109] Lieblich (n 99) 45.
[110] Ibid 47-48.
[111] Martti Koskenniemi, 'What is Critical Research in International Law? Celebrating Structuralism' (2016) 29 (3) *Leiden Journal of International Law* 727-735, 727-728.
[112] Eyal Benvensiti and Doren Lustig, 'Monopolizing War: Codifying the Laws of War to Reassert Government Authority 1856-1874' (2020) 31 *European Journal of International Law* 127-169, 127.

determined to be unjust or unfair and to indicate the meaning of abstract terms like 'unjust' or 'unfair'. Reasonable minds may disagree about the theory chosen and perhaps the conclusions about the injustice or unfairness of the law – however, the rigour of the evaluation lies in how well the analysis characterises the relevant factual features of the situation and how well it applies the evaluative criteria to those circumstances to reach a reasoned conclusion. For example, Anghie uses the postcolonial theory to ask how colonialism shaped the origin of international law,[113] and this thesis also uses concepts of global injustice and postcolonial theories to argue why current shipbreaking laws are morally wrong and, specifically, to answer questions 1-3 in Part III of this Chapter. The basic argument is that the current laws unjustly benefit international shipping industries and the developed countries in which they are incorporated, while causing serious work-related deaths, injuries, and diseases to the shipbreaking workers in the developing countries and unfairly leaving workers with no compensation in cases where they face death, injury or disease.

The current research is reform oriented in that it argues for a new legal regulatory framework after identifying the gaps in current laws that regulate the shipbreaking industry. To support this reform focus, the research uses a case study methodology to find relevant frameworks for reform. Using the case study methodology, a researcher can investigate a case or cases to determine if some of the findings can be applied to their particular area of research.[114] Case study methodology is suitable for this study, as it examines selected global events (for example, industry incidents) and the subsequent legal reforms to identify suitable legal reforms for the shipbreaking industry.

In summary, the doctrinal legal research, with normative, descriptive, and critical components, and supporting comparative and case study methodologies, is suitable for this study. The research proceeds on the basis that it is hard to detach a law, or a regime of laws, from its impact on the society.[115] Lieblich argues that doctrinal research with

[113] Antony Anghie, 'Francisco de Vitoria and the Colonial Origins of International Law' (1996) 5(3) *Society and Legal Studies* 321, 322-323; see also Sundhya Pahuja, 'The Postcoloniality of International Law' (Summer 2005) 46 *Harvard Journal of International Law* 459, 460-462.
[114] Terry Hutchinson, *Researching and Writing in Law* (Thomson Reuters, 4th ed, 2018) 144.
[115] Richard Posner, 'Conventionalism: The Key to Law as an Autonomous Discipline' (1988) 38 *The University of Toronto Law Journal* 333, 345, cited in Terry Hutchinson and Nigel Duncan, 'Defining and Describing What We Do: Doctrinal Legal Research' (2012) 17(1) *Deakin Law Review* 83, 83-85.

descriptive analysis can follow the tradition of law and society approaches.[116] Furthermore, he argues that rather than being exclusively founded in or focused upon legal doctrine itself, the doctrinal methodology can look at the interaction of law with society to question the effectiveness of a law.[117] This means that doctrinal researchers can rightly identify whether a law is acceptable in a given context and whether a new law is required to solve the problem. The current research, while doctrinal in character, developed a critical and normative approach to propose a new law to address the injustices perpetuated by the existing legal frameworks that govern the shipbreaking industry.

IX METHODS AND TECHNIQUES

The research for this thesis uses two methods. First, the research uses the process of collecting, categorising, and analysing relevant treaties, legislations, and case laws of India, Bangladesh, and Pakistan and a recent Court of Appeal of England and Wales decision to support the research objectives.[118] Second, as discussed below, the research will use the *applied theory* to resolve an international global justice issue. *Applied theory* refers to a method in which a researcher applies a 'conceptual apparatus or framework to the concrete problems faced by the international community'.[119]

The basic steps followed for the first method are as follows:

1. **Collect information in order to establish existing knowledge and conceptualise the problem.** The study collects relevant primary and secondary source materials. The primary source materials are international treaties, national laws, court judgments, and voluntary codes of conduct for particular companies or industries. As secondary materials, the study collects information from scholarly law books, academic journals, State reports, NGO articles, conference proceedings, organisational documentation, published, and unpublished materials from India, Bangladesh, Pakistan, and other sources.
2. **Examine, and interpret the literature and summarise relevant points**. After collecting the primary and secondary materials, the study follows a systematic

[116] Lieblich (n 99) 45.
[117] Ibid.
[118] Ibid 51.
[119] Steven R. Ratner and Anne-Marie Slaughter, 'Appraising the Methods of International Law: A Prospectus for Readers' (1999) 93 *American Journal of International Law* 291, 292.

approach to identify the relevant points. The study uses a literature matrix to critically analyse, synthesise the similarities and differences of the materials, and support its arguments. Where practicable, the thesis identifies the relevant factual, legal, ethical, and normative propositions that it must establish to answer the research questions properly.

3. **Identify and select multiple cases.** The research identifies and selects multiple global events where incidents in an industry have been the catalyst to bring about changes in regulatory frameworks. By identifying similarities between these incidents and the hazards inherent in the shipbreaking industry, the thesis draws lessons to support the development of an adequate liability mechanism for the shipbreaking industry.

As the second method, the current study uses the *applied theory* for investigating the normative component of the thesis. Using this method, the thesis applies the theory of rectificatory justice and proposes an international civil liability; i.e., the SLC framework for providing a compensation focused remedy and regulatory system. The proposed liability framework would resolve the problems of paying either inadequate or no compensation to workers who suffer a work-related death, injury or disease (see Chapters 2, 3 and 4 of the thesis) together with changing the existing non-transparent business and industry practices.

This study uses electronic search techniques to collect data from commercial, government, non-government organisations, and other sources, and collects primary sources from government databases, such as lawjusticediv.gov.bd, and Laws of India.[120] Other sources of information include legal databases such as Heinonline and LexisAdvance.[121] The study takes advantage of the Curtin University library database, being the university's storehouse of electronic books, academic working papers, blogs, videos, graphics, and illustrations.[122] In addition, this study collects and examines

[120] Bangladesh Supreme Court (Web page) https://*www*.supremecourt.gov.bd; Bangladesh Law Justice Division, Ministry of Law, Justice and Parliamentary Affairs (Web page) https://www.lawjusticediv.gov.bd; Supreme Court of India (Web page) https://www.sci.gov.in; Ministry of Law and Justice (Web page) www.lawsofindia.org, Supreme Court of Pakistan (Web page) www.supremecourt.gov.pk; www.pakistanlawsite.com.

[121] Lexis Advance Pacific, West Law UK, informit, AustLii, Lexis Advance US Research, HeinOnline, Justis, Proquest, Business Source Complete, Springer Link, Taylor & Francis, Scopus, Wiley Online Library, Brill Online Books and Journals, Index to Legal Periodicals and Books, Treaty Collection, Social Science Research Network (SSRN), Law Journal Press ebooks, Google Scholar, Environmental Law reports, Human Rights Studies Online are the few examples of legal databases.

[122] Hutchinson (n 114) 104-106.

unpublished field reports from government and non-government organisations. The study also collects information from the stakeholders in conferences to obtain such reports. The professional connections of the researcher are also used to collect the unpublished judicial decisions from Bangladesh and the UK.

X STRUCTURE OF THE THESIS

The thesis consists of ten chapters including an Introduction (**Chapter 1**) and a Conclusion (**Chapter 10**). The discussion below provides a summary of the remaining eight chapters of the thesis.

Chapter 2 presents the theoretical framework of the thesis. The Chapter provides a theoretical foundation for subsequent Chapters by discussing the fundamentals of global rectificatory justice in the context of shipbreaking. The Chapter argues that the shipbreaking regime is an example of global injustice for shipbreaking workers, but provides substantial benefits to the shipowners based in developed countries. This Chapter sets out a *prima facie* case for applying the rectificatory global justice theory in this context. In defining the concept of rectificatory justice, the Chapter uses the notion of something 'between loss and profit' or 'corrective justice to set an unjust relationship right' as explored in Aristotle's *Nicomachean Ethics* Volume 5.[123] This means, if one steals from another or injures someone, the justice is to 'restore the profit or the stolen property and loss to a position of equality, by subtracting from the offender's profit'.[124] Furthermore, according to Aristotle's theory of justice, a level of equality is required so that a victim or plaintiff can seek relief from an offender. Therefore, a legal framework's objective is to bring in equality between the wrongdoer (who may be in a higher position than the victim) and the victim.

[123] Aristotle, *Aristotle: Nicomachean Ethics*, ed Roger Crisp (Cambridge University Press, 2000) vol 5, 81-102; Study Guide, Nicomachean Ethics: Aristotle Book V, *Sparknotes* (Web Page) <https://www.sparknotes.com/philosophy/ethics/section5/page/2/> , 1-2.
[124] Dylan Grant, 'Aristotelian Justice in The Illiad' (2015) 24(6) *Agora ejournal* (University of Lynchburg, 2015) 6:1-12, 1-2. *https://digitalshowcase.lynchburg.edu/cgi/viewcontent.cgi?article=1188&context=agora*

Through the lens of global injustice, **Chapters 3**, **4** and **5** describe the shipbreaking industry in South Asia and domestic and international legal frameworks relevant to shipbreaking in South Asia.

Chapter 3 describes the financial benefits that the international maritime industry receives through its extension into the South Asian shipbreaking industry. It describes why, even though international shipowners earn millions of dollar per annum from the sale of ships to the South Asian shipbreaking market, the international maritime industry has yet to call for, or contribute to, any scheme to provide adequate compensation to deceased, injured or ill workers for their economic loss. The Chapter also describes work-related deaths, injuries and diseases from the shipbreaking industry as an issue of global injustice, and further argues that the international maritime industry has both a moral and a financial responsibility towards South Asian shipbreaking workers. The Chapter then proposes, accordingly, that a global legal framework is necessary to remedy the work-related deaths, injuries and diseases.

Chapter 4 identifies the key factual and legal problems in the shipbreaking industry. The factual problems include the reliance on the beaching method, the absence of pre-cleaning requirements, and the process of the breaking of ships with bare hands – all of which contribute to the poor working conditions in the shipbreaking industry. In relation to legal issues, this Chapter undertakes an analysis of the written constitutions, laws, and relevant national court decisions in India, Bangladesh and Pakistan. The legal analysis of the laws of the three shipbreaking nations shows that even though the three countries have a responsibility to protect the right to life and health of workers and remedy any of the abuses, their current laws are not enough to properly regulate the problems. One of the underlying causes of injustice identified in the Chapter is that the national laws have no mechanism to make the buyers and sellers of ships directly or indirectly accountable for the work-related deaths, injuries and diseases. This Chapter further argues that there is no mechanism in place to make the buyers and sellers of ships accountable to pay an adequate amount of compensation to those workers sustaining work-related deaths, injuries and diseases.

Chapter 5 examines the existing global regime of shipbreaking. The Chapter mainly reviews the *Hong Kong Convention* (which has yet to come into force). This Chapter analyses the preventive and remedial structure of the *Hong Kong Convention*. It argues

that the *Hong Convention* provides no scope to impose financial liability on the international maritime industry for the work-related deaths, injuries, and diseases that occur in the shipbreaking yards in developing countries.[125] The Chapter concludes that the *Hong Kong Convention* maintains the domination of colonisers because it shifts the burden of regulation and recycling of the toxic ships to the developing host countries without recognising their technical and financial incapacity and the vulnerability of workers.

Using the rectificatory global justice theory, **Chapters 6**, **7** and **8** present case studies in which industry reform measures have applied financial mechanisms to better regulate global problems for an industry.

Chapter 6 presents the EU's regulatory approaches as the first case study. The EU contains a number of large shipping nations, and is therefore responsible for a significant proportion of the ships entering the global shipbreaking market. This Chapter examines the regulatory measures that the EU has implemented for regulating inter-State transfer of EU ships. The literature review in this Chapter examines the *EU Ship Recycling Regulation, 2013*. The Chapter also explores the financial mechanisms that are under review by the European Commission to address several issues that this thesis also addresses, such as the lack of regulatory standards to impose liability on EU shipowners for selling ships to substandard shipbreaking yards. The underlying aim of the mechanisms is to impose financial liability on the ships registered in EU countries. After examining these approaches, this Chapter argues for introducing a financial mechanism to impose financial liability on global shipowners to compensate the injured, or ill workers or the family members of deceased workers within the shipbreaking industry.

Chapter 7 presents case studies of regulatory approaches and reforms relating to international oil transport, offshore oil rig and appropriate loading of merchant ships. The Chapter draws analogies between incidents that occurred in these three global industries and the hazards inherent in shipbreaking, and explores the advantages of the

[125] K.P Jain, J.F.J. Pruyn and J.J. Hopman, 'Critical Analysis of the Hong Kong International Convention on Ship Recycling' 2013 (7) 10 *International Journal of Environmental, Ecological, Geological and Mining Engineering* 683, 689.

liability systems introduced after the incidents, to support proposing a similar civil liability framework for the shipbreaking industry.

Through the lens of the rectificatory global justice theory, this Chapter examines, from the legal and historical context, how the *1992 Civil Liability Convention* and *1992 Fund Convention* implement legal and financial liability for compensating work-related deaths, injuries and diseases and environmental problems within the maritime and oil industries. It also discusses the Plimsoll line incident happened in 1871 that prompted the IMO to introduce the *load lines certificate* for the global maritime industry. Further, in examining the Piper Alpha incident, a catastrophic offshore oil rig disaster, the Chapter examines the importance of the insurance-based risk assessment mechanism to learn lessons for the shipbreaking industry.

The Chapter argues that the regular workers' deaths, injuries and diseases in the Indian, Bangladeshi and Pakistani shipbreaking industries indicate that the shipping industries should facilitate the introduction of a liability mechanism similar to the mechanisms discussed here. The thesis explores the legal implications raised by that debate.

Chapter 8 presents the Koko incident in relation to international waste trade and the Baia Mare incident occurred in 2000 in relation to the mining industry and the subsequent liability Protocols.

The Baia Mare and Koko incidents both present relevant similarities to the shipbreaking industry and the incidents and hazards that exist in that industry. In the case of Koko, private traders collected high volumes of toxic wastes from different sites in Italy and dumped them in Koko, a Nigerian village, leading to harmful environmental and human consequences.[126] Hundreds of people faced death and injury from exposure to toxic substances during removal of the wastes. However, there was no regulatory framework to control such human consequences. The Baia Mare incident demonstrated the difficulty of addressing transboundary damage caused by mining industries when mining companies can rely upon absolute legal impunity to thwart legal claims for liability for the damage. In this case, Hungary faced huge

[126] An Italian waste trading company, Messrs S.I Ecomar in collaboration with an Italian businessperson, Gianfrance Rafaellin who lived in Nigeria, dumped the wastes: at Babade James Ayobayo, 'The Koko Incident- Law of the Sea and Environmental Protection' (Seminar Paper, November 2014, 14)

economic loss due to transboundary negative effects of the incident, but found it too difficult to impose liability on the foreign mining companies. The incident occurred in North Western Romania in late January 2000 when a tailings dam burst and released 100,000 cubic metres of cyanide-contaminated water into the Lapos and Somes (Szamos) River. The flow of cyanide caused severe damage to the aquatic life of these rivers, mainly in Hungary, Yugoslavia and Romania. Aurul, a joint venture company formed between the Australian Company Esmeralda Exploration and the Romanian government, was the operator of the mine.[127]

The Protocols adopted after the Koko and Baia Mare incidents supplemented their pre-existing Conventions within their respective industries, as the frameworks of those Conventions did not previously address the liability of inter-State parties involved in the industry.[128] By using these case studies, this Chapter argues for an additional mechanism to supplement the *Hong Kong Convention* and, further, that in order to rectify future injustice a new inter-State mechanism to regulate the shipbreaking industry. The Chapter develops criteria for the shipbreaking liability and insurance frameworks and for designing the SLC proposed in Chapter 9.

The thesis also uses the case studies to consider the civil liability of private actors. However, the thesis does not examine the question of State liability, as this issue is complex and is considered out of scope for this research.[129] Pertaining to the thesis, 'liability' refers to the traditional regime of civil liability for providing adequate compensation to an injured or ill worker or the family members of a deceased worker for economic loss of property and person by private, non-State actors. In the case of shipbreaking, these non-State actors are the shipowners, in particular, but also the related parties involved in the process of transferring a ship out of commercial service and to a shipbreaking location in South Asia. The issue of criminal liability under the national law of concerned States is also out of the scope of this thesis.

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[127] Ifeoma Onyerikma, 'Achieving Compliance with the Basel Convention on Transboundary Movement of Hazardous Waste' (LLM Thesis, The University of Alberta, 2007) 20.
[128] The *Basel Convention*; *The Convention on the Protection and Use of Transboundary Watercourses, and International Lakes*, signed 17 March 1992, 1936 UNTS 269 (entered into force 6 October 1996); *the Convention on the Transboundary Effects of Industrial Accidents*, signed 18 March 1992, 2105 UNTS 457 (entered into force 18 April 2000). *(the 1992 Helsinki Conventions)*.
[129] B. D. Smith, *State Responsibility and the Marine Environment: The Rules of Decision* (Oxford: Clarendon Press, 1988); G. Handl, 'International Liability of States for Marine Pollution' (1983) 21 *Canadian Yearbook of International Law* 85, 85-87.

Chapter 9 draws on the propositions discussed in Chapters 2 to 8, and proposes a compulsory SLC and shipbreaking liability insurance for all ships sailing in international waters. This Chapter also proposes that, before a shipbreaking facility can purchase a ship for breaking, that facility must also obtain the certificate and insurance. The IMO would monitor the two SLCs (one for a ship seller and another for a ship buyer), whereas global maritime insurance industries would administer the insurances. This Chapter also evaluates the SLC framework using the balance between the 'loss and profit' or righting the injustice theory discussed in the theoretical framework Chapter (Chapter 2).

Chapter 10 provides conclusions, identifies problems associated with the introduction of the proposed SLC framework, and suggests areas for further research.

XI LIMITATIONS

The current study has six major limitations. First, a limitation of the study has been the lack of industry participation. There has been no pilot study for testing the views of global shipping and shipbreaking industry leaders on the proposed SLC framework. Second, it has not been possible to test the desired outcome of the proposed SLC framework, mainly with respect to improving the poor industry practice and payment of adequate compensation. Third, another limitation of the study is limited discussion on the shipbreaking laws of India's and Pakistan's states and provinces. Although Pakistan and India have their state and provincial laws on shipbreaking, because of their influence in framing national policy on shipbreaking, the study has mainly examined the federal laws of India and Pakistan and decisions of their Supreme Courts. Fourth, the current study has not considered the re-insurance of the maritime insurance companies. Under the proposed SLC framework, the primary insurers (maritime insurance companies) will issue insurance for shipowners and shipbreaking yards, but who will insure the primary insurer is a question to be answered in future research. Fifth, the current study has also not addressed the transparency issue in relation to the idea of higher insurance for increasing numbers of casualties (see Chapter 7) because the proposed SLC framework has rigorous processes of both determination of insurance premium and compensation. Sixth, the current study has not discussed an alternative international organisation, in the event that the International Maritime Organisation (IMO), being the international organisation that

deals with inter-State maritime issues, does not introduce the proposed SLC framework.

CHAPTER TWO : RECTIFICATORY GLOBAL JUSTICE : A NEW APPROACH FOR CIVIL LIABILITY IN SHIPBREAKING INDUSTRY

I INTRODUCTION

Shipowner should undertake responsibility for the deaths, injuries, and work-related diseases that occur within the jurisdiction of the shipbreaking countries, and change the global shipbreaking industry practice. In order to address the plight of shipbreaking workers, the thesis has adopted rectificatory global justice theory with its philosophical underpinning of remedying injustice that occurs in more than one jurisdiction. Rectificatory justice generally refers to a principle to remedy unequal distribution of profit and loss between two parties, but by rectificatory global justice, the thesis proposes a global remedy system that aims to strike a balance between the profit and loss of two inter-State parties. In other words, the proposed system aims to balance between the profits earned by all shipowners and the losses suffered by shipbreaking workers in the shipbreaking industry.

In developing a theoretical basis of the rectificatory global justice theory, this Chapter argues that shipbreaking in South Asia is a case of global injustice. According to the Stanford Encyclopaedia of Philosophy, a problem is one of global justice when either the problem affects agents or residents in more than one State, or the problem is unresolvable without international co-operation.[1] The fact that workers in the shipbreaking industry face deaths, injuries and suffer from work-related diseases elsewhere from shipowners' state jurisdiction, and that their sufferings are not likely to be reduced unless shipowners undertake responsibility, indicates that shipbreaking in South Asia is a matter of global injustice. George Cairns also argues that 'by any model of development the condition and suffering of the shipbreaking workers cannot be resolved to their betterment without international co-operation'. He further argues that irrespective of the global and local status of shipbreaking yards in South Asia, both in terms of health and employment, the majority of the workers will continue to suffer.[2]

[1] Gillian Brock, 'Global Justice' in Edward N. Zalta (ed) *The Stanford Encyclopaedia of Philosophy* (Stanford University, Spring 2017) 2.
[2] See George Cairns, 'Return to Chittagong: Ten Years since the "Postcard"' (2017) 13(4) *Critical Perspectives on International Business* 340, 342-348.

This thesis corroborates with these arguments and acknowledges that shipbreaking workers suffer the most of all those who are part of the shipbreaking business. The current study examines workers' issues through the lens of global injustice, and aims at proposing a global framework to provide an effective remedy. The international framework of civil liability proposed in Chapter 9 of the thesis thus also includes essential features of improving workplace conditions, changing shipbreaking industry practices, and preventing work-related deaths, injuries, and diseases in the global shipbreaking industry.[3] The proposed civil liability framework includes a shipbreaking liability certificate (SLC) and insurance scheme, as two practical measures to address the regular deaths, injuries, or work-related diseases in the shipbreaking industry.[4] The argument to introduce the legal framework is premised on three objectives.

First, the Chapter aims to conceptualise injustice occurs in the South Asian shipbreaking industry because the existing legal mechanism imposes no responsibility on international shipowners for the deaths, injuries, or work-related diseases suffered by shipbreaking workers.

Second, the Chapter defines shipbreaking as a value chain of old ships and links shipbreaking industry to the shipping industry.[5] Referring shipbreaking to value chain of a ship's operational life, is essential to formulate the foundation of the thesis that shipowners should undertake responsibilities to rectify the injustice in the shipbreaking industry.

Third, the Chapter explains the doctrinal basis to introduce the civil liability framework, a treaty-based strict liability, which includes financial mechanism (the shipbreaking liability certificate) and a compulsory insurance mechanism

[3] The first layer of responsibility is state responsibility that imposes responsibility on states for the breaches of international law. However, according to Kecskes, such a responsibility approach is not enough to regulate the breaches of international law. He argues that it has not played a practical role in the context of inter-state business. More specifically, his study of different responsibility approaches comes with a conclusion that civil liability – channelling responsibility directly to operator or facility – is more effective than other forms of responsibility in the case of a dangerous industry. He uses the nuclear industry as an example because such a civil responsibility approach is used (see Chapter 7). See Gabos Kecskes, 'The Concept of State Responsibility and Liability in Nuclear Law' (2008) 49(2) *Acta Jurdica Hungarica* 221, 222

[4] Cairns (n 2) 340-344.

[5] Shipbreaking is a value chain of the shipping industry that eventually leads to converting an unwanted ship into valuable steel products. Shipbreaking thus adds value to the materials found in an old ship through a series of activities or processes that aim to create profitable value for the end-of-life ships, which would otherwise remain burdens for shipowners.

(shipbreaking liability insurance) to compensate the victims promptly and to share the burden of compensation among all parties involved in the business chain of shipbreaking.

Part II of this Chapter develops the argument that shipbreaking regime continues the colonial legacy driven by the interest of the agents of developed countries.[6] This Part, through the lens of postcolonial legal discourse, explains why shipbreaking is a matter of global injustice. Part III then conceptualises rectificatory justice in the shipbreaking industry and argues for the responsibility of shipowners using the duty of care, due diligence, and corporate liability principles. Part IV introduces features of the civil liability framework and argues the need for a treaty-based mandatory approach. Part V concludes the Chapter by highlighting the importance of the civil liability framework; i.e., the SLC, to remedy the injustice to workers in the shipbreaking industry.

II THE ARGUMENT OF INJUSTICE IN SOUTH ASIAN SHIPBREAKING INDUSTRY

Injustice occurs in the shipbreaking industry in the absence of a system to address responsibility for the deaths, injuries, or work-related diseases whilst breaking ships. There are two reasons to support the injustice argument. First, shipowners can transfer their end-of-life ships to the South Asian Countries – India, Bangladesh, and Pakistan – with the knowledge that the South Asia's shipbreaking yards do not maintain safety standards for workers. Second, given that shipbreaking is a dangerous industry, injustice occurs in allowing the transfer of ships to these countries for breaking without establishing a global responsibility and compensatory system. The following Sections discuss these points in detail.

A *Absence of A Responsibility System To Compensate Victims*

As discussed briefly in Section A, Part II of Chapter 1, the exportation of unclean ships to developing countries is a legal business under the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships* (*Hong Kong*

[6] See Chapter 5 for detailed analysis of the international frameworks.

Convention).[7] Hence, little scope is left to impose direct responsibility on shipowners for sending off their hazardous ships to South Asia and creating risk for the workers and the environment. Shipowners from developed countries, face no legal challenge. Externalising such human and environmental risk from developed countries to shipbreaking countries is a matter of debate in the relationship between developed and developing countries. The current research examines the relationship through the lens of post colonialism.[8] Historically, developed countries established their colonies in many different parts of the world for their business interests, and international law, in this context, has pursued these interests even after the colonial era ended.[9] Pushing the shipbreaking industry to South Asian developing countries reflects the same business interests of developed countries, and is a way of continuing colonialism.

B *Post Colonialism, Economic Dependency and Shipbreaking Industry*

Colonial powers designed the international legal order for their business profit.[10] This is one of the reasons why in the majority of cases, there is rarely a system that imposes responsibility on multinational companies (MNCs), incorporated in developed countries, for their actions affecting human life and environment in developing countries. As discussed in Chapter 5, the *Hong Kong Convention* has established a legal order for the shipbreaking industry that imposes no responsibility on shipowners from developed countries. Postcolonial theorists refer to such legal order as postcolonial laws, which perpetuate a legal discourse that advantages the colonizers and their business entities over developing countries. Weeramanty refers post colonialism to mean the continuation of colonies by developed countries by using international laws as an instrument.[11] In legal terms, it means to forward an unjust

[7] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force).
[8] Frey refers this relationship to a world-system that allows countries to externalize their hazards or environmental harms on others. For detailed discussion see Robert Scott Frey, 'Breaking Ships in the World-System: An Analysis of Two Ship Breaking Capitals, Alang-Sosiya, India and Chittagong, Bangladesh' (2015) 21(1) *Journal of World System Research* 25, 25.
[9] Goran Collste, *Global Rectificatory Justice* (Springer Link, 2014) 2.
[10] Ibid.
[11] Christopher George Weeramanty, *Universalising International Law* (Brill Publications, 2004) vol 48, 20.

business by introducing a superior legal order by the developed countries and their national and supranational entities 'under a single logic of rule'.[12]

The injustice that links to colonialism is incomplete without a discussion on the historical background of India, Bangladesh and Pakistan and the reasons for their dependency on developed countries. These countries emerged as independent countries after colonial rules ended in the middle of the 20th century but they are still dependant on the colonizers for development. They continue following many of the laws used in the former colonies, even though the colonizers passed the laws to materialise their business interest.[13] With some exceptions, environment and resource-related laws and institutions are some of the examples of postcolonial laws.[14] Opposed to preservation, historically these laws focus on using the natural resources of the colony for economic development. These use-oriented laws thus reflect the interest of colonial powers, who established the institution and adopted the laws aimed at exploiting natural resources from the Indian sub-continent to supply raw materials for their own national industries. The laws therefore remain 'use-oriented, ignoring the rights of others who are dependent on those resources'.[15]

Shipbreaking laws discussed in Chapter 4 reflect the same goal. These laws, rather than preserving the coastal environment, allow the dangerous shipbreaking process on the coastal beaches. This beaching process results in large-scale marine pollution in addition to regular deaths, injuries, and diseases to workers, for the benefit of the shipowners in developed countries. In short, beaching unfairly limits the shipbreaking cost, but substantially creates the scope for paying a high purchase price to shipowners.[16]

Pogge opposes postcolonial laws that reflect such colonial legacies. He claims that establishing an economic order to benefit developed countries and their agents is

[12] Lavanya Rajamani, *Differential Treatment in International Environmental Law* (Oxford University Press, 2006) 5.
[13] Ibid 17.
[14] Mohiuddin Farooque, 'Regulatory Framework and Some Examples of Environmental Contamination in Bangladesh' in Bangladesh Environmental Lawyers Association (ed), *Selected Writings of Mohiuddin Farooque: Environmental Order the Security of Survival* (BELA, 2004) 20.
[15] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 17.
[16] See Chapter 3.

wrong.[17] Weeramanty argues that providing no responsibility and remedy system in the international regulatory framework is a matter of global injustice.[18] Pogge and Weeramanty's propositions are relevant to the shipbreaking industry on the ground that the *Hong Kong Convention*, the only international Convention for shipbreaking, does not provide a mechanism for shipowners to undertake responsibility for deaths, injuries, and work-related diseases (see Chapter 5 that further explains this argument).[19]

The injustice arguments of Pogge and Weeramanty also imply that the domination of developed countries that often produces laws that do not represent equal cost burdens between the North and South is wrong and unjust.[20] The shipbreaking industry mirrors that inequality of cost burden in law. Increasing numbers of hazardous ships being transferred to developing countries and no responsibility of shipowners under the *Hong Kong Convention* (as discussed in Chapter 5) for the consequent human harms demonstrates that international laws continue to have a contemporary relevance, as an instrument of profiteering in the postcolonial world.[21] It is worth asking why workers in South Asian developing countries risk their lives in such a dangerous industry. Perhaps unsurprisingly, unemployment, poverty and lack of iron ore to support the demand for steel in South Asian shipbreaking countries are the main reasons for offering such labour. Arguably, the shipping industries of developed countries have used these traits to introduce such a hazardous industry in South Asia.[22]

The economic dependency may also challenge the argument of injustice in the context of shipbreaking because shipbreaking not only benefits the shipowners, but also benefits the shipbreaking countries. Hadjiyianni and Kloni note that the shipbreaking business is deeply rooted in the society and economy of developing countries, and is

[17] Md Saiful Karim, *Recycling of Ships in* 'Prevention of Pollution of the Maritime Environment from Vessels: Potential Limit of the International Maritime Organisation' (Springer, 2015) 98-100; Thomas Pogge, 'World Poverty and Human Rights' (2005) 19 (1) *Ethics and International Affairs* 1-7.
[18] Weeramanty (n 11) 20.
[19] Stephen M. Gardiner, 'Ethics and Global Climate Change' (April 2004) 114(4) *University of Chicago Press Journals* 580, 555-600; Alpana Roy, 'Postcolonial Theory and Law: A Critical Introduction' (2008) 29 *Adelaide Law Review* 315, 317.
[20] Mossimo Renzo, 'Why Colonialism is Wrong' (2019) 72(1) *Current Legal Problems* 347, 347-348.
[21] Roy (n 19) 319.
[22] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 38.

an example of a circular economy approach.[23] They justify the argument because on the one hand, the shipbreaking industry benefits the shipowners in maintaining the wastes in the economy and on the other hand, it contributes to developing the economy of shipbreaking countries.[24] According to the circular economy approach, exporting the toxic ships to developing countries for steel is not illegal or unjust.[25] In relation to the global shipbreaking industry, Hadjiyianni and Kloni argue that the circular economy approach makes it nearly impossible to impose responsibility on shipowners for selling the hazardous ships even though it is evident that the transfer is for externalising the cost to developing countries.[26]

The argument of the circular economy approach, however, is not acceptable in all cases, especially in relation to a dangerous industry such as shipbreaking. Any development initiative is for the people, and thus it is not justifiable to use the circular economy approach to exonerate the recalcitrant businesses. Refuting the application of the circular economy approach, the current research proposes to remedy future deaths, injuries, and work-related diseases in the shipbreaking industry with a civil liability framework to supplement the existing shipbreaking laws. Primarily, the responsibility to address the deaths, injuries and work-related diseases lies with shipowners.[27] Moreover, to correct the legacy of colonialism in the case of shipbreaking, major shipping nations also have moral obligations to rectify the wrongs of their shipping industries.[28]

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[23] Ioanna Hadjiyianni and Anna Kloni, 'Regulating Shipbreaking As a Global Activity: Issues of Fragmentation and Injustice' (2021) *Journal of Environmental Law* 211, 214; Gordon Walker, *Environmental Justice, Concepts, Evidence and Politics* (Routledge, 2012) 98.

[24] European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Closing the Loop – A EU Action Plan for the Circular Economy*, COM (2015) 614/2; EU Commission: Brussels, Belgium, 2015 cited in Christian Jageuken et al, 'The EU Circular Economy and Its Relevance to Metal Recycling' (Special Issue 2016) 1(2) *Public Policy Directions for Directions for Recycling, Waste Management, Resource Recovery and Circular Economy* 242, 243-248.

[25]Circular economy is a 'transition where the value of products, materials and resources is maintained in the economy for as long as possible and the generation of waste minimised': at Hadjiyianni and Kloni (n 23) 214.

[26] Ibid.

[27] Juan Ignacio Alcadidea, Francisco Piniella and Emilio Rodriguez-Diaza, 'The Mirror Flags: Ship Registration in Globalised Shipbreaking Industry' (2016) 48 *Transportation Research Part D* 378, 379.

[28] Michael Blake and Patrick Taylor Smith, 'International Distributive Justice' in Edward N. Zalta (ed) *The Stanford Encyclopaedia of Philosophy* (Stanford University, Summer 2021) 40.

III PHILOSOPHICAL UNDERPINNING OF THE RECTIFICATORY GLOBAL JUSTICE AND RESPONSIBILITY OF SHIPOWNERS

The shipbreaking industry is an example of a sector where casualties occur regularly.[29] Given the history of fatalities and severe injuries in the South Asian shipbreaking yards, there is a *prima facie* case for applying the concept of rectificatory global justice to compensate the victim by shipowners under an international legal framework. One of the most important grounds to argue for an international system to rectify the injustice is the argument of 'profit' of shipowners. One estimate suggests that the industry's annual income is USD 2350 million.[30] As ships generate wastes in foreign waters, and shipowners finally externalize the wastes on top of earning millions of dollars by selling the ships, according to the theory of rectificatory global justice, shipowners have a special duty to compensate the victims.

A *Rectificatory Justice to Rectify Injustice in Shipbreaking Businesses*

Justice is the key to the removal of, and restoration or compensation for, any injustice. Rectificatory justice aims to set an unjust relationship right.[31] In this context, it is different from distributive justice because it does not emphasise on the distribution of resources and goods to all members of a society.[32] Rectificatory justice places emphasis on the correction of injustice. More precisely, it strives for a balance between right and wrong or between powerful and powerless by providing a remedy system.[33] According to Aristotle, it is something 'between loss and profit' for justifying an act by means of a penalty, or deducting from the gain of the responsible person to benefit the victim.[34] Another relevant meaning of 'between loss and profit' is to accept a loss by adding a remedy system for providing an adequate and prompt relief. It further means to repair the damage when the conduct of one person harms others. The compensation is required when one person transgresses into someone else's rights. In relation to retaining profit from a business relationship, a person is entitled to his profit

[29] Okechukwu Ibeanu, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc. A/HRC/12/26 (15 July 2009) 2. *(UN Special Report on Shipbreaking)*.
[30] Annual income of the shipping industry is about 2350 million USD: at Table 5, Chapter 3
[31] Rodney C. Roberts (ed), *Injustice and Rectification* (Peter Lang, 2002) 20.
[32] Ibid.
[33] Ibid.
[34] Ibid.

subject to the receiving of just profit, meaning that the profit is not justifiable without ensuring justice to the affected parties.[35]

In other words, profit that results from injustice in a business relationship necessitates payment of compensation to set the relationship right. This must also lead to improving the economic condition of the 'neediest'. According to John Rawls' 'difference principle,' the neediest part of a relationship must get priority over others;[36] unequal distribution of risks may be acceptable only if it concentrates on ensuring justice for the 'worst off'. Rawls also argues that people may have their personal motivation around various issues such as income inequality, class, gender, and talent, and each will view the world in their own way. However, values such as liberty, opportunity, social basis of self-respect, and opportunities to earn a living should be applicable to everyone. Therefore, every decision should meet these values irrespective of someone's personal motivation.[37] From the perspective of shipbreaking, shipowners from developed countries may want to get rid of the unwanted ships or externalise the risk and cost of shipbreaking to developing countries in South Asia, but valuing human life must be their key focus.[38] They should undertake responsibility for the deaths, injuries, and work-related diseases.

Similarly, according to Sen, 'practical reasoning must include ways of judging how to reduce injustice and advance justice, rather than aiming only at the characterisation of perfectly just societies'.[39] A goal of the theory of justice is to identify an injustice, which is remediable. If not in full, at least a society should try to eliminate this remediable injustice.[40] In doing so, a legal system should focus on human lives and the people who suffer from the injustice.[41] In other words, Sen argues to reflect people and their sufferings in a legal system with an aim at providing adequate and prompt remedy in a given context.

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[35] Robert Nozick, *Anarchy, State, and Utopia* (Basic Books & Oxford, 1974) 152; James S. Coleman, Boris Frankel and Derek L. Phillips, 'Robert Nozick's Anarchy, State, and Utopia' (1976) 3(3) *Theory and Society* 437, 438.
[36] John Rawls, *A Theory of Justice* (Oxford University Press, 1999 rev ed) 101-109; Philosophy Overdose, Rawl's Theory of Justice (September 12, 2016) https://www.youtube.com/watch?v=zhVByiXBxi4
[37] Ibid.
[38] Karim (n 15) 38.
[39] Amartya Sen, *The Idea of Justice* (The Belknap Press of Harvard University Press, 2009) 7.
[40] Ibid, 7-8; see also Amartya Sen, 'Rawls versus Bentham: An Axiomatic Examination of the Pure Distribution Problem' (1974) 4 *Theory and Decision* 301, 301-309.
[41] Sen (n 39) 10.

The aspects of remedying injustice proposed by Aristotle, Rawls, and Sen are relevant to the South Asian shipbreaking industry for two reasons. First, following Aristotle and Rawls' propositions, as shipbreaking is an externalisation of risk to developing nations, the focus should be on the 'worst off'; i.e., the workers of the shipbreaking industry. Second, following Sen's proposition, as the current shipbreaking laws, discussed in Chapter 4 and 5 are not enough to prevent shipbreaking accidents,[42] shipowners must undertake responsibility through a civil liability framework to remedy the injustice in their business relationship. Given that the shipowners are the main beneficiaries of shipbreaking in terms of wealth accumulation,[43] the thesis argues for applying the rectificatory global justice and proposes a mandatory civil responsibility mechanism for providing adequate and prompt compensatory damages to victims of shipbreaking accidents and other work-related diseases.[44]

Rectificatory global justice is not a new theory used in inter-State issues, such as shipbreaking. Some researchers have used the theory to compensate for past injustices in the cases of border closure,[45] debt relief,[46] slave trade,[47] and climate change.[48] In relation to debt burden of developing countries, a study conducted by Jaggar has convincingly argued that the debt is the financial consequence of colonization of previous centuries. Jaggar has also claimed that the reason behind the poverty of many developing countries in Asia and Africa is that 'they have been robbed of their wealth in the past'.[49] Because of this taking away of the assets by past colonizers, the developing countries, who are now struggling with many poverty-related issues, including industrial development, are required to borrow back the wealth from the developed countries. Jaggar argues that the responsibility lies with the colonial powers to release developing countries' debt burden and rectify past injustice.[50] In relation to

[42] See Chapters 4 and 5 that discuss why current shipbreaking laws are not enough to prevent shipbreaking accidents.
[43] See Chapters 3 and 5 for detailed discussion on the question of profit.
[44] Karim (n 17) *IMO Structure and Law-Making Process*, 30-35.
[45] Ryan Pevnick, *Immigration and the Constraints of Justice: Between Open Borders and Absolute Sovereignty* (Cambridge University Press, New York, 2011) 3.
[46] Alison M. Jaggar, 'Vulnerable Women and Neo-Liberal Globalisation: Debt Burdens Undermine Women's Health in the Global South,' (2002) 23 *Theoretical Medicine* 425, 435
[47] Sara Amighetti and Alaisa Nuti, 'Towards Shared Redress: Achieving Historical Justice Through Democratic Deliberation' (2015) 23(4) *The Journal of Political Philosophy* 385, 386-388.
[48] Lukas H. Meyer and Dominic Roser, 'Climate Justice and Historical Emissions' (2010) 13(1) *Critical Review of International Social and Political Philosophy* 229, 233-240
[49] Jaggar (n 46).
[50] Ibid.

past injustices, such as slavery and racial discrimination, the Caribbean Community is currently trying to obtain compensation for Caribbean slavery by European countries.[51] Meyer and Roser have argued for compensation to States that have fallen victim to climate change caused by historical emissions by developed countries.[52]

The international law principles, such as good faith and abuse of rights duty, due diligence duty and corporate social responsibility have also aimed at remedy using the principles of rectifying global injustices. The following sections explain the doctrinal basis for remedying future harms by compensation in light of these international law principles.

B *Doctrinal Basis for Shipowners' Responsibility*

Benefit and knowledge are linked to responsibility of the shipowners under international law principles. For the argument, the following sections use three grounds. First, shipowners breach the international principles of good faith and prevention of abuse of rights. Second, shipowners promote shipbreaking in developing countries despite having knowledge of the poor shipbreaking practices. Third, shipowners keep tight control of the total business process of selling ships. The next three sub-Sections explain these grounds.

1 *Justification Based on the Principles of Good Faith and Prevention of Abuse of Rights*

Promoting the shipbreaking industry in South Asian developing countries is a breach of the international principles of good faith and prevention of abuse of rights duty (principles). Besides shipbreaking incidents, activities involved in shipbreaking causes environmental pollution and harm to human health, which indicate that shipowners violate these principles. This reinforces the argument of rectifying the injustice in the shipbreaking industry and the taking of responsibility by shipowners.

According to the good faith and prevention of abuse of rights duties, a person cannot abuse the rights of others and cause damage or harm. If they do so, the abuser is required to take responsibility for his abusive actions. Voyame, Bertil, and Rocha define the duty to prevent abuse of rights as a 'legal mechanism designed to ease the

[51] Amighetti and Nuti (n 47).
[52] Meyer and Roser (n 48).

inflexibility of the legal relationships derived from statutory, judicial, or treaty rules'.[53] According to this definition, the duty of good faith and abuse of rights are inter-related, which means the duty of preventing abuse of rights is an expansion of the good faith principle. National legal systems apply the principles regularly and regard the abuse of rights duty as a general principle of international law.[54]

Inter-State environmental and human rights treaties have also explicitly incorporated the principles. For instance, art 300 of the 1982 *United Nations Convention on the Law of the Sea* provides that 'State Parties shall fulfill in good faith, the obligations assumed under this Convention and shall exercise the rights, jurisdiction, and freedoms recognized in this Convention in a manner, which would not continue as abuse of right'.[55] Moreover, the amended art 17 of the *Convention for the Protection of Human Rights and Fundamental Freedoms* reads as follows:

> Nothing in this Convention may be interpreted as implying for any state, group or person any right to engage in any activity or perform any act aimed at the destruction of any of the rights and freedoms set forth herein or at their limitation to a greater extent than is provided for in the Convention.[56]

Alongside the endorsement of the principles in the treaties, Judges have referred the principles in a number of international disputes. For instance, Weeramantry J in *Gabcikovo-Nagymaros*, recognized the principles as a 'well-established area of international law'.[57] In deciding the question of whether Hungary's environmental concerns violated Slovakia's treaty right leading to human harms, Parra-Aranguren J in the same case held that Slovakia should not give compensation to Hungary, unless evidence can prove a manifest abuse of rights on its part.[58] With more clear objectives, the Appellate Body of the World Trade Organization (WTO) relied on the duty to prevent abuse of rights in *Shrimp-Turtle case*. In this case, the Appellate Body stated that the duty to prevent abuse of rights controls a State's abusive practice over another

[53] Joseph Voyame, Bertil Cottier and Boliver Rocha, 'Abuse of Right in Comparative Law' (Conference Paper, European Union Law, 6-9 November 1989) 23.
[54] M. Whiteman, *Digest of International Law* (Washington DC: Government Printing Office, 1965) vol 5, 224-30.
[55] *United Nations Convention on the Law of the Sea*, opened for signature10 December 1982, 21 ILM 1261 (entered into force 16 November 1994).
[56] *Convention for the Protection of Human Rights and Fundamental Freedoms,* opened for signature 4 November 1950, 213 UNTS 222 (entered into force 4 November 1953).
[57] The *Gabcikovo-Nogumoaros Project (Hungary v Slovakia)* [1997] ICJ Rep 7, 22.
[58] Ibid Parra-Aranguren J [25].

State.[59] It is therefore clear that neither a State nor a group or person can misuse the rights of other States or their citizens. An accountability would lie on the responsible parties if they breach the duty to prevent abuse of rights. In the context of shipbreaking, as shipowners deliberately send their ships to developing countries, principles of good faith and prevention of abuse of rights duty are the key international principles for them to undertake responsibility.[60] The next sections sheds light on associative duties,[61] the *OECD Guidelines for Multinational Enterprises* (the *OECD Guidelines*) and the *United Nations Guiding Principles for the Implementation of the United Nations 'Protect, Respect and Remedy Framework'* (the *United Nations Guiding Principles*) to further elaborate this argument.[62]

2 *Other Grounds for Shipowners' Responsibility?*

Shipbreaking is an international business that involves chains of owners, including shipowners and their States; shipbreaking yards and their States; open registry countries; and cash buyers as intermediary shipowners (see Chapter 3 for details). The question is who should, and under which legal principles, take the responsibility and what would be the nature of the remedy. This Section contends that shipowners should be responsible for the deaths, injuries, or work-related diseases taking into account their business association with the shipbreaking industry.

As stated before, justice requires one to pay what one owes to others in a range of areas, where injustice occurs.[63] There are three schools of thought in relation to

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[59] Appellate body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Doc WT/DS58/AB/R (6 November 1998) [10].

[60] Michael Byers, 'Abuse of Rights: An Old Principle, New Age' (2002) 47 *McGill Law Journal* 389, 390-391.

[61] Lea YPI, Robert E. Goodin, and Christian Barry, 'Associative Duties, Global Justice, and the Colonies' (2009) 37(2) *Philosophy and Public Affairs* 103, 103.

[62] Organisation for Economic Co-operation and Development (OECD), *OECD Guidelines for Multinational Enterprises*, 2nd ed, 2000, Part II, para 2, <http://www.oecd.org/daf/investment/guidelines/mnetext.htm> and *OECD Guidelines for Multinational Enterprises, Recommendations for Responsible Business Conduct in a Global Context 2011* http://www.oecd.org/investment/mne/1922428.pdf; John Ruggie , *Guiding Principles for the Implementation of the United Nations 'Protect, Respect and Remedy Framework,* Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, UN Doc A/HRC/17/31 (March 2011). (*the United Nations Guiding Principles*)

[63] Tom D. Campbell, 'Humanity before Justice in Global Perspective' (1974) 4 *British Journal of Political Science* 219, 220; Brian Barry, 'Humanity and Justice in Global Perspective' in James Ronald Pennock and JamesWack Chapman (eds), *Ethics, Economics and the Law* (New York University Press, 1982) 219-225.

ensuring justice when inter-State parties are involved. First, the international justice that considers the duty of everyone to remedy the victims, irrespective of involvement in any breach.[64] Second, the domestic justice that argues that the principle of justice applies only among citizens of the State.[65] Third, the middle ground that also argues that responsibility must be taken for global problems, but the extent of responsibility is neither too high as the first school contends nor too low as the second school contends.[66] The thesis follows this third position. It posits that the responsibility of the actors in a business arises on the ground of associative duties. As discussed before, shipbreaking is a value chain of the shipping industry that eventually leads to converting an unwanted ship into valuable steel products and thereby adding value to the materials found in an old ship through a series of activities or processes. Shipbreaking aims to create profitable value for the end-of-life ships, which would otherwise remain burdens for shipowners.

Generally, on the 'business association' account, people have more duties to the one that they have a business association with than to the outsiders.[67] Everyone within the same business association has associative duties to each other.[68] The duty exists only among the participants in the business. The associative duties do not decrease merely on the ground of distance, no matter how distant the advantaged group is from those who are adversely affected.

In the context of shipbreaking, the associative duty lies with the shipowners from the beginning because of their knowledge of poor working condition and profit from the shipbreaking industries in South Asia.[69] Shipowners' knowledge and motivation for profit can thus form the basis of their responsibility. This is evident in a recent case law decided by the Court of Appeal of England and Wales. The Court found a UK shipping industry broadly responsible for paying compensation to the family of a deceased worker, who died from the fall while working in a Bangladeshi shipbreaking

[64] YPI, Goodin, and Barry (n 61) 104.
[65] Campbell (n 63) 221.
[66] Michael Blake, 'Distributive Justice, State Coercion, and Autonomy' (2001) 30 *Philosophy and Public Affairs* 257, 257-260; Andrea Sangiovanni, 'Global Justice, Reciprocity, and the State' (2007) 35 *Philosophy and Public Affairs* 3, 4.
[67] YPI, Goodin, and Barry (n 61) 103.
[68] Ibid.
[69] See Chapter 3 for understanding business profit of shipowners.

yard. The UK shipping industry sold its ship despite having knowledge about the poor working conditions in the Bangladeshi shipbreaking yard (see Section (a) below).

Similar to a hazardous waste management company, a shipowner can hardly escape responsibility by severing ties with a ship. For example, if a company exposes its workers to asbestosis for many years and later the workers start showing symptoms of serious health problems, the owners cannot simply avoid responsibility by selling the company and retaining no relationship with the affected workers.[70] The same argument would apply where a shipowner intends to sever the tie with the human harms caused in breaking an old ship by transferring ownership to a shipbreaking yard or a cash buyer company, such as Global Marketing System (GMS).[71] 'Cash buyer' refers to an intermediate buyer of a ship who may purchase a ship 'as it is' paying cash to a shipowner. The responsibility to pay compensation does not end with the transfer of ships. Primarily, shipowners' duty to safeguard right to life and health of workers in their value chain would continue and any failure to meet these associatively grounded duties would lead to paying compensatory damages.[72]

In relation to the change of ownership and value chain connection in shipbreaking, a reasonable question is, if there are duties, what should be their philosophical basis? In fact, a compensation mechanism that creates an incentive to prevent accidents in the workplace is important to follow the duties. One good example of this is the readymade garments (RMG) sector in Bangladesh. The Bangladesh RMG sector acts as a supply chain that manufactures garment products for many global brand companies. As people use the readymade garments produced in Bangladesh for the multinational brand companies, the sense of responsibility is higher than in the shipbreaking industry. Due to the use of RMG and therefore, higher sense of responsibility and concern on the RMG sector and consensus on responsibility of foreign buyers, two key global regulatory frameworks were established by multinational companies after the collapse of a building named 'Rana Plaza' in Bangladesh on 24 April 2013. Rana Plaza housed a number of small garments industries, which were in operation at the time of its collapse. Eleven hundred workers

[70] The example is cited in YPI, Goodin, and Barry (n 61) 124.
[71] See Chapter 4 and 5; Established in USA in 1992, GMS is the world's largest buyer of ships and Offshore Assets: see GMS Leadership, *World's Largest Buyer of Ships and Offshore Assets* (Webpage, 2019) http://www.gmsinc.net
[72] YPI, Goodin, and Barry (n 61) 124.

died and 2500 workers were injured in that industrial accident.[73] This event forced the multinational companies to introduce and implement the *Accord on Fire and Building Safety in Bangladesh (the Accord)* and *the Alliance for Bangladesh Worker Safety (the Alliance)* in 2013 (Agreements). They are binding agreements and they focus both on prevention and on compensation.[74] *The Accord* is between the brand companies and the trade unions of Bangladesh for a safe environment and *the Alliance* is amongst the leading North American apparel companies, retailers, and brands for safer RMG industries in Bangladesh.[75]

After the implementation of these agreements, there have been no major industrial accidents in the RMG sector of Bangladesh. This indicates that although the focus of the Agreements is to pay adequate compensation to the victims, they also have a slipover effect on preventing catastrophic industrial accident.

These instruments have introduced a very important aspect of the corporate responsibilities of business enterprises such as global shipping industries.[76] However, as yet, shipping industries have not introduced any effective mechanism for shipbreaking. Perhaps unsurprisingly the reason is that shipbreaking involves different activities from the RMG sector. People use garments produced by the RMG sector, whereas people have nothing to use from shipbreaking in a direct sense. People have attachment to ships during their commercial life for shipping goods, parcels, et cetera, but no one keeps track of what happens to the ships at the end of their life or of what consequences shipbreaking bring for workers and the environment. However, in both RMG and the shipbreaking sectors, owners have responsibility due to their knowledge, and the profits from their business relationship.

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[73] Alyssa Ayress, 'A Guide to the Rana Plaza Tragedy, and Its Implications, in Bangladesh', *the Forbes* (online at 24 April 2014) https://www.forbes.com/sites/alyssaayres/2014/04/24/a-guide-to-the-rana-plaza-tragedy-and-its-implications-in-bangladesh/#62b4d3b62c50

[74] The Accord is a legally binding agreement between brands and trade unions for improving safety environment and the Alliance is a legally binding five years initiative amongst leading North American apparel companies, retailers, and brands for safer Readymade Garments industries in Bangladesh. Bangladesh Accord, *Accord on Fire and Building Safety in Bangladesh* (Web Page)< http://bangladeshaccord.org/; Bangladesh Worker Safety, *Alliance for Bangladesh Worker Safety* (Web Page) http://www.bangladeshworkersafety.org/; Jimmy Donaghey and Juliane Reinecke, 'When Industrial Democracy Meets Corporate Social Responsibility – A Comparison of the Bangladesh Accord and Alliance as Responses to the Rana Plaza' (March 2018) 56(1) *British Journal of Industrial Relations* 14, 15.

[75] Ibid.

[76] George M. Cairns, 'Return to Chittagong: Ten Years since the "Postcard" (2017) 13(4) *Critical Perspectives on International Business* 340, 341-343.

As discussed in the following sections, the knowledge about the poor shipbreaking practices and profit of shipowners can be followed by court actions if shipowners do not undertake responsibility. The profit motive of shipowners is already under increasing scrutiny under the tort law's duty of care principle, which can form the basis of the duty and compensation payment.

(a) Duty of Care for Creating a Danger Principle

The Court of Appeal of England and Wales (Civil Division) has recently used the principle of duty of care for creating a danger principle to find a UK shipping industry liable for the death of a worker in a shipbreaking industry in Bangladesh. According to this principle, if 'X' does something that creates an opportunity for 'Y' to exploit and cause harm to 'Z', then for creating the danger, 'X', being the person in control of the transaction, is liable to pay compensation.

The Court of Appeal of England and Wales established the principle in *Hamida Begum v Maran (UK) Limited.*[77] The Court reached this conclusion after hearing an appeal that upheld an interim order passed by the High Court of Justice (Queen's Bench Division) stating that the defendant-shipowner would owe the legal duty of care to a shipbreaking worker in Bangladesh and pay compensation subject to full trial of the case.[78]

Initially, Hamida Begum, wife of a shipbreaking worker, Khalil Mollah– who fell from a height to death while breaking the ship named the *Maran Centaurus* – made a compensation claim before the High Court of Justice arguing that the shipowner, Maran (UK) Limited, had a duty of care. This was on the ground that the defendant retained full control over the ship's sale arrangement, including the transfer to the final destination and the purchase price.[79] On Appeal, the Court of Appeal had to decide whether the defendant-Maran (UK) Limited had a legal duty of care to the plaintiff and was liable to pay compensation.

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[77] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. (10 March 2021). *(Maran Shipping)*

[78] Earlier, the defendant-appellant filed a summary rejection petition before the High Court of Justice (Queen's Bench Division). The Court rejected the petition. In rejecting the petition, the Court primarily ordered that the plaintiff had a good case to claim compensation and the matter should go for trial. The defendant-appellant, Maran (UK) Limited, appealed against the order to the Court of Appeal for England and Wales (Civil Division): at *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2020] EWHC 1846 (QB) (13 July 2020) Jay J.

[79] *Maran Shipping* (n 77).

The defendant, by contrast, argued that the shipowner had no duty of care, for not being the last owner of the ship. The facts, however, showed that the defendant kept tight control for selling the disputed ship but followed a non-transparent process as discussed in Chapter 1 and 3. Maran (UK) Limited acted as an agent to sell the disputed ship on behalf of the principal company, Centaurus Special Maritime Enterprise.[80] Finally Hsaejar Maritime Inc., the intermediary cash buyer used by the defendant, purchased the ship with cash from the defendant and sold it to the Bangladeshi business enterprise, Zuma shipbreaking yard, who purchased the ship for breaking in Bangladesh.

Arguing against the non-transparent selling process of the ship, the plaintiff claimed that the defendant had a legal duty of care under the neighborhood principle established in *Donoghue v Stevenson*.[81] According to the neighborhood principle, a defendant owes a duty of care to a claimant if the defendant has knowledge and control over the act causing the harm. The plaintiff accordingly claimed that the defendant owed a duty of care as they had knowledge of the unsafe shipbreaking practices in Bangladesh and foreseen the danger involved in breaking the ship.

The defendant-appellant, on the contrary, argued that the defendant had no legal duty of care because the accident had happened due to a third party intervention and, in this case, it was the Zuma shipbreaking yard in Bangladesh. The defendant had no control on the shipbreaking practices of the third party, Zuma shipbreaking yard in Bangladesh. The victim faced death falling from the height that happened due to the unsafe shipbreaking practices of the third party, Zuma shipbreaking yard. However, the defendant's argument of third party intervention could not succeed before the court, as the evidence was that the defendant-appellant had complete control over the sale of the vessel, its final destination and price.

[80] The defendant, Maran (UK) Ltd. is a British company that acted as a broker for the original registered owner, Centaurus Special Maritime Enterprise (CSME), a Liberian company that is a part of the Angelicoussis shipping group. Full share of the registered owner, Centaurus Special Maritime Enterprise, belongs to another company within the same group, Maran Tankers Ship Holdings Limited (MTS), incorporated in the Cayman Islands, UK. Another related Liberian company, Maran Tankers Management was the operational and management company of the ship. Maran (UK) Ltd. acted as an agent to sell ships on behalf of the principal company, Centaurus Special Maritime Enterprise. Alongside 28 other ships, defendant-Maran (UK) Limited signed an agency agreement with the operator, Maran Tankers Management on 1 August 2013: at Ibid [7].
[81] [1932] UKHL 100.

After hearing, the Court of Appeal accepted plaintiff's appeal affirming the decision of the High Court of Justice and sent the matter back for trial. The court found that the shipowner would 'owe a legal duty of care to a shipbreaking worker in Bangladesh' because 'the shipowner created the danger for not foreseeing a state of danger which may be exploited by a third party'.[82] Moreover, referring to *Smith v Littlewoods*, the Court stated that creation of danger is an exception to the third party intervention principle.[83] Under this creation of danger principle established in *Smith v Littlewoods,* a defendant may be held liable if it is reasonably foreseeable that third parties may exploit it, and for 'sparking off the danger'.[84] Coulson LJ also found that the shipowner's duty did not extinguish by the intervention of a third party- Zuma shipbreaking yard. Importantly, Coulson LJ further found that the shipowner would owe a legal duty because between a substandard shipbreaking yard in Bangladesh and standard shipbreaking yard in China, the owner preferred selling the ship to Bangladesh for earning extra profit.

The Court further emphasised the issue of profit motivation of the shipowner. The Court found that for the same ship, China was ready to pay USD 10 million whereas Zuma shipbreaking yard, a shipbreaking company in Bangladesh, agreed to pay USD 16 million because the yard did not have to bear the expense of and arrange for providing safe conditions for its workers.[85] Coulson LJ explicitly mentioned that 'the defendant-Maran (UK) Limited decided to prefer taking the money to workers in Bangladesh, to take the risk'.[86] The Court concluded that:

> The defendant was responsible for sending the ship to Bangladesh, knowing that this would expose workers such as the Claimant's husband to the risk of death or serious injury as a result of the negligence of the shipbreaker which employed him. It was not a case where there was merely a risk that the shipbreaker would fail to take reasonable care for the safety of its workers. On the contrary, this was a certainty, as the Defendant knew.[87]

[82] *Maran Shipping* (n 77) [53]-[73] (Coulson J)
[83] *Smith v Littlewoods Organisation Ltd* [1987] UKHL 18.
[84] *Maran Shipping* (n 77) [53].
[85] Ibid [121].
[86] Ibid [64].
[87] Ibid [124].

The judgment is relevant to this current study since both this thesis and the Court of Appeal of England and Wales use the same foundation, the profit motivation of shipowners, in establishing the responsibility of shipowners for the compensation payment. Although this decision was based on tort law principle, which is not the legal basis of the thesis, the decision is relevant for the thesis, because it reinforces the debate that a party who controls the business process and earns extra profit must follow due diligence and corporate responsibility to pay compensation in a given business context.

(b) The Due Diligence Principle

Due diligence principle in the global context is derived from the common law of due diligence that has been accepted as a general principle recognised by civilised nations.[88] Due diligence serves as an objective standard for introducing an obligation on the responsible parties aiming to ensure a minimum standard of protection,[89] and remediation. During the second half of the twentieth century, national courts have used the due diligence principle as a principle of good faith in good neighbourly relations.[90]

In international issues, like shipbreaking, application of the due diligence requires an additional legal mechanism. The principle itself does not create any binding obligation in relation to an inter-State business relationship. As discussed above, the RMG sector adopted this principle in the *Accord* adopted after the Rana Plaza incident,[91] which indicates that although the due diligence depends on foreseeability of a harm from the side of international parties, it can only be applied subject to its inclusion in the regulatory mechanism of the industry under which it operates.[92] Without a specific mechanism to that end, it is highly unlikely to introduce a direct link between the value chains, where unsafe practices cause harm, and the international parties who control the business. In other words, only knowledge of the abusive practice is not enough in absence of a regulatory mechanism that incorporates the due diligence principle.

[88] This is a source of international law under art 38(1)(c) of the Statute of the ICJ: see the *Statute of the International Court of Justice*, opened for signature 26 June 1945, 33 UNTS 993, entered into force 18 April 1946.
[89] *Corfu Channel Case (United Kingdom v Albania)* [15 December 1949] ICJ Rep 1, 244; *Pulp Mills on the River Uruguay (Argentina v Uruguay)* [2006] ICJ Rep 113, 200.
[90] Jonathan Bonnitcha and Robert McCorquodale, 'The Concept of 'Due Diligence' in the Guiding Principles on Business and Human Rights' (2017) 28(3) *The European Journal of International Law* 899, 900.
[91] Clean Cloth Campaigns, 'Human Rights Due Diligence' (Position Paper, March 2016) 6-7.
[92] Ibid, 903.

The *Hong Kong Convention* does not provide any mechanism to apply the due diligence principle. Hence, the Convention does not provide a mechanism to ensure a sound shipbreaking management in the shipbreaking States under the control and supervision of shipowners despite deliberate use of substandard shipbreaking practices in South Asia. It is an indication that unless the shipbreaking industry adopts a treaty-based approach to introduce the due diligence principle, the business as usual will continue. This means uncompensated deaths and injuries in the industry will continue in the future, and there will be limited scope to apply other relevant principles, such as the principle of corporate responsibility.

(c) The Principle of Corporate Responsibility

The Corporate Responsibility principle is an extension of the due diligence principle when a business involves a number of business entities. By the parameters of corporate responsibility, a business should respect human rights, included in the fundamental human rights instruments such as the *Universal Declaration of Human Rights*,[93] and the *Declaration of Fundamental Principles and Rights at work*.[94] The *OECD Guidelines* and *United Nations Guiding Principles* promote the corporate responsibility to respect human rights in the supply chain of an international business.

Under the *OECD Guidelines*, the companies that have business connection with an entity directly responsible for violating the rights of workers bear a responsibility to prevent or mitigate its impact on violation of rights. The *OECD Guidelines* require the companies to engage with their value chain to address the systemic issues. Importantly, the *OECD Guidelines* recommend that companies should seek to mitigate and prevent adverse impact by engaging with 'impacted or potentially impacted parties'.[95]

The *OECD Guidelines* that include important labour rights and human rights are similar to the *United Nations Guiding Principles*.[96] The *United Nations Guiding Principles* suggest that corporations are committed to respecting human rights, should

[93] *Universal Declaration of Human Rights*, GA Res 217 A (III) UN GOAR, UN Doc A/810 (10 December 1948).
[94] *The ILO Declaration on Fundamental Principles and Rights at Work*, International Labour Conference, 86th Session, Geneva, 18 June 1998 (Annex revised 15 June 2010).
[95] *OECD Guidelines* [12].
[96] Some of the key rights are: trade union rights, abolition of child labour, elimination of all forms of forced or compulsory labour, equal opportunity consultation and co-operation between employers and workers, *OECD Guidelines*, ch V.

refrain from doing any act or acts that may affect the core standard of human rights by avoiding and mitigating the loss. Corporations therefore need to take steps that will minimize the adverse effect on humans.[97]

The *OECD Guidelines* and *United Nations Guiding Principles* are directly relevant to the shipbreaking industry and are therefore applicable to the shipowners. By the parameters of due diligence and corporate social responsibility, shipowners should respect the fundamental human rights of the shipbreaking workers and refrain from selling ships unless the shipbreaking facilities adopt safety measures to prevent accidents. If prevention of accidents is not possible because of inherent dangers involved in the shipbreaking industry, shipowners should take steps to minimize the human harms and provide adequate remedy to the victims.[98] The *United Nations Guiding Principles*, in particular, recommend for an effective judicial and administrative remedy contemplating the dangerous nature of an industry, such as shipbreaking.[99]

C *Doctrinal Basis of the Remedy System with Compensation*

Broadly, in the context of business and human rights, the *United Nations Guiding Principles* suggest that 'remedies may include financial or non-financial compensation, apologies, restitution, rehabilitation, and punitive sanctions'.[100] According to the *United Nations Guiding Principles*, an aggrieved party may seek four different kinds of remedies depending on the facts of his or her case. One may seek restoration for one's full loss; or compensation if the complete return of the loss is not possible; or a person may want an apology to acknowledge and address the wrong of an injustice grounded on a moral basis; or a person may want that the perpetrator suffers due punishment.[101]

In the context of shipbreaking, given that in consequence of the death or serious injury of a worker demanding restitution for the full loss is not possible, compensation is more acceptable a remedy than restoration, apology, and punishment. Apology or punishment falls short of addressing the economic loss of a victim worker, whereas

[97] The *United Nations Guiding Principles* [11], [12] and [13 (a)-(b)].
[98] *The United Nations Guiding Principles* [11]-[12].
[99] Ibid [25]-[30].
[100] Ibid [25].
[101] Commentary, *The United Nations Guiding Principles* [111.A.25].

compensation addresses the unaccounted loss. This means it supplements a victim's loss of earning due to a workplace accident. It also attempts to counterbalance an unjust loss with something equivalent in value to that loss. Broadly, pertaining to shipbreaking, it would balance with the profit earned by shipowners and the loss suffered, if any, by the victims.

However, as the *United Nations Guiding Principles* are not mandatory laws, a question arises against the effectiveness of the *Principles*.[102] Moreover, the payment of compensation following an international mechanism is controversial because a number of international instruments shift the responsibility to the concerned States where the violation has occurred. For instance, art 8 of the *Universal Declaration of Human Rights* states that 'everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted by the constitution of law'.

In contrast, from the perspective of a victim, in the absence of an effective mechanism for compensation in the national context, an international system is more adequate for compensation mainly for two reasons. First, when the constitution guarantees the rights of the workers, but the national judiciary and tribunals are not legally able to enforce the rights due to the loopholes in national laws and unequal bargaining power between the shipbreaking yards and the workers, it becomes the associative duty of the shipowners as international parties to follow the international law and remedy the victims in their value chain.[103] Second, as the victimization is the indirect effect of business profit of shipowners, the shipowners, both individually and collectively, have a moral obligation to remedy the victims by introducing an appropriate financial system. To assess the claim for an international remedy system with a financial mechanism, the next Section investigates several international human rights laws that in principle have focused on a global remedy with a financial mechanism.

[102] International Federation of Human Rights (FIDH), *Joint Civil Society Statement on the Draft Guiding Principles on Business and Human Rights* (Web Page, 3 March 2011) <http//www.fidh.org/UN-Forum-on-Business-and-Human-1259>; Robert C. Blitt, 'Beyond Ruggie's Guiding Principles on Business and Human Rights: Charting an Embracive Approach' (2012) 48(1) *Texas International Law Journal* 33, 35.
[103] See Chapter 4.

D *Financial Compensation in the International Human Rights Law*

International human rights laws place an emphasis on financial reparation of victims. As a principle of customary international law, the international human rights laws even suggest paying additional compensation to victims following an international mechanism.

Importantly, art 2(3) of the *International Covenant on Civil and Political Rights* (ICCPR) provides that 'each person whose rights or freedoms as herein recognized are violated shall have an effective remedy for granting financial reparation to victims of human rights violation'.[104] This provision is controversial. Some scholars argue that the ICCPR provides no ground for financial remedy since it only focuses on procedural rights,[105] whereas the International Law Commission's *Drafts Articles on Responsibility of States for Internationally Wrongful Acts* and Human Rights Committee maintain that 'customary international law recognises the duty to pay compensation'.[106] Duty to pay compensation as a principle, not procedure, became clearer when the United Nations General Assembly (UNGA) in 1999 declared that 'everyone has the right to benefit from an effective remedy, including any compensation due'.[107]

Moreover, some international laws also recommend for paying compensation in addition to the remedies available from the courts of the State where the shipbreaking yards are located (State remedies). Art 14 of the *Convention Against Torture* states that 'the individual victim or his or her dependents in the case of death shall have a direct right to financial compensation from the responsible parties and states must

[104] *International Covenant on Civil and Political Rights*, opened for signature 16 December 1966, 999 UNTS 171 (entered into force 23 March 1976) art 6.
[105] Sascha-Dominik Bachmann, *Civil Responsibility for Gross Human Rights Violations – The Need for a Global Instrument* (Pretoria University Law Press, 2007) 7.
[106] International Law Commission, *Drafts Articles on Responsibility of States for Internationally Wrongful Acts*, November 2001, Supplement No. 10 (A/56/10), chp.IV.E.1, art 31,34, and 36; Human Rights Committee, *Ann Maria Garcia Lanza de Netto* v *Uruguay* Communication No 8/1977, UN Doc CCPR/C/OP/1 (1984) 45('*Weissmann Communication')*. A principle becomes a customary international law if it satisfies two criteria. First, the principle must be well-settled and practised by the states and second, states obey the rule because they consider themselves legally bound by it, not just because of tradition, politeness, or convenience, see Monica Hakimi, 'Making Sense of Customary International Law' (2020) 118(8) *Michigan Law Review* 1487, 1488.

[107] *Declaration on the Rights and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognised Human Rights and Fundamental Freedoms*, UN Doc GA Res 53/144 (8 March 1999) art 9(1).

ensure this'.[108] An important development of the provision is that it adds to State remedies, that is, irrespective of remedies available from the State courts, victims can seek remedies from the parties who profit from the industry. The *United Nations Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power* also recognizes the general principle of compensation specifically in case of 'unlawful detention and acts of political brutality'.[109]

These declarations and documents demonstrate that there is a quest for forming an international principle under the UN to impose responsibility for human harms with a financial mechanism on international parties in addition to or in absence of State remedies. This is also evident in the regional mechanisms where the Member States have accepted commonly that compensation is the most suitable remedy for human harms. For instance, art 13 of the *European Union Convention on Human Rights* and Art 41 of the *European Union Court of Human Rights* allows the *European Union Court of Human Rights* to order financial remedy for human harms.

E *Importance of a Special Responsibility Framework in Global Issues*

It follows from the above international law principles that there is a recognised need for introducing a special responsibility framework to address global injustice, where business related deaths, injuries and diseases are an issue. Although, in principle, the above-mentioned instruments have established a strong basis for compensation, the mechanisms have not introduced a direct procedure so that a victim can pursue an individual claim against a non-State actor or a State.

As it stands, there are two ways to access a financial remedy. One of the ways to access a financial claim rests with State actions. A concerned State party can initiate a complaint or communication procedure, where a State brings the matter to an international tribunal or communicates directly with another country for seeking compensation in the event of a mass violation of human rights.[110] Both American and

[108] *Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*, opened for signature 10 December 1984, 1465 UNTS 85 (entered into force 26 June 1987).
[109] *The United Nations Declaration of Basic Principles of Justice for Victims of Crime and Abuse of Power*, UN Doc, GA Res 40/34 (29 November 1985) art 12.
[110] Bachmann (n 105) 11; *The Basic Principles and Guidelines on the Right to A Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law*, UN Doc, GA Res 60/147 (16 December 2005) ch 7

African Human Rights Courts follow this approach.[111] Another process is to file an individual complaint before the concerned regional human rights court to decide on a victim's remedy.[112] The European Union Court of Human Rights follows this approach. Nevertheless, the problem is that both approaches may lead to traditional litigation processes and the concerned courts finally have to decide on the remedy. Without a direct remedy system, the traditional State action or litigation approach has created a weak procedure for an individual victim to enforce their rights, especially against a State or a non-State actor.[113] Due to the weakness in the law, there is a growing demand within the legal community to introduce a special responsibility framework for compensating specific human consequences.[114] Importantly, Bachmann argues for a global instrument to impose civil responsibility in the context of gross human rights violation.[115] Shipbreaking falls into the category of a special regime that causes regular human rights violations because of the hazardous nature of the industry itself.[116]

Whether the court sponsored remedy is effective is beyond the scope of the thesis, but this thesis argues for a treaty-based civil responsibility approach to introduce a system for direct remedy rather than following a litigation. Under the framework the litigation may come last to give remedy, subject to failure of the system.

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[12] & ch 9 [15]; *American Convention on Human Rights*, opened for signature 22 November 1969, 1144 UNTS 123 (entered into force 18 July 1978) art 25.

[111] *American Convention on Human Rights*, opened for signature 22 November 1969, 1144 UNTS 123 (entered into force 18 July 1978) art 25; *Protocol to the African Charter on Human and People's Rights on the Establishment of An African Court on Human and Peoples' Rights*, opened for signature 10 June 1998, AU Doc, Assembly/AU/Dec.45 & Assembly/AU/Dec.83(V) (entered into force 25 January 2004) arts 28-30. Under the regional human rights instruments, the Inter-American Court of Human Rights and the African Court of Human Rights have not been entrusted with the duty to hear and decide individual claims.

[112] Art 47(1) of the *Charter of Fundamental Rights of the European Union*, opened for signature 2000, EU Doc, OJ C 326/ 391 (entered into force December 2009) provides the power to European Union Human Rights Court to hear individual claims.

[113] Bachmann (n 105) 11-12.

[114] Ibid.

[115] Ibid.

[116] Okechukwu Ibeanu, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc. A/HRC/12/26 (15 July 2009).

IV ARGUMENT FOR A TREATY-BASED CIVIL RESPONSIBILITY APPROACH FOR THE SHIPBREAKING INDUSTRY

Chapter 9 of this thesis argues for a treaty-based civil liability framework, considering the special nature of the shipbreaking industry that causes deaths, injuries and illness related to a toxic and hazardous work environment, for two reasons.

First, the current research proposes the civil liability framework, namely the SLC framework, for an injured or ill worker or family members of a deceased worker to claim compensation directly from a shipowner or from a shipowner's shipbreaking insurance and to meet the policy goals of the international principles. As discussed above, the *OECD Guidelines* and the *United Nations Guiding Principles* are merely policy goals for shipowners to undertake responsibilities, but they are not enforceable unless they are included in a legally enforceable mechanism that governs the industry. The SLC would address the gap by providing for an enforceable mechanism. Nevertheless, a philosophical basis for such an enforceable mechanism is subject to debate in relation to regulating business and human rights in the global context.

For example, Rawls acknowledges that human rights are an important tool for enacting change in global harmful practices,[117] but he does not recognize the responsibility of inter-State parties. In contrast, Pogge argues that there is a serious case to introduce a framework for rectificatory global justice when one community is stronger than others are and takes advantage of their dominant position to the detriment of others.[118] Within the broad theoretical construct of justice, the injustice in the shipbreaking industry links to the rectificatory global justice theory to solve a problem that originates in multiple countries, but affects workers in one country.[119]

Second, the proposed SLC is to provide a comprehensive and mandatory safety net to the victims from the danger involved in breaking the ships. Yujuico, rather, argues for a corporate social responsibility (CSR) model for the shipbreaking industry in South Asia. His CSR model is to introduce a voluntary funding mechanism to support upgrading the shipbreaking standard in South Asia.[120] However, application of the

[117] John Rawls, *A theory of Justice* (Oxford University Press, 1999, rev ed) 109.
[118] Thomas Pogge, 'World Poverty and Human Rights' (2005) 19(1) *Ethics and International Affairs* 1-7.
[119] Brock (n 1) 10.
[120] Emmanuel Yujuico, 'Demandeur Pays: The EU and Funding Improvements in South Asian Ship Recycling Practices' (2014) 67 *Transportation Research Part A: Policy and Practice* 340, 348-349;

CSR model for the shipbreaking industry is not suitable for two reasons. First, this model does not impose responsibility on the international parties and its effectiveness depends on the will of developed countries, and second, the model does not have teeth since it proposes no consequences for the non-compliance.[121] Having said that, this thesis does not deny the importance of the CSR model in general, but in shipbreaking, such an approach is not effective since the shipowners are historically non-compliant in following the CSR model.[122]

Chapters 7 and 8 examine civil liability as an effective approach for compensation where the insurance and other responsible parties share the burden for compensation as used in inter-State oil transport, the waste trade, and the mining business. Incorporation of the features within the SLC is required to meet five important objectives. First, it is easy to facilitate claims. Second, it can protect the industry from excessive claims. Third, it allows a victim to claim compensation directly. Fourth, the insurance industry will directly be responsible to the victims on behalf of the shipowner, and lastly, the victim would not require proving the fault of any parties or party for one's claim.[123]

V CONCLUSION

This Chapter has briefly highlighted the shipbreaking issues in order to justify the theoretical foundation. The Chapter has also designed the theoretical framework of the thesis to support the proposals, detailed in Chapter 9, for the individual civil liability mechanism of the shipbreaking liability certificate alongside its insurance. In doing so, this Chapter has used rectificatory global justice theory to remedy the injustice in the shipbreaking industry with three propositions stated below.

First, this Chapter in Part II has argued that the international shipbreaking regime is an example of postcolonial laws that cause injustice to shipbreaking workers. Arguing briefly that the *Hong Kong Convention* advances a legal discourse that mainly benefits developed countries (that is the colonisers) and their shipping companies, this Chapter

Shawkat Alam, and Abdullah Faruque, 'Legal Regulation of the Shipbreaking Industry in Bangladesh: The International Regulatory Frameworks and Domestic Implementation Challenges' (2014) 47 *Marine Policy* 46, 51.

[121] Ibid.

[122] Md. Saiful Karim, 'Environmental Pollution from the Shipbreaking Industry: International Law and National Legal Response' (2010) 22 *Georgetown International Law Review* 185, 199.

[123] Chapter 9 discusses these objectives in detail.

has argued that shipbreaking continues the colonies the colonial legacy t in causing injustice to the shipbreaking workers. The Chapter has further argued that the shipbreaking industry has failed to balance between the business interests of shipowners and the loss of life of shipbreaking workers.

Second, based on the first argument, the Chapter has maintained that unless the international rules adopted for the profit of the formerly colonial powers are rectified with an aim to compensate the victims of the shipbreaking industry, the injustice would continue in the shipbreaking industry.[124] This Chapter then sheds light on the rectificatory global justice theory that aims to remedy the injustice. With respect to applying the rectificatory global justice theory, the Chapter in Part III has argued for undertaking responsibility by shipowners. Importantly, with reference to a recent application of the duty of care principle in *Maran Shipping* and the international law principles of due diligence and corporate responsibility, Part III has argued that the shipowners have a duty of care and the corresponding obligation to pay compensation because of their knowledge and profit from the industry.

Third, following the first and second arguments, Part IV of the Chapter has argued that a treaty-based civil liability approach is a key requirement to applying the rectificatory justice theory in the shipbreaking industry. The investigation of international laws and cases in Part III of this Chapter has revealed that the international laws recognise the remediable justice in principle, but they are merely policy goals. They are not enforceable unless they are included in a legally enforceable mechanism that governs the industry. The Chapter therefore has argued that the approach is more appropriate than guiding principles for providing adequate and prompt compensation to victim workers in the shipbreaking industry. This Chapter in Part IV has argued that a legal framework needs to be developed where individuals can claim compensation directly from the shipowners where the burden of compensation is shared between shipowners and insurance companies. The next Chapter presents the statistics and analyse the problems of the shipbreaking industry in detail.

[124] Lavanya Rajamani, *Differential Treatment in International Law* (Oxford University Press, 2006) 4.

CHAPTER THREE : THE SHIPBREAKING INDUSTRY IN SOUTH ASIA: ECONOMIC GAINS AND PROFIT-MAKING AT THE COST OF WORKERS' HEALTH AND SAFETY

I INTRODUCTION

Using the rectificatory global justice theory, the last Chapter developed the argument for a treaty-based civil liability framework specific to the shipbreaking industry. This Chapter provides factual evidence for that argument in the context of the thesis; i.e., shipbreaking in South Asia is mainly a question of the maritime industry's business profit and answers the first core research question: Why has the shipbreaking industry become so well established in South Asian countries despite its negative impacts on the environment and the welfare of workers?

The Chapter aims to conceptualise that the shipbreaking industry in South Asia and the global maritime industry that represents shipowners are inextricably linked to business profit – the profits that the maritime industry receives from the sale of ships to the shipbreaking industry based in South Asia. This Chapter further explores human harms (including workers' deaths, injuries and occupational diseases) from the shipbreaking industry as an issue of transnational injustice, and argues that the global maritime industry has both a moral and a financial responsibility towards South Asian workers. Although the global maritime industry earns millions of dollars per annum from the sale of ships to the South Asian shipbreaking market,[1] the industry is yet to call for, or contribute to, any scheme to provide adequate compensation to workers for death, injury, or disease-related economic loss.

This Chapter proceeds as follows. Part II examines the global business link between the shipbreaking and global maritime industries. Part III analyses the financial profitability of the global maritime industry and the socio-economic benefits earned by the South Asian countries from the shipbreaking industry, and argues that the global

*Some parts of this Chapter have been accepted for publication as a Book Chapter entitled 'Deciphering the Recycling Crisis of Australia's Offshore Structures- A Proposal for a Bilateral Agreement Between Bangladesh and Pakistan' (co-authored with Dr Nahid Islam) in Anita Mandhekar et al (eds) *Strategic cooperation and Partnerships Between Australia and South Asia: Economic Development, Trade and Investment Opportunities Post-Covid- 19* (IGI Global, 2021) (in press).

[1] See Part III.

maritime industry gains most from an arrangement in which ships, when they are no longer fit for commercial trading, are sent to a South Asian country for breaking.

Part IV evaluates the South Asian shipbreaking industry from a human harms perspective. It summarises concerns related to human harms raised in a number of international and non-government organisations' reports. Part V concludes by inciting the debate for a global legal framework to remedy the human harms especially in the cross-border shipbreaking industry.

II OVERVIEW OF THE SHIPBREAKING INDUSTRY

A *Life Cycle of Ships*

Shipping is a global business that generally ends with shipbreaking. Commercial service of ships is widespread across the world. Over 80% of the world's trade products are transported inter-State by shipping industries.[2] A 2016 report estimated that, as at December 2016, over 90,000 ships were in use for global trading.[3]

What happens to these ships when they are no longer fit for commercial trading? As nearly all (80-90%) of a ship's body is steel, most ships end in the shipbreaking yards of South Asia for breaking, to allow the steel to be recycled. The volume of steel is a key driver for companies in South Asia to purchase ships.[4]

Shipbreaking also links strongly with scrap prices in the shipbreaking countries. For example, in a ten-month period during the 2007 financial crisis, the price of scrap increased from USD 200 to USD 300 per Light Displacement Tonnage (total weight of a ship which is only used for the shipbreaking market) in the South Asian market, and more than 700 ships were sold in that market for breaking.[5] A recent report

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[2] United Nations Conference on Trade and Development, 'Review of Maritime Transport 2018' (Annual Report, 2018) 3 https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2245 ; Ebe Daems and Gie Goris, *Behind the Hypocrisy of Better Beaches, Shipbreaking in India, Shipowners in Switzerland Lobbying in Belgium*, ed Linda A Thompson (MO Magazine, 2019) 3.

[3] United Nations Conference on Trade and Development, 'Review of Maritime Transport 2016' (Annual Report, 5 March 2017) 3 http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=1650 ; International Maritime Organization, 'Report on International Shipping Facts and Figures – 2012' (Information Resources on Trade Safety, Security, Environment, 2012) 5.

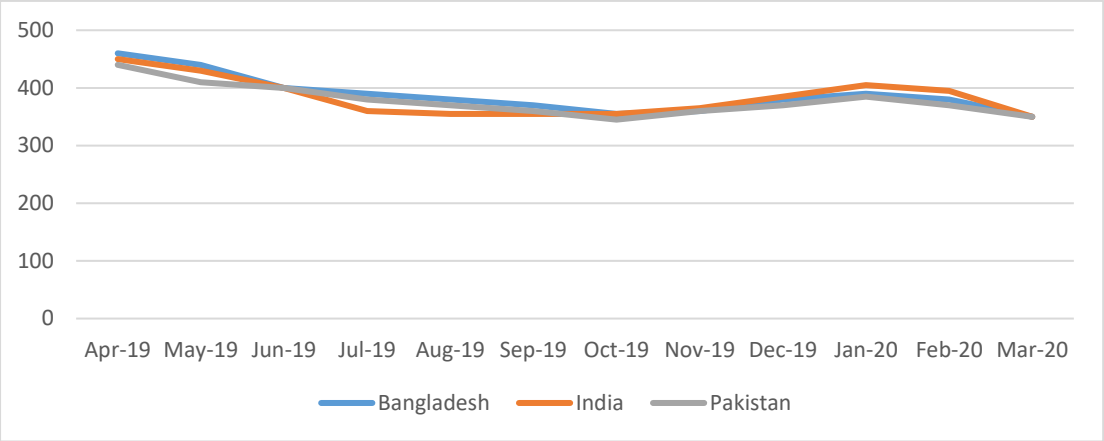
[4] Federico Demaria, 'Shipbreaking at Alang-Sosiya (India): An Ecological Distribution Conflict' (2010) 70(2) *Ecological Economics* 250, 250.

[5] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 6.

suggests that between 2019 and 2021 there is a 19.5% jump, in the price of old ships for increasing price of iron in global market.[6]

The scrap price depends on a number of other factors, including scrap demands usually from the local construction industry. For example, between 2019 and 2021, the aforementioned rise in the scrap price was for increasing steel demand in Bangladesh's construction industry.[7] Based on data sourced from the Global Maritime Service and Allied Shipbroking's website (see Figure 1 and Table 1 below), the steel price started to settle down to around USD 350 to 400 per LDT from the middle of 2019.[8]

Figure 1. Scrap price in South Asian countries (April 2019 to March 2020)



Source: Allied Shipbroking – Monthly Report April 2020.

Table 1. Price of steel scrap of different classes of ships in 2019

Rank	***Location***	***Dry Bulk***	***Tanker***	***Container***
		USD per LDT	***USD per LDT***	***USD per LDT***
1.	India	375	USD 385/LDT	USD 395/LDT
2.	Bangladesh	365	USD 375/LDT	USD 385/LDT
3.	Pakistan	355	USD 355/LDT	USD 375/LDT
4.	Turkey	280	USD 270/MT	USD 280/MT

Source: Global Maritime Services April 2020

B *Methods Used for Shipbreaking*

[6] Masud Milad, '25 Years Old Ship, Cost 24.564 Million' *Prothom Alo* (9 July 2021).
[7] Ibid.
[8] Allied Shipping Research, *Monthly SnP Statistics* (Web Page) < https://www.bluverve.com/wp-content/uploads/2020/04/ALLIED-SnP-Statistics-Week-15-12_04_2020.pdf

The shipbreaking industry also depends on labour, and the cost of compliance with environmental and safety standards.[9] As the Indian subcontinent has low labor costs, and weak environmental and safety requirements (see Chapter 4) and thus low compliance costs, shipbreaking yards in South Asia can offer higher price for ships for breaking than other locations. Most South Asian shipbreaking yards use the beaching method, which is cheaper – both to build and to operate – than other more expensive methods, such as dry dock, or lay-up or reefing.

Dry dock refers to breaking ships apart, whereas lay-up or reefing is used to sink a ship as a whole. 'Dry dock' is the safest and most expensive method – it locks up a ship to a sealed-off enclosed area with a drainage system. Although industrialised countries, such as China, UK and the US, use this expensive method,[10] it is not commercially viable, as it allows only the breaking of a limited number of ships each year, under the strict observance of domestic regulatory bodies. The dry-dock method requires separating the hazardous and non-hazardous materials and ensuring sound storage facilities before cutting of the hull commences. For example, asbestos located in engine rooms is separated and wrapped with special plastic bags under strict occupational safety and health protocols, with the materials ultimately being buried.[11]

'Lay-up' is also a safe method, but the method is not used for breaking ships; rather, it is a waiting period for a ship, when there is over-capacity in the shipping market.[12] The period of lay-up may be a few weeks to up to five years or more. During the lay-up period, a ship stops commercial operation and anchors in a suitable coastal area.[13] Shipowners are generally reluctant to use lay-up, as it requires huge storage facilities.[14] Reefing is also a disposal method that involves the removal of toxic materials from a ship and its sinking in a special location.[15] The method is not commonly used given the high costs for cleaning up, decontaminating and dumping in a safe location.

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[9] Ibid.
[10] Jun-Ki Choi et al, 'Economic and Environmental Perspective of End of Life Ship Management' (2016) 107 *Resources, Conservation and Recycling* 82, 83.
[11] Ibid.
[12] gCaptain, *The Unwanted Ships: How to Lay-up a Vessel* (Web Page, 20 May 2016) https://gcaptain.com/the-unwanted-ships-how-to-lay-up-a-vessel/
[13] Ibid.
[14] Det Norske Veritas, *Key Factors to Consider When Assessing Lay-up Options* (Web Page, 2 April 2020) < https://www.dnv.com/expert-story/maritime-impact/Key-factors-to-consider-when-assessing-lay-up-options.html
[15] Choi et al (n 10) 85.

In the beaching method, ships are run on a beach during high tide, and then are stripped and dismantled without storage facilities.[16] The Norwegian Shipowners' Association defines beaching as a means to dismantle ships without using permanent installation that ultimately fails to store up dangerous and polluted wastes.[17] Thus, in contrast to dry-dock, reefing, and lay-up methods, shipbreaking that follows this beaching method in South Asia has many advantages – for example, no large storage facility is required and there is no high clean-up cost.

An old ship normally contains tons of hazardous materials, such as asbestos and mercury, in its body. In beaching, these toxic materials can be stored on the shore or beach areas around the ship. This practice, while unsafe for workers and harmful to the environment, reduces the management costs for the wastes. The World Bank reports that a South Asian shipbreaking company spends only between 2% and 5% of total shipbreaking cost for labour, and nothing for compliance with safety and environmental standards for breaking ships (see Table 2 below). There is a 30% labour cost and 50% environmental and safety regulatory cost difference between a beaching method used in South Asia and a dry dock method (see Table 3 below).[18] By saving labour and compliance costs, South Asian shipbreaking companies are able to allocate around USD 82% of their total shipbreaking costs towards the purchase of a ship whereas a company following the dry dock method can only allocate about USD 30% of its total shipbreaking costs (see Table 3). For example, as indicated in Table 2 below, considering USD 4,692,200 as the total shipbreaking cost, the purchase cost would be around USD 3,848,000 (82% of the total cost of USD 4,692,200) in Bangladesh, whereas the shipbreaking cost for the same ship would be only USD 1,407,600 (30% of the total cost of USD 4,692,200) in the USA.

[16] S. Overgaard, 'Feasibility Study for Ship Dismantling' (Research Report, Litehauz, 2013) 27-28.
[17] Sturla Henrikson, 'Says No to Beaching Ships' *Norwegian Shipowners' Association* (Web Page, 17 August 2015) https://www.rederi.no/aktuelt/2015/nei-til-beaching-av-skip
[18] Choi et al (n 10) 87.

Table 2. Cost and profit from breaking a ship in Bangladesh and Pakistan

	Bangladesh		***Pakistan***	
	USD		USD	
Revenues from selling steel and other reusable materials	5,613,600		5,505,500	
Total costs	4,692,200		5,340,900	
Purchase of ships	3,848,000	(82%)	3,848,000	(82%)
Labour Costs (salary is 2 euros a day) Platform report 2010	92,700	(1.97%)	233,400	(4.97%)
Consumables	302,200	(6.44%)	230,000	(4.91%)
Financial Costs	147,900	(3.15%)	265,700	(5.66%)
Taxes, Tariffs, and duties	263,000	(5.61%)	693,600	(14.7%)
Other costs (Including rents, investment costs, etc.)	38,400	(.81%)	70,200	(1.4%)
Profit	921,400	(16%)	164,600	(3%)

Source: World Bank report 2010[19]

Table 3. Cost distribution between a dry dock and beaching method of shipbreaking

Cost	***Dry Dock Method***	***Beaching Method***
Environmental and Safety Regulation	50%	00%
Labour Cost	10%	4.97%
Ship Purchase	30%	82%
Other Cost	10%	13.03%

Source: Jun-Ki Choi[20]

Receiving a higher sale price from South Asia is an additional profit for shipping companies and this being the determining factor why South Asian countries have been maintaining the top three positions in the industry defeating countries, like China. This

[19] Maria Sarraf et al, 'Ship Breaking and Recycling Industry in Bangladesh and Pakistan,' (Report No. 58275-SAS, World Bank, 2010) 20. *(World Bank Report 2010)*.
[20] Choi et al (n 10) 87-88.

is also because the financial incentive to break a ship occurs when:[21] (a) operating costs exceed revenue income (because of the high cost of maintaining the vessels for seaworthiness, including repairs, and insurance)[22] or (b) commercial operation becomes costly due to the age of a ship or market conditions.[23]

C *The Shift of the Shipbreaking Industry to South Asia*

In the 1980s, shipping companies relied on a highly mechanised task for breaking their old ships using dry docks,[24] along with providing sophisticated safety equipment to their shipbreaking workers.[25] Within major shipping countries, it was expensive since the industry was required to comply with high standards for health, environment, and safety regulations.

In the 1990s, shipbreaking activity shifted from developed countries to India, Bangladesh, Pakistan, China and Turkey.[26] By 2010, these five countries had managed to break 98% of end-of-life ships. Recently the focus of the shipbreaking has become concentrated in South Asia, such that by 2018, the three South Asian countries jointly broke 90% of unused ships – 518 (India 305, Bangladesh 222, and Pakistan 141) of 744 ships broken globally (see Figure 2 below). In terms of LDT, this amounts to 90.4% of ships that required breaking.[27] Most of the ships came from shipping

[21] Anand M. Hiremath, Sachin Kumar Panday, and Shyam R. Asolekar, 'Development of Ship-specific Recycling Plan to Improve Health Safety and Environment in Ship Recycling Yards' (2016) 116 *Journal of Cleaner Production* 279, 280.
[22] Galley (n 5).
[23] Hiremath (n 21) 280.
[24] A dry dock is a contained area used for the sound management of the hazardous materials found in a ship's body. This method stops the materials from escaping the contained area and mixing with seawater. It uses a crane for parts removal. Any toxic liquid spilled from a ship can be stored and cleaned after the breaking process. The dry dock thereby ensures that soon after the breaking process the area is cleaned. Unlike beaching, it is safe for the environment as toxic materials can be safely transferred from ships without mixing into seawater.
[25] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 104.
[26] Juan Ignacio Alcadia, Francisco Piniella and Emilio Rodriguez-Diaz, '"The Mirror Flags": Ship Registration in Globalised Ship Breaking Industry' (2016) 48 *Transportation Research Part D* 378, 378-379; NGO Shipbreaking Platform, 'Europe Has Capacity to Recycle Its ships, New Data shows - Yet shipowners Want to Use Dangerous, Polluting Yards Abroad' (Press Release, 24 September 2018).
[27] Safety4Sea, '90% of Tonnage Scrapped on South Asian Beaches in 2018' *Ship Recycling* (Web Page, 30 January 2019) https://safety4sea.com/ngo-90-of-tonnage-scrapped-on-south-asian-beaches-in-2018/.

companies based in the United Arab Emirates (n = 61), Greece (n = 57) and the United States (n =53).[28]

China and Turkey's shipbreaking industries, meanwhile, have declined sharply to only around 10% of the global ships.[29] In general, shipping companies are unwilling to send a large number of ships to Turkey and China because companies based in Turkey and China cannot offer as high a purchase price as companies based in India, Bangladesh and Pakistan (see Figure 2 and Appendix J). For example, China can offer only USD 210 per Light Displacement Tonnage (LDT),[30] which is less than half the price (USD 450) offered by South Asian yards. Turkey can offer USD 280 per LDT. Because of the price difference, a large container ship that weighs around 25 000 LDT can earn a shipowner about USD 11.80 million from a ship purchased by India, but only USD 7 million from Turkey and USD 5.25 million from China.[31] One estimate shows that a shipowner earns USD 3-9 million more USD by sending a ship to the South Asian shipbreaking countries than by sending a ship elsewhere (see Appendix I).[32] This price is just conjecture, however, and it may rise at any time depending on the steel demand.

Profit margins for South Asian shipbreaking companies are not as high as for companies based elsewhere (see Table 4), mainly because of the high purchase price, they offer. A standard shipbreaking industry may earn around USD 96/LDT, whereas the profit may be only USD 62/LDT in Bangladesh. This means that a South Asian shipbreaking company sacrifices around 34 USD/LDT to provide a high purchase price to the shipowners.[33]

On the other side, the shipping industry remains the key beneficiary of the current state of the South Asian shipbreaking industry since their part of the business gives little or no consideration to the environmental and human rights impacts involved in the breaking of ships.

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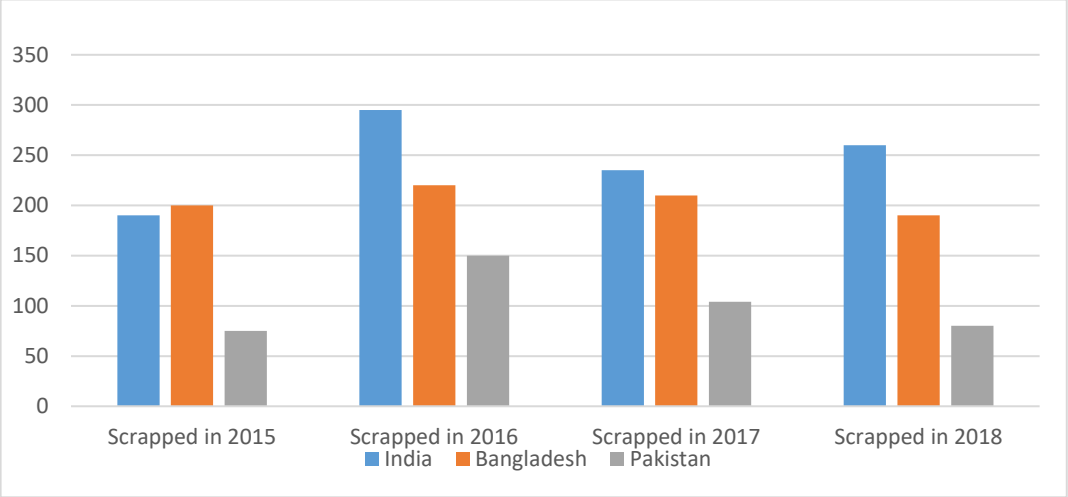
[28] Ibid.
[29] Ibid.
[30] Light Displacement Tonnage means the weight of a ship with all its permanent equipment excluding the weight of cargoes, persons, fuel, dunnage and ballast: at *Dictionary.com* (online at 23 April 2020).
[31] Matt Miller, *Shipbreaking: Breaking Badly* (Web Page, 23 April 2018) http://www.ajot.com/news/channel/maritime.
[32] Chris White, 'Two Years Since Pakistan's Gadani Shipbreaking Disaster, Why are Workers Still dying?' *This Week in Asia* (online at 28 October 2018) (https://www.scmp.com/week-asia/health-environment/article/2170256/two-years-pakistans-gadani-ship-breaking-disaster-why
[33] Choi et al (n 10) 87.

Figure 2. Total number of ships broken between 2015 and 2018 in South Asia



Source: NGO shipbreaking platform reports 2010 to 2018[34]

Table 4. Difference of purchase price and profit

	Revenue (USD)	***Cost (USD)***	***Profit (USD)***
Standard Method (USA)	466	370	96
Substandard Method (Bangladesh)	379	317	62
		Loss of profit by Substandard Method	34

Source: Choi et al[35]

The thesis places an emphasis on the profit motives of all parties involved in the business of selling ships. It argues that the motivation for profit not only of shipowners, but also of their business associates, including cash buyers and the open registry countries involved in the inter-State ship sale business, is the governing factor for driving the use of shipbreaking companies in South Asia (see Part IV of this Chapter).

Market analysts predict that the number of ships being broken in South Asia will continue to increase. The Hellenic Shipping News reported in early 2021 that many

[34] NGO Shipbreaking Platform, *Impact Report 2018-2019* (Biennial Report, 2018-2019) <https://shipbreakingplatform.org/wp-content/uploads/2020/06/NGOSBP-Bi-Annual-Report-18-19.pdf> 3-8
[35] Choi et al (n 10) 87.

ships will enter into the shipbreaking market in 2021 (see Appendix I),[36] and that the South Asian scrap market will continue to offer the highest scrap price, which stood at around USD 400 per LDT ahead of 2020.[37] Global Marketing System (GMS), a global expert in selling ships to the South Asian market, has also predicted that the next few years may potentially be busy for the shipbreaking business.[38]

This positive market forecast raises two key questions. First, why has shipbreaking become established mainly in South Asia and how has the maritime industry received profit from South Asia? Second, can the South Asian industry manage to break the high number of ships without workers' deaths, injuries and work-related diseases in future? The following Parts III and IV answer the first question by undertaking an in-depth analysis of the issue of profit discussed above. Part V of this Chapter answers the second question.

III THE ROLE OF THE SHIPBREAKING INDUSTRY IN SOUTH ASIAN ECONOMIES

The shipbreaking industry provides a vital source of steel for South Asian economies. Their construction industry and re-rolling mills are largely dependent on the supply of scrap from shipbreaking industries.[39] The high demand for steel reflects the lack of iron ore reserves in these countries and the rapid development of infrastructure. Steel scraps from broken ships are reproduced into refined and new steel materials. Recycled ships also provide 20 million tons of highly profitable second hand materials, including good quality furniture,[40] hull (for other ships), machinery, equipment, fittings, batteries, hydrocarbons, televisions, DVD players, and tools for

[36] Nikos Roussanoglou, *Shipbreaking Expected to Roar Ahead in 2020, as More Ships Could Head for Demolition* (Blog Post, 8 January 20) https://www.hellenicshippingnews.com/shipbreaking-expected-to-roar-ahead-in-2020-as-more-ships-could-head-for-demolition/
[37] Ibid.
[38] Tradewinds, 'Watershed Looms for Recyclers After 15% Drops in Prices' (Research Paper, 19 August 2019) 29.
[39] Johsin John, and Sushil Kumar, A Locational Decision Making Framework For Shipbreaking Under Multiple Formula (2016) 7(1) *International Journal of Strategic Decision Sciences* 76, 77-81.
[40] Choi et al (n 10) 82-91; Paritosh Chakor Deshphande, Atit K Tilwankar, and Shyam R Asolekar, 'A Novel Approach to Estimating Potential Maximum Heavy Metals Exposure to Ship Recycling Yard Workers in Alang, India' (2012) 438C *Science of the Total Environment* 304, 304; The unused global fleet was 7.6% of total fleets in October 2016: at Tuscar Lloyds, *Breaking Bad? The Story of Alang Shipbreaking Yards* (Web Page, 18 November 2016) <https://www.tuscorlloyds.com/alang-ship-breaking-yards/>

home and small business. As these products are reusable following reprocessing, they have a good market in South Asia.[41]

The shipbreaking industry also provides a vital source of employment for South Asian economies. Shipbreaking is a labour-intensive industry that, when using the beaching method, requires thousands of workers to remove and process the steel and the second-hand products. The social and economic drivers pushing policy makers and business leaders to support the shipbreaking industry include over-population, increasing numbers of people living below the poverty line, high numbers of unskilled and uneducated workers, and high rates of unemployment. The industry is also facilitated by minimum legal protection of the coastal environment and natural resources, and inadequate legal mechanisms, as discussed in Chapter 4.[42] The next three Sections explain the importance of the industry in Bangladesh, India and Pakistan in terms of their socio-economic context.

A *Socio-economic Benefit of the Shipbreaking in Bangladesh*

Bangladesh was the top shipbreaking country globally from 2004 to 2008. That period cemented the shipbreaking industry as an integral component of the Bangladeshi economy. Since 2009, the shipbreaking industry has experienced a 36% annual growth in relation to the number of ships.[43] In 2018, 222 ships were imported for decommissioning, the most ever for Bangladesh.[44] One estimate shows that the average yearly profit from breaking one ship in Bangladesh is US$921,400.[45]

[41] Gregson N. et al, 'Following Things of Rubbish Value: Retired Ships, Chock-Chocky Furniture and the Bangladesh Middle Class Consumer' (2010) 41(6) *Geo Forum* 846, 850.
[42] Tony George Puthurcherril, *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Matinus Nijhoff Publishers, 2010) 26; See generally: Oxford University Press, *The Oxford Encyclopaedia of Economic History* (online at 25 April 2020) 4 Economic History, 'India' [245-268]; Oxford University Press, *The Oxford Encyclopaedia of Economic History* (online at 25 April 2020) 5 Economic History, 'Pakistan' [270-308]; Oxford University Press, *The Oxford Encyclopaedia of Economic History* (online at 25 April 2020) 4 Economic History, 'Bangladesh' [309-368].

[43] Mohammad Shakhaoat Hossain et al, 'Impact of Shipbreaking Activities on the Coastal Environment of Bangladesh and a Management System for Its Sustainability,' (2016) 16 *Environmental Science and Policy Journal* 84, 85.
[44] Munima Sultana, 'Bangladesh Ship Breakers Left Out to Sea', *Equal Times* (online at 11 January 2013) http://www.equaltimes.org/wp-content/uploads/2013/01/Shipbreaking_021-WP.jpg .
[45] World Bank Report 2010 (n 19) 1.

The shipbreaking business has significantly contributed to Bangladesh's national demand for steel.[46] Bangladesh's shipbreaking industry provides more than 70% of its annual steel demand,[47] because of which Bangladesh does not need to import steel, which saves a considerable amount of foreign exchange. Moreover, shipbreaking is the only source of metal scraps for small re-rolling industries in Bangladesh. Shipbreaking industries supply the lion's share of the raw materials to run more than 350 re-rolling mills in Bangladesh.[48]

Shipbreaking also benefits the local shipbuilding industry.[49] Shipbreaking is the main source of annual steel supply to that industry, providing up to 35,000 to 45,000 tons as raw materials. Bangladesh's shipbuilding industries add more than 200 ships each year to their local fleet and the shipbreaking industry supplies the basic raw materials for building these vessels.[50] The use of recycled steels allows Bangladeshi shipyards to build ships with less cost.

Shipbreaking is also a good source of tax revenue and employment for unskilled workers. Annually, Bangladesh's revenue earning from the shipbreaking industry is more than USD 130 million.[51] In 2016, Bangladesh earned about fifteen per cent of the total tax revenue from its shipbreaking industry.[52] The revenue is generated by imposing duties (7.5%), a yard tax (2.5%), and other imposts.[53] The Bangladesh government is likely to generate USD 1.5 billion in annual revenue income mainly from its shipbreaking industry.[54]

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[46] N. M. Golam Zakaria, Mir Tareque Ali and Khandakar Akhter Hossain, 'Underlying Problems of Ship Recycling Industries in Bangladesh and Way Forward' (2012) 9(2) *Journal of Naval Architecture and Marine Engineering* 91, 91.
[47] Hossain et al (n 43) 86.
[48] Ibid.
[49] Ibid.
[50] Ibid.
[51] Khandakar Akhter Hossain, 'Overview of Ship Recycling Industry of Bangladesh' (2015) 5(5) *Journal of Environmental and Analytical Toxicology* 7, 7*;* Md. Maruf Hossain, *Shipbreaking Activities: Threat to Coastal Environment and Fish Biodiversity and Fisherman Community in Chittagong, Bangladesh* (Young Power in Social Action, 2010) 40.
[52] Hasan Ruhan Rabbi and Aevelina Rahman, 'Shipbreaking and Recycling Industries in Bangladesh; Issues and Challenges' 194 (2017) *Prodcedia Engineering* 254, 256.
[53] Mohammad Maruf Hossain and Md. Atikur Rahman, 'Shipbreaking Activities: Threat to Coastal Environment and Fish Biodiversity' in M.E Yousuf Haroon and A. K Hussain (eds), *Eco-system Health and Management of Pollution in the Bay of Bengal* (Bangladesh Fisheries Research Institute, 2011) 23, 24-30.
[54] Jan Moller Hansen, 'Shipbreaking in Bangladesh', *Lensculture* (Web Page) https://www.lensculture.com/articles/jan-moller-hansen-ship-breaking-in-bangladesh

The Bangladesh shipbreaking industry employs a large number of workers. The industry employed more than 25,000 workers in 2017,[55] with some sources claiming that the number might be as high as 50,000.[56] Moreover, Bangladesh's retail shops and re-rolling mills dependent on the shipbreaking industry employ more than one million people.[57]

B *Socio-economic Benefit of the Shipbreaking Industry in India*

India is the largest shipbreaking country in the world. It has more than 180 yards operating in a 12 km area of the Gujarat coast that break around 50% of end-of-life ships.[58] A recent estimate has found that the shipbreaking industry produces 4.5 million tons of steel annually by breaking 400 ships, which is equal to the production of a major Indian steel plant.[59] The industry has been well established in India for many years. Until 2013, the Indian shipbreaking industry broke more than 6000 ships.[60]

The shipbreaking industry contributes 10-15% of India's total yearly steel demand,[61] and employs more than 60,000 workers directly. More than half a million more are working in companies that are directly or indirectly dependent on the shipbreaking process.[62] These include downstream industries and businesses such as re-rolling mills, foundries, oxygen plants, transportation companies, local scrap goods shops,

[55] Hossain and Rahman (n 53).
[56] Det Norske Veritas, 'Technological and Economical Feasibility of Ship Scrapping in Europe' (Research Report No 2000-3527, Det Norske Veritas, rev ed, 2014) 14. *(Det Norske Veritas).*
[57] World Bank report (n 19) 27.
[58] Federico Demaria, 'Shipbreaking at Alang-Sosiya (India): An Ecological Distribution Conflict' (2010) 70(2) *Ecological Economics* 250, 252.
[59] Government of India Ministry of Labour and Employment. The Second National Commission on Labour Report (New Delhi: Ministry of Labour and Employment, 2002) 630; Anand M. Hiremath, Sachin Kumar Panday, and Shyam Raj Asolekar, 'Development of Ship-specific Plan to Improve Health Safety and Environment in Ship Recycling Yards' (2016) 116 *Journal of Cleaner Production* 279, 281.
[60] Paritosh C. Deshpande et al, 'A Novel Approach to Estimating Resources Consumption Rates and Emission Factors for Ship Recycling Yards in Alang, India, (2013) 59(15) *Journal of Cleaner Production* 251, 251.
[61] Amit B. Mahindrakar et al, 'Shipbreaking industry in India: Assessment of Opportunity and Challenges' (January 2008) *eLaw Journal*: *Journal of Air and Waste Management Association*, 1 https://www.researchgate.net/publication/262687134_Ship_Breaking_Industry_in_India_Assessment_of_Opportunities_and_Challenges
[62] Deshpande et al (n 60).

furniture shops, and local electronic equipment shops.[63] A recent report shows that the annual turnover of the Indian shipbreaking industry is around USD 814.51 million.[64]

C *Socio-economic Benefit of the Shipbreaking Industry in Pakistan*

Pakistan started its shipbreaking industry in 1965, and following a gradual increase in the number of shipbreaking yards, by the 1980s shipbreaking had turned into an actual source of steel. Pakistan's central shipbreaking location is Gadani. By the 1980s, the Pakistani shipbreaking industry employed more than 30,000 workers and produced more than a million tons of steel per year.[65] In 2013, Pakistan became the world's third largest shipbreaking industry.[66]

The shipbreaking industry of Pakistan contributes about 500,000 tonnes of steel to the Pakistani economy every year, which contributes up to 15 per cent of Pakistan's steel production. In its peak period in 2014,[67] Gadani employs around 30,000 workers directly in the yards. Not only those other downstream industries in Pakistan, such as re-rolling mills employ more than 500,000 workers indirectly. In the 1980s, Pakistan broke more than one million tons of ships each year, but due to a tax increase, the industry declined in 2009 and 2010.[68] However, the government decreased the tax on scrap steel in 2010, and the industry started growing slowly again after 2010.[69] The Pakistani shipbreaking industry provides a supply of 500,000 tons of scrap steel per year to other nationwide industries.[70] It is estimated that the average annual profit from breaking a ship in Pakistan is USD 164 600.[71] The shipbreaking industry in Gadani received wide media attention in 2016 and 2017 after two major explosions that killed

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[63] International Federation for Human Rights, 'Where Do the "Floating Dustbins" End Up? Labour Rights in Shipbreaking Yards in South Asia – The Cases of Chittagong (Bangladesh) and Alang (India)' (Investigative Mission Report No 348/2, International Federation for Human Rights, December 2002). *(International Federation for Human Rights)*.
[64] Sara Costa and Geetanjoy Sahu, 'The Ship Recycling Industry Must Move Towards a Sustainable Future' *The Wire* (online at 03 August 2020) https://thewire.in/environment/shipbreaking-ship-recycling-industry-sustainable-future-environment
[65] Ramapati Kumar, *Ship Dismantling: A Status Report on South Asia and the EU*, eds Johan Bentinck and Dr Paul R Halmos (Euroconsult Matt Macdonald and World Wildlife Fund-India, 2018) 6.
[66] International Federation for Human Rights (n 63) 7.
[67] Ghulam Dastageer, Subuk Hasnain and Ayesha Binte Rashid, 'The Ugly Side of Pakistan's Ship-Breaking Industry at Gadani' *The WIRE* (online at 28 December 2016) https://thewire.in/south-asia/ugly-gadani-ship-breaking
[68] Puthurcheril (n 42) 80.
[69] Kumar (n 65) 6.
[70] World Bank report 2010 (n 19) 16.
[71] Ibid.

more than 50 workers and caused permanent injuries to more than 100 workers.[72] The data on the maritime industry's regular profit, however, show that these human consequences have not affected their business. The next Section explains this situation.

IV BUSINESS PROFIT OF THE MARITIME INDUSTRY, CASH BUYERS, AND OPEN REGISTRY COUNTRIES

Shipbreaking is highly profitable for the global maritime industry, both for shipping companies and for associated parties, including cash buyers and open registry countries. Although they receive a high sale price, shipping companies and shipowners do not sell ships directly to a shipbreaking yard. Instead, they use brokerage services of cash buyers. Cash buyers are dedicated brokers who base themselves in 'open registry' countries, and pay a registration fee to open registry countries for providing their nationality to foreign vessels just before a ship is sailed to a shipbreaking yard. The use of cash buyers and open registry countries raises important questions of transparency in the global maritime shipbreaking industries and is examined later in the thesis (see Chapters 5 and 6). These associated parties benefit financially from the South Asian shipbreaking industry (see Table 5 below) and are referred to as shipowners or short-term shipowners throughout the thesis.

Table 5 below shows the annual revenues that the maritime industry receives from the sale of ships into the South Asian shipbreaking market. Data on the revenue of shipping companies from shipbreaking are difficult to acquire because the original owners sell ships via cash buyers paying a commission of 1% of the sale price.[73] Table 5 also shows that between 2007 and 2018, the annual revenue derived by shipping industries and shipowners varied between USD 905 million to USD 4150 million. On average, the industry earns around USD 2350 million per year. Cash buyers derived an annual revenue of USD 23.49 million during that period (based on a 1% share in sale prices).

[72] Human Rights Commission of Pakistan, 'Horror in Gadani' (Fact Finding Mission Report, November 2016) 5.
[73] Nikos E. Mikelis, *The Recycling of Ships* (Global Maritime Services (GMS) Leadership, 2nd ed, 1 October 2019) 7.

Table 5. Average revenue income of global maritime industry from South Asian shipbreaking market between 2007 and 2018

Year	***LDTs***	***Bangladesh Price in USD/LDT***	***Indian Price in USD/LDT***	***Pakistani Price in USD/LDT***	***Avg. Price***	***Shipowners' Annual Income from the Industry***	***Cash buyers' income (1%)***
Ships broken in million				USD/LDT		Shipowners' income and Cash buyers' earning as 1% commission	
2007	1.9	500	470	460	476.66	905.65	9.056
2008	2.6	770	745	690	735	1911	19.11
2009	6.2	340	320	320	326.66	2025.35	20.25
2010	4.3	480	480	480	480	2064	20.64
2011	6.1	520	550	510	510	3111	31.11
2012	8.3	500	500	500	500	4150	41.50
2013	6.4	435	440	440	438.34	2805.38	28.05
2014	6	480	500	480	486.67	2920.02	29.20
2015	4.4	300	320	320	313.34	1378.70	13.78
2016	8.1	310	310	310	310	2511	25.11
2017	5.9	380	390	380	383.34	1955.03	19.55
2018	5.8	430	420	420	423.34	2455.34	24.55
Average income --USD 2349.37 million/per year for shipowners and USD 23.49 million for cash buyers							***23.49***

Source of Data: Nikos Mikelis[74]

Open registry countries also earn revenue from inter-State transfer of ships for breaking. Although data on their earnings are not readily available, an investigative report by a UK based non-government organisation (NGO) revealed a close connection between open registry countries and cash buyers, from which open registry countries earn a registration fee of around USD 6750 per ship. Altogether, it can roughly be estimated that in 2018 open registries, such as occur in Palau, Comoros and Caribbean Islands of St. Kitts and Nevis, earned around USD 1.8 million by registering 266 ships.[75] However, these countries are not directly involved

[74] Nikos E. Mikelis, *The Recycling of Ships* (Global Maritime Services (GMS) Leadership, 2nd ed, 1 October 2019) 2, 8, 10, 12, 13, 17; Nikos E. Mikelis, A Statistical Overview of Ship Recycling (2008) 7(1) *World Maritime University Journal of Maritime Affairs* 227, 233. Nikos E. Mikelis, *The Recycling of Ships* (Global Maritime Services (GMS) Leadership, 1st ed, 1 April 2018 1-2, 9-11, 14.
[75] Margot Gibbs, 'Revealed: The UK Company and Caribbean Tax Haven Cashing in on One of the World's Deadliest Trades – Shipbreaking' *F:Uncovered* (Web Page, 20 February 2019) https://www.financeuncovered.org/investigations/tax-haven-flags-of-convenience-stkitts-nevis-shipbreaking-toxic-ships-skanreg-chittagong/

in transactions. Instead, their registration service is outsourced to private companies incorporated in large shipping nations. For example, a private company named Skanreg, incorporated in the UK, arranges registration and port documentation for several open registry countries, such as St Kitts and Nevis. The company takes a service and registration charge from shipowners. Through the company's services, 143 ships flagged in St. Kitts and Nevis were sold to South Asian yards between 2016 and 2019. In 2016, by way of example, St Kitts and Nevis earned USD 500,000 from this company.[76]

Highlighting the profits of the international parties, a main aim of the thesis is to propose a remedy system that binds all these parties and hold them responsible for the consequences of their business profit.

V ANALYSES OF LABOUR, ENVIRONMENTAL STANDARDS, AND HUMAN RIGHTS ABUSES IN SOUTH ASIAN SHIPBREAKING INDUSTRY

Considered more in Section H below, the economic benefits that the South Asian shipbreaking industry generates comes at a heavy cost to shipbreaking workers. The ships arrive at the shipbreaking yards full of hazardous substances and workers are employed to cut the ships without adequate protective equipment and training. The following Sections investigate labour and environmental standards of the South Asian shipbreaking industry and examine whether the South Asian shipbreaking industry will manage to break the high number of ships without deaths, injuries and diseases to workers in future. In doing so, the next Section examines several reports published by the International Labour Organisation, European Union Commission, World Bank, United Nations Human Rights Council, International Metal Works Federation and NGO Shipbreaking Platform. These reports suggest that accidents and pollution in the South Asian shipbreaking industry are not going to be halted in the near future. On the other hand, the shipping industry contends that the situation is improving by their support. These opposed arguments lead to examining the current rate of accidents to identify whether shipbreaking yards are on track to prevent more casualties. Section H below evaluates the claims by investigating the data on current deaths and injuries occurring in South Asian shipbreaking yards.

[76] Ibid.

A *International Labour Organisation (ILO) Report, 2001*

A 2001 ILO report, 'Worker Safety in Shipbreaking 2001' concluded that worker safety in shipbreaking is the major concern. The report noted that the major shipbreaking locations in South Asia lack adequate investment capital to improve workplace health and safety standards. These locations do not use a dry dock system to manage wastes from ships and the shipbreaking process, and do not use modern technology in the shipbreaking process, instead relying on manual labour and basic tools and machinery. The report defined these locations as 'first generation facility' or 'non-facilitated beach'. Because of the poor health and safety standards, there are high rates of death and injury.

The report concluded that resolving the problems is a shared responsibility of all parties involved in the business. It also noted that shipbreaking is deeply rooted within the maritime industry and the South Asian economy such that it cannot be relocated elsewhere. The report further observed that shipbreaking is a profitable business. It includes a number of stakeholders, such as shipowners, cash buyers, and open registry countries. The report concluded that it is the responsibility of these stakeholders to recognise and address the dilemma faced by the developing nations to strike a balance between economic gains and safeguards to protect people from human and environmental rights abuses.[77] The ILO therefore recommended that responsibility must be imposed on all parties.[78]

B *European Commission Report, 2001-2016*

The European Union (EU) shipowners contribute 40% to the global annual shipbreaking market. The EU has therefore been vigilant in monitoring the industry and introducing strict legal and policy frameworks for EU shipowners (see Chapter 6). Since 2000, a number of reports have documented the EU approaches, all of which have recognised that shipbreaking is a global business and recommended that the EU integrate its policy and legal frameworks with international frameworks.[79] A

[77] Aage Bjorn Anderson, 'Worker Safety in Shipbreaking, Sectoral Activities Program' (Working Paper No 167, International Labour Organisation, 2001). *(ILO Report)*
[78] Ibid, 60
[79] European Commission, 'Study on "Ship Dismantling and Pre-cleaning of Ships"' (Final Report, Directorate General for Environment, June 2007) http://ec.europa.eu/environment/waste/ships//index.htm; The European Commission, 'Study on Oil

2001 report entitled 'Technological and Economic Feasibility Study of Ship Scrapping in Europe' specifically recognised the positive contribution of South Asian shipbreaking to the global maritime industry.[80] This report also argued that shipbreaking is not economically viable in the EU because there is no market for the reusable materials.

The report found that running a shipbreaking industry in the EU is costly since the shipbreaking operations require proper standards. The EU has therefore introduced legislative procedures to apply the 'polluter pays' principle. Under this principle, the producer has a duty of care to ensure that a licensed disposer follows a sound management process to dispose of wastes.[81] The report acknowledged that without the South Asian shipbreaking market, shipowners would face a significant loss of profit, which would have a tremendous impact on the shipping industry. For this reason, shipowners preferred selling ships to South Asia's shipbreaking industry. However, the report observed that:

> The shipbreaking industry in South Asia had failed to follow the most general expectation in terms of the precautions with the potential of causing serious safety violations and causing harm to workers health and the environment. The absence of overlaying plans and policies, lacking in facilities, lacking procedures, lacking skills requirement and appreciation of training needs represent sufficient inadequacies to draw the conclusion of general non-compliance.[82]

The report importantly concluded that this was a global market failure. In 2008, the EU published a report entitled 'Impact Assessment for a EU Strategy for Better Ship Dismantling', which assessed four different EU strategies, including an approach to

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Tanker Phase Out and the Ship Scrapping Industry' (Research Report, DG Transport and Energy, 2004) http://europa.eu.int/comm/transport/maritime/safety/doc/prestige/2004_06_scrapping_study_en.pdf; Department of Environment, Food and Rural Affairs (DEFRA) 'Regulatory Impact Assessment for the UK Ship Scrapping Industries' (Research Report, February-2007) http://www.defra.gov.uk/ENVIRONMENT/WASTE/strategy/ship.htm; The European Commission, 'Ship Recycling: Reducing Human and Environmental Impacts' (Thematic Issue 55, Director General Environment by the Science Communication Unit Environmental Policy, 2016) http://ec.europa.eu/science-environment-policy

[80] Det Norske Veritas, 'Technological and Economical Feasibility of Ship Scrapping in Europe' (Research Report No. 2000-3527, 13 February 2001) 46.

[81] Ibid.

[82] Det Norske Veritas, 'Technological and Economical Feasibility of Ship Scrapping in Europe' (Research Report No. 2000-3527, 2001) 51.

integrate with a global legal instrument – the *Hong Kong Convention*.[83] The EU Green Paper on Ship Dismantling, published in 2007, stated that any international standard should provide a level playing field for all parties since, irrespective of improving the standards in South Asian industry, those nations would continue to dominate due to their low labour cost and nationwide market of second-hand materials f an old ship. [84]

C *World Bank Report, 2010*

In 2010, the World Bank published an important report, 'Shipbreaking and Recycling Industry in Bangladesh and Pakistan'. Despite the appalling conditions described for the industry, the report concluded that South Asia dominates in importing ships for several reasons, including the vast market of scraps and other second-hand products that exists in South Asia and the region's ability to run the industry with low labour cost. The report also noted that shipbreaking is a private industry and receives no government investment support to meet international labour standards.

Like the EU and ILO reports, the World Bank report documented the safety and environmental concerns relating to shipbreaking. It described the long-term health problems from poor workplace conditions and reported that 88 per cent of workers had accidental injuries. The report revealed that the high purchase prices demanded by shipowners contributed to the dangerous conditions that workers experience in South Asia, noting that the South Asian shipbreaking yards are unable to meet the high purchase price unless the cheap beaching and conventional shipbreaking methods for breaking ships are used. In addition, the report found the workers get no compensation when they incur death, injuries or diseases in the workplace.[85]

D *United Nations Human Rights Council Reports, 2009 and 2010*

In July 2009, the UN Human Rights Council (UNHRC) special rapporteur, Okechukwu Ibeanu published a report entitled 'Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous

[83] Commission of the European Community, *Impact Assessment for a EU Strategy for Better Ship Dismantling*, EU Doc. COM (2008) 765 final, Brussels, 19 November 2008.
[84] Commission of the European Community, *Green Paper on Better Dismantling*, Com SEC (2007) 645, Brussels 22 May 2007.
[85] World Bank Report (n 19) 4.

Products and Wastes on the Enjoyment of Human Rights'.[86] Subsequently another report published in September 2010 focused on Indian shipbreaking practice entitled 'Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights- Mission to India'.[87] Both reports stated that shipbreaking is a global problem that requires a global solution, which must involve all parties, including flag States, shipbreaking countries and shipowners.

One of the main problems that the report identified was that the injured and sick workers were excluded from the existing social protection system due to the informal character of the industry. They did not receive any compensation for their injury, sickness, or temporary or permanent disability caused by workplace accidents. An employer paid a low amount of compensation to an injured worker or the family of a dead worker. Injured workers received only the emergency treatment cost and a dead worker's family received the funeral cost. No payment was made for chronic diseases to support long-term medical treatment –even though it was found that, when affected, most of the workers could not return to the yards or seek employment in any other industry.

The UN special reports also argued for the responsibility of all parties. The demand for breaking ships and the difficulty to replace the South Asian shipbreaking industry with locations in industrialised countries means that the South Asian industry will retain the greatest share of the global shipbreaking demand. The reports noted, however, that apart from passing the *Hong Kong Convention*, the international community has done little to minimise the risks from breaking ships in these emerging countries. The reports noted that the low cost of the shipbreaking operation and availability of manual workers must not be invoked to justify the non-

[86] Okechukwu Ibeanu, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc. A/HRC/12/26 (15 July 2009). (*UN Special Report on Shipbreaking*)
[87] Calin Georgescu, *Report of the Special Rapporteur on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights – Preliminary Assessment of Whether the Hong Kong Convention Establishes an Equivalent Level of Control and Enforcement as that Established under the Basel Convention,* UN Doc. UNEP/CHW/OEWG/7/21 (2 September 2010).

implementation of the legal standards, particularly for the payment of adequate compensation. [88]

E *The International Metal Workers Foundation Report, 2005*

A report from the International Metalworkers Federation (IMF) stated that 'shipbreaking is one of the most dangerous occupations.'[89] The IMF, a global trade union that represents metal industries in more than 100 countries, conducted a field survey in 2005 to document the socio-economic condition of the workers in two shipbreaking locations (Alang and Mumbai) situated in India. The report identified day-to-day problems of workers and noted that the job of a shipbreaking worker is no more than bonded labour. The report claimed that, in every stage of their work, the industry abused the workers since there was no scheme or legal provision to regulate their employment conditions. One of the key findings of the report was the issue of compensation claims for workers. According to the report, workers received no compensation in case of a workplace injury. In most cases, an injury is followed by a forced termination. In case of death, the family of a dead worker received USD 205.2 to 1370.13 as compensation, but even the payment of that small amount depends on pressure imposed by media. In particular, the report observed that:

> The workers have some knowledge on their compensation, in case of fatal injuries, but the total amount that actually the family of the deceased or injured receives is much lower than the legal amount prescribed by law.[90]

F *NGO Shipbreaking Platform Report, 2020*

Alongside many other international reports published between 2001 and 2020 on South Asia's shipbreaking industry, the reports of the NGO Shipbreaking Platform have played a key role in reinforcing the debate for liability of shipowners. NGO Shipbreaking Platform is an international NGO established in 2005. One of its goals is to expose the international shipowners and shipping industries who have a record of sending ships for breaking after changing flags and names. In early 2020, NGO Shipbreaking Platform launched a new website (http://www.offthebeach.org/) that

[88] UN Special Report on Shipbreaking (n 86).
[89] International Metalworkers Federation, 'Special Report – Cleaning Up Shipbreaking is the Most Dangerous of the World' (Research Report, 15 December 2015) 1.
[90] Ibid, 11.

provides detailed information on which countries and their registered shipowners have sent their ships to South Asia. The online report noted that, irrespective of a new EU *Ship Recycling Regulation* that prohibits sending ships to recycling facilities that use the beaching method, a number of EU ships hit the beaches of South Asia (see Chapter 6). Many of them had reflagged their ship to non-EU countries just before the last journey.[91]

The report stated that government and multinational corporations have failed to recognise the problems in South Asia, noting concerns with human rights to life and enjoyment of sound health in the workplace, and large-scale degradation of the coastal environment. The report also questioned whether *the Hong Kong Convention* is going to solve all the problems and ensure social security for workers. The report further noted that although the *Hong Kong Convention* will help to upgrade the standards of a shipbreaking yard, it will do little to compensate the workers when the standard fails. It also argued deaths, injuries and diseases in the shipbreaking industry are a statistical certainty that require an adequate legal standard imposing liability on all parties along the way.

The main recommendation of the NGO Shipbreaking Platform is that shipowners must respect the workers' rights and apply due diligence when they decide to sell ships. These corporations are obliged to ensure no one is harmed due to their business practice, although to date this had happened only in rare cases. [92]

G *Opposite View*

Despite these well-documented reports on unsafe conditions in South Asia's shipbreaking industry published between 2001 and 2020, shipping companies and their associated parties refute these reports. They argue that the maritime industry has the policy for onsite assessment and the situation is improving in India, Bangladesh and Pakistan,[93] since they are closely monitoring their shipbreaking

[91] NGO Shipbreaking Platform, *Toxic Tide: 2019 Shipbreaking Records* (Web Page) http://www.offthebeach.org/
[92] Ibid.
[93] Maersk, 'Breaking the Stalemate' *Case Studies* (Web Page, 25 October 2019) https://www.maersk.com/news/articles/2017/01/03/breaking-the-stalemate

process.[94] The shipping industry also claims that, in a number of cases, it has provided financial assistance to the shipbreaking industry in South Asia in order to improve standards.[95] Global Marketing System (GMS), one of the largest cash buyers in the world, claims that, utilising their support in preparing a ship-recycling plan and a ship recycling facility plan, and monitoring of the ship recycling process,[96] about 70 Indian shipbreaking yards have already obtained a Statement of Compliance certificate from classification societies, such as ClassNK from Japan and RINA from Italy. A classification society is a non-government organisation that assists maritime industry to follow regulatory standards.[97] Classification societies act as private consultants and assess standards of a yard. Obtaining a Statement of Compliance (SoC) certificate means the safety standard of a yard meets a safety standard. A shipbreaking company from Bangladesh has also obtained a Statement of Compliance certificate.

In contrast, NGO Shipbreaking Platform contends that the classification societies have been issuing SoC certificate without field visits. The shipbreaking industry in South Asia uses SoC certificates for window dressing to show that the facilities are 'green', whereas the actual conditions may not be safe enough.[98] UN Special Rapporteur Baskut Tuncak has gone even further, questioning the certification power of a classification society. He argues that the classification societies are simply extensions of the shipping industry and are not independent organisations.[99]

The EU takes a slightly different approach on the issue of SoC certificates issued by the classification societies. Peter Koller, a policy officer at the European Commission's Director-General for Environment, agrees that there has been a lot of improvement in the South Asian industry.[100] However, he calls for an impartial investigation of standards since he believes that the quality of all the certified

[94] Inderpreet Walia, 'India Ratifies the Hong Kong Convention on Ship Recycling', *Lloyd List Maritime Intelligence* (Online at 21 November 2019)
http://www.gmsinc.net/gms_new/assets/pdf/IndiaHC.pdf
http://www.gmsinc.net/gms_new/assets/pdf/2019-09-10bwM_org.pdf
[95] Ibid.
[96] GMS Leadership, *Overview* (Web Page) https://www.gmsinc.net/gms_new/index.php/about
[97] International Association of Classification Societies, *Classification Societies- What, Why and How* (Web Page) http://www.iacs.org.uk/media/3785/iacs-class-what-why-how.pdf
[98] NGO Shipbreaking Platform, *HKC Statement of Compliance* (Web Page)
https://www.shipbreakingplatform.org/issues-of-interest/the-law/hkc-soc/
[99] Ibid.
[100] Julian Bray, 'Ship Recycling Forum', *TradeWinds News* 13 March 2020, 25-26.

shipbreaking yards are not equal and some are not meeting the *Hong Kong Convention* standard.[101] Norway's Greig Green, which audits shipbreaking yards and helps shipbreaking yards to follow safety and environmental standards, has also argued that the yards with Statement of Compliance certificates have varying standards. Risks are still high without providing enough protective equipment, and training.[102]

The above contesting claims of the international organisations and shipping industries lead the current study to examine recent data on deaths and injuries in the South Asian shipbreaking industry.

H *Environment and Human Harms from Shipbreaking*

Abundant scientific and media reports confirm that a significant number of ships beached and broken in South Asia contain high quantities of toxic chemicals,[103] and their release into the seawater contaminates the marine life and surrounding workplace of a yard.[104] Pollution of the workplace from such hazards has long-term adverse effects on the workers.[105] For instance, a long-time exposure to asbestos and polychlorinated biphenyl (PCB) is responsible for causing lung cancer, asbestosis and mesothelioma, birth defects, and reproductive and neurological damage.[106] A 2008 study reported that the workers were suffering from abdominal, urinary, muscle and skin problems, in addition to nutritional deficiencies caused from toxic metals, oil, and chemical contamination.[107] Another study found that 16 per cent of the Indian shipbreaking workers had symptoms of asbestosis who are under risk of developing mesothelioma, a type of cancer, in future.[108] Table 6 below shows the

[101] Ibid 28.
[102] Ibid.
[103] Md Abu Syed, 'Shipbreaking in South Asia: Impact on Environment and Health', *The Daily Star* (online at 23 April 2011) http://archive.thedailystar.net/newDesign/news-details.php?nid=182721
[104] Md. Saiful Karim, 'Violation of Labour Rights in the Ship-Breaking Yards of Bangladesh: Legal Norms and Reality' (2009) 25(4) *International Journal of Comparative Labour Law and Industrial Relations* 379, 380.
[105] Mohammad Zulfikar Ali, 'How Effective are the International and Domestic Laws in Protecting Workers' Occupational Health and Safety Rights in the Shipbreaking Industry of Bangladesh? What Role Could the National Court Play in Accordance With Their Constitution' (Master's Thesis, University of New South Wales, 2013) 15.
[106] Syed (n 103).
[107] Mohammad Shahadat Hossain et al, 'Occupational Health Hazards of Ship Scrapping Workers at Chittagong Coastal Zone, Bangladesh' (2008) 35(2) *Chiang Mai Journal of Science* 370, 376.
[108] Syed (n 103).

nature of the symptoms due to long-term exposure of the hazardous materials found in old ships.

Shipbreaking is also a cause of immediate threat to workers' lives (see Appendix E, G, and H). The shipbreaking industry in South Asia causes a number of deaths and injuries due to limited use of technical standards. A recent study has suggested that between 1000 and 2000 people succumbed to death and many more suffered grievous injuries over the last 20 years from various accidents in this industry.[109] Figure 3 below depicts data on deaths and injuries between 2005 and 2019. In particular, the overall number of deaths was 456 in the three countries from 2005 to 2019. According to these figures, 53 workers died in 2016 alone, equaling the total death rate for the years between 2011 and 2015. In 2016, Bangladesh recorded 22 deaths and 29 serious injuries, and India reported two deaths.[110] The second highest death toll was reported for 2011 with 43 deaths. The Figure also ranks that year with the highest number of injuries, reaching 150. In terms of ratio between numbers of ships and accidents, 2018 was at the top with 39 deaths and injuries. In 2019, 21 deaths and 11 injuries were reported in South Asia. Overall, the South Asian shipbreaking industry records two accidents per 1000 workers, and this corresponds with the claims of the reports discussed above.[111]

[109] Karim (n 104) 20.
[110] Michael Schular, 'NGO shipbreaking Platform Slams Shipping Industry Scaremongering to Undermine European Ship Recycling Regulation', *gCaptain* (online at 22 June 2018) https://gcaptain.com/ngo-shipbreaking-platform-slams-shipping-industry-scaremongering-to-undermine-european-ship-recycling-regulation/

[111] NGO Shipbreaking Platform, *India* (Web Page) https://www.shipbreakingplatform.org/our-work/the-problem/india/

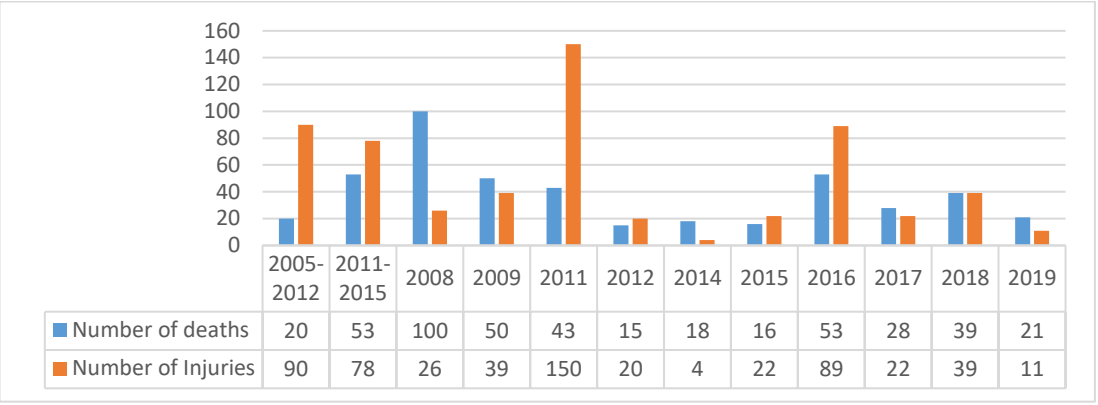
Table 6. Long term adverse effects on health of workers

Hazardous Materials	*Available in*	*Symptoms*
Asbestos	Engine room	Lung cancer, asbestosis and mesothelioma
Polychlorinated biphenyls (PCBs)	Cable insulation, transformers, capacitors, switches, some paints, pumps, cranes etc.	Cancer, liver damage, neurological and immune system damage.
Ozone depleting substances (CFCs, HCFC, etc.)	Insulation of LNG carriers, extinguishing agent, refrigerant for refrigerating machine	Large-scale pollution of the environment.
Organotin compounds (TBT, TPT, TBTO)	Anti-fouling paint on ship's bottoms	Sea product contamination, potential hazardous effect on human health.
Glass wool	Glass wool board, glass wool felt, glass wool pipe, shell of glass fibre products	Toxic as asbestos
Heavy metal-lead	Paints, cabling, batteries, motors and generators.	The neurological system, hearing, vision, reproductive system, blood vessels, kidneys and heart damage especially children's physical and neurological development
Heavy metal-mercury	Light fittings, luminescent lamps, switches, thermometers.	Toxic, bio accumulative and affect nervous system.
Oil and fuel (including hydraulic and lubricating oils, engine oil and grease)	Bunkers, bilges, fuel systems and engine room.	Poisonous through inhalation or consumption of contaminated water or fish. May also result in fire and explosion.
Blige water	Accumulated stagnant water in bilges.	Contains a range of pollutants: oil, inorganic salt, heavy metals, etc.
Ballast water	Fresh or salt water taken on board ballast tanks to adjust ship's trim and stability	May contain bacteria and viruses, also persistent invasive organisms and sediments.
Polyvinyl chloride (PVC)	In a number of materials, including plastics, cable coatings, floor coverings	May induce cancers, asthma, and impairment to human reproduction systems. Burning may generate carbon monoxide, and highly toxic dioxins etc. Burials may release chemicals to groundwater.
Polycyclic Aromatic Hydrocarbons (PAHs)	In high quantity in ship's body and due to beaching the material is available on the sediments and water surface	Soil and water pollution. A long-term exposure by ingestion, inhalation may cause lung, skin and bladder cancer.

Source: World Bank Report 2010[112]

[112] World Bank Report 2010 (n 19) 28-35.

Figure 3. Rate of deaths and injuries from 2005 to 2019 in South Asian shipbreaking yards



	2005-2012	2011-2015	2008	2009	2011	2012	2014	2015	2016	2017	2018	2019
Number of deaths	20	53	100	50	43	15	18	16	53	28	39	21
Number of Injuries	90	78	26	39	150	20	4	22	89	22	39	11

Source: NGO Shipbreaking Platform Reports[113]

Following the discussion of profit of the shipowners and their associates, and the accident data, the thesis submits that the responsibility to protect from these human consequences and to provide a remedy in case of death, injury and disease lies primarily with the shipping industry. The thesis also submits that while shipbreaking is an economic necessity for the shipbreaking countries in South Asia, it is a business for the shipping industry. The shipping industry that represents the foreign shipowners should therefore undertake responsibility either to provide protection from the human harms or to pay adequate compensation to the victims. However, the recent accident data show the shipping industry has thus far failed to protect the workers from these extreme consequences or to pay adequate compensation. One of

[113] The figure was developed by using information from the following sources: Karim (n) 20; Young Power in Social Action, Death Trap? A List of Dead Workers from the Year of 2005 to 2012 (September 2012) < Death Trap | Shipbreaking in Bangladesh (shipbreakingbd.info)>; NGO Shipbreaking Platform, *Annual Report 2009* (Annual Report, 2009) < NGO_Shipbreaking_Platform_Annual_Report-2009.pdf (shipbreakingplatform.org)> 3; NGO Shipbreaking Platform, *Annual Report 2010* (Annual Report, 2010) < Rapport_Annuel_2010.pdf (shipbreakingplatform.org)> 5; NGO Shipbreaking Platform, *Annual Report 2011* (Annual Report, 2011) < https://shipbreakingplatform.org/wp-content/uploads/2018/02/AR-2011-light-version.pdf> 10; NGO Shipbreaking Platform, *Annual Report 2012* (Annual Report, 2012) < Annual-Report-2012-NGO-Shipbreaking-Platform.pdf (shipbreakingplatform.org) 3; NGO Shipbreaking Platform, *Annual Report 2013* (Annual Report, 2013) < NGO-Shipbreaking-Platform-annual-report-2013.pdf (shipbreakingplatform.org) 6; NGO Shipbreaking Platform, *Annual Report 2014* (Annual Report, 2014) < NGO-Shipbreaking-Platform-Annual-Report-2014.pdf (shipbreakingplatform.org) 6; NGO Shipbreaking Platform, *Annual Report 2015* (Annual Report, 2015) https://shipbreakingplatform.org/wp-content/uploads/2018/02/NGO-Shipbreaking-Platform-Annual-Report-2015.pdf> 9; NGO Shipbreaking Platform, *Annual Report 2016* (Annual Report, 2016) NGO_Shipbreaking_Platform_Annual_Report_2016_05.indd (shipbreakingplatform.org)> 12-15; NGO Shipbreaking Platform, *Annual Report 2017* (Annual Report, 2017) https://shipbreakingplatform.org/wp-content/uploads/2018/07/Annual-Report-2017-Final-Spreads.pdf> 6-12; NGO Shipbreaking Platform, *Impact Report 2018-2019* (Biennial Report, 2018-2019) <https://shipbreakingplatform.org/wp-content/uploads/2020/06/NGOSBP-Bi-Annual-Report-18-19.pdf> 6-13.

the underlying causes for not providing adequate safety standards and compensation is the lack of adequate mechanisms in the national and international laws that govern the shipbreaking industry. The next Chapter examines the deficiencies in the national laws of India, Bangladesh and Pakistan, followed by an examination of deficiencies in international laws in Chapter 5.

VI CONCLUSION

This Chapter has addressed the first research question: Why has the shipbreaking industry become so well established in South Asian countries despite its negative impacts on the environment and the welfare of workers?

The key factor for sustaining the industry in South Asia is the revenue earned by the global shipping industry and their associates, namely cash buyers and open registry countries, from the sale of ships to South Asian shipbreaking yards. A second factor is the socio-economic benefits of the industry to Bangladesh, Pakistan, and India.

The South Asian shipbreaking industry is a significant contributor to the global shipbreaking market and a major source of income for the shipping industry. It is expected that in future more ships will be sent for breaking in South Asia because shipbreaking in the large shipping nations is not economically viable due to high labour, safety, and environmental regulatory costs. The shipbreaking industry in South Asia therefore benefits the shipping industry in terms of both the economy and the environment. Despite generating millions of USD, however, the shipping industry at large has done nothing to address the human consequences of the shipbreaking industry practices in these countries.

This Chapter has argued that a harmful industry in one part of the planet – South Asia – should not provide a source of revenue for companies and countries located elsewhere without a robust global system to prevent the abuse of human rights and to compensate workers. A systematic approach is crucial to provide an injured worker with an adequate compensation, and that is the focus of investigation for this research. An analysis of the national laws in South Asia that govern the shipbreaking industry is made in Chapter 4 to examine why, legally, South Asian shipbreaking countries

have not been able to prevent and compensate the work-related deaths, injuries and diseases occur in their shipbreaking industry.

CHAPTER FOUR : DEFICIENCIES WITHIN THE REGULATORY FRAMEWORK IN SOUTH ASIA

I INTRODUCTION

The previous Chapter demonstrated the imbalance between the business profit and the loss of the workers in the shipbreaking industry and argued that the shipbreaking laws must establish a balance between them. Following the argument, a principal purpose of this Chapter is to answer the second research question: What are the inadequacies in the national laws of the South Asian shipbreaking countries to prevent work-related deaths, injuries, or diseases and to compensate an injured or ill worker or the family members of a deceased worker? To that end, this Chapter examines the domestic laws of Pakistan, India and Bangladesh and identifies their deficiencies following a descriptive methodology of the legal research approach – an underlying objective of which is to collect, describe the law, and provide comments.

The analysis in this Chapter establishes the central argument of the thesis – the importance to develop a global civil liability mechanism; i.e., the shipbreaking liability certificate (SLC) that includes compensation for the potential victims of shipbreaking accidents and pollution. In order to explore the deficiencies and incite the discussion for a global civil liability framework, this Chapter not only examines the shipbreaking laws and regulations in India, Pakistan, and Bangladesh, but also investigates how the judiciary in these countries enforces these laws.

The examination of these decisions of the Supreme Courts of India, Bangladesh, and Pakistan with respect to shipbreaking is important since they have provided regulatory directions with respect to regulating the import of ships in deciding several non-government organisation (NGO) initiated public interest litigation (PIL) cases.[1] Supreme Courts are the highest courts of India, Pakistan, and Bangladesh and with

*This Chapter has been accepted for publication as a Book Chapter entitled 'Comparative Legal Analysis of Shipbreaking Regulations in Bangladesh, India, and Pakistan: Implication on Human Tragedy and Compensation to Victims' in Jushua Aston et al (eds) *Comparative Law* (Thomson Reuters, 2021)

[1] Ridwanul Hoque, 'Taking Justice Seriously: Judicial Public Interest and Constitutional Activism in Bangladesh' 2006 15(4) *Contemporary South Asia* 399, 401-402; There are no equivalent cases from the Supreme Court of Pakistan giving such decisions.

respect to public interest issue; their decisions generally influence legal policies.[2] In important environmental and human rights issues, the higher judiciary in each country often takes the first initiative and in appropriate cases, directs the government to pass laws on an issue that interests the community. Subject to public support, the government passes the relevant laws by the parliament, or the concerned ministry adopts the rules. Analysing the decisions of the Supreme Court and the relevant legislations, this Chapter identifies three specific deficiencies in the regulatory frameworks that are briefly stated below.

First, this Chapter finds that the three shipbreaking countries follow three different legal regimes in relation to importing ships. This is a serious problem in regulating the shipbreaking industry in South Asia, since one country cannot enact better laws to protect the workers and the environment unanimously for fear of facing the reality of losing businesses. As discussed in Chapter 3, shipbreaking in South Asia is mainly promoted by shipowners from developed countries whose sole motivation is earning a good price from selling their old ships. Shipbreaking countries also follow the business motive of shipowners and thus have a lack of interest to enact better laws to protect the workers and environment.

Bangladesh focuses on a worker and environment friendly approach subsequent to a recent decision of the Supreme Court of Bangladesh in *Bangladesh Environmental Lawyers Association (BELA) v Janata Steel Corporation* (*Janata Steel).*[3] In this recent case, the Supreme Court of Bangladesh has applied the recent shipbreaking laws. Bangladesh allows importing ships without pre-cleaning the wastes contained in the body of a ship under the *Hazardous Wastes and Shipbreaking Waste Management Rules, 2011* (Bangladesh) *and the Shipbreaking and Recycling Rules, 2011* (Bangladesh),[4] but national authorities of the country have the independent power to conduct a detailed and formal assessment of the in-built wastes of a ship, and if necessary to stop a ship's entry into Bangladesh.

[2] Ridwanul Hoque, *Judicial Activism in Bangladesh: A Golden Mean Approach* (Cambridge Scholars Publishing, 2011) 3.
[3] [Writ Petition No. 8466 of 2019] High Court Division (26 February 2020). (*Janata Steel*)
[4] *The Hazardous Wastes and Shipbreaking Waste Management Rules, 2011* (Bangladesh) r 19; *The Shipbreaking and Recycling Rules, 2011* (Bangladesh) r 11; *The International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force). (*The Hong Kong Convention)*

By contrast, India follows a pro-business approach that refers to preferring business profit to human and environmental costs of shipbreaking and passing special laws for shipbreaking for business profit. Under India's *Shipbreaking Code 2013* and the *Indian Ship Recycling Act 2019*, the country neither requires shipowners to pre-clean ships beyond India's territorial waters, nor provides its national authorities with enough power to restrict a ship's entry for containing wastes in its body. Pakistan also follows India's approach, with the exception that, unlike India, Pakistan has not passed a special law. This means Pakistan's approach is to run the business as usual and import all types of ships for breaking without any special legal regime. The differences in approaches is problematic for the environment and workers, as this is responsible for creating a race to the bottom situation. Shipowners can choose the country where the health and safety standard is law, but the price of ships is high. None of the countries, in fact, stops importing ships with full of hazardous materials and keeps the wastes away from their jurisdiction. This is a serious problem in regulating shipbreaking in South Asia.

Second, this Chapter argues that the new laws in India and Bangladesh and the general law in Pakistan also do not restrict the beaching and conventional shipbreaking practice that makes the sound management of the toxic ships difficult in these countries.[5]

Third, the Chapter argues that because of the weaknesses in the preventive system, the remedy of compensation should have been the central focus. However, the problem is, the shipbreaking workers cannot claim compensation. Their work is casual in nature and they have no employment contract or identity documents. Although their claim depends on the general labour laws of these three South Asian countries, shipbreaking workers for their casual job nature are not able to enforce these laws and claim compensation from the owners of the shipbreaking yards.[6]

This Chapter consists of five Parts. Following this introduction, Part II investigates the legal approaches taken by India, Bangladesh and Pakistan's Supreme Courts for regulating the import of ships. It examines four decisions of the Indian and

[5] *Shipbreaking Code 2013* (India) and the *Ship Recycling Act 2019* (India); *Ship Recycling Act, 2018* (Bangladesh), *Balochistan Environmental Protection Act 2012* (Pakistan).
[6] Taqbir Huda, 'Why is the Price of Killing a Worker Only Tk 2 Lakh' *The Daily Star e-paper* (online at 11 July 2021) <E-paper(http://epaper.thedailystar.net)> .

Bangladeshi Supreme Courts to demonstrate the highest Courts' approaches to workers' health and safety and protection of environment vis-à-vis economic development. Part III examines the key South Asian shipbreaking legislations, such as the *Shipbreaking Code 2013* (India) and the *Ship Recycling Act 2019* (India), *Ship Recycling Act, 2018* (Bangladesh), *the Shipbreaking and Recycling Rules-2011* (Bangladesh), and the *Hazardous Waste and Shipbreaking Management Rules, 2011 (*Bangladesh), *Balochistan Environmental Protection Act 2012* (Pakistan), and the general labour laws. Analysing these national legislations, it identifies four deficiencies, namely, absence of compulsory pre-cleaning requirements, limited power of the national authorities to check in-built wastes of a ship before authorising shipbreaking, no restriction on conventional shipbreaking practice, nor on other conventional shipbreaking methods.

Moreover, this Part reviews *Janata Steel* in detail. This case is relevant for the Bangladesh shipbreaking industry since the Supreme Court of Bangladesh has interpreted the recent *Hazardous Waste and Shipbreaking Management Rules, 2011* quite extensively following a worker- and environment-friendly policy. Part IV examines the framework of compensation in these countries and argues that there is no special mechanism for compensation. Compensation is paid under national labour laws of these countries that do not address the issue of the casual nature of work and weak legal status of the shipbreaking workers. This begs the question whether the general laws are sufficient to compensate the victims. Finally, Part V concludes with reiterating the proposition that a global compensation system is required to address the deficiencies in the domestic law of these three countries.

II DEFICIENCY IN DIFFERENT APPROACHES OF INDIA, BANGLADESH AND PAKISTAN

Importing ships without pre-cleaning is one of the main reasons why shipbreaking is the key source of marine pollution and health hazards in the three major shipbreaking countries in South Asia,[7] but instead of following a common approach to pre-cleaning,

[7] Ship-recycling activities in India, Bangladesh and Pakistan is one of the main sources of marine pollution in South Asia: See Ljubomir, Jeftic, Seba Sheably and Ellik Adler, *Marine Litter: A Global Challenge*, ed Nikki Meith (United Nations Environment Program, April 2009) 13; On an average, 2 workers face accidents out of 1000 workers in the shipbreaking industry everyday: at Stara Srinivas, 'Breaking Down the Ship Recycling Industry' *The Ship Recycling Industry in India* (Research Report, Part I- Issue Brief, Social and Political Research Foundation, 20 June 2020) 3.

these countries follow three different approaches. These different approaches create unfair regime competition and make the regulation of this global shipbreaking industry more complicated. The different regulatory standards enable shipowners to prefer a shipbreaking country that pays little attention to the problems involved in sound management of ships but at the same time is ready to pay the highest price. For example, Bangladesh's worker and environment friendly approach is not profitable and attractive to shipowners since, according to Bangladesh's Supreme Court decisions,[8] Bangladesh cannot import a ship beyond Bangladesh's territorial waters without pre-cleaning it. In the context of shipbreaking, worker and environment friendly policy means giving priority to a worker's health environment over business. By contrast, Pakistan and Indian laws do not restrict importing ships without pre-cleaning. Therefore, if the choice arises between Bangladesh, India and Pakistan, shipowners may consider Pakistan or India over Bangladesh, because of the pro-business approach of India and Pakistan that allows them to export ships without pre-cleaning. In this context, pro-business means giving priority to business profits over environment and society. The next three sections discuss these approaches in detail with reference to the decisions given by the Supreme Courts of the respective countries.

A *The Indian Approach – Blue Lady and the Exxon Valdez*

The legal development of the Indian shipbreaking laws has two different phases. Prior to 2012, India had a worker and environment friendly policy for the import of ships. India's significant progress in developing legal standards evolved in response to several landmark decisions of the Indian Supreme Court based on the regulatory principles of the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention)*.[9] From 2012 onwards, changes to the law have followed the *Hong Kong Convention* principles and a pro-business approach as applied by the Supreme Court of India in the *Research*

[8] *Bangladesh Environmental Lawyers Association (BELA) v Bangladesh and others*, [Writ Petition No 3916 of 2006] High Court Division (6 July 2006) (*MT Alfaship*); *Bangladesh Environmental Lawyers Association (BELA) v Bangladesh, Represented by the Secretary, Ministry of Shipping and Others* [Writ Petition No. 7260 of 2008] High Court Division (5 March 2009, 17 March 2009, 31 May 2010 and 7 March 2011). (*MT Enterprise*)

[9] *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992). *(Basel Convention)*

Foundation for Science Technology and Natural Resource Policy v Union of India and Others, Supreme Court of India (*Blue Lady*) and *Research Foundation for Science Technology and Natural Resource Policy v Union of India and Others, Supreme Court of India* (*Exxon Valdez*).[10]

In its primary decision in *Research Foundation*,[11] the Supreme Court imposed a ban on waste import and directed proper regulatory recommendations to the Indian government. Initially, the petitioner, Research Foundation for Science, Technology and Natural Resources instituted the case to examine the issues related to hazardous waste dumping in India. While dealing with the broad issue, the Supreme Court also looked into the issue of shipbreaking.

Research Foundation is a continuing mandamus.[12] Mandamus under art 226 of the *Constitution of India*, 1950 (that is the case in two other countries) refers to an order from a superior court to a sub-ordinate court or tribunal or public authority to perform an act, which falls within its duty. In 2003, the Supreme Court of India in deciding an application in the ongoing *Research Foundation* case found that although India's laws were sufficient to meet their international legal obligations, the problem was the enforcement of these laws by India's public authorities.[13] The petitioner in this case, the Research Foundation for Science, Technology and Natural Resources, argued that India is a party to *the Basel Convention* and therefore cannot approve the import of ships into Indian waters without prior decontamination.[14] The Supreme Court accepted the argument and declared that:

> The concerned authorities shall strictly comply with the norms laid down in the *Basel Convention* or any other subsequent provisions that may be adopted by the Central

[10] [Civil Original Jurisdiction Writ Petition No 657 of 1995) (November 2007) *(Blue Lady)*; [Civil Original Jurisdiction Writ Petition No 657 of 1995 interim application no. 61 and 62] (12 October 2012). *(Exxon Valdez)*

[11] *Research Foundation for Science Technology and Natural Resource Policy v Union of India and Others, Supreme Court of India*, [Civil Original Jurisdiction Writ Petition no. 657 of 1995] 4 SCC 647. *(Research Foundation)*

[12] Continuing mandamus refers to a remedy which does not stop by giving a decision, rather it continues to compel the performance of duties. Court plays a supervising role with respect to the action to which the writ pertains. The case remains open for an indefinite time to check the continuous performance of duties by the respondent: see Shreemanshu Kumar Dash, Writ of Continuing Mandamus in Matters of PILs: A Step towards Development of Environmental Jurisprudence (August 2017) 22 (8) *Journal of Humanities and Social Science* 26, 29-32.

[13] *Research Foundation for Science Technology and Natural Resource Policy V Union of India and Others*, [Civil Original Jurisdiction Writ Petition no. 657 of 1995] Supreme Court of India (12 April 2003). (*Research Foundation – 2003)*

[14] See Chapter 5.

> Government in aid of a clean and pollution free maritime environment, before permitting entry of any vessel suspected to be carrying toxic and hazardous material into Indian territorial waters.[15]

Legal development that ensued during the first five years after the judgement confirmed the effectiveness of the role of the court in regulating the issue of pre-cleaning as summarised in Table 7 below.

Table 7. Pre-cleaning regulations passed by the Gujarat Provincial Government and the Central Government of India

Name of the Regulations	***Principles***	***Objective***	***Influence on the industry***
Gujarat Maritime Board (Prevention of Fire and Accidents for the Safety and Welfare of Workers and Protection of Environment during Shipbreaking Activities) Regulations 2000.	The international conventions issued by the IMO and the International Labour Organisation	To direct industry good practices, but they had no binding obligations	Little influence on the non-compliant industry
Hazardous Waste (Management, Handling and Transboundary Movement) Rules 2008	Ensuring sound management by exporter	Compulsory pre-cleaning requirement	Decreased import of ships
Gujrat Maritime Board (Prevention of Fire and Accidents for Safety of Workers and Protection of Environment during Shipbreaking Activities) Regulation, 2003 and the Gujarat Maritime Board (Conditions and Procedures for Granting Permission for Utilising Ship Recycling Plots) Regulation, 2006	Empowering local authorities to issue clearance	Local authorities can deny entry or breaking of toxic ships	Decreased import of old ships

Source: Florent Pelsy[16]

The State government of Gujarat passed the above laws following *Research Foundation*, but these policies challenged Indian shipbreaking businesses largely because shipowners were not interested in selling ships to India after following the expensive pre-cleaning methods to remove the hazardous materials contained in their ships. To overcome the business challenges and economic loss, India began following a pro-business approach for retaining the business. Despite nationwide criticism, the

[15] *Research Foundation – 2003* (n 13).
[16] Florent Pelsy, 'The Blue Lady Case and the International Issue of Ship Dismantling' (2008) 4(2) *Law, Environment and Development Journal* 135, 137

Indian government allowed the import of highly toxic ships, including the Blue Lady in September 2007 and the Exxon Valdez in May 2012.[17]

The import of the Blue Lady ship, a former French ship, came as a great opportunity for India to revive their industry,[18] whilst the ship became a liability for the last owner, the Norwegian Cruise Lines (ncl), after it suffered a boiler explosion in 2006 in Miami, Florida. The explosion killed a number of workers and rendered the ship immobile. Eventually the Norwegian Cruise Lines sold the ship to an Indian buyer for USD 14.5 million, and got rid of an estimated cost of USD 17 million required to clean the asbestos that remained in the ship's body.[19]

When the purchase of the ship by an Indian shipbreaking yard went to the Indian Supreme Court, the Plaintiff, in its submission, argued for an order from the Court not to permit breaking of the ship in India on the ground that the Blue Lady ship would be highly risky for the workers and the environment. Rejecting the plaintiff's claim, the Court permitted its breaking,[20] as it was convinced by the argument of the defendant – Union of India – that the ship would provide 41,000 million tonnes of steel and employment opportunities for 400 people. Instead of balancing the environmental, social and economic concerns, the Supreme Court introduced the concept of proportionality and balance for the notion of development,[21] and prioritised business profits over the suffering of people and pollution of the environment. Although the Court acknowledged that in applying the principle of proportionality a balance is required between priorities of development and environmental protection, in reality the Court did not do so in this case, leaving open the same approach to be followed in the future.[22]

[17] Ibid.
[18] Ibid.
[19] NGO Shipbreaking Platform, 'Comments on the Indian Committee Inspection Report on the Hazardous Materials On-board the SS Blue Lady' (Research Report, 31 July 2006).
[20] *Blue Lady* (n 10).
[21] The concept of proportionality is used as a threshold to limit the interference with human or fundamental rights. It requires that the interference with rights must be reasonable and it must not cross boundary in relation with the intensity of the interference: Jam Sieckmann, 'Proportionality as Universal Human Rights Principle' in Duarte D. and Silva Sampson (eds), *Proportionality in Law* (Springer International Publishing, 2018) 3-24. < https://doi.org/10.1007/978-3-319-89647-2_1>
[22] Pelsy (n 16) 141.

In 2012, *Exxon Valdez* once again exposed the pro-business approach of the Indian Supreme Court.[23] The Exxon Valdez ship was involved in a major oil spill in Prince William Sound, Alaska in 1989. The United States and European Union banned the ship from entering into their ports because of the pollution risk involved in anchoring the damaged ship. In order to conceal its identity, the owner, Hong Kong Bloom Shipping Ltd., changed the name of the ship several times between 1989 and 2011. At the end of its life, the recycler of the Blue Lady ship, Priya Blue Industries Private Limited, an Indian company, purchased the ship for a reported USD 16 million.[24] Although the Supreme Court of India initially rejected its entry, in May 2012 the ship arrived in India under no flag, thereby hiding its identity. Before entry into India, its former registration in Sierra Leone had also expired.

An environmental group, Toxic Watch Alliance, exposed this hidden identity of the *Exxon Valdez* and filed petition before the Supreme Court to stop the breaking of the ship. Since the ship was already in the territorial water of India, however, the Court allowed its breaking. In its decision, the Court referred to its previous decisions, but recommended passing a national comprehensive code for shifting the liability of regulating the industry to central government from state government.[25]

Importing these two ships into India without pre-cleaning was the central issue in *Blue Lady* and *Exxon Valdez*. In a positive sense, the Court's directions paved the way for the Indian government to pass a consolidated law for shipbreaking that is applicable to all parts of India. On the other hand, since 2007, the decisions of the Indian Supreme Court in these cases have provided leeway for the Indian Government to shift from its earlier decisions in *Research Foundation* and to allow importing ships even if they contained in-built hazardous materials. Following these decisions, the Indian Parliament has passed specific national laws that are applicable to the shipbreaking industry, being the *Ship Recycling Code, 2013* and *Ship Recycling Act 2019*.

[23] *Exxon Valdez* (n 10); Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 155.
[24] Ibid 155-157.
[25] *Exxon Valdez* (n 10). *Research Foundation* was the original ruling and in 2003, 2007, and 2012, the Indian Supreme Court delivered further decisions disposing more petitions.

B *The Bangladeshi Approach – MT Alfaship and Enterprise*

The Bangladesh Supreme Court also decided two cases in 2012, the *MT Alfaship* and *MT Enterprise*, where the Court took a different approach from India and rejected the import and breaking of the two ships.[26]

The *MT Alfaship and MT Enterprise* stemmed from a list prepared by Greenpeace International of the 50 most toxic ships ready to be dismantled.[27] This list was prepared with the aim of pressurising yard owners to ensure that shipowners decontaminated the ships before sending them to Bangladesh.[28] Both the MT Alfaship and MT Enterprise were included in this list.

In *MT Alfaship*, the ship buyer tried to import the ship to Bangladesh for dismantling. The ship reached the outer anchorage (despite its arrival being unauthorised due to not obtaining any certificate of environmental clearance from the Department of Environment (DoE)).[29] Bangladesh Environmental Lawyers Association (BELA), an environmental lawyers group, sought to prevent the import because the ship was a vast source of hazardous wastes.[30] Just before beaching the disputed ship, the High Court Division of the Bangladesh Supreme Court ordered relevant government authorities to stop the MT Alfaship from entering into the territorial waters of Bangladesh.[31]

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[26]The decisions came in response to litigations filed by an environmental policy based NGO, Bangladesh Environmental Lawyers Association (BELA), on behalf of the people and environment affected by the industry activities. These types of litigations are called Public Interest Litigation (PIL), when someone from the society has the right to sue and get the issue addressed by the Apex Court. As with India and Pakistan, the judicial guidelines from the Courts on shipbreaking followed this common approach: at *MT Alfaship*.

[27] Greenpeace International, 'Playing Hide and Seek: How the Shipping Industry, Protected by Flags of Convenience, Dumps Toxic Waste on Shipbreaking Beaches' (Research Report, December 2003) 29.

[28] Feature Story, *Ship-sized Loophole Closed: Victory- Toxic Ships Export Controlled*, Green Peace International (1 November 2004) http://www.greenpeace.org/international/en/news/features/victory-toxic-ship-export-co/ .

[29] 'Toxic Ship Barred from Chittagong Port', *The Daily Star* (online at 15 January 2007) http://www.thedailystar.net/2007/01/.

[30] *MT Alfaship* (n 8).

[31] Being the highest Court and guardian of the constitution, the Bangladesh Supreme Court is empowered to review and strike down any law if the concerned law does not corroborate the mandate of the constitution. The Bangladesh Supreme Court is divided into High Court and Appellate Division. The High Court division has some original jurisdiction along with the power of deciding appeal from the lower courts. This division decides writ petitions of all kinds. Against the decision of the High Court, an aggrieved person can file appeal to the Appellate Division whose decision is final: see generally *Constitution of the Peoples' Republic of Bangladesh Constitution* (Bangladesh) 1972, arts 94-117. *(Bangladesh Constitution)*

Significantly, and unlike India, the judgment imposed a legal duty on public bodies to prohibit the entry of a hazardous ship to Bangladesh.[32] Further, the Court's order emphasized that the government was required to follow its international obligations in relation to improving sound management capacity of its shipbreaking industry in accordance with the *Basel Convention*.[33]

Following the judgment, the Alfaship eventually left Bangladesh.[34] In the years that followed, however, the government did not amend or develop any new law or policy to give effect to the Court's judgment. Arguably, this was because the Court failed to give a directive that a law or regulation be developed.[35] On this basis, the judgment could be viewed as only a partial success, but it was an impetus to the government to take the shipbreaking matter seriously. Moreover, it set a platform for future judicial action in *MT Enterprise.*

In the related *MT Enterprise* case, the ship, MT Enterprise entered into Bangladesh despite the embargo from the Department of Environment.[36] When the ship was substantially scrapped in one of Bangladesh's shipbreaking yards, BELA lodged an application before the Supreme Court's High Court Division in September, 2008 claiming that the Court should order the Ministry of Environment and Forest and the Department of Environment to close all yards, including the one which was breaking the MT Enterprise, as these yards in operation had no environmental clearance, to break ships.

Akin to *MT Alfaship*, *MT Enterprise* addressed the policy of the government on shipbreaking and the link between a right to life and right to a decent environment at work. As with *MT Alfaship*, the Bangladesh High Court found in favour of Bangladesh

[32] Saiful Karim, 'Environmental Pollution from Shipbreaking Industry: International Law and National Legal Response' (2010) 12(2) *Georgetown International Law Review* 185, 235.
[33] *MT Alfaship* (n 8).
[34] Ibid.
[35] 'Promoting fundamental rights, impartial administration of justice, application of rule of law are the issues in which the Supreme Court acts as the final interpreter as guardian of the Constitution. The Judiciary can shape principle of law according to the need of the society by taking resort from International law when there is gap in national law': at Jona Razzaque, 'Access to Environmental Justice: Role of the Judiciary in Bangladesh' (2000) *Bangladesh Journal of Law* 1, 1.
[36] The protection of the environment in Bangladesh is regulated through the *Environmental Conservation Act 1995* (ECA): This Act defines pollution to include all the pollutants during shipbreaking and not just those found on-board. The ECA also established a Department of Environment (DoE) headed by a Director-General to take necessary action against a non-compliant industry. It is a mandatory requirement for the shipbreaking industry to obtain an environmental clearance certificate before commencing the breaking.

Environmental Lawyers Association. The Court held that it was a requirement for shipbreaking yards to have a legally binding environmental clearance certificate from the Department of Environment and ordered that:

> All shipbreaking yards operating without environmental clearance to close activity within two weeks from the receipt of the order. The Ministry of Environment and Department of Environment are directed to take steps to ensure closure of all shipbreaking yards, which are operating without necessary clearance as required by law.[37]

The direction to the Ministry of Environment and Forest and the Department of Environment to close all the yards operating without a clearance certificate from the Department of Environment (a ban order) stopped further shipbreaking activity in Bangladesh. Pursuant to the ban order, it was not permissible for ship importers to bring in end-of-life vessels without initially ensuring that shipowners had properly pre-cleaned the inbuilt hazardous materials of ships.[38] The Court also addressed the most important argument of the petitioner, BELA, namely the need for a comprehensive national policy to regulate the industry effectively.

The ban order closed the Bangladeshi shipbreaking industry indefinitely. Dissatisfied with the ban order the Bangladesh Shipbreakers Association subsequently filed petition for leave to appeal to the Appellate Division in January 2011.[39] The Bangladesh Ship Breakers Association (BSBA) argued that the High Court Division gave an *ex-parte* decision, as there was no representative from the association at the time of hearing before the High Court Division. After hearing, the Appellate Division initially allowed the BSBA's application to appeal in March 2011, and stayed the High Court's ban order,[40] until final hearing of the appeal.[41] Finally, the Appellate Division disposed of the appeal and lifted the restriction after the Government adopted the *Shipbreaking and Recycling Rules, 2011* and the *Hazardous Waste and Shipbreaking Management Rules, 2011*.

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[37] *MT Enterprise* (n 8) (17 March 2009) directions no 2-4.
[38] Ibid, direction no 8.
[39] Bangladesh Supreme Court has two divisions, namely, High Court Division and Appellate Division. Appellate Division has the power to hear appeal against the High Court Division and decision of the Appellate Division is final in Bangladesh Legal System: at art 94(1) of *Bangladesh Constitution*.
[40] *MT Enterprise* (n 8) (17 March 2009) directions 2-4.
[41] *MT Enterprise* (n 8) (17 May 2010) 5 [4].

C *The Pakistani Approach – Shehla Zia Case*

In relation to Pakistan's shipbreaking industry, the first issue is, there is no comprehensive and particular regulatory framework for shipbreaking in Pakistan.[42] Pakistan follows a similar pro-business approach to India and puts no restriction on importing ships, the only difference being that India does it under special laws, whereas Pakistan does it without passing a special law. By not passing special laws, Pakistan walks away from its international and constitutional commitments.

Pakistan is a party to the *Basel Convention* and several other ILO Conventions.[43] By becoming a party to the international agreements on inter-State regulation of waste and labour regulation, Pakistan commits to promoting the rights of the environment and of workers. Additionally, Pakistan has a written Constitution that guarantees fundamental rights of its citizens and environment; under art 141 of its constitution, Pakistan has a specific mandate to ensure the life, liberty, and independence of general people. Any law made by the parliament is subject to this Constitutional guarantee of rights.[44] Where someone abuses the rights of others, the victims have the right to claim compensation. This principle was established in *Shehla Zia and Others v Water Resources and Power Development Authority* which expanded the meaning of right to life to include safe health and a safe environment.[45] Based on the legal principles, Pakistan has a duty not to abuse the rights of its citizens merely for economic benefit. The government must update the laws and monitor their strict application following its international and constitutional commitments, especially if an industry is hazardous in nature, such as shipbreaking.

The debate for a specific law in relation to shipbreaking gained momentum in late 2016 after the Pakistan shipbreaking industry experienced a major explosion on 1

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[42] Human Rights Commission of Pakistan, 'Horror in Gadani' (Fact-finding Report, November 2016) 28.

[43] Pakistan has ratified 36 ILO Conventions, such as *Labour Inspection Convention*, 1947 (No. 81) adopted on 19 June 1947, entered into force 10 October 1953, 13th Session, Governing Body of the International Labour Office: at International Labour Organisation, 'Ratifications for Pakistan' (Web Page) < https://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO:11200:P11200_COUNTRY_ID:103166>

[44] The Supreme Court of Pakistan has the power to review the laws and examine whether they are in conformity with the fundamental rights guaranteed in the Constitution: at arts 184 and 190 of *the Constitution of the Islamic Republic of Pakistan*, 1973 (Pakistan).

[45] PLD 1994 SC 963 (12 February 1994). (*Shehla Zia)*

November 2016 at the Gadani shipbreaking location .[46] The incident occurred when a shipbreaking yard forced more than 250 workers to cut a floating oil tanker, MT ACES (IMO # 8021830), without degassing the ship.[47] The bottom part of the ship contained a mixture of oil and water that emitted flammable and noxious gases. The shipbreaking yard manager provided oxy torches to the workers for cutting the ship. When a worker lit an oxy torch, the flame touched where the gas was located and caused an explosion. The incident killed more than 29 workers and injured more than 60 workers. Some workers who witnessed the tragic event claimed the exact number of deceased was more than 80.[48] The accident exposed the poor state of Pakistan's regulatory compliance and, following the catastrophic incident, NGO reports identified that exporting the ship without pre-cleaning, cutting the ship without degassing, using conventional shipbreaking practice with oxy-torches and having minimum oversight from the government agencies were some of the main reasons behind the explosion.[49] Five years after the shipbreaking accident, the country has not passed a special law to impose restriction on these issues.

D *Analysis*

This Section argues that although India and Pakistan follow identical shipbreaking practices, both countries did not learn lesson from the Gadani incident. These countries still allow importing ships full of oil and flammable gases. By contrast, Bangladesh has improved its approach, following the Supreme Court of Bangladesh's decisions, but the decisions in *Alfaship* and *MT Enterprise* were not without controversies. The Bangladesh Shipbreakers Association argued that the court had effectively stopped the industry,[50] because the Supreme Court ruled that until the government had formulated

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[46] Saher Baloch, 'Shipbreaking Activities at Gadani Suspended', *Dawn* (online at 11 January 2017)https://www.dawn.com/news/1307621

[47] In most cases the inside of a ship's chamber contains unseen and flammable gases. Therefore degassing is a process used to remove the remaining gas from the hold in an environmentally sound way. It basically means to remove the gas from a tanker's hold: at Port of Rotterdam, *First Steps in Environmentally Responsible Degassing of Ships* (Web Page, 7 September 2020) https://www.portofrotterdam.com/en/news-and-press-releases/first-steps-in-environmentally-responsible-degassing-of-ships>

[48] Human Rights Commission of Pakistan (n 42) 30.

[49] NGO Shipbreaking Platform, 'NGO Denounces Dangerous Working Conditions After Major Explosion At Gadani Shipbreaking Yard In Pakistan Killing At Least 21 Workers' (Press Release, 2 November 2016). https://www.shipbreakingplatform.org/press-release-ngos-denounce-dangerous-working-conditions-after-major-explosion-at-gadani-shipbreaking-yard-in-pakistan-killing-at-least-21-workers/

[50] Ben Block, *Bangladeshi Lawyer Fights Toxic Shipbreaking* (Web Page, World Watch Institute) http://www.worldwatch.org/node/6084 .

new rules could not permit shipbreaking.[51] A differing view is that the Supreme Court's order allowed the operation of the industry subject to a more detailed regulation by the Ministry of Environment and Forest. Thus, the Supreme Court of Bangladesh established a balance between economic needs and workplace safety.[52]

There are two similarities in the decisions of Bangladesh and India, namely, directions for establishing special national laws and continuation of the business, but the difference is that the Indian Supreme Court allowed breaking of the Blue Lady and Exxon Valdez without any regulatory restriction. Bangladesh's Supreme Court, in contrast, did not allow importing the ship, MT Alfa or the continued breaking of the ship, MT Enterprise without a clearance from the DoE. The Bangladeshi approach, however, did create problems for maintaining the business of shipbreaking. By virtue of *MT Enterprise*, the shipbreaking industry faced a total shut down for a while.

Pakistan's Supreme Court, on the other hand, has declared a general principle for waste regulation but the Court is yet to intervene directly in the case of shipbreaking.[53] In *Shehla Zia*, the Court found that Pakistan has a general duty to follow its international obligations and manage any wastes in a sound way in order to ensure sound health and save lives. The 2016 industrial accident has exposed the danger of Pakistan's general approach for the workers. To avoid the accident, Pakistan could have imported the ship after pre-cleaning beyond Pakistan's territorial waters. The incident is also a sign of danger for Bangladesh, if Bangladesh cannot enforce its Supreme Court's decisions. Against this backdrop, the following sections analyses the legal complexity in following the decisions of the Supreme Courts in Pakistan, India, and Bangladesh, followed by a comparative analysis of the legislative development in these countries.

[51] NGO Shipbreaking Platform, 'Bangladesh Succumbs to Shipping Industry Pressure: Bangladesh Temporarily Allows Toxic Ships Pending Final Ruling' (Press Release, 9 March 2011) http://www.shipbreakingplatform.org/bangladesh-succumbs-to-shipping-industry-pressure/
[52] *MT Enterprise* (n 8) (7 March 2011).
[53] *Shehla Zia* (n 45).

III ANALYSING THE DEFICIENCIES IN THE LAWS AND POLICIES OF BANGLADESH, INDIA, AND PAKISTAN

A *Challenges in Seeking Compulsory Pre-cleaning*

It is important to note that legislative developments ensued in India and Bangladesh following the two different policies introduced by the decisions of their Supreme Courts. For example, because of the original direction of the respective judiciary, India enacted the *Shipbreaking Code* in 2013 (India) without putting a restriction on importing unclean ships,[54] whereas Bangladesh put restrictions on importing unclean ships in the original version of the *Hazardous Waste and Shipbreaking Management Rules, 2011* (Bangladesh). By putting no restriction on pre-cleaning in the *Shipbreaking Code* 2013 (India), India took up the challenge to clean and break these unclean ships, but a recent report published by the British Broadcasting (BBC) suggests that the regulatory model has had little success.[55]

The problem, nevertheless, with the South Asian shipbreaking industry is not to have the capacity and infrastructure for sound waste management. The industry is not standard to dispose of the in-built wastes, including asbestos and flammable gas in ships purchased for breaking (see Chapter 1 and 3) appropriately. Accordingly, their exposure can damage the water, air and soil quality in the surrounding environment.[56] Mishandling of the materials even causes explosions leading to death and injury for workers. These are the reasons why at least 300 hundred workers die each year in this industry.[57]

One of the underlying problems of the *Shipbreaking Code 2013* (India) is the absence of the pre-cleaning requirement.[58] Without specific pre-cleaning requirement beyond Indian waters, the *Shipbreaking Code 2013* (India) only requires 'the shipbreaking yard to remove all hazardous substances from the vessel once the vessel is anchored

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[54] *Shipbreaking Code 2013* (India).
[55] See details for understanding the Indian shipbreaking standards: at Chris Foote, 'Breaking Bad: Uncovering The Oil Industry's Dirty Secret' (Investigative Report, BBC, 17 March 2020) https://www.bbc.co.uk/news/extra/ao726ind7u/shipbreaking>
[56] NGO Shipbreaking Platform, 'Why ships are Toxic?' *Issues of Interest* (Web Page) https://shipbreakingplatform.org/issues-of-interest/why-ships-are-toxic/ .
[57] NFB, Shipbreakers (21 June 2017) https://www.youtube.com/watch?v=5jdEG_ACXLw&feature=emb_rel_pause, 46.52-47, 1:12:51
[58] Mohammad Shahanwaz, 'The Effective Enforcement of National Ship recycling Regulations in India' (Master's Thesis, World Maritime University Dissertation, 2017) 65.

in Indian waters and waiting for permission to beach'.[59] When a ship with its hazardous substances anchors in Indian waters, the foreign wastes have reached the Indian Territory. The lack of a pre-cleaning requirement from a ship seller's country is contrary to India's obligation under the *Basel Convention*. Being a *Basel Convention* Party, India has an obligation to enact laws that require compulsory pre-cleaning from wastes' place of origin.[60] The *Shipbreaking Code 2013* (India) did not incorporate this requirement. One of the reasons for this could be India's intention to follow the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships Hong Kong Convention (Hong Kong Convention)*,[61] which is the specific international law for shipbreaking that also does not address the compulsory pre-cleaning issue(see Chapter 5).

The weaknesses of the *Shipbreaking Code 2013* (India) resulted in far reaching implications for the shipbreaking industry's green image. India faced widespread criticism from environmental groups and shipowners based in Europe. In particular, NGO Shipbreaking Platform and the EU Community Shipowners' Association urged India to make changes to the *Shipbreaking Code 2013* (India).[62] India passed the *Ship Recycling Act 2019* (India) accordingly to supplement the *Shipbreaking Code 2013* (India).[63] India also acceded to the *Hong Kong Convention*, passing the *Ship Recycling Act 2019* (India). The *Ship Recycling Act 2019* (India) therefore provides for regulations that meet the requirements of the *Hong Kong Convention*. The issue with the *Ship Recycling Act 2019* (India) is, however, that it also lacks a clear requirement for an owner to pre-clean a ship.

The *Ship Recycling Act 2019* (India) requires all new and ships up to five years old to maintain an inventory of hazardous materials (IHM).[64] The National Authority or authorised body may inspect a ship to check and verify that there is an inventory of hazardous materials or a ready for recycling certificate on-board of a ship.[65] In

[59] *Shipbreaking Code 2013* (India), s 4(3).
[60] *Basel Convention*, arts 4(2)(d)-4(2)(e), 4(2)(9)(a).
[61] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force). *(Hong Kong Convention)*
[62] Jens Gieseke, 'European Union Ship Recycling Rules: Carrot, Stick or Illusion' European Community Shipowners Association (5 May 2021) https://www.youtube.com/watch?v=BY1jfhJj3lI>, 37.22.
[63] *Ship Recycling Act 2019* (India) Preamble para 4.
[64] Ibid s 16.
[65] Ibid s 28.

addition, the *Ship Recycling Act 2019* (India) requires the shipowners to keep 'a ship clear from cargo residues and minimise any remaining fuel oil and wastes on-board'.[66]

A careful scrutiny of the *Ship Recycling Act 2019* (India) shows the lack of clear requirement for an owner to pre-clean a ship. The Act only requires the shipowner 'to clean the cargo residues and minimise any remaining fuel oil and wastes on-board kept in loose condition', but does not define the term 'cargo residues and remaining fuel oil and wastes on-board'.[67] In the absence of a clear definition of the term, this means shipowners are only required to clean the wastes, such as fuel oil leaked on-board of a ship, rather than the wastes remaining in a ship's body. A clear definition of the terms is important so that it creates no confusion as to the clear obligations of shipowners with respect to cleaning the wastes contained in a ship's body. The *Ship Recycling Act 2019* (India) also does not clarify who can issue the inventory of hazardous materials.

Similarly, as discussed, Pakistan does not have a specific legal regime to regulate the shipbreaking industry. There is no legal requirement to demand a pre-cleaning certificate from the exporter and because of this, Pakistan can receive and permit beaching a ship without requiring any pre-cleaning certificate from the exporter. This is a significant legal gap in Pakistan's law.

Some laws that are applicable to Pakistan's shipbreaking industry include the *Shipbreaking Industry (Special Procedure) Rules 1997* (Pakistan),[68] the *Balochistan Environmental Protection Act 2012* (Pakistan) and the *Balochistan Development Authority Act 1974* (Pakistan) that only deal with some basic procedures for national security, insurance and tax purposes. For instance, before a ship reaches a port the security agencies, including the Pakistan Navy, can issue security clearances having received information at least two days before the arrival of a ship in Pakistani waters. This information relates to the 'navigational communication code, flag of origin, and type of vessel for national security', but not to the internal wastes of a ship. The government security agencies have the power to reject a vessel on security issue whereas they have no power to return a ship on the grounds of storing hazardous

[66] Ibid s 19.
[67] Ibid s 19(iii).
[68] *Shipbreaking Industry (Special Procedure) Rules, 1997* (Pakistan) (vide SRO Sales Tax notification S.R.O 1283(I)/97; amended vide notifications SRO 313(I)/2001, 23 May 2001, SRO 699(I)/2002, 12 October 2002, and SRO 887(I)/2003, 5 September 2003.

substances within its body.[69] Moreover, since Pakistan has no mechanism to seek a pre-cleaning certificate from a ship seller, Pakistan allows the import of hazardous ships, upon voluntary application for clearances.[70]

Unlike India and Pakistan, Bangladesh's national laws passed following the Supreme Court's decisions reflect Bangladesh's worker and environment friendly approach to pre-cleaning, but Bangladesh's problem lies in the enforcement of the Court's decisions by striking a proper balance between businesses and the rights of workers.

The specific laws that are applicable to the Bangladesh Shipbreaking industry are the independent *Ship Recycling Act, 2018* (Bangladesh), *the Shipbreaking and Recycling Rules-2011* (Bangladesh) and the *Hazardous Waste and Shipbreaking Management Rules, 2011* (Bangladesh). Under these laws, the Department of Environment has the power to permit beaching and breaking a ship. In order to control the wastes and strictly enforce the Department of Environment's power, the compulsory pre-cleaning obligation was included in the original r 17 of the *Hazardous Waste and Shipbreaking Management Rules, 2011* (Bangladesh). This rule did put an obligation on the exporting country to provide a certificate from the government or government-appointed expert of the exporting country confirming that the ship was decontaminated. The implementation of this rule resulted in a significant decrease in ship imports to Bangladesh. Hence, in 2012, the government amended the rule and lifted the mandatory pre-cleaning requirement. A proper authority in Bangladesh can now issue a pre-cleaning certificate subject to its National Import Policy.[71] Following this amendment, Bangladesh amended the Bangladesh National Import Policy in 2012 and lifted the requirement to seek a pre-cleaning certificate from the shipowners. Annex 1 of the *Import Policy Order 2012-2015* provides:

> In case of import of scrap vessel (HS Heading No. 89.08), a certificate to the effect that 'no poisonous or hazardous waste "except inbuilt materials of the ship" is being carried' issued by last exporter or owner and a declaration of the importer must be submitted with shipping documents. Provided that, provisions of Bangladesh

[69] Human Rights Commission of Pakistan (n 42) 19-20.
[70] Ibid.
[71] *Amendment to the Hazardous Waste and Shipbreaking Management Rules, 2011* (Bangladesh) SRO no. 386-ain/2012, sub-s 15(gha).

> Environmental Act 1995 (Act No. 1 of 1995) and Rules and regulations thereon shall be observed in case of shipbreaking.[72]

Bangladesh's 2012-2015 and 2016-2019 National Import Policies have a similar provision. It means, after the amendment, a ship importer only needs to submit a 'list of hazardous materials that are on-board' to obtain environmental clearance from the Department of Environment.[73] The 'on-board wastes' do not include the internal wastes that remain in a ship's body. The exporter therefore has no liability to decontaminate the internal wastes, including oil and flammable gases of a ship. This amendment to the rule and policies led to an increasing number of reported accidents and large-scale pollution of the environment (see Appendix 1). This put pressure on the Bangladeshi legal authorities to provide clear guidance and introduce a safe shipbreaking regime.[74] More specifically, the NGOs created the pressure, as there is no active workers union for shipbreaking industry. The Supreme Court of Bangladesh intervened, and in *Janata Steel*, provided important guidance on the Department of Environment's (the DoE) power to conduct a formal assessment of both the inbuilt wastes and IHM of a ship.

In general, the DoE has all the administrative powers aimed at preserving the environment in Bangladesh. However, the conflict of power between the DoE and Bangladesh Ministry of Industry in providing the clearances was the main issue in *Janata Steel*.[75] The Court in *Janata Steel* had to decide whether the defendant breached r 15(d) and *Import Policy Order 2015-2018* item 39 by not declaring the hazardous substances that remained in the ship's structure. Rule 15 (d) of the *Hazardous Waste and Shipbreaking Management Rules, 2011* (Bangladesh) provides:

> In relation to an imported ship, the DoE cannot issue a shipbreaking clearance, unless a report issued by the government or government appointed body of the state of export of a seagoing vessel, or oil tanker or fishing vessel certifies that the ship is adequately free from dangerous substances.

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[72] *Import Policy Order 2012-2015* (Bangladesh) (No. SRO 411-Ain/2012) (No. SRO 411-Ain/2012); *Import Policy Order 2015-2019* (No. S.R.O. No. 28-Law/2016 of 15 February 2016).
[73] *Environment Conservation Act 1995* (Bangladesh), s 12.
[74] Aage Bjorn Anderson, 'Worker Safety in the Shipbreaking Industries' (Issues Paper No WP 167, International Labour Office, February 2001) 13-14, 39-40. http://www.ilo.org/safework/info/publications/WCMS_110357/lang--en/index.htm .
[75] *Janata Steel* (n 3) [10].

According to Bangladesh's law, ships are required to obtain environmental clearance from the DoE before breaking and a clearance cannot be issued unless the application seeking such clearance encloses a report from the DoE's listed inspector of hazardous substances as to the hazardous materials and wastes present in the ship.[76] To give effect to this law, the Ministry of Environment and Forest can also form a committee to inspect vessels imported as scrap at the outer anchorage, in order to identify, mark, collect samples and prepare lists of hazardous wastes present in an imported vessel.[77] The Ministry of Industry also has the power to accord permission independently of and without reference to any other law. This overriding power given to the Ministry of Industry had created the possibility of providing clearances for breaking ships without the DoE's detailed assessment report.[78]

In *Janata Steel*, the Ministry of Industry had issued clearance for breaking the disputed ship, MT Producer, in response to Janata Steel Industries' (Defendant no. 17) application before the DoE provided any clearance. As a tool to bypass the DoE's permission, the Ministry of Industry had used a resolution passed in an inter-ministerial meeting held on 14 January 2017, long after the ship reached Bangladesh.[79] Following a number of media reports,[80] the petitioner, BELA initiated the legal proceeding in *Janata Steel* and argued that without an internationally verified inventory of hazardous materials declaring true status of the in-built wastes of the ship, clearance issued by the Ministry of Industry was illegal.[81] The defendant, Janata Steel Industries, on the other hand, argued that according to r 15(d) and item 39 of the *Import Policy Order*, defendant's declaration as to on-board materials is enough since a declaration from a shipowner about the in-built substances is not required.[82]

The High Court Division of the Bangladesh Supreme Court in its final decision found the intervention of the Ministry of Industry was illegal. In deciding the issue, the court ruled that

[76] *The Hazardous Wastes and Shipbreaking Waste Management Rules, 2011* (Bangladesh) r 19.
[77] Ibid.
[78] *The Shipbreaking and Recycling Rules, 2011* (Bangladesh) r 11.
[79] *Janata Steel* (n 3) 48.
[80] Norma J. Martinez, Claus Nordahi, and Louise Maria Shottle Moller, 'Maersk and The Hazardous Waste in Bangladesh', DANWATCH (Web Page, 15 October 2016) < https://old.danwatch.dk/en/undersogelse/maersk-og-det-farlige-affald-i-bangladesh/>
[81] *Janata Steel* (n 3) [11].
[82] *Janata Steel* (n 3) [21].

> It is mandatory to provide true information of the materials found in a ship's structure, systems, and equipment that may be hazardous to health or the environment and the description and standards of the inventory of hazardous materials should be globally recognised',[83] and any false declaration concerning the true nature of the inventory of hazardous materials is a criminal offence.[84]

The court also ruled that without an environmental clearance from the DoE, Ministry of Industry should not have given the clearance for breaking the ship.[85]

B *Limited Power of the National Authorities to Check Inbuilt Wastes of a Ship*

Another deficiency in the domestic laws of South Asia is the limited power of the National Authorities to check inbuilt wastes of a ship, which is against the *Hong Kong Convention*'s objective of promoting a responsible shipbreaking industry and strengthening the national institutions in shipbreaking States.

The *Ship Recycling Code 2013* (India) is a consolidated version of all the previous laws. It includes a systematic legal requirement to authorise the process of shipbreaking, but does not address the extent of power of the national authorities in checking in-built substances of a ship.[86] Due to the weaknesses in the *Ship Recycling Code 2013* (India), the Indian public bodies may not be able to stop the breaking of a ship or avoid shipbreaking accidents.[87]

The *Ship Recycling Act 2019* (India) also provides a limited power to the local authorities. As regards the inspection of Inventory of Hazardous Materials (i.e. a written document that provides information on internal materials of a ship), the National authority or Administration has the power to dismiss, exclude or detain the ship from its ports or within Indian waters in case of failure to carry a valid certificate of Inventory of Hazardous Materials. Nevertheless, this power is not absolute. The Central Government can take away this detaining power by considering the facts and

[83] An inventory of hazardous materials has to be submitted in line with the government's import policy order and international conventions ratified by Bangladesh: at *Shipbreaking and Recycling Rules 2011* (Bangladesh) r 2(xv).
[84] *Shipbreaking and Recycling Rules* 2011 (Bangladesh) r 46(2).
[85] *Janata Steel* (n 3).
[86] Shahanwaz (n 58) 568.
[87] Seatrade Maritime News, Marcus Hand, Five Workers Dead in Blast at Alang shipbreaking yard, (June 28 2014) https://www.seatrade-maritime.com/asia/five-workers-dead-blast-alang-shipbreaking-yard

circumstances of each case.[88] Applying this power, a toxic ship with no valid Inventory of Hazardous Materials may be permitted entry on the grounds of economic benefit such as in the *Blue Lady* case. Unlike Bangladesh, India is a federal State and the *Ship Recycling Code 2013* (India) sets up elaborate administrative arrangements. Thus, as far as implementation of environmental law is concerned, it involves authorities at the federal and state levels. Even in the case of shipbreaking, there are involvements of authorities at both the federal and state levels, with the Central Government having the overriding power over other authorities. This overriding power of the Central Government is major weakness, which is fatal for a proper checks and balance of power in regulating the shipbreaking industry in India.

Moreover, *the Ship Recycling Act 2019* (India) provides limited power to the National Authorities to regulate the breaking of unclean ships. The *Act* does not address this problem. It neither specifies a method of detailed assessment of ships before breaking, nor bans import of ships that may include in-built hazardous materials.[89] It is therefore uncertain whether the National Authorities can reject an application for beaching a ship that is likely to contain hazardous materials. It is also uncertain whether the national authorities can reject a permission to break a ship for having a false Inventory of Hazardous Materials issued by an unrecognised institution.

Pakistan also follows India's approach. After a ship reaches a shipbreaking yard, the provincial regulatory body, Balochistan Environmental Protection Agency (the Agency) is legally responsible to inspect a ship. In applying the power, the Agency must test whether a ship is hazard-free for safety purposes.[90] However, the Agency can issue a no objection certificate (NOC) following an initial environmental examination (IEE), to ensure that it is fire hazard free or free from risk or other potential damage to the environment from on-board waste, rather than the wastes contained in a ship's body. Moreover, before the test, the Agency can only verify the

[88] *Ship Recycling Act 2019* (India) s 29.
[89] Zarir Bharucha, 'Hong Kong: Ship Recycling in India- Hong Kong Convention', *Mondaq-Connecting Knowledge and People* (Web Page, 11 August 2020) https://www.mondaq.com/hongkong/environmental-law/974864/ship-recycling-in-india-hong-kong-convention
[90] The Balochistan Environmental Protection Agency was established in 1992 and worked under the Department of Environment, Wildlife, Livestock and Tourism and the Secretary for Environment and Sports. However, now it is an independent department under the new *Balochistan Environmental Protection Act 2012* (Pakistan): at Balochistan Environmental Protection Agency, *About Us* (Web Page) < https://bepa.gob.pk/>

no objection certificate issued by the Customs,[91] but has no legal authority to seek a pre-cleaning certificate from the importer.

The Balochistan Environment Protection Agency also has limited power of examination. It can only examine a shipbreaking yard after its owner voluntarily applies for an examination. As discussed above in Section C of Part II, the shipbreaking yard in which the ship was exploded at Gadani in 2016 had obtained no environmental certificate because it did not apply for clearance in the first place and the Agency had no official information about the ship.[92] The incident also demonstrates that if ship sellers do not identify and pre-clean a ship, a ship can become explosive and a little flame may result in a number of deaths and permanent injuries.[93]

In relation to the local authority's power in assessing the in-built substances of a ship,[94] Bangladesh's approach is superior to those of Pakistan and India. The Bangladesh Supreme Court in *Janata Steel* convincingly decided that before a shipbreaking yard can submit an application for beaching, the DoE must have the power of a formal and detailed assessment of the in-built and on-board hazardous materials or wastes of an end-of-life ship.[95] The Court also ordered that the Ministry of Industry or other National Authorities could not encroach on the DoE's power under any circumstances whatsoever and provide permission for beaching and cutting.[96] Thus, the Court has interpreted that the DoE is empowered to examine the hazardous materials contain in a ship's body, despite r 3(3) of the *Ship Breaking and Recycling Rules*, 2011 (Bangladesh) providing that the DoE is not empowered to do so before issuing environmental clearance certificates. The Court established the new and strict principle in light of *MT Enterprise* and *MT Alfaship*, being the foundation of the *Ship Breaking and Recycling Rules*, 2011 (Bangladesh).

The Court further ruled that after examining the hazardous wastes of a scrap vessel, including wastes in structures and on board, the DoE can agree or decline to issue an

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[91] Human Rights Commission of Pakistan (n 42) 18.
[92] Ibid 6.
[93] Kanwar Muhammad Javed Iqbal, Patrizia Heidegger, 'Pakistan Shipbreaking Outlook: The Way Forward for a Green Ship Recycling Industry – Environmental, Health, and Safety Conditions Pakistan Outlook' (Fact Finding Report 1st ed, Sustainable Development Policy Institute and NGO Shipbreaking Platform, October 2013) 36-39.
[94] The *Hazardous Wastes and Shipbreaking Waste Management Rules 2011* (Bangladesh) rr 3(3), 15, 18, 19(4),19(5).
[95] *Janata Steel* (n 3) [73].
[96] *Janata Steel* (n 3) [76].

environmental clearance certificate prior to beaching. The Ministry of Industry cannot override this power. In relation to the decision of the inter-ministerial meeting, the Court found that such decision is illegal in the presence of enforceable rules.[97]

The consequence of the order is that the importer and owner of the ship for breaking, Janata Steel Industries, eventually has no permission to start breaking the ship. This is a huge setback to the business profit of the shipbreaking yard owner for not properly understanding and following the existing legal principles.[98] In the legal sense, however, it appears from the decision that Bangladesh has recognised that the National Authorities must have the power to check inbuilt wastes of a ship, which is important for establishing a fair balance among economic, human, and environmental interests. This decision is pivotal in ensuring that Bangladesh may be able to uphold the green shipbreaking image. Enforcement of the decision, however, it depends on the will of the executive organs, including the Bangladesh Ship Recycling Board (Board), a Government body, proposed under the *Ship Recycling Act 2018* in Bangladesh. An important purpose of the Bangladesh Ship Recycling Board is to deliver one-stop service for all matters with respect to shipbreaking.[99]

Bangladesh is yet to form the Ship Recycling Board, but subject to its formation, the proposed Board will be able to exercise an absolute power for every issue related to shipbreaking, such as beaching and shipbreaking permissions. The main problem with the Ship Recycling Board is its constitution. Majority members of the Board are bureaucrats and shipbreaking yard owners who can dominate in making any decision (the implications of which are discussed below). In other words, as seen in *Janata Steel*, it is obvious that holding the majority, bureaucrats and shipbreaking yard owners may have the tendency to prefer business interests to those of people and the environment. It is therefore a matter of doubt whether the Board would enforce the decision of *Janata Steel*.[100]

[97] Ibid [79].
[98] Ingvild Jenssen et al, 'Biennial Report – 2018-2019' (Research Report, NGO Shipbreaking Platform, 2020) 11.
[99] *Ship Recycling Act 2018* (Bangladesh), s 7. See s 11 that provides details on function and powers of the Bangladesh Ship Recycling Board.
[100] Bangladesh Ship Recycling Board consists of eight members from the different government departments, one member from the Police department, one member from the Bangladesh Navy, and three members from the shipbreaking industry owners: at the *Ship Recycling Act 2018* (Bangladesh), s 10.

Under the *Ship Recycling Act 2018* (Bangladesh), the Bangladesh Ship Recycling Board consists of 15 members,[101] but one-third of the members complete the quorum to hold a valid meeting,[102] and a simple majority in a Board meeting can make any decision.[103] Any decision of the Board is final and no one can raise a question against a decision made by the Board.[104] One third is equivalent to five members, and interestingly, among 15 members of the Board, three represent the owners of shipbreaking yards and by adding two bureaucrats from the Ministry of Industry, a quorum completes. So if a ratio of three from industry representatives and two others from the bureaucracy sit in a meeting, and decide to disregard the legal requirements of taking compulsory clearance for shipbreaking from the DoE established in *Janata Steel*, it is unclear whether the DoE can enforce the decision of *Janata Steel*.

C *Conventional Shipbreaking Practice*

1 *Problems to Prohibit the Use of Beaching Method*

The beaching method is one of the main concerns for Indian shipbreaking, but there is no provision in the *Ship Recycling Code 2013* (India) to prohibit this method. Rather, the *Ship Recycling Code 2013* (India) impliedly allows beaching subject to certifications from a number of Government bodies. In the pre-beaching process, the Customs authority has the power to inspect a ship on arrival at an Indian port. There are three flaws with the inspection for beaching. First, the Customs authority is only empowered to check loose materials stored in a ship,[105] and so mainly inspects hazardous waste in 'loose' condition on board the ship.[106] Along with the Customs department's inspection, the shipbreaking yard has a voluntary duty to obtain a copy of the gas-free and fit for work certificate from the competent authority,[107] but the Customs cannot reject a gas-free and fit for work certificate (i.e. the certificate ensures that the inside of a ship is free from flammable gas) even if it finds that the ship has a high volume of inbuilt hazardous substances, such as, oil and unseen gases.

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[101] *Ship Recycling Act 2018* (Bangladesh), s 13.
[102] *Ship Recycling Act 2018* (Bangladesh), s 12(6).
[103] Each member has one vote, and a simple majority can decide any matter: at *Ship Recycling Act*, s 12(5).
[104] *Ship Recycling Act 2018* (Bangladesh), s 12(7).
[105] *Ship Recycling Code 2013* (India), s 3(6).
[106] Ibid ss 3(6)(7)(xvii).
[107] *Factories Act 1948* (India), s 2(c)(a).

Second, the State Maritime Board or Port authority can issue beaching permission to a shipbreaking yard only on production of the document issued by other authorities, including the Petroleum and Explosives Safety Organisation, or State Pollution Control Board, or the Customs authority. The State Maritime Board or Port authority has no duty to check anything other than these documents.[108] Third, without the gas-free and fit for work certificate, a ship can beach on an Indian shipbreaking yard, subject to clearing the toxic materials contained in a ship's structure at an Indian port. However, it is important to note that India has recently initiated the move to construct dry docks. India's National Green Tribunal, a special environmental court, has also given the green signal to the project.[109] However, recent report shows that situation has not improved yet.[110]

Pakistani laws also do not stop the dangerous beaching practice that refers to cutting ships on open beaches and releasing the toxic substances into seawater. All shipbreaking yards are located at Gadani beach in the state of Balochistan. Due to the location, under *the Balochistan Shipbreaking Industry Rules 1979* (Pakistan) the Balochistan Development Authority (BDA) controls the shipbreaking yards.[111] Under the *Balochistan Shipbreaking Rules 1979* (Pakistan), a person or industry can lease a plot of the beach for breaking ships from the BDA by paying an annual rent of USD 646.[112] Upon leasing, the BDA allows all the shipbreaking yards in Pakistan officially to follow the common beaching practice, which creates difficulties for applying a sound management of wastes and conduct of safety operations. Referring to the 2016 incident at Gadani beach that killed dozens of workers, the executive director of the Sustainable Development Policy Institute (SDPI), a social and policy research body that works on behalf of the NGO shipbreaking Platform, has raised concern about the conventional beaching practice arguing that:

[108] For example, in case of petroleum oil cargo and petroleum slop tanks; 'on production of gas-free for hot work certificate issued by the Petroleum and Explosives Safety Organisation (PESO)': at *the Ship Recycling Code 2013* (India), s 4(2)(a).
[109] Premal Balan, 'NGT Nod for Beaching Method of Ships at Alang', *Times of India* (online at 28 November 2020).
[110] Foote (n 55).
[111] The issue of environmental protection and labour rights now rests with the provincial government, Balochistan. The authority of the federal government is limited: Kanwar Muhammad Javed Iqbal and Patrizia Heidegger, 'Pakistan Shipbreaking Outlook: The Way Forward for a Green Ship Recycling Industry – Environmental, Health and Safety Conditions', (Position Paper, Sustainable Development and Policy Institute and NGO Shipbreaking Platform, October 2013) 6.
[112] Human Rights Commission of Pakistan (n 42) 6.

> If health and safety would come first, the terrible blast could have been avoided. There is lack of infrastructure and equipment in Gadani to prevent such a deadly incident. Rescue operations are extremely difficult due to the lack of ambulances and firefighting equipment and because rapid access to the ship and the workers that are still stuck inside is extremely challenging.[113]

In principle, Bangladesh also allows the beaching practice, although it is one of the major hindrances to ensuring sound waste management.[114] The *Ship Recycling Act 2018* (Bangladesh) provides a 'zoning' system for shipbreaking on the beaches. The *Ship Recycling Act 2018* (Bangladesh) provides that the government can declare an area to a zone or can extend an existing zone for shipbreaking.[115] Any person or institution can establish a yard in the zone by gaining permission from the government.[116] Any yard established before the *Ship Recycling Act 2018* (Bangladesh) has to gain permission from the government.[117] These provisions in relation to the zoning system will encourage more beaching by allocating more space on the coastal beaches. However, a good provision against beaching is s 6(7) of the *Ship Recycling Act 2018* (Bangladesh), which provides a voluntary requirement that the government and yard owners can take necessary action to apply any other alternative methods to beaching. However, as the requirement to shift from beaching to an alternative safer method, i.e. the dry dock method of breaking ships using built structure, is not mandatory, this optional provision may not have any practical impact on the profitable practice of beaching.

2 *Problems in the Use of Other Conventional Shipbreaking Methods*

Cutting ships with bare hands or using an oxy torch also has been a big concern for the South Asian shipbreaking industry, but none of the South Asian countries has stopped this practice. As discussed in Section C of Part II, the accident that occurred at Gadani, in 2016, demonstrated the problem with this conventional shipbreaking practice in Pakistan, but Pakistani laws still have not addressed the problem. One of

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[113] Ibid, 24.

[114] Okechukwu Ibeanu, Special Rapporteur, *Report on the Adverse effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc A/HRC/15/22/Add.3 (2 September 2010) 4.

[115] *Ship Recycling Act 2018 (Bangladesh)*, s 4.

[116] Ibid ss 5(1)-5(3).

[117] Ibid.

the ways to address the problem would be to declare shipbreaking a formal industry for ensuring a better enforcement and compliance monitoring system. As Pakistan is yet to do so,[118] the industry is out of the scope of the general health and safety laws applicable to formal industries.

Some of the legislations that would be applicable to the shipbreaking sector upon such a declaration include the *Workmen Compensation Act 1923*, *the Labourers Act, 1934*, and *the Factories Act 1934*. Pakistan has significantly developed their *Workmen Compensation Rules in 1961*, the *West Pakistan Hazardous Occupation Rules1963*, the *Provincial Employees Social Security (Occupational Diseases) Regulations, 1967*, and the *Labour Laws Ordinance (amendment), 1972*. These domestic legislations, in fact, cover safety issues in hazardous work with a detailed procedure for handling explosive or inflammable dust, gas, and other materials. A fundamental legal restriction relating to shipbreaking is the mandatory duty on every factory to provide effective management for the disposal of wastes and effluents of the manufacturing process.[119] However, as an informal sector, a shipbreaking yard in Pakistan has limited motivation to follow these legal standards.

Similarly, the *Ship Recycling Code 2013* (India) does not prohibit the dangerous conventional shipbreaking practices. As mentioned before, cutting up a ship using an oxy torch is one of the most dangerous methods, but the Indian Port Authority has the power to permit such a method.[120] The Port Authority may authorise cutting a ship upon submission of a gas-free certificate to the effect that a ship is free of unseen gases, installation of firefighting pumps and compliance with the provisions for management of occupational health and safety.[121] The *Ship Recycling Code 2013* (India), in s 6, contains specific provision and procedure to conduct the cutting operation, such as the use of appropriate Personal Protection Equipment (PPE) for 'ships of special concern', but the *Ship Recycling Code 2013* (India) does not interpret what it means by the term 'ships of special concern'.[122]

[118] Rukhsar Ahmed and Kamran Siddiqui, 'Shipbreaking Industry in Pakistan – Problems and Prospects' (September 2013) 3 (9) *International Journal of Management, IT and Engineering* 140, 150.
[119] The *Factories Act* (Pakistan) 1934, ss 9-11.
[120] *Shipbreaking Code* (India), s 6(2) (3).
[121] Ibid 6(2)(1)-6(2)(2).
[122] NGO shipbreaking Platform, 'Substandard Shipbreaking: A Global Challenge' (Research Report, 2016) 7.

Bangladesh also has no legal restriction on the use of the same conventional shipbreaking practice. Bangladeshi laws allow this practice subject to having some technical documents. For instance, upon submission of a Ship Recycling Plan (SRP), Yard Environment Clearance Certificate, Certificate from the Bangladesh Navy, Workers' registration and proof of cleaning oil from all bunker tanks, and gas-free test certificate issued by the Department of Arms and Explosives, a shipbreaking yard owner can get a cutting permission from the Ministry of Industry.[123]

Because of the deficiencies in the laws discussed in this Part, the thesis argues that workers are at high risk of shipbreaking accidents and exposure to hazardous substances. It is not likely that the domestic laws would succeed in preventing shipbreaking accidents in future. This leads to a logical conclusion that these countries require a special compensation mechanism for the workers to ensure them prompt and adequate financial compensation should they fall victim to a shipbreaking incident and pollution. The next Part examines this proposition.

IV ISSUES IN RELATION TO COMPENSATION CLAIM

Tortious remedies against private parties are not available in Bangladesh, India, and Pakistan.[124] If a tort claim could be lodged against the supplier or seller of ships that are broken in South Asia, the injured or ill or families of deceased workers could receive adequate compensation by judicial enforcement. Indeed, because of this absence, Hamida Begum sued a British ship in the English courts for adequate compensation for the death of her husband while working in a Bangladeshi shipbreaking yard (see Chapter 5 for a detail discussion). This is a significant legal gap in imposing liability on foreign shipowners for the human harms in the shipbreaking yards.

Moreover, the challenge to establish a compensation mechanism in South Asia lies with the fact that labour laws in these countries do not take into account the casual natural of work, as is the case in their shipbreaking industry. This gap limits the workers' enjoyment of compensation rights under the labour laws, as the laws are

[123] *The Shipbreaking and Recycling Rules 2011* (Bangladesh), r 11.
[124] Rehan Abeyratne, 'Ordinary Wrongs as Constitutional Rights: The Public Law Model of Torts in South Asia' (2018) 54 (1) *Texas International Law Journal* 1, 2-3.

silent on the legal status of shipbreaking workers who do not have an employment contract or an identity card.

A *India's Compensation Laws*

India has a comprehensive set of laws that only apply to permanent and registered workers employed in a factory.[125] Some of the important rights provided under the special *Shipbreaking Code 2013* (India) include insurance, but for enforcing the rights, the *Shipbreaking Code 2013* (India) has high reliance on the application of the *Factories Act 1948* (India) which is itself problematic to apply in case of shipbreaking.

For proper application of the *Factories Act 1948* (India), a shipbreaking yard must fall within the definition of a 'Factory'. 'If the manufacturing process is carried out with the aid of power', 'Factory' is a premise 'where ten or more workers work', and if the 'manufacturing process is carried out without the aid of power', 'Factory' is a premise where twenty or more workers work.[126] Under this definition, workers mean permanent and registered workers. Casual or seasonal workers are beyond the ambit of the definition and because of this limitation, it is problematic for the shipbreaking workers to enforce the *Factories Act 1948* (India).

The *Shipbreaking Code 2013* (India) also provides that the workers engaged in shipbreaking are required to have registration under either the *Employees State Insurance Corporation Act* or *Workmen Compensation Act*.[127] In order to protect injured workers from losing income, the *Shipbreaking Code 2013* (India) mandates the shipbreaking yard owner to re-employ them in safer areas of the shipbreaking process,[128] but for the principles to apply, a shipbreaking worker has to prove his legal status as a worker. As in Bangladesh and Pakistan, shipbreaking yards in India often employ hundreds of workers through contractors. Shipbreaking workers in Alang, India are mainly migrant workers. The contractors hire the workers on a casual basis, subject to ships being available for breaking,[129] and can suspend a worker at any time.

[125] A permanent worker means a worker who has been appointed following a permanent recruitment process. He has an identifiable employer, a job contract, and registration or passbooks with details.
[126] Ibid s 2(m).
[127] The *Ship Recycling Code 2013* (India) sub-s 6(2) (1) (i).
[128] Ibid, sub-ss 6(12) (2).
[129] International Metal Workers' Federation, 'Status of shipbreaking workers in India' (Research Report, 6 March 2006) 7.

The workers shift from one yard owned by one company to another yard owned by a different company. Thus, the absence of a job contract and permanent recruitment process by an identifiable employer makes it very complicated to enforce workers' rights.[130] India could address the problem by introducing a mandatory requirement of registration, or by issuing passbooks with details of employment, wage rates et cetera, as provided in the *Inter-State Migrant Workmen Act (Regulation of Employment and Conditions of Service) Act 1979* (India).[131] Again, as the *Shipbreaking Code 2013* (India) does not explicitly mention the *Inter-State Migrant Workmen Act (Regulation of Employment and Conditions of Service) Act 1979* (India), shipbreaking workers cannot enforce these laws.[132]

B *Bangladesh's Compensation Laws*

Bangladesh also has different laws on compensation for workers, but they are insufficient to provide an adequate amount of compensation to victims due to a lack of mandatory direction to shipbreaking yard owners.

The umbrella legislations are the *Labour Act 2006* (Bangladesh) and the *Labour Rules 2015* (Bangladesh). The *Labour Act 2006* (Bangladesh) has provisions of compensation for injured workers,[133] and obligations for the yard owners to re-employ them.[134] Importantly, the insurance of workers is mandatory under the *Labour Rules 2015*.[135] Every yard owner must maintain insurance for each worker. The *Labour Act 2006* (Bangladesh) and *Labour Rules 2015* (Bangladesh) are the only applicable laws concerning compensation. However, the compensation amount is too low under the *Labour Act 2006* (Bangladesh) with, for example, the highest value for death in an accident at only USD 2357.93. In addition to the *Labour Act 2006* (Bangladesh), s 20(1) of the *Ship Recycling Act 2018* (Bangladesh) provides that yard owners may pay extra compensation to injured workers or their family over and above the amount provided in the *Labour Act 2006* (Bangladesh). As the section uses the term 'may' instead of 'shall', however, it implies that the requirement for the extra compensation

[130] Paridhi Poddar, and Sarthak Sood, 'Revisiting the Shipbreaking Industry in India: Axing Out Environmental Damage, Labour Rights' Violation and Economic Myopia' (2015) 8 *National University of Juridical Science Law Review* 245, 259.
[131] *Inter-State Migrant Workmen Act (Regulation of Employment and Conditions of Service) Act 1979* (India).
[132] Poddar and Sood (n 130) 258.
[133] *The Labour Act 2006* (Bangladesh), s 151.
[134] Ibid, s 21.
[135] *The Labour Rules 2015* (Bangladesh), r 98.

is not mandatory. Without a binding obligation, this provision is weak. Therefore, the extra payment option provided under the *Labour Act 2006* (Bangladesh) should be made mandatory to be effective as the shipbreaking yard owners rarely pay the amount willingly.[136]

The *Ship Recycling Act 2018* (Bangladesh) also does not provide for the consequence of paying no compensation, or for a way to enforce payment of compensation. The rate of complaints filed by victims for compensation is only 0.2%, and in case of shipbreaking, the rate is zero.[137] This is because the employers are not accountable since they have no mandatory obligation to provide an adequate compensation.

C *Pakistan's Compensation Laws*

Pakistan has a set of comprehensive rules in relation to compensation payment, but these are only applicable to formal industries. Pakistan is yet to include shipbreaking in its list of formal industries.[138] According to the *Employers Liability Act, 1938* a worker can sue an employer for damages in respect of an injury at a workplace.[139] More specifically, the *Workmen Compensation Act 1923* provides injury and death grants for different classes of accidents.[140] There is also provision for an insurance scheme for workers. Under the *Industrial and Commercial Employment (Standing Orders) Ordinance, 1968*, a permanent worker must be insured at least for the amount specified, which varies between USD 1244 to 2488.[141] Unless the country declares shipbreaking as a formal industry and provides workers with permanent statues, a shipbreaking yard in Pakistan has limited incentive to follow these legal standards.

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[136] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 105.
[137] A.K.M Mahatab Uddin, Md, Zillur Rahman, 'Nature and Pattern of Recent Submitted Disputes at Labour Courts in Bangladesh', (Research Report, Institute of Social Welfare and Research, University of Dhaka, March 2019) 29.
[138] Sayed Asghar Shah, Hussain Hadi and Mujahed Hussain, 'Skill Gap Analysis in the Ship Breaking Industry of Pakistan' (2017) 7 (11) *American Journal of Industrial and Business Management* 1244, 1253.
[139] *The Employers Liability Act 1938* (Pakistan), s 3.
[140] *The Workmen's Compensation Act 1923* (Pakistan) s 4 read with sch I.
[141] International Labour Standards Units, 'Occupational Safety and Health: Legal Framework and Statistical Trend Analysis (2010-2015)' (Research Report, Ministry of Overseas Pakistanis and Human Resources Development, April 2016) 33-34.

The 2016 shipbreaking accident at Gadani Port in Pakistan highlighted the struggle of the injured workers to receive adequate and prompt compensation.[142] As there was no legal compulsion to pay, the workers received the compensation only after a series of protests and seminars organised by the workers' community, although the amount they received was unsatisfactory. Three months after the incident, each family of a deceased worker received around USD 18,000 one off payment from the government, the Workers Welfare Board and the employer of the shipbreaking yard. The injured workers only received USD 1500 as compensation.[143] An industry leader from Pakistan stated that:

> We are disappointed that the compensation is less than what we demanded. We are concerned that even after such a horrific accident, workers at the Gadani shipbreaking yard are still working in dangerous condition, safety protective equipment is not provided to workers.[144]

V CONCLUSION

This Chapter has addressed the deficiencies in the domestic laws of South Asian shipbreaking countries and incited the discussion for why a global civil liability mechanism is necessary. Using the example of the Gadani incident, the analysis in this Chapter has shown that the shipbreaking workers are not safe because the countries have not stopped the hazardous methods of beaching, and other conventional shipbreaking methods. The three countries discussed also have different approaches relating to the responsibility of identifying and pre-cleaning on-board and in-built wastes guided by their Supreme Courts' decisions. This is a major problem. As these three countries are not taking a coordinated approach, one country cannot enact better laws to protect the workers and the environment, since if they do so they face the reality of losing business. Bangladesh's approach is superior to that of India and Pakistan since Bangladesh's DoE has enough power to check inbuilt wastes found in a ship before accepting or rejecting to beach a ship. However, the enforcement of this approach is dependent upon the questionable structure of the Bangladesh Ship

[142] IndustriALL Global Union, Pakistan: Shipbreaking Accident Victims Receive Compensation (Web Page, 23 February 2017) http://www.industriall-union.org/pakistan-shipbreaking-accident-victims-receive-compensation
[143] Ibid.
[144] Ibid.

Recycling Board's membership by which it can take any decision to favour business interests over those of the population.

The worker and environment friendly approach in Bangladesh provides enough power to its Department of Environment to conduct a formal assessment before issuing a shipbreaking clearance sourced from Bangladesh Supreme Court's decision in *Janata Steel*. Thus, the problem for Bangladesh is to portray this better legal environment, at the same time offer a high purchase price to shipowners, and allow them to externalise their costs for pre-cleaning. The result is that if India and Pakistan are able to succeed in securing a better market-share than Bangladesh by allowing ships without pre-cleaning beyond their territorial waters, Bangladesh will lose the market. Bangladesh is not willing to take the risk. This is arguably why the country did not stop the beaching and conventional shipbreaking practices similar to Pakistan and India, and introduced the Bangladesh Ship Recycling Board in order to bypass the worker and environment friendly approach to pre-cleaning.

Another key deficiency that this Chapter has identified is the weak compensatory framework for shipbreaking workers. The countries have introduced domestic laws that are aimed at prevention rather than compensation. General laws regulate the compensation for which the workers have to prove their legal status as a worker. The casual nature of their employment, however, makes it very difficult for shipbreaking workers to claim compensation. The national standard of compensation amount is also very low in these countries.

This thesis argues that it is high time to explore whether a global civil liability mechanism is necessary to provide a mechanism of compensation to the shipbreaking workers for injuries, illness or death. Shipbreaking, occurring as it does at the end of a ship's life, involves a number of international parties including foreign shipowners, shipbrokers, cash buyers, open registry countries, and shipbreaking yard owners for the inter-State transfer of ships (see Chapter 3). Shipbreaking is therefore an international issue, and it may be the time for all parties to take responsibility for the prevention of human tragedy in the shipbreaking industry.

The next Chapter examines whether the international laws have provided a good safety net and compensatory mechanism to the shipbreaking workers, who sacrifice their valuable lives in pursuit of profit for these international parties.

CHAPTER FIVE : INTERNATIONAL FRAMEWORK - PURSUIT FOR AN EFFECTIVE MECHANISM

I INTRODUCTION

This Chapter answers the third research question: What are the inadequacies of international legal frameworks to prevent work-related deaths, injuries, or diseases and to compensate an injured or ill worker or the family members of a deceased worker? This Chapter examines the international regulatory frameworks of shipbreaking. In reviewing the literature, the Chapter follows both descriptive and critical analysis. Descriptive analysis refers to describing and providing comment, whereas critical analysis is used to question the moral validity of a law using a theoretical foundation. For the critical analysis, the thesis uses the argument of 'injustice'. Using both descriptive and critical analysis and the framework of 'global injustice', this Chapter questions why the international legal frameworks are not reasonable within the current study's context.

This Chapter presents three principal arguments supporting the central claim of the thesis that the shipbreaking industry requires a global civil liability mechanism for compensating workers who suffer work-related fatalities, injuries or disease.

First, the Chapter posits that the preventive system for occupational health and safety governed by the *Hong Kong Convention* is insufficient to prevent work-related fatalities, injuries or diseases of shipbreaking workers adequately.[1]

Second, the Chapter argues that in contrast to most global industries, which have both preventive and compensation systems,[2] the international legal frameworks for shipbreaking creates no system to provide compensation payments to victims of shipbreaking-related dangerous activities (Part V).

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> 'Effectiveness of the Hong Kong Convention on Ship Recycling in India and Bangladesh' (2019) 5 *Curtin Law and Taxation Review* 69-87.

[1] *The International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force). *(Hong Kong Convention)*

[2] Mining and Waste Trade as discussed in Chapter 7.

Third, it argues that the *Hong Kong Convention* introduces a poor legal system by shifting the costs of shipowners to shipbreaking yards and shipbreaking States. The four propositions set out below underpin these arguments:

1. The *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* (*Basel Convention*),[3] which regulates the transboundary movement of hazardous wastes (i.e. by keeping it closest to the place of production), has not been applied to shipbreaking because of difficulties regarding its application to ships.
2. The *Hong Kong Convention* establishes only a weak preventive model because it regulates shipbreaking mainly through a weak notification and sound management system in developing countries. The *Hong Kong Convention* also does not impose any mandatory obligation on shipowners to 'pre-clean' ships of hazardous materials from its structure before sending them off to developing countries for dismantling. 'Hazardous materials' refers to those substances that can cause dangers to human health and/or the environment.

3. The *Hong Kong Convention* shifts the responsibility for managing hazardous materials in ships from shipowners to shipbreaking yards based in developing countries. The *Hong Kong Convention* thus makes the coastal environments in those developing countries the ultimate receiver of many hazardous materials contained in the ships but includes no international funding system to provide financial support to shipbreaking yards and developing countries to manage such materials.

4. In the absence of a compensation system, the only way for shipbreaking workers who suffer injuries or disease, or work-related fatalities, to obtain compensation for themselves or their families, is to file an inter-State compensation claim before the home state court of shipowners, a cause of action that is rarely used and is highly contested and lengthy.

This Chapter proceeds as follows. Part II explains the regulatory principles underpinning the *Basel Convention* and the issues that make it hard to apply to

[3] *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992). *(Basel Convention)*

shipowners and to enforce legal responsibility for the damage to humans and the environment in the South Asian shipbreaking industry. This Part further argues that the *Basel Convention* is to regulate inter-State movement of wastes, not ships; as shipowners can conceal their intention of shipbreaking by changing ownership and flags on the high seas, it is not possible to ascertain the 'point in time' when 'ships' turn into 'wastes' and thus to apply the *Basel Convention*.

Part III finds that although the International Maritime Organization (IMO) aimed at introducing a separate legal system for shipbreaking, the preventive system introduced by the *Hong Kong Convention* is weak. From a critical point of view, this Part examines the deficiencies of the *Hong Kong Convention*, including the limitations of its notification and hazardous waste management systems and argues that the *Hong Kong Convention* is not enough to prevent shipbreaking-related deaths, injuries, and diseases.

Part IV argues that the *Hong Kong Convention* has introduced a poor legal system because it shifts the responsibility for a sound shipbreaking process to the developing countries, whereas it is evident that shipowners are the main gainer of the practice. The *Hong Kong Convention* does not recognise that the shipbreaking industry in South Asia has to pay around 82% of the cost of shipbreaking, and thus has limited financial incentive to upgrade its standards.

Part V argues that the main weakness of the *Hong Kong Convention* is that it does not introduce an inter-State compensatory mechanism. A weak preventive model, and not addressing the liability of shipowners for ensuring sound management of their end-of-life ships, result in shipbreaking workers continuing to face more deaths, injuries and work-related diseases, without a legal foundation for claiming compensation from shipowners. This Part also examines a recent decision delivered by the Court of Appeal of England and Wales in *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* (*Maran Shipping*).[4] Delivered on appeal that related to an inter-State claim of compensation filed by the wife of a shipbreaking worker, who died in breaking a ship owned originally by a UK owner, the Court in *Maran Shipping* found that the UK shipowner would owe a duty of care under tort law to the shipbreaking

[4] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. (*Maran Shipping)*

worker died in Bangladesh. Briefly discussing *Maran Shipping*, this Part also argues that such inter-State compensation claim under tort law is not a practical approach since they are rarely used, highly contested and lengthy. Part VI concludes the Chapter arguing for a civil liability mechanism to address the deficiencies in the international legal frameworks of shipbreaking.

II ARE SHIPS DESTINED FOR RECYCLING 'WASTES' UNDER *THE BASEL CONVENTION*?

Chapter 3 has argued that there are major concerns about the use of unsafe practices, including importing ships without pre-cleaning the hazardous materials, and beaching in the shipbreaking industry in South Asia. The basic problem is that the ships purchased for breaking may include in-built hazardous materials and the South Asian shipbreaking industry may not manage them appropriately. Cleaning the wastes from the structure of an end-of-life ship is a challenging issue for shipowners. In addition, there are high regulatory restrictions with respect to their sound management and transboundary transfer.[5]

Prior to the adoption of the *Hong Kong Convention* by the IMO Member States in 2009, the Basel Convention was the only international framework that could apply to the shipbreaking industry. The *Basel Convention* is the key international agreement relating to the inter-State movement of 'wastes' and its fundamental objectives are to decrease the generation and movement of waste, that is, by keeping wastes close to their place of production. Ships destined for recycling are, objectively, wastes, in the sense of being a thing that they are no longer wanted or of use. A principal aim of the *Basel Convention* is to regulate the inter-State waste trade strictly, and the Convention accordingly focuses on decreasing the amount and the hazard level of generated wastes, and requiring generators or exporters of waste to 'improve waste minimisation policies'. To support this objective, the *Basel Convention* encourages the Member States to improve their capacity (e.g. to develop relevant technologies and methods).[6] Choksi argues that the *Basel Convention* operates to enforce liability on exporters of

[5] Gabriela Agguuiello Moncayo, 'International Law on Ship Recycling and its Interface with EU Law' (2016) 109 *Marine Pollution Bulletin* 301, 301-302.
[6] *Basel Convention,* art 4.

wastes by requiring the parties to take responsibility for causing any damage to human health and environment.[7]

The basis of the argument rests on a potentially powerful mechanism for regulating shipbreaking because the *Basel Convention* only allows ship transfer based on a prior informed consent (PIC) and movement document from the exporter's State.[8] Prior informed consent acts as a guarantee from the exporter's State that its private exporter has notified the competent authority of the proposed export and obtained written consent from the importing State.[9] The waste movement document includes a requirement to name 14 specific items,[10] including a certification from the private exporter about the correctness of the information,[11] no objection from the States, and an overall description of the waste.[12] Another key requirement is that all private importers have to be nationally authorised to dispose of the wastes.[13] Art 4(7)(a) provides that without permission under national law, a person or an entity cannot process the wastes. An additional requirement complementing the approach is that if the system fails to bring about the desired outcome of environmentally sound disposal in an importing country, the exporting State has to ensure that the exporter will re-import the waste.[14]

In general, the *Basel Convention* does not permit transferring ships from one State to another unless the exporter can ensure their sound management in the importer's jurisdiction. However, the *Basel Convention* has not yet been successful in regulating ships destined for breaking, largely on the basis that those ships do not fall under the definition of 'wastes' for the purposes of the *Basel Convention*. Given the practical

[7] Choksi S. 'The Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal: 1999 Protocol on Liability and Compensation' (2001) 28 *Ecology Law Quarterly*.
[8] *Basel Convention*, arts 6(1), 6(3).
[9] Ibid art 6(4).
[10] Article 4(7)(c) of the *Basel Convention* states that a waste movement document is a list of hazardous materials that are travelling inter-State. The starting point of the transboundary movement issues the document that has to be maintained until final disposal of the hazardous materials. In effect, the document provides a complete idea about the wastes that are moving inter-State and their consequences.
[11] *The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992) annex V B ('Information to be provided on the Movement Document') item 12.
[12] Ibid item no 8.
[13] Tony George Puthurcherril, *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Matinus Nijhoff Publishers, 2010) 109.
[14] *Basel Convention*, art 8; Ibid.

difficulties discussed below, it is doubtful whether the international community ever intended to apply the *Basel Convention* to shipbreaking.[15]

A *Definition of Wastes in the Basel Convention and Associated Issues with the Definition in Relation to Shipbreaking*

The main issue with the *Basel Convention* is its definition, namely, whether the definition of 'wastes' also include ships. Shipowners circumvent the *Basel Convention* arguing that it only applies to transfer of wastes and a ship is not waste at the time of its export.[16] Art 2(1) of the *Basel Convention* defines ‘wastes’ as 'substances or objects, which are disposed of, are intended to be disposed of, or are required to be disposed of by the provisions of national law'.[17] Thus, the question of whether a ship is (or becomes) ‘wastes’ depends on whether the shipowner ‘intends’ the ship to be ‘wastes’.

Intention as referred to in art 2(1) of the *Basel Convention* is a 'subjective quality' that depends on the express or implied activities of the owner.[18] That means, in absence of any express or implied activity that refers to dismantling a ship, it is difficult to identify the intention required under art 2(1). In identifying the intention of an owner, a number of 'legal or physical actions' may be considered.[19] For example, a written communication between a shipowner and crewmembers about dismantling or an instruction from a shipowner to keep a very low level of fuel storage may indicate this intention. Without any such activity, it is difficult to draw an inference of an intention of breaking ships. It is even more difficult to interpret the intention as ships are often loaded with cargo, even if they are on their final journey for breaking. Altogether, it is very difficult to determine the point in time when a ship turns from being ‘a ship’

[15] Chircop, ‘A law of the Sea and International Environmental Law Considerations for Places for Refuge in Need of Assistance’ in Aldo Chircop and Olof Linden (eds), *Places of Refuge for Ships: Emerging Environmental Concerns of a Maritime Custom* (Marinus Nijhoff Publishers, 2005) 231, 262-264.
[16] International Chamber of Shipping, *Communication to the Use of Basel Convention in the Context of Shipbreaking*, 9 January 2004; See also ibid 262.
[17] *Basel Convention*, art 2(1).
[18] Tony George Puthurcherril, ‘Contemporary International Law and Ship Recycling’ in David Freestone (ed), *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Martinus Nijhoff Publishers, 2010) 9.
[19] Mohammmad Zuflikar Ali, ‘How Effective Are International and Domestic Laws in Protecting Workers’ Occupational Health and Safety Rights in the Shipbreaking Industry of Bangladesh? What Role Could the National Court Play in Accordance with Their Constitutional Power?’ (Master’s Thesis, The University of New South Wales) 22.

to 'wastes'.[20] Shipowners can therefore easily escape their responsibilities arising from the *Basel Convention* by concealing the fact that the ship is not on its last voyage from the State of export or changing flag and name (see Chapter 1).[21]

B *Shipowners Concealing Intention to Break Ship and Circumvent the Basel Convention on Shipbreaking*

One of the notable examples of such concealment was the transfer of a ship called North Sea Producer from London to Bangladesh in August 2016. The original owner Maersk (a UK based shipping company) sold the ship to a post box company from Saint Kitts, a Caribbean country, relying on a false claim that the ship was going to be used in Nigeria for commercial purposes. In fact, the ship sailed to Bangladesh for breaking.[22] Although the owner contended that they had no knowledge of shipbreaking, an investigation revealed that the owner actually initiated the process and used an unknown company to bypass the *Basel Convention*.[23]

Given the procedural difficulties in finding out the intention of a shipowner, a key process may be to implement the *Basel Convention* by litigations filed before the national courts of the home States, where the ships are primarily registered.[24] In a few cases, the domestic courts in the European Union (EU) have rejected the export of EU-owned end-of-life ships to South Asia and fined the owners (see Chapter 6).[25]

In running these cases, one of the difficulties for the Department of Public Prosecutor was to prove the intention of a shipowner of final disposal, and in a number of cases, the prosecution used email communications and low fuel storage of a ship to prove this (see *Seatrade* in Chapter 6). Upon successful proof of the intention, domestic courts of shipowners (discussed in detail in Chapters 4 and 6) have found the

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[20] H Edwin Anderson, 'The Nationality of Ships and Flags of Convenience: Economic, Politics and Alternatives' (1996) 21 *Tulane Maritime Law Journal* 139, 163.
[21] Puthurcherril, (n 13) 9; Ali (n 19).
[22] North Sea Producer was primarily used in transporting oil in a North Sea Oil Extracting field. It was used for oil transport for more than 17 years. After that, it was sold with a false claim that it was going to be used for commercial operation in Nigeria. Under the *Basel Convention*, it was illegal to sell a ship for breaking without informing her flag States. The original owner had knowledge about the ultimate destination of the ship but due to the huge profit, used the fraudulent practice. The issue is still under investigation by the UK government: at Shipbreaking Platform, *Spotlight North Sea Producer Case* (Web Page). http://www.shipbreakingplatform.org/spotlight-north-sea-producer-case
[23] Ibid.
[24] ibid.
[25] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 158.

shipowners accountable for sending ships to the South Asian shipbreaking industry and shown a level of legal control over the unsafe shipbreaking practices by applying the *Basel Convention* principles (see Chapter 4). The courts in applying their domestic laws focused on the mandatory regulations of pre-cleaning.[26] Even so, the continuous export of hazardous ships to South Asia shows that this judicial approach is not sufficient to stop shipowners circumventing the *Basel Convention*.

C *Use of Reflagging to Circumvent the Basel Convention*

Another critical part of the shipbreaking business is the flag change or reflagging practice. Reflagging refers to a change to the flag of a ship from one State to another at any time during commercial operation or before end-of-life of a ship that often breaks the link between a ship and its original owner, and makes it impossible to identify the original owner and follow the *Basel Convention*. This is because under arts 92 and 94 of the *United Nations Convention on the Law of the Sea* (1982), the flag States have the administrative authority for a ship and by changing flag, the administrative control shifts to a new flag State.[27]

By misusing the reflagging, shipowners from both the original State and the flag State can escape the legal requirements of the *Basel Convention*. Ulfstein argues that if the original owner plans to dispose of a ship and then the ownership is changed, the new owner from a flag State may also have no liability under the *Basel Convention* for two reasons.[28] First, without the involvement of at least two States in a transboundary waste movement,[29] a flag State is not liable under the *Basel Convention*.[30] It means there must be a wastes movement from an area under jurisdiction of one State to an

[26] See for example *Cemsan Ship Dismantling Metal and Steel Industry Trade Limited Company V Ministry of Environment, Ankara* (IZmr 2nd Administrative Court), case no. 2002/496, Decision no. 2003/1184, 30 September 2003; *Stichting Greenpeace Nederland V Secretary of Housing, Spatial Planning and the Environment* [Council of State], Case No. 200606332/1, 21 February 2007, *Research Foundation for Science Technology and National Resource policy V Union of India & another* [Supreme Court of India], Writ Petition (civil) No. 657 of 1995, 30 July 2012; *Le Clemenceau, Council d'Etat* [French Administrative Court] Decision No. 288801, 15 February 2006 reported in Rec Labon.

[27] Puthutcherill (n 13) 115; The *United Nations Convention on the Law of the Sea*, adopted on 7 October 1982, UN Doc. A/CONF.62/122 (entered into force 16 November 1994).

[28] Juris Geir Ulfstein, Legal Aspects of Scrapping of Vessels (Research Report, the Norwegian Ministry of Environment, 9 March 1999) 13.

[29] *Basel Convention*, art 2(3).

[30] Gabriela Agguuiello Moncayo, 'International Law on Ship Recycling and its Interface with EU Law' (2016) 109 *Marine Pollution Bulletin* 301, 303-304.

area under jurisdiction of another State. Second, the plan to dispose of the ship was not made in the flag State's territorial jurisdiction.[31]

'An area under national jurisdiction' means an area in which 'a State exercises administrative and regulatory responsibility concerning the protection of human health or the environment'.[32] Therefore, for instance, if a shipowner from Panama buys a ship anchored at Singapore and sells to a shipbreaking yard in Pakistan, then the Panama's shipowner would be the flag State owner, but since the transboundary movement of the ship has started from Singapore, which is not within the national jurisdiction of Panama, the shipowner from Panama will not be liable to follow the *Basel Convention'*s requirement of pre-cleaning.

This thesis rather asserts that if it were possible to apply the *Basel Convention*'s principles of PIC, pre-cleaning, and sound management to shipbreaking, the workers would have to manage fewer hazardous materials contained in ships. The *Basel Convention* restricts sending hazardous ships to developing countries without minimising the wastes and ensuring sound management of the inbuilt wastes in host States. Moreover, the responsibility to ensure prevention of deaths, injuries and work-related diseases would lie directly with shipowners and that would make them financially responsible for the dangerous shipbreaking practices in South Asia. The next Part investigates whether the *Hong Kong Convention* has incorporated the principles of the *Basel Convention* and mandated to prevent shipbreaking work-related deaths, injuries and diseases adequately.

III INADEQUACIES IN THE PREVENTIVE SYSTEM OF THE HONG KONG CONVENTION

Problems in applying the *Basel Convention* to shipbreaking led the International Maritime Organisation (IMO) to step in. In an attempt to introduce a specific regulatory mechanism for shipbreaking and clarifying its requirements, in May 2009 the IMO Member States signed the *Hong Kong Convention* at a diplomatic conference held in Hong Kong. The final text of the *Hong Kong Convention* was a combined

[31] Ibid.
[32] *Basel Convention*, art 2(9).

effort of the IMO Member States, non-government organisations (NGOs), the International Labour Organisation (ILO) and the Parties to the *Basel Convention*.

Unlike the *Basel Convention*, the *Hong Kong Convention* is specific to shipbreaking. It introduces an international legal mechanism based on national notification and a national waste management system to resolve the problems in shipbreaking practices (see Chapter 3). The *Hong Kong* Convention is yet to enter into force,[33] but arguably, success of the *Hong Kong Convention* for the South Asian countries will rest on the effective operation of these systems, the national notification and national waste management systems, within their jurisdictions.

The *Hong Kong Convention*'s national notification system is a binding obligation for the shipowners and shipbreaking yards to report their corresponding State about the intention of breaking a ship.[34] For sound management, the *Hong Kong Convention* aims to limit transfer of a ship to a shipbreaking yard unless a ship is free from the hazardous materials (for instance, mercury, and radioactive materials) listed in Appendix I to the *Hong Kong Convention*.[35] Most importantly, the *Hong Kong Convention* requires a shipbreaking yard to increase its technical capacity. Under reg 15, each State Party is bound to introduce proper legal mechanisms and implement this requirement (technical capacity development) of the *Hong Kong Convention* in a shipbreaking yard.[36] The next two sections examine the deficiencies in the notification and sound management system of the *Hong Kong Convention*.

[33] *The Hong Kong Convention,* art 17 provides the requirements for entry into force of the Convention. The requirements are ratification (without reservation) from 15 states who by gross tonnage represent 40% of the world merchant fleets, and by recycling tonnage represent 3% of end-of-life ships for the previous 10 years. The conditions were not met as of 2021: *The International Convention for the Safe and Environmentally Sound Recycling of Ships*http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/The-Hong-Kong-International-Convention-for-the-Safe-and-Environmentally-Sound-Recycling-of-Ships.aspx.

[34] *The International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force) annex *(Regulation for Safe and Environmentally Sound Recycling of Ships)*, reg 24(1). *(Annex Regulation on Ship Recycling)*.

[35] Ibid, reg 17.

[36] States are bound to introduce adequate inspection, monitoring and enforcement provisions that may include sampling and entry powers. Moreover, such a mechanism may include an audit scheme to be carried out by the competent authority or an organisation recognised by the Party': at *Annex Regulation on Ship Recycling*, ibid reg 15(1)-(2).

A *Problems to Operationalise the Hong Kong Convention's Notification System*

A major weakness of the *Hong Kong Convention* is its private notification system for the mandatory pre-cleaning requirement. The crux of the problem is that the notification is voluntary in nature and therefore the Convention provides no mechanism to enforce the requirement. There is no legal or other consequence in case of failure to comply with the reporting requirement, and because of this substantial gap, the reporting merely becomes a directory, rather than a mandatory, requirement. Consequently, the shipbreaking countries and shipowners may be reluctant to follow the reporting obligations as long as their industries are providing employment and greater revenues for their government.

According to the *Hong Kong Convention*, shipowners and shipbreaking yards are required to notify their own State about their intention to break a ship.[37] The notification enables the administration of a flag State to prepare for the necessary survey of a ship's Inventory of Hazardous Materials (IHM)[38] before issuing an International Ready for Recycling Certificate (IRRC).[39] Notification from a shipowner follows survey of an IIHM and the survey follows the IRRC to authorise breaking of a ship by a flag State, the state of registration that registers a ship. With respect to a shipowner, a shipbreaking yard is required to notify a competent authority of its own State government in three stages, namely to indicate:

(1) The intention to break a ship when the company is preparing to receive a ship;[40]

(2) The planned start of shipbreaking after the shipbreaking yard has obtained the IRRC;[41] and

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[37] Ibid reg 24(1).

[38] The IHM is specific to each ship and shall at least identify as Part I, Hazardous Materials listed in Appendices 1 and 2 to the Hong Kong Convention and contained in a ship's structure or equipment, their location and approximate quantities: at ibid reg 5(1).

[39] Ibid reg 24(1).

[40] *Annex Regulation on Ship Recycling* provides the detailed information that has to be included in the notification: at ibid reg 24(2); the *Hong Kong Convention* provides that "Competent Authority(ies)" means a 'governmental authority or authorities designated by a Party as responsible, within specified geographical area(s) or area(s) of expertise, for duties related to Ship Recycling Facilities operating within the jurisdiction of that Party as specified in this Convention': at *the Hong Kong Convention* art 2(3).

[41] *Annex Regulation on Ship Recycling* (n 34), reg 24(3).

(3) At the time of completion of the intended shipbreaking activity, that is, when the shipbreaking will be completed following the requirements of the Convention.[42]

The notification system under the *Hong Kong Convention* is a key requirement, but unlike the *Basel Convention*'s PIC system discussed above, the *Hong Kong Convention* does not impose an obligation on shipowners and their States (that is, the States in which the shipowners are based) to get consent from the shipbreaking State before exporting a ship. This gap disregards any inter-State communication to restrict export and entry of a hazardous ship. The notification system thus only operates to make the companies accountable to their own State.

The *Hong Kong Convention* could have incorporated the widely used PIC system that would require a shipbreaking State to give consent to a ship's import. This would then put the obligation on the shipbreaking State to check for hazardous contaminants against the ship's IHM.[43]

The PIC system under the *Basel Convention* is distinguishable from the reporting system under the *Hong Kong Convention*. The PIC would require consent from a shipbreaking State before a shipbreaking yard receives a ship, whereas the reporting system does not require such consent from a public body of a shipbreaking State. As a result, shipbreaking yards may be able to bring in a ship for breaking that contains hazardous materials in its body without any intervention from their government.[44] Such entry of a ship for breaking into a State may continue to become a *fait accompli*, i.e., no other option except a breaking permission for shipbreaking States.[45]

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[42] Ibid reg 25.

[43] Some of the international environmental agreements are: *The Convention on Biological Diversity* opened for signature 5 June 1992. 1760 UNTS 79 (entered into force 29 December 1993); *The Stockholm Convention on Persistent Organic Pollutants*, opened for signature 23 May 2001, UNEP/POPS/CONF/4 (Appendix II) (entered into force 17 May 2004); *The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade*, opened for signature 10 September 1998, UNEP/FAO/PIC/CONF/5 (entered into force 24 February 2004).

[44] According to the *Hong Kong Convention* a shipbreaking company means 'the owner of the ship recycling or shipbreaking facility or any other organisation that is under the authority to operate the recycling or shipbreaking yards'; at *the Hong Kong Convention*, art 2(12).

[45] Saurabh Battacharjee, 'From Basel to Hong Kong: International Environment Regulation of Ship Recycling Takes One Step Forward and Two Steps Back' (2009) 1(2) *Journal of Trade Law and Development* 193, 224.

B *The Problems with Satisfying the Requirement of Sound Waste Management under the Hong Kong Convention*

The *Hong Kong Convention* also contains a requirement of sound management. Regulation 15 (Controls on Ship Recycling Facilities) provides:

> Each Party shall establish legislation, regulations, and standards that are necessary to ensure that Ship Recycling Facilities (shipbreaking yards) are designed, constructed, and operated in a safe and environmentally sound manner in accordance with the regulations of this Convention.

Similarly, Regulation 20 (Safe and environmentally sound management of Hazardous Materials) provides:

> Ship Recycling Facilities (shipbreaking yards) authorized by a Party shall ensure safe and environmentally sound removal of any Hazardous Material contained in a ship certified in accordance with regulation 11 or 12.

Discussed in Chapter 3, increasing numbers of ships sent for breaking in South Asia demonstrates an opposing view, that there is no urgency among the shipowners and shipbreaking yard owners to enforce the above regulatory requirements. There is also no notable international pressure to that effect.

This is an indication that the South Asian countries are unlikely to adhere to the sound management principles (see below) as long as their business as usual runs without interruption. The number of unsafe shipbreaking yards have in fact increased dramatically in these countries since 2009 without even following the above regulations.[46] Except for a few exceptions, shipbreaking yards in South Asia that use the beaching practices do not appear to have any urgency to build dry docks to ensure safe shipbreaking practices.

Lack of financial capacity of the shipbreaking yards and States in South Asia is one of the reasons for this.[47] This is also the reason for not paying an adequate compensation

[46] Beaching refers to cutting vessels on coastal beaches with no use of a contained or covered area that makes it impossible to stop toxic substances from affecting workers (see Chapter 3). Beaching is mainly 'responsible for the degradation of the coastal environment because with beaching it is not possible to stop toxic substances from directly mixing with seawater': at Okechukwu Ibeanu, Special Rapporteur, *Report on the Adverse Effects of the Movement and Dumping of Toxic and Dangerous Products and Wastes on the Enjoyment of Human Rights*, UN Doc A/HRC/15/22/Add.3 (2 September 2010) 8.

[47] Md. Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 84.

to the workers who face deaths, injuries, or suffer work-related diseases. South Asian shipbreaking yards have to offer a high purchase price to shipowners to retain the industry. The majority of shipbreaking costs thus go to shipowners as the sale price. As seen, in Part III of Chapter 3, international shipowners receive about 82% of the total shipbreaking cost as the sale price. A shipbreaking yard has to spend the remaining 18% for revenues, wages and other incidental costs, leaving a very minimum amount for the improvement of standards.

States also cannot provide public funds to support the building of necessary infrastructure, such as a dry dock, enforcement of laws, or compensation payments to workers for one particular industry – shipbreaking – that is largely run by private owners.

Despite acknowledging the high cost to the shipbreaking industry of payments made to shipowners, the *Hong Kong Convention* provides that the shipbreaking yards have to ensure sound management and finance to build dry docks, and States have to deal with human costs to workers and bear the environmental impacts. The *Hong Kong Convention* thus creates a poor system for South Asian shipbreaking countries.

C *Burden on Shipbreaking Yards for Ensuring Sound Management*

Sound management of an end-of-life ship is the responsibility of everyone involved in the business, but the *Hong Kong Convention* shifts the burden solely onto shipbreaking yards.

It provides that a shipbreaking yard can only accept a ship which is free from the hazardous substances (for example, asbestos, PCBs and ozone depleting substances) listed in the Appendix I of the *Hong Kong Convention*.[48] Importantly, the *Hong Kong Convention* introduces a 'cradle to grave' approach,[49] meaning that a ship must protect the marine environment throughout its lifetime and a shipbreaking yard cannot receive a ship that does not comply with such requirements.[50] Regulation 17 (General requirements) provides:

[48] *Annex Regulation on Ship Recycling* (n 34), reg 17.
[49] Under the *Hong Kong Convention* both "ship recycling facilities operating under the jurisdiction of a party" and "ships entitled to fly the flag of a party" are under the purview of the Convention: at *the Hong Kong Convention* (n 1) art 3.1.
[50] *Annex Regulation on Ship Recycling* (n 34) regs 17(2) and 4.

> Ship Recycling Facilities (shipbreaking yards) authorised by a Party shall establish management systems, procedures and techniques which do not pose health risks to the workers concerned or to the population in the vicinity of the Ship Recycling Facility and which will prevent, reduce, minimise and to the extent practicable eliminate adverse effects on the environment caused by Ship Recycling, taking into account guidelines developed by the Organisation.

The *Guidelines for the Authorisation of Ship Recycling Facilities*, 2012 also provide the detailed rules for a shipbreaking yard to obtain approval.[51] Only shipbreaking yards, which can provide these yards, can accept a ship.[52] Linked to these requirements, the *Hong Kong Convention* has introduced 'green shipbuilding and design', for which State Parties are required to introduce a restriction on the use of hazardous materials, including asbestos, ozone-depleting substances, PCBs and prohibited anti-fouling compounds on their ships.[53]

The State Parties are also required to 'prohibit and/or restrict the installation or use of such materials on ships visiting their ports, shipyards, ship repair yards, or offshore terminals'. These restrictions lead to a number of surveys that are required to be undertaken before the actual shipbreaking can commence.

A shipowner has to conduct the first survey prior to putting a ship into business of transportation, or before an internationally recognised Classification Society issues the International Certificate on IHM.[54] A Classification Society certifies the seaworthiness of a ship upon a shipowner's request. Each new ship is to maintain a certificate of IHM once it starts operation.[55] In addition, a shipowner has to conduct a periodic survey of a ship every five years.[56] Further, an additional survey is required upon the request of the shipowner in case of any change, replacement or significant repair of the

[51] *The Hong Kong Convention* (n 1), art 16; *Guidelines for the Authorisation of Ship Recycling Facilities*, 2012 (Resolution MEPC.211 (63)), IMO Doc. MEPC 63/23 (14 March 2012) Annex 5.
[52] *The Hong Kong Convention*, art 17(2).
[53] *Annex Regulation on Ship Recycling* (n 34), reg 4(1) and Appendix 1 (*Controls of Hazardous Materials*).
[54] Ibid reg 10(1)(1).
[55] The *Hong Kong Convention*, Appendix 2 (*Minimum List of Items for the Inventory of Hazardous Materials*). See *Guidelines for the Development of the Inventory of Hazardous Materials* replaced in 2015; *Guidelines for the Development of the Inventory of Hazardous Materials, 2011* (Resolution MEPC.197 (62)), IMO Doc. MEPC 62/24 (26 July 2011) Annex 3; *Guidelines for the Development of the Inventory of Hazardous Materials, 2015* (Resolution MEPC.269 (68)), IMO Doc. MEPC 68/21/Add.1 (29 May 2015) Annex 17.
[56] *Annex Regulation on Ship Recycling* (n 34), reg 10(1)(2).

structure.[57] Finally, a shipowner has to conduct a survey before recycling or shipbreaking commences.[58]

A flag State can issue an IRRC following the final report before a ship ends up in a shipbreaking yard.[59] The IRRC proves that a ship is free from any hazardous materials listed in the *Hong Kong Convention*.[60]

In order to accept a ship, a shipbreaking yard must obtain the survey reports from the owner,[61] and improve its physical and technical capacity to manage the reported hazardous materials in a sound manner.[62] The *Hong Kong Convention*, however, is silent on the problem of the financial ability of a shipbreaking yard in South Asia. Surprisingly, the *Hong Kong Convention* does not address how a shipbreaking yard, or the government of a State Party such as Bangladesh, can demand that shipowners internalise the costs of implementing the guidelines. Without any explicit provision of funding, it is therefore not clear how a financially capable shipowner shares the cost with shipbreaking yards in developing countries.[63]

D *Burden on Shipbreaking States*

Providing no funding mechanism in the *Hong Kong Convention* does not address the financial problems faced by shipbreaking yards and their States to enforce the guidelines. Legally, under the *Hong Kong Convention*, it is the duty of each Party to establish proper legal mechanisms to enforce the regulatory requirements in a shipbreaking yard.[64]

The *Hong Kong Convention* provides requirements for a ship recycling plan safeguarding human health and environment; safe management of ships' hazardous materials; emergency response and preparedness; safety of workers and their training;

[57] Ibid reg 10(1)(3).
[58] Ibid reg 10(1)(4).
[59] Ibid reg 11(11).
[60] It means to comply with the conditions of safety as laid down in the Convention such as proper oxygen and removal of explosive substances: at ibid reg 1(6) – 1(7).
[61] Ibid regs 17(1) and 17(1)(3).
[62] *The Hong Kong Convention* (n 1) art 6 read with *Annex Regulation on Ship Recycling* (n 5) reg 8(1).
[63] Moncayo (n 30) 301-308.
[64] A State Party is required 'to establish effective use of inspection, monitoring and enforcement provisions, including powers of entry and sampling. Such a mechanism may include an audit scheme to be carried out by the competent authority or an organisation recognised by the Party': at *Annex Regulation on Ship Recycling*, reg 15(1)-(2).

and reporting on incidents, accidents, and occupational diseases and their chronic affects.[65] As principles, the requirements are very important, but their practical implementation is subject to the financial ability of a shipbreaking State. The problem of financial ability begs the question whether the developing countries in South Asia can enforce these requirements.

These countries still face development-related challenges, including a high rate of illiteracy, unemployment, and lack of communication infrastructure, sanitary facilities and shortages of other necessities. The governments of these countries have therefore preferred to invest their state budget in these areas of national importance rather than on the single shipbreaking industry.

The main impact of the *Hong Kong Convention*, to date, has been to the shift of responsibility for environmentally sound management of wastes to the developing countries and their industries.[66] This is the main difference between the *Basel Convention* and the *Hong Kong Convention* as instruments for regulating the transfer of ships from shipowners to intermediaries to shipbreaking companies based in developing countries. The *Basel Convention* makes the shipowners responsible for environmentally sound management of the wastes within a ship's structure, whereas *the Hong Kong Convention* shifts the responsibility to the shipbreaking yards to ensure sound management of these wastes.

The *Hong Kong Convention* is also silent on shipowners' responsibility for pre-cleaning inbuilt wastes of ships at any designated place beyond the territorial waters of shipbreaking States because reg 8(2) (Preparation for Ship Recycling- General Requirements) only provides that:

> Ships destined to be recycled shall conduct operations in the period prior to entering the Ship Recycling Facility in order to minimise the amount of cargo residues, remaining fuel oil, and wastes remaining on-board. [67]

[65] *Annex Regulation on Ship Recycling* (n 34) regs 18-23 read with *Guidelines for Safe and Environmentally Sound Ship Recycling*, 2012 (Resolution MEPC. 210(63)), IMO Doc. MEPC 63/23 (14 March 2012) Annex 4.
[66] Bhattachargee (n 45) 214-215; art 10(2) of the *Hong Kong Convention* (n 1), *Annex Regulation on Ship Recycling* (n 34), reg 15(1)-(2), 8(2), 10(1)-(3), 19.
[67] Ibid reg 8(2).

In fact, a clear meaning of the above regulation is that it does not require shipowners to pre-clean the inbuilt wastes of a ship in their own State jurisdiction. The next Part evaluates the implications of this gap.

IV IMPLICATION ON FUTURE SHIPBREAKING FOR SHIFTING THE LIABILITY ON SHIPBREAKING YARDS AND THEIR STATES

The above analysis demonstrates that mainly shipbreaking yards and their States are responsible for enforcing the *Hong Kong Convention*'s standards. Shipowners have no responsibility for ensuring the sound management of a ship.[68] The *Hong Kong Convention* is also silent on how the corresponding State of a shipowner is to monitor the sound management of a ship. Art 10(2) of the *Hong Kong Convention* provides:

> In the case of a Ship Recycling Facility (shipbreaking yard), sanctions shall be established under the law of the Party having jurisdiction over the Ship Recycling Facility.

This is a clear deviation from the *Basel Convention*. Under the *Basel Convention*, an exporting State must monitor the environmentally sound management of the hazardous wastes. The *Basel Convention* elaborates the restriction and provides that an exporting State can allow a waste transfer only if the exporting State has lack of technical expertise and capacity to dispose of the wastes or if a State of import has a demand for the wastes as raw materials for their industrial production. The *Hong Kong Convention* provides no such qualifying terms and restrictions for importing a ship.[69]

Further, under the *Basel Convention*, it is the duty of an exporting State to ensure sound management practices and an exporting State cannot shift the duty to the importing State.[70] According to art 4(2)(e) of the *Basel Convention*, the exporting States have a mandatory obligation to stop a waste transfer if they are not capable of ensuring the environmentally sound management capacity of the importing States.

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[68] Tone George Puthucherril, 'Trans-boundary Movement of Hazardous Ships for Their Last Rites: Will the Ship Recycling Convention Make a Difference?' in David Freestone (ed), *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Martinus Nijhoff Publishers, 2010) 283, 314.

[69] Iwona Rummel-Bulska, 'The Basel Convention and the UN Convention on the Law of the Sea' in Henrick Ringdom (ed), *Competing Norms in the Law of Marine Environmental Protection – Focus on Ship Safety and Pollution Prevention* (Kluwer Law International, 1997) 83, 83-84.

[70] *Basel* Convention, art 4(8).

In particular, the *Hong Kong Convention* unjustly requires shipbreaking yards and their States to ensure the prevention of shipbreaking-related accidents and diseases, as it provides no limitation on the beaching practice.[71] Regulation 19 (prevention of adverse effects to human health and the environment) provides:

> Ship Recycling Facilities (shipbreaking yards) authorised by a Party, shall establish and utilise procedures to prevent explosions, fires, and other unsafe conditions by ensuring that Safe-for-hot work conditions and procedures are established, maintained and monitored throughout Ship Recycling; prevent other accidents, occupational diseases and injuries or other adverse effects on human health and the environment; and prevent spills or emissions throughout Ship Recycling which may cause harm to human health and/or environment taking into account guidelines developed by the Organisation.

Without restricting the beaching practice, shifting the responsibility to shipbreaking yards and their States may make the application of the above requirements doubtful. Greenpeace International, an international non-government organisation voiced reservations around the issue during the negotiation process of the *Hong Kong Convention*. In particular, Greenpeace International proposed the following provision to add with reg 19 of the *Hong Kong Convention*:

> Ship Recycling Facilities (shipbreaking yards), authorised by a Party, shall establish and utilise procedures to ensure that ship recycling operations taking place on intertidal flats, or ocean beaches or other working platforms which prevent: rapid access to ships by emergency equipment; the ability to utilise cranes and lifting equipment at all times alongside vessels; and the possibility of full containment of pollutants during all cutting and stripping operations, are prohibited.[72]

This proposal did not receive acceptance during the negotiation phase of the *Hong Kong Convention*. It is an indication that the international community has accepted the beaching practice but has failed to address the legal gap, meaning the *Hong Kong*

[71] *Annex Regulation on Ship Recycling* (n 34), reg 15.
[72] *Ensuring Sustainable Green and Safe Ship Dismantling – Concerning Beaching and the Establishment of a Mandatory Fund (Submitted by Greenpeace International and FOEI)*, IMO Doc. SR/CONF/14 (9 February 2009) cited in Karim (n 47) 85.

Convention would bring about no significant change to the ongoing industry practices, although they are not safe for the workers or the environment.[73]

In fact, the *Hong Kong Convention* also does not recognise the reality of shipbreaking workers.[74] Ignoring the reality of shipbreaking workers is a denial of rectificatory global justice. Objectively, the rectificatory justice theory extends liability to responsible parties for any cost related to rectifying an injustice (see Chapter 2).[75] Specifically, for a proper application of the theory, the concerned law must identify responsible parties and propose a mechanism for remedying the risk between the responsible parties and victims.[76] It is evident that the shipowners are the responsible parties whose commercial use contributes to the generation of waste, and who control the sale of a ship mainly for profit,[77] but the *Hong Kong Convention* does not recognise this.

This is an indication that 'business as usual' will continue to cause deaths and injuries in future, without justification. These foreseeable future risks from shipbreaking lead to the question of a compensation system, and whether the *Hong Kong Convention* has a compensatory mechanism to remedy any potential harms.

V LACK OF COMPENSATORY MECHANISM FOR VICTIMS

The *Hong Kong Convention* is also silent about the responsibility of shipowners for the payment of compensation to shipbreaking workers who suffer work-related fatalities, injuries or disease while breaking a foreign ship.

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[73] Md. Saiful Karim, 'Environmental Pollution from the Shipbreaking Industry: International and National Legal Response' (2010) 22 *Georgetown International Environmental Law Review* 185, 224.
[74] Nikos Mikelis analysed the Convention's common principles for recycling in all countries: see more at Nikos Mikelis, *Developments and Issues on Recycling of Ships 3* (Web Page, 16 December 2006) http://www.imo.org/includes/blastDataOnly.asp/data_id%3D17980/Developments.pdf.
[75] Astrid Kalkbrenner, 'Compensating for Catastrophic Harm: Civil Liability Regimes and Compensation Fund' (PhD Thesis, University of Calgary, 2015) 27.
[76] Principle 16 of *Rio Declaration* provides that National authorities should endeavour to promote the internalisation of environmental cost and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment: at *Rio Declaration on Environment and Development*, UN Doc. A/CONF.151/26 (Vol. I) 1992.
[77] NGO Shipbreaking Platform, *Annual Report 2017* (Web Page) https://www.shipbreakingplatform.org/wp-content/uploads/2018/07/Annual-Report-2017-Final-Spreads.pdf

In addition to the *Hong Kong Convention* and the *Basel Convention*, a number of ILO instruments are directly applicable to the issues of shipbreaking, but the ILO instruments also do not provide a compensatory mechanism for shipbreaking workers.[78] However, shipbreaking is not a separate issue that can be regulated only by the Labour laws. It requires improved administrative competence, legal implementation, and proper infrastructure.[79] As well, the lack of understanding of the safety and health of the workers in the shipbreaking yards undermines the environmental sustainability of the shipbreaking industry.[80] These concerns led the ILO to frame an exclusive framework for the safety and wellbeing of the workers, namely the *Safety and Health in Shipbreaking: Guidelines for Asian Countries and Turkey (ILO guidelines)* in 2004.[81] Responsible States are encouraged to adopt the *ILO Guidelines* as technical standards, codes of practice or as authoritative guidance in national legislation for workers, but the *ILO Guidelines* also do not include an effective compensatory mechanism or guide for State parties to focus on compensation.[82] The *ILO Guidelines* focus on improving the standards of shipbreaking, and in relation to improving the standards in the shipbreaking industry, some of the fundamental yardsticks in framing national laws are to:

- Recognise the work of a ship breaker is one of the most hazardous jobs.[83]
- Ensure sound waste management.[84]

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[78] The following ILO Conventions may have relevance to shipbreaking, including the *Convention Concerning Occupational Safety and Health and the Working Environment*, adopted on 22 June 1981 ILO Convention 155 (entered into force August 1983); *Convention Concerning the Promotional Framework for Occupational Safety and Health*, adopted on 15 June 2006, ILO Convention 187 (entered into force 20 February 2009); *Convention Concerning Occupational Health Services*, adopted on 25 June 1985, ILO Convention 161 (entered into force 17 February 1988); *Convention Concerning Prevention and Control of Occupational Hazards Caused by Carcinogenic Substances and Agents*, adopted on 24 June 1974, ILO Convention 139 (entered into force 10 June 1976); *Convention Concerning the Protection of Workers against Occupational Hazards in the Working Environment Due to Air Pollution, Noise and Vibration*, adopted on 20 June 1977, ILO Convention 148 (entered into force 11 July 1979); *Convention Concerning Safety in the Use of Asbestos*, adopted on 24 June 1986, ILO Convention 162 (entered into force 16 June 1989); *Convention Concerning Safety in the Use of Chemicals at Work*, adopted on 25 June 1990, ILO Convention 170 (entered into force 4 November 1993)). See also *Safe Work Codes of Practice*, online: International Labour Organisation http://www.ilo.org/public/english/protection/safework/cops/english/index.htm

[79] Ali (n 19) 29.

[80] Ibid.

[81] See generally International Labour Organisation, *Recycling of Ships: Safety and Health in Shipbreaking: Guidelines for Asian Countries and Turkey* (2004) www.ilo.org/public/english/region/asro/beijing/download/ship_breaking.pdf

[82] Ibid art 3(2)(2).

[83] Ibid art 2(3)(1).

[84] Ibid art 2(3)(2).

- Enforce social protection and labour law.[85]
- Recognise the difficulties arising in enforcing laws and regulations to the yards because of their location.[86]

Overall, instead of guiding a compensatory framework, an important goal of the *ILO Guidelines* is to promote a sound national framework for individual shipbreaking States. Following the guidelines, States are required to include adequate and appropriate types of shipbreaking yards and of a worker's status in employment in their national legal framework.[87]

Adopting these *ILO Guidelines* is one of the ILO's key initiatives,[88] providing a set of guidelines on the parties having liability to promote occupational safety and health in the shipbreaking yards.[89] Nevertheless, the guidelines are limited to providing a map for developing related domestic laws and are voluntary in nature.[90] Compensation for labour is an issue that must be regulated by labour laws; however, the *ILO Guidelines* also focus on prevention rather than compensation.

This leads to the conclusion that the workers have no international system for claiming compensation. In the absence of a global mechanism of compensation, the only means to a compensation claim is filing highly complicated and contested compensation claims under the tort of negligence law before the home State court of a shipowner. Paragraphs below argue that such claim is not beyond criticism.

As discussed in Chapter 2, *Maran Shipping* is a recent example of an inter-State compensation claim under tort law in the UK.[91] The matter was primarily concerned with the liability of a foreign shipowner to pay compensation to the wife of a Bangladeshi shipbreaking worker, who died in breaking a ship owned by a UK shipowner.

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[85] Ibid art 2(3)(3).
[86] Ibid art 2(3)(4).
[87] Ibid 3(2)(2).
[88] Midshipman (MIDN), 'End of Life Ships' (Report, Inter-Departmental Committee on the Dismantling of Civilian and Military End of life Ships, March 2007) 19. http://www.shipbreakingplatform.org/shipbrea_wp2011/wp-content/uploads/2011/12/2007-06-18_-_Rapport_MIDN_english_version.pdf.
[89] Puthucherril (n 13)120.
[90] Duncan Graham-Rowe, 'Ship Scrapping: Breaking up is Hard to Do' (2004) 429 *Nature: International Weekly Journal of Science* 800, 802.
[91] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. (10 March 2021). *(Maran Shipping)*

For reasons set out at length in the judgment, Coulson J accepted the proposition that Maran (UK) Limited would owe a duty of care to the worker for its knowledge about poor shipbreaking practice and the higher amount of profit received from selling the ship.[92] The Court also stated 'the issue must go for a full trial to decide finally on the matter of the amount of compensation'.[93] It appears from the facts of the case that the plaintiff, Hamida Begum, the wife of the victim, MD Khalil Mollah, has a good case under the tort of negligence, but the shipping company may defend the liability for compensation payment proving on evidence that the victim, in fact, did not die breaking the company's ship in the concerned shipbreaking yard.

The High Court of Justice (Queens Division) has the original jurisdiction to try the matter, and is yet to decide the matter of compensation. Until a final decision, the implications of the decision for shipbreaking are not clear. However, the thesis posits that the interim decision has more negative than positive implications for global shipbreaking.

On the one hand, the decision implies a good basis for victims establishing that court actions will follow each shipbreaking-related fatality, or injuries, because the international framework of shipbreaking has no compensatory mechanism and the national mechanism of shipbreaking countries is not sufficient to provide adequate compensation (see Chapter 4). With hundreds of unskilled workers in South Asia and with continuous risk of more casualties, the decision, however, demonstrates that the companies have a responsibility to provide a meaningful remedy to workers.

On the other hand, despite being a wake-up call for other shipowners, the decision risks the business of shipbreaking in developing countries. South Asia may lose the growing shipbreaking market, if foreign shipowners do not send ships to South Asia due to the fear of similar court actions. Drop of ship's number for breaking in South Asia from 90% in 2018-2019 to 76% in the first quarter of 2021, is probably a sign of such consequences.[94] The shipowners will also be mindful about the decision that may lead to an unlimited amount of compensation if the claim is proved before the Court.

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[92] Ibid [116].
[93] Ibid [116].
[94] Compared to 90% ships broken in 2015-2020, in the first quarter of 2021, South Asia broke 76% of ships: at Safety4Sea, '155 Ships Sold to South Asian Shipbreaking Yards in Q1 2021' (online at 29 April 2021) <https://safety4sea.com/155-ships-sold-to-south-asian-shipbreaking-yards-in-q1-2021/?>

From the perspective of an injured, or ill worker, or family of a deceased worker, the problem is that only in rare cases can a victim or a family member go to a foreign country and lodge such an inter-State compensation claim. Just one among thousands of workers could go to the Court of Appeal of England and Wales through the help of intermediaries, including local and international NGOs and very expensive law firm named Leigh Day.[95]

The thesis posits that this is a matter between a shipowner, the shipbreaking yard and a victim worker. The involvement of third parties, such as law firms, has financial consequences for all parties. Another issue is that targeting one country's ship is not enough for imposing liability on ships of other countries. Further, the decision is only applicable to UK ships, not to ships from other countries. It leaves a scope for shipowners from other developed countries to escape liability, if courts of these countries do not follow the same principles applied in *Maran Shipping*.

Broadly, the decision relying on tort law reinforces the argument of the thesis for an international civil liability mechanism. From the perspective of compensation claims for shipbreaking workers who face death, injuries or suffer diseases from shipbreaking, the mechanism would only be effective if all shipowners around the world undertake responsibility for their compensatory damages. This may preclude a multiplicity of suits; reduce costs and intervention from third parties, and save the business.

VI CONCLUSION

This Chapter has addressed third question of the thesis, which is: What are the inadequacies of international legal frameworks to prevent work-related deaths, injuries, or diseases and to compensate an injured or ill worker or the family members of a deceased worker?

[95] John Vidal, 'Mollah's Life was Typical: the Deadly Ship Graveyards of Bangladesh' *The Guardian* (online at 31 January 2020) < https://www.theguardian.com/global-development/2020/jan/31/khalid-mollah-life-was-typical-the-deadly-ship-graveyards-of-bangladesh>

The Chapter has argued that the *Hong Kong Convention* has created an unequal distribution of the waste burden of old ships and that the developing countries have to accept this, while not having a mechanism in place to compensate the most vulnerable shipbreaking workers. The yet to enter into force *Hong Kong Convention* is the only specific legally binding international legal instrument for shipbreaking, and the international community relies heavily on this instrument. This Chapter has argued that the *Hong Kong Convention* is not beyond criticism, largely because it is not seen as imposing an obligation on any of the beneficial entities, such as shipowners and shipping industries, involved in the business. Instead, the *Hong Kong Convention* shifts the burden onto flag States and ship recycling facilities unequally, and establishes the unequal waste burden. Although the *Hong Kong Convention* canvasses the idea that its primary concern is to protect the occupational health and safety of workers, it does not have sufficient mechanisms for accomplishing this goal. The principles of sustainable development (considering shipbreaking as a green activity by emphasising an inventory for containing hazardous materials) introduced by the *Hong Kong Convention*, portray safety as an important issue in shipbreaking. However, the thesis argues that the Convention fails to accomplish its goal of promoting safe recycling because the responsibility for safety and enforcement lies mainly on under-resourced ship recycling States and their under-resourced facilities.[96] Moreover, the industry is not justified under the justice theory because it does not focus on supporting those most in need with a compensation mechanism.

Instead, the *Hong Kong Convention* focuses mainly on national notification and sound management systems that follow a number of surveys and certifications for protecting workers from shipbreaking accidents. Part IV therefore has questioned whether the *Hong Kong Convention*'s ability to regulate inter-State movement of contaminated ships is sufficient to protect the rights of workers at the recycling or shipbreaking yards in South Asia. Part V has questioned the Convention's ability to provide adequate compensation to victim workers. This leads to a logical conclusion that an appropriate policy is required to remedy the abuse of rights within the industry.

Since the international community has established the *Hong Kong Convention* as the single most important instrument, the first place where the regulatory control should

[96] Ibid.

be introduced is where this would have least impact on its regulatory standards. The next Chapter explores existing regulatory and financial mechanisms implemented by the EU and its Member States, so that lessons can be learned that help in designing a legal framework to control the abuse of human and environmental rights within the global shipbreaking industry.

CHAPTER SIX : CASE STUDIES TO EXPLORE RESPONSIBILITY WITHIN THE SHIPBREAKING INDUSTRY- AN ANALYSIS OF REGULATORY MEASURES OF THE EU AND ITS MEMBER STATES

I INTRODUCTION

Exploring the data on human harms and examining the deficiencies in the national and international laws of shipbreaking, Chapters 3 to 5 form the foundation of the central claim of the thesis that the shipbreaking industry requires the shipbreaking liability certificate (SLC), a civil liability mechanism for compensatory harms occurring in the jurisdiction of shipbreaking countries. This Chapter incites the discussion on the adequate nature of the mechanism in the context of the global shipbreaking industry by examining the regulatory approaches relating to the shipbreaking industry that the European Union (EU) has implemented, and the impact of such measures on the inter-State transfer of EU ships. The analysis will be applied to answer the fourth research question: What can the global shipbreaking industry learn from regulatory and financial measures of the EU in relation to shipbreaking?

The literature review in this chapter examines the *European Union Ship Recycling Regulation, 2013* (the *EU Ship Recycling Regulation*).[1] In reviewing the literature, this Chapter follows critical and normative approaches of legal research. Critical analysis is used to question the moral validity of a law, whereas normative methodology is used for learning the lessons for legal reform in a given context. Using critical analysis with the theory of 'global injustice', this Chapter questions why the *EU Ship Recycling Regulation* is not reasonable within the current context. This Chapter also explores the financial liability approaches, namely the (1) Capital Fund, (2) Ship Recycling Licence, and (3) Ship Recycling Insurance that the EU Commission has reviewed since 2005. The underlying aim of the three financial mechanisms is to impose financial liability on the EU shipowners for recycling the EU ships in a substandard shipbreaking yard. This Chapter further investigates the criminal liability approach introduced by a District Court of Rotterdam in the Netherlands. Using the normative analysis and the 'rectificatory global justice' theory as its normative yardstick, the

[1] *Regulation (EU) No. 1257/2013 of the European Parliament and of the Council of 20 November 2013 on Ship Recycling and Amending Regulation (EC) No. 1013/2016 and Directive 2009/16/EC, 2013*, OJ (L 330) 1. (*EU Ship Recycling Regulation)*

thesis learns from these financial and criminal liability approaches for the global shipbreaking industry.

The Chapter is premised on three objectives. First, it learns from the regulatory approaches of the EU, identifying some of their strong aspects, and suggests reform of these regulatory approaches so that the global shipbreaking industry can adopt them.

Second, this Chapter aims at exploring the weaknesses of the EU approaches. It argues that despite having some strong elements, the EU approaches are in general weak and against the principles of rectificatory global justice discussed in Chapter 2. This is because the approaches do not aim at restricting the reflagging practice and consequently at imposing liability on the EU shipowners for causing human and environmental harms in their value chain.

Third, this Chapter posits that the approaches do not go far enough without a liability framework that aims at compensating the victims of the shipbreaking accidents for breaking foreign ships. Table 8 summarises the major approaches, which will be discussed in detail in this Chapter, from which lessons can be learned for the global shipbreaking industry.

The Chapter proceeds as follows. Part II of this Chapter argues that the *EU Ship Recycling Regulation* has failed to address the reflagging issue. Reflagging refers to any changing of the flag of a ship from the country of original registration to that of another country. Shipowners use it normally in order to hide the identity of the original owner (see Chapter 1). This Part also argues that the EU follows the flag State approach and since the reflagging practice is not restricted within the *EU Ship Recycling Regulation*, the flag State approach allows shipowners to circumvent the *EU Ship Recycling Regulation*. A EU owner can change flag from its EU jurisdiction to a non-EU jurisdiction when a ship is on its last journey.

Table 8. The measures to impose liability on EU shipowners

Approach	*Measures*	*Region/Country*	*Discussion*
The EU Ship Recycling Regulation	Off the beach shipbreaking, listing and flag State approach that restrict EU shipowners to sell ships to South Asian shipbreaking facilities.	The EU	Part II
Capital Fund	Accumulation of fund charging from ships as a pre-condition to enter into a EU port (Port Levy).	The EU	Section A.1 of Part III
Ship Recycling Licence	Ship recycling licence paying levy for entry into EU ports	The EU	Section A.2 of Part III
Ship Recycling Insurance	Insurance certificate paying levy for entry into EU ports	The EU	Section A.3 of Part III
Criminal Liability	Judicial enforcement imposing criminal liability	Netherlands[2]	Part IV

Part III argues that the approaches for a financial mechanism proposed for the EU are also problematic since they aim at discouraging the reflagging practice, but they leave out civil liability of the EU shipowners for reportedly breaking ships on South Asian beaches. Part IV of this Chapter argues that the criminal liability approach of the Netherlands imposes liability on its ships in limited cases. Learning from these approaches, each of these Parts develops a Section under the heading of 'Lessons for the Global Shipbreaking Industry'.

Part V argues that the EU has played a pioneering role in reinforcing the debate for the introduction of a financial liability on shipowners for the end-of-life ships globally. By thoroughly discussing the EU approaches, this Part further argues that a global liability framework should learn from the ship recycling licence and ship recycling insurance proposed within the EU. However, the aim of a global ship recycling

[2] *State v Seatrade* [Rotterdam District Court, three-judge economic division for criminal cases], Public Prosecutor Office 10/994550-15, 15 March 2018 reported in (2018) Rechtspraak.nl 1, ECLI:NL:RBROT:2018:2108 https://www.rechtspraak.nl/Organisatie-en-contact/Organisatie/Rechtbanken/Rechtbank-Rotterdam/Nieuws/Documents/English%20translation%20Seatrade.pdf>

licence; i.e., the shipbreaking liability certificate (SLC), together with insurance should be to address the global injustice inflicted on the shipbreaking workers who suffer regular deaths, injuries, and diseases whilst breaking foreign ships. Part VI provides a brief conclusion of this Chapter. Lessons learned from this Chapter will be applied later in the thesis at Chapter 9 in critically examining the shipbreaking liability certificate (SLC) with insurance as a liability framework for the global shipbreaking industry.

II THE EU SHIP RECYCLING REGULATION, 2013

A *Background and Essential Features*

Shipbreaking is an international business,[3] as it includes a number of international parties in the business chain. In fact, it is the tail end of the global maritime industry. Chapter 5 discussed that the cross-border nature of the business has reinvigorated discussions regarding the suitability of the *International Convention for the Safe and Environmentally Sound Disposal of Ships* (*Hong Kong Convention*) in not providing for any responsibility for the international parties and the International Maritime Organization (IMO) itself.[4] As a major contributor to the global shipbreaking market, however, the EU is pushing for changes, relying on their own legal policies, which have led to the adoption of the *EU Ship Recycling Regulation* in 2013.

The *EU Ship Recycling Regulation*'s main aim is to implement the *Hong Kong Convention* in the EU.[5] This new special law was essential, due to the controversy around whether the existing *Waste Shipment Regulation* applies to end-of-life ships when there is no evidence to prove the intention of disposal from the shipowners who sell ships for breaking (see Chapter 5).[6] In principle, the *Waste Shipment Regulation*

[3] Tony George Puthurcherril, *From Shipbreaking to Sustainable Ship Recycling: Evolution of a Legal Regime* (Matinus Nijhoff Publishers, 2010) 10.
[4] *The International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force). (*The Hong Kong Convention)*
[5] The Preamble of the *EU Ship Recycling Regulation* provides that 'this Regulation is aimed at facilitating early ratification of 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': at *EU Ship Recycling Regulation* (n 1) Preamble para 5.
[6] *Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on Shipments of Waste* OJ (L 190) 1 (*Waste Shipment Regulation); The Sandrien Case* (Council of State, Case Number 200105168/2, 19 June 2002); *the Clemenceau Case* (2005) (Council of State, Case Number 288801, 15 February 2006).

does not allow a ship to transfer beyond the EU jurisdiction unless the exporting State or the owner pre-cleans the toxic materials found in the body of a ship.[7]

A Dutch District Court in *Otopan* settled this compulsory pre-cleaning principle.[8] In this case, the decision of the Secretary of State of the Netherlands, to transfer a hazardous ship named the Otopan from Amsterdam to a Turkish shipbreaking yard faced a legal challenge. Greenpeace, an international environmental group, filed the case arguing that since Turkey is not a Member State of the EU unlike the Netherlands, without pre-cleaning the wastes remaining in the ship, the Netherlands could not transfer the ship. The Court accepted the argument and ordered that without decontamination of some 441 tonnes of asbestos and asbestos- contaminated materials of the ship, Dutch authorities had no power to transfer the ship to Turkey for breaking.[9] The decision had a huge financial consequence for the Netherlands government, having to spend around 4 million Euro to clean the wastes before sending the ship to Turkey for breaking. The decision set a key principle that pre-cleaning a ship before the final voyage is compulsory for the EU shipowners.[10]

The decision demonstrates that the *Waste Shipment Regulation* has a strict mechanism that does not allow sending ships to India, Bangladesh and Pakistan, without first ensuring proper management of a ship's internal wastes; however, the reality is different mainly because of the difficulty to prove the intention of a EU shipowner in disposing a ship beyond the EU borders. In practice, between 2006 and 2011 at least 91% of the EU ships circumvented the restriction by reflagging,[11] a common and legal practice in the maritime industry, and thereby changing the nationality and administrative jurisdiction of a ship. A ship must fly a flag to sail on international waters, but shipowners misuse the practice of reflagging to evade the strict requirements of the *Waste Shipment Regulation*. The impact of this practice is lack of

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[7] David Azoulay and Nathaniel Eisen, 'Legality of the EU Commission Proposal on Ship Recycling' (Research Report No 1101, Centre of International Environmental Law, December 2012) 3 https://www.shipbreakingplatform.org/wp-content/uploads/2020/09/CIEL-Legality-EU-Proposals-on-Ship-Recycling-2020.pdf

[8] *Stitching Greenpeace Nederland v The Minister of Housing, Spatial Planning and The Environment* (Council of State, Case No. 2200606331/1, 21 February 2007. (*Otopan Case)*

[9] Ibid.

[10] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 127.

[11] Nikos Mikelis, *The Recycling of Ships* (Global Maritime Services (GMS) Leadership, 2nd ed, 1 October 2019) 26.

evidence to define a ship as 'wastes' and therefore apply the *Waste Shipment Regulation*.

The Danish ferry Frederik IX is one of the ships that used the reflagging practice to circumvent the *Waste Shipment Regulation*. After changing flags and names more than once, the Danish shipowner sold the ferry to India for breaking.[12] Although India purchased the ferry in February 2005 for recycling, the owner made a false declaration to the Danish authorities that the ship was sold to run commercially in the Middle East. Eventually, because of having no substantial evidence that could substantiate the ship as wastes, the Danish authority could not enforce the *Waste Shipment Regulation*. As well as the Danish *Ferry Frederik IX*, the *Sandrein, 2002* and *Clemenceau, 2008* also demonstrated the same difficulties.[13]

The EU responded to the problem of applying the *Waste Shipment Regulation* on old ships by shifting its focus from the *Waste Shipment Regulation* to a specific EU regime.[14] On March 23, 2012, the European Commission proposed to establish a legally binding regime.[15] In 2013, the European Parliament and Council accepted the proposal and passed the *EU Ship Recycling Regulation*. The instrument aims to promote sustainable shipbreaking of EU flagships, speed up the process of adoption of the *Hong Kong Convention* within the EU, and integrate the principles of the *Hong Kong Convention* into the law of the European Union.[16] To accomplish these aims, the *EU Ship Recycling Regulation* overrides the application of the *Waste Shipment Regulation*.[17] The European Commission argued that overriding the *Waste Shipment Regulation* was proposed to avoid confusion, overlapping and administrative burden.[18]

[12] See for a detail discussion on this case in Galley (n 10) 124-127.
[13] Ibid 117-136.
[14] Soledad Blanco, 'Recycling for EU Flag Ship Owners' (YouTube, 16 March 2012, 3.02-3.10). http://www.youtube.com/watch?v=nxk_c0Abhos
[15] See Denmark, 'Proposal for an Enforceable Legally Binding System for the Recycling of Ships', Submission to the IMO Maritime Environment and Protection Committee (IMO MEPC 53/3/7).
[16] Committee Draft Report on the proposal for a regulation of the European Parliament and of the Council on ship recycling, 2012/0055 (COD), (Nov. 12, 2012) 80.
[17] It is worthy to mention art 27 of the *EU Ship Recycling Regulation* excludes vessels from the scope of the *Waste Shipment Regulation*. Art 1(3) of the *Waste Shipment Regulation* adds that i) 'Ships flying the flag of a Member State falling under the Scope of Regulation (EU) No 1257/2013 of the European Parliament and of the Council are excluded'.
[18] Art 1(3) of the *Waste Shipment Regulation* is an exclusion clause that covers the areas where the *EU Ship Recycling Regulation* is not applicable.

According to the European Commission, the overriding does not cause difficulties in promoting sound shipbreaking because as per the *EU Ship Recycling Regulation*, the EU shipowners can only send ships to the EU approved facilities; i.e., the yards located beyond EU's jurisdiction, must stop using the common beaching practice and take approval from the European Commission. Since beaching is responsible for causing direct harms to coastal environments and workers by discharging wastes directly into the seawater,[19] the *EU Ship Recycling Regulation* undertakes this 'off the beach' shipbreaking approach. The next Section discusses the impact of this approach in detail.

B *Regulatory Standards under the EU Ship Recycling Regulation*

1 *Off-the-beach Shipbreaking*

The *EU Ship Recycling Regulation* follows an 'off-the-beach' shipbreaking process that refers to restricting releasing hazardous materials of a ship to the coastal beaches (see Chapter 3 that analyses the differences between beaching and off-the-beach shipbreaking approaches). Primarily, the *EU Ship Recycling Regulation* takes the *Hong Kong Convention* as the framework convention, but for the 'off-the-beach' approach,[20] it includes additional requirements to those of the *Hong Kong Convention*. Three of the most important requirements include: (a) the requirement for a shipbreaking yard to be included in a EU list of standard shipbreaking yards (see Section 2 of this Part), (b) the requirement for built structure that refers to the dry dock method, and (c) downstream toxic waste management.[21]

The text of the *EU Ship Recycling Regulation* does not interpret the phrase 'built structure', but in practical terms, it means the dry dock method of shipbreaking (see

[19] The *EU Ship Recycling Regulation*, art 15(2)(a).
[20] Similar to the *Hong Kong Convention*, the *EU Ship Recycling Regulation* provides that New Vessels flying the flag of a EU member states are required to have an inventory of hazardous materials on board from 31 December 2018. All EU flagged vessels must have a Ready for Recycling Certificate and cannot go to any yard other than those enlisted in the European List of Ship Recycling Facilities (EU List). For commercial operation and flying the flag of a EU Member State, the certified inventory of hazardous materials is required from 31 December 2020. Any non-EU flagged vessels calling at a port or anchorage of a EU member state shall have a certified inventory of hazardous materials from 31 December 2020; see DNV-GL, 'The EU Ship Recycling Regulation-Coming into General Application on 31 December 2018' (Web Page, 20 December 2018) https://www.dnvgl.com/news/the-eu-ship-recycling-regulation-coming-into-general-application-on-31-december-2018-135690
[21] The *EU Ship Recycling Regulation*, art 13(1)(c).

Chapter 3 for discussion of the difference between beaching and dry dock methods).[22] As per the text of the *EU Ship Recycling Regulation*, downstream toxic waste management includes: (a) 'control of any leakage, in particular in intertidal zones'[23] and (b) 'handling of hazardous materials and waste generated during the ship recycling process only on impermeable floors with effective drainage systems'.[24]

With 'off-the-beach' shipbreaking approach and a focus on downstream waste management, the primary objective of the *EU Ship Recycling Regulation* is 'to prevent, reduce or eliminate adverse effects on human health and the environment caused by the recycling, operation and maintenance of ships flying the flag of a Member State'. The problem is, however, that the *EU Ship Recycling Regulation* does not provide a detailed interpretation of its 'off-the-beach' requirement and a method by which shipbreaking yards can cope with this requirement. This lack of clarity, as argued below, may discourage the sending of EU ships to the shipbreaking yards that use beaching.

From the perspective of the South Asian shipbreaking industry, this off-the-beach shipbreaking approach of the *EU Ship Recycling Regulation* is also questionable for its extraterritorial application. The *EU Ship Recycling Regulation* is not an international treaty but it aims to enforce the EU standards beyond the EU and requires all non-EU countries to follow the requirements.[25] Otherwise, shipbreaking yards in non-EU countries are not eligible to purchase ships from EU shipowners. Moreover, any shipbreaking yard located outside Europe is subject to an inspection by the European Commission or its agents and authorisation for entering into the EU authorised shipbreaking yards.[26] Before the inspection, a non-EU shipbreaking yard has to apply to the European Commission, providing evidence of their compliance with the requirements along with a certification from an independent verifier who has inspected the site.[27] The following Sections discuss the complications arising from these requirements.

[22] Dry dock refers to break ships in a built structure and store wastes in a secured storage.
[23] The *EU Ship Recycling Regulation*, art 13(1)(f).
[24] The *EU Ship Recycling Regulation*, art 13(1)(g)(i).
[25] Mikelis (n 11) 41.
[26] The *EU Ship Recycling Regulation*, art 15 (2)(a).
[27] Ibid.

2 *Listing Approach*

In relation to time and scope for the listing approach, the *EU Ship Recycling Regulation* provides that from 1st January 2019, a shipbreaking yard located beyond the EU must have approval from the European Commission to recycle a EU ship above 500 gross tonnage (refers to a nonlinear measure of a ship's overall internal volume).[28] The European Commission published a list in November 2020.[29] The list contains one shipbreaking yard from the US, eight shipbreaking facilities from Turkey, and thirty-four shipbreaking yards from different countries of the EU, but no shipbreaking yard from South Asia.[30] Twelve yards from India applied but did not get the EU approval for not meeting the EU 'off-the-beach' shipbreaking standard. None of the Bangladeshi and Pakistani yards even filed an application, since, given the widespread use of the beaching method for breaking ships, they are ineligible.[31]

3 *Flag State Approach*

The *EU Ship Recycling Regulation* with the listing and 'off-the-beach' shipbreaking has a strict approach, but they are not consonant with the *EU Ship Recycling Regulation*'s flag State approach. The *EU Ship Recycling Regulation* applies only to EU flagships. It means the regulation is not applicable to ships flying the flag of a non-EU country. In other words, ships owned by the EU owners can evade the requirements of the *EU Ship Recycling Regulation* by reflagging. An underlying aim of the *EU Ship Recycling Regulation* is to monitor the operation and maintenance of ships flying the flag of a Member State only.[32] This would lead the EU shipowners to use the reflagging practice with the purpose of circumventing the regulatory standards of the *EU Ship Recycling Regulation* and they can still send ships where beaching is used.

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[28] The *EU Ship Recycling Regulation*, art 6(2)(a), arts 32 and 16.

[29] *The European List of Ship Recycling Facilities Referred to in Article 16 of the EU Regulation*, 1257/2013 OJL 160/28 (18 June 2019) https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1560844195431&uri=CELEX%3A32019D0995

[30] *Decision No 2020/1675 of the EU Commission Implementing Amending Implementing Decision (EU) 2016/2323 establishing the European List of Ship Recycling Facilities*, EU 1257/2013 OJL 378/5 (12 November 2020)https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32020D1675&qid=1605170136460

[31] List of ship recycling facilities located in third countries that have applied for inclusion in the European List of ship recycling facilities pursuant to Article 15 of the Ship Recycling Regulation 1257/2013. https://ec.europa.eu/environment/waste/ships/pdf/list-of-applicants-2018-12-14.pdf

[32] The *EU Ship Recycling Regulation*, Preamble para 7.

C *Lessons Learned from the EU Ship Recycling Regulation*

The study has learned three important lessons from the *EU Ship Recycling Regulation*. The first lesson is, unlike the *Hong Kong Convention*, the *EU Ship Recycling Regulation* follows a questionable binding approach for restricting the EU shipowners from sending ships to substandard shipbreaking yards in South Asia. Unlike the *EU Ship Recycling Regulation*, the global shipbreaking regime under the *Hong Kong Convention* does not prohibit the beaching practice, and does not currently have a mandatory listing of standard shipbreaking yards. However, the *Hong Kong Convention* has a voluntary mechanism so that shipbreaking yards improve their standards and private entities, such as Class NK, certify them.[33] Class NK has already certified 34 yards, including a shipbreaking yard in Bangladesh, for complying with the *Hong Kong Convention's* standards.[34] In addition, Lloyd's register based in the UK and Registro Italiano Navale (RINA) based in Italy have certified around 33 yards in India.[35] The *Hong Kong Convention* thus leads to a questionable private assessment practice.

The classification societies play an important role in the voluntary implementation of the *Hong Kong Convention* standards, but their operation is not transparent for three specific reasons. First, shipowners from developed countries own most of the major classification societies. This business link of major classification societies with shipowners raises questions around their authority to issue the certificates. The UN Special Rapporteur on Human Rights and Hazardous Substances and Wastes, Baskut Tuncack, has questioned the role of the classification societies for the link between

[33] Nippon Kaiji Kyokai, known as Class NK, is a ship classification society engaged in a growing range of ship related activities and services to contribute to promoting the protection of human life and property at sea and the marine environment. It is based in Japan and was the first company to issue the compliance certificate to a shipbreaking yard in India. Class NK, 'Introduction About ClassNK' (Webpage). https://www.classnk.or.jp/hp/en/about/aboutNK/

[34] World Maritime News, 'PHP Shipbreaking and Recycling Industries Wins HKC Compliance Statement', *World Maritime News* (online at 16 January 2020). https://www.offshore-energy.biz/php-ship-breaking-and-recycling-industries-wins-hkc-compliance-statement/

[35] Robin Des Bois, 'The Mystery of the Nameless Boat, Shipbreaking' (Bulletin of Information and Analysis on Ship Demolition No 55 from 1 January 2019 to 11 June 2019). http://www.robindesbois.org/wp-content/uploads/shipbreaking55.pdf ; Ship classification is the main object of RINA's business and it is the founding member of the International Association of Classification Societies formed in 1968. RINA, Marine (Web Page) < https://www.rina.org/en/business/marine>; Lloyds Register is a limited company registered in England and Wales. They certify shipbreaking facilities. See for a verified list of shipbreaking facilities, Lloyds Register Verified Ship Recycling Facilities (WebPage) < https://www.lr.org/en/lloyds-register-verified-ship-recycling-facilities/>

shipowners and classification societies, arguing that the classification societies do not work freely since they work for their owners – shipping industries.[36] Second, the mandate of the classification societies to act as a recognised organisation to certify the standards of India, Bangladesh or Pakistan is doubtful because the *Hong Kong Convention* has not entered into force yet, and they have no authority from the IMO or shipbreaking countries to assess the compliance with the *Hong Kong Convention* requirements.[37] Third, the business-to-business practice of the classification societies is also controversial. Any shipbreaking yard can contact a classification society and ask for a compliance certificate. NGO Shipbreaking Platform, a global environmental group that works closely to highlight the global shipbreaking problems, argues that the business-to-business certification process leads to endorsing a shipbreaking yard without inspecting the actual practice of the yard.[38]

According to a report published by NGO Shipbreaking Platform, before a classification society can issue a certificate, a shipbreaking yard has to provide an independent environmental assessment report, but to avoid the impact of the environmental clearance on the certificate; many yards from India have used the same classification society to issue both environmental clearance and the certificate of compliance. The report also finds that many of the common hazardous substances, including asbestos, have been found lying on Indian beaches certified by a classification society, but the certificate issued by the classification society did not reflect the condition.[39] Despite receiving a certificate of compliance with the *Hong Kong Convention* standards by the same classification society, reports often show that the shipbreaking yards in India maintain different standards.[40] Some yards have low quality due to the dangerous beaching practice.[41]

The second lesson learned from the *EU Ship Recycling Regulation* is 'off-the-beach' and 'listing' approaches are not suitable for global shipbreaking because of the *Hong Kong Convention*'s flag state approach. In this context, if it is proposed to adopt 'off-

[36] Cited in NGO Shipbreaking Platform, HKC Statement of Compliance (webpage), https://shipbreakingplatform.org/issues-of-interest/the-law/hkc-soc/>.
[37] NGO Shipbreaking Platform, HKC Statement of Compliance (webpage), https://shipbreakingplatform.org/issues-of-interest/the-law/hkc-soc/>
[38] Ibid
[39] NGO Shipbreaking Platform, HKC Statement of Compliance (webpage), https://shipbreakingplatform.org/issues-of-interest/the-law/hkc-soc/>
[40] Ibid.
[41] Julian Bray, 'Ship Recycling Forum', *TradeWinds News* 13 March 2020, 25-26.

the-beach' and 'listing' approaches following the *EU Ship Recycling Regulation* at the global level, it may not facilitate the improvement of the condition of South Asian shipbreaking yards, unless shipowners stop selling ships to South Asia. One of the main reasons is that both the *EU Ship Recycling Regulation* and the *Hong Kong Convention* follow the flag State approach and a change of flag to a non-party State can circumvent their application.[42]

Off-the-beach' and 'listing' approaches are not even viable for the European Union. In relation to the EU listed facilities, there is a growing concern whether the EU listed facilities with 30% capacity of the global shipbreaking annual demand can meet the EU's growing shipbreaking demand.[43] Shipping companies argue that listed capacity with 300,000 light displace tonnage is inadequate to meet the 2.5 million light displace tonnage supply of the EU flagships.[44] The European Commission also acknowledges that the main problem is the lack of capacity of the EU countries to meet the annual demand of shipbreaking.[45] The South Asian shipbreaking industry is therefore a primary choice for the EU shipowners. A report suggests that during the first two quarters of 2019, around ten ships reached the South Asian beaches after changing flags to St Kitts, a Caribbean country. Amongst other international shipping companies, Greek companies from the EU jurisdiction has topped the list.[46] This means the *EU Ship Recycling Regulation*'s 'off-the-beach' approach is not working properly.

The third lesson learned from the *EU Ship Recycling Regulation* is that mandatory pre-cleaning is also not a good option for the global shipbreaking industry. The EU did not address the mandatory pre-cleaning requirement, as pre-cleaning is associated with

[42] See Chapter 5 for detailed discussion on non-party State's eligibility to sell ships to the potential Member States of the *Hong Kong Convention*.
[43] Michael Schular, 'NGO shipbreaking Platform Slams Shipping Industry Scaremongering to Undermine European Ship Recycling Regulation', *gCaptain* (online at 6 June 2018) https://gcaptain.com/ngo-shipbreaking-platform-slams-shipping-industry-scaremongering-to-undermine-european-ship-recycling-regulation/
[44] The original weight of a ship that does not include residues of a 'cargo, fuel, water, ballast, stores, passengers, crew, but with water in boilers to steaming level': at UKP&I, Jacqueline Tan and Alexandra Couvadelli, Legal Article: EU Ship Recycling Regulation will Apply in full after 31 December 2018 (07-12-18).
[45] European Commission, Proposal for a Regulation of the European Parliament and of the Council on Ship Recycling, Executive Summary of Impact Assessment accompanying the Document, Brussels, 23.03.12, SWD (2012) 45 final, COM 2012 118 final, pp 2-3.
[46] Christian Hejj, Govert E. Bijwaard and Sabine Knapp, 'Ship Inspection Strategies: Effect on Maritime Safety and Environmental Protection' (2011) 16 *Transportation Research Part D* 42, 42.

a number of other practical problems that include: loss of sailing capacity of a ship, rising cost to tow the ship from one State to another, lack of capacity of towing ships to cover a long distance, high cost, and dangers involved in cleaning ships.[47] If the global shipbreaking regime is to incorporate the proposed 'off-the-beach' and 'listing' approaches, the shipowners will continue reflagging their ships to escape the liability. Another problem is the imposition of criminal liability on the shipowners if they do not follow the mandatory pre-cleaning as discussed in Part III of this Chapter. Criminal liability is controversial since it is likely to impose liability for practices, such as beaching, which are legal under the *Hong Kong Convention*.[48]

Learning the lessons from the *EU Ship Recycling Regulation*, this thesis argues for introducing a systemic approach to address liability of shipowners by a remedy system. The thesis also argues that setting a mandatory pre-cleaning and banning of beaching following the listing approach should not be the sole strategy to bring about behavioural change of shipowners. Rather, the thesis argues for a combined approach with an appropriate liability framework. The framework must address a financial guarantee of shipowners for compensating the workers who face deaths, injuries, or work-related diseases from shipbreaking.

A study entitled 'Insurance Aspects of Wrecks and Recycling of Ships From an Environmentally Sustainable Perspective' has reinforced the proposition.[49] The study proposes that insurance, as a financial mechanism is more suitable than stopping beaching and introducing mandatory pre-cleaning standards from the perspective of cost.[50] The study estimates that the calculated extra charge would be between 0.01 USD/LDT and 0.06 USD/LDT for the insurance premium,[51] whereas the cost of pre-cleaning is around 100-200 USD/LDT depending on what kind of vessel it is.[52] For these and other reasons explored further in Chapter 7, this thesis argues that improvement of standards in developing countries should not be the sole policy

[47] Det Norske Veritas, 'Technological and Economical Feasibility of Ship Scrapping in Europe' (Research Report N, 'Technological and Economical Feasibility of Ship Scrapping in Europe' (Research Report No. 2000-3527, 2001) 77-78.
[48] See Chapter 5.
[49] Kristoffer Tedenhag, 'Insurance Aspects of Wrecks and Recycling of Ships from an Environmental Sustainability Perspective' (Master's Thesis, Lund University, 2013) 62.
[50] ibid 62.
[51] Ibid.
[52] Maria Sarraf et al, 'Ship Breaking and Recycling Industry in Bangladesh and Pakistan,' (Report No. 58275-SAS, World Bank, 2010) 53.

mechanism. A financial mechanism that addresses civil liability of shipowners for compensatory harms is required to change the unsafe practices in South Asia.[53]

If a mandatory liability mechanism is going to be established globally, it should take into account the civil liability mechanisms for compensating the human loss.[54] Moreover, as discussed in the next Part, the framework should incorporate an appropriate insurance or financial guarantee, such as a ship recycling certificate, and ship recycling insurance proposed within the *EU Ship Recycling Regulation*. This leads to the question: what should be the nature and feature of the proposed framework?

The next Section examines the financial mechanisms proposed by a number of international institutions relating to imposing financial liability on the EU shipowners in order to discourage the reflagging practice. The examination is used to justify the suitability of the mechanisms in imposing civil liability on the EU shipowners for their business association with the shipbreaking industry and human harms in South Asia.

III ANALYSIS OF THE PROPOSALS WITHIN THE EU TO IMPOSE FINANCIAL LIABILITY ON EU SHIPOWNERS

The European Commission has theoretically recognised that a financial mechanism in addition to the *EU Ship Recycling Regulation* is the key to resolving the reflagging problem. Some of the other important objectives of an effective financial mechanism are to prevent, reduce, and minimise and to the extent practicable, eliminate accidents, injuries and other adverse effects on human health and the environment caused by ship recycling.[55] Art 29 of the *EU Ship Recycling Regulation* requires the European Commission to conduct a feasibility study and report to the European Parliament and the Council.[56] The preamble of the *EU Ship Recycling Regulation* also clearly states that the report should include:

> The feasibility of establishing a financial mechanism applicable to all ships calling at a port or anchorage or a Member State, irrespective of the flag they are flying, to

[53] NGO Shipbreaking Platform, 'Make the Polluter Pay: Why we need the EU Ship Recycling Licence' (Position Paper, October 2016). https://www.shipbreakingplatform.org/resources/library/. *(NGO Shipbreaking Platform, 2016)*
[54] See Chapters 7 and 8.
[55] The *EU Ship Recycling Regulation*, art 1.
[56] Ibid

generate resources that would facilitate the environmentally sound recycling and treatment of ships without creating an incentive to re-flag.

A *The Scope and Nature of a Financial Mechanism under the EU Ship Recycling Regulation*

The European Commission has therefore already reviewed a number of options between 2005 and 2016, but due to the nature of taxation, lack of insurance objectives, and scope deficiency of the options, the EU Parliament has not accepted them. For a clear analysis of the options, the Chapter classifies them into three terms. First, accumulation of funds from port levy that refers to raising a fund from charging a ship for every entry into a EU port. Second, the ship recycling licence that is to introduce a compulsory licencing system, paying a set fee for a ship to seek entry into a EU port. Third, the ship recycling insurance, which is to insure a ship for a set period, fixing the annual premium based on a ship's size and age. Every ship entering into a EU port must have the insurance certificate on board the ship.

The options are important from a conceptual basis of the thesis, because they reinforce the argument for introducing a financial mechanism for regulating the shipbreaking business. However, a major criticism of the approaches is that although they presume that the EU shipowners may send ships to South Asia, the approaches do not intend to impose inter-State liability on the EU shipowners and provide a remedy system for the workers who face deaths, injuries or shipbreaking work-related diseases in their value chain. Instead, the approaches propose to benefit the EU shipowners by returning the amount they pay to the financial mechanisms. In that sense, the financial mechanisms are in fact nothing more than a payback system presuming that the EU shipowners are going to lose their profit by selling ships to EU listed facilities. Therefore, the focus of the mechanisms is to compensate the price gap of a ship between a EU listed shipbreaking yard and a shipbreaking yard in South Asia.

Next Sections discuss the Capital Fund, port levy system, Ship Recycling Licence, a licencing system, and Ship Recycling Insurance, an annual insurance system. Part III.D identifies the lessons learned from the mechanisms for the global shipbreaking industry.

1 *Capital Fund*

Primarily, the European Commission aimed at introducing a capital fund from charging a port levy. In general, the proposed approaches, namely the ship recycling fund, ship recycling guarantee, and ship recycling account, require a shipowner to make an annual contribution to the fund for each entry into a EU port and as a ship grows older, to turn the annual contribution into a capital amount. The final capital amount would then be returned to the last shipowner-showing evidence of ship recycling in a EU listed shipbreaking yard.

Studies published prior to 2016 by the European Commission, Greenpeace, NGO Shipbreaking Platform, and the Director General Environment of the EU proposed a capital fund with different names. Ecorys's study (2005) named the financial mechanism as the 'ship recycling fund' charging from the owners of newly built ships.[57] The Cowi and Milieu (2009) study proposed to create a fund charging every ship visiting the EU ports,[58] and the Milieu study (2013), on the other hand, proposed to maintain a "ship recycling guarantee" by each ship visiting the EU ports.[59] Table 9 shows the nature of the proposals put forward to the EU Commission before 2016.

[57] ECORYS Research and Consulting, 'The Ship Recycling Fund: Financing Environmentally Sound Scrapping and Recycling of Sea-going Ships' (Research Report, Greenpeace, 1 February 2005).<https://shipbreaking.wordifysites.com/wp-content/uploads/2019/01/ECORYS-survey-on-a-ship-recycling-fund.pdf> *(Ecorys Study, 2005)*

[58] COWI and Milieu Environmental Law And Policy, 'Study in Relation to Options For New Initiatives Regarding Dismantling of Ships' (Research Report, The EU Director General of the Department of Environment, August 2009). < https://ec.europa.eu/environment/pdf/waste/ships/fund_note.pdf> (*COWI and Milieu Study)*

[59] Milieu Environmental Law and Policy, 'Financing the Environmentally Sound Recycling and Treatment of Ships' (Research Report, Impact Assessment Unit, Directorate for Impact Assessment, The EU Parliament, 2013). *(Milieu Study, 2013)*

Table 9. Key features of the financial proposals in the EU before 2016

Terms	*Author*	*Published by*	*Year*	*Names of the Fund*
The Ship recycling fund	Ecorys	Greenpeace[60]	2005	Ship Recycling Fund
Study in relation to options for new initiatives regarding dismantling of ships	Cowi and Milieu	EU Directorate-General Environment[61]	2009	Ship Recycling Fund
Financial mechanisms to ensure responsible ship recycling	Profundo	Shipbreaking Platform[62]	2013	-Ship Recycling Fund; -Ship recycling Account; -Ship recycling insurance or ship recycling life insurance
Financing the environmentally sound recycling and treatment of ships	Milieu	European Parliament (Impact Assessment)[63]	2013	-Ship Recycling Fund; -Ship recycling Account; -Ship recycling Insurance or ship recycling life insurance. -Ship recycling guarantee (SRG).

Regardless of the capital fund's eye on imposing liability, the capital fund as a financial liability system falls short of imposing financial liability on shipowners in the true sense. This is because, as noted above, instead of proposing to compensate the victims, the proposals set mechanisms to pay back the shipowners from the fund subject to showing evidence of recycling a ship in a EU listed shipbreaking yard.

[60] Ecorys Study, 2005 (n 57).
[61] Cowi and Milieu Study, 2009 (n 58).
[62] Profundo Economic Research, 'Financial Mechanisms To Ensure Responsible Ship Recycling' (Research Paper, NGO shipbreaking Platform, 22 January 2013) < https://shipbreakingplatform.org/wp-content/uploads/2018/11/Financial-mechanisms-for-resonsible-ship-recycling-22_01_2013-FINAL.pdf> *(Profundo Study, 2013)*
[63] Milieu Study, 2013 (n 59).

The capital fund aims to pay a EU shipowner the cost of the price gap for selling a ship to a EU listed shipbreaking yard, presuming that this option has financial consequences on the EU shipowner,[64] owing to the fact that the *EU Ship Recycling Regulation* compliant ship recycling facility cannot offer a price as high as a South Asian shipbreaking yard. A EU listed shipbreaking yard would pay less than a shipbreaking yard in South Asia due to spending a higher maintenance cost than a South Asian shipbreaking yard (see Chapter 3).[65] On the other hand, a South Asian shipbreaking yard can offer a higher price by not complying with environmental and safety standards. An obvious reason not to comply with the environmental and safety standards is their local legal system and the business model as discussed in Chapter 3.[66]

The Ecorys-Dnv-GL study comments that the price difference between a *EU Ship Recycling Regulation* compliant shipbreaking yard and non-*EU Ship Recycling Regulation* compliant shipbreaking yard may put the *EU Ship Recycling Regulation* compliant shipbreaking yard at a competitive disadvantage.[67] The shipowners therefore may not want to lose the profit and continue to sell ships to non-EU listed shipbreaking yards by reflagging to a non-EU flag. The proposed capital fund therefore acknowledges the possible difference in the operation cost of a EU listed shipbreaking yard and non-EU listed shipbreaking yard.

Moreover, raising funds from port entry has some practical problems. The option raises concerns among shipowners for uneven financial burden on ships calling more regularly to the EU ports than other low frequency ships to the EU ports. Further problem is the taxed nature of the port levy, which will create an extra administrative burden for the ports.[68] These practical problems led to proposing the ship recycling

[64] The latest EU study published by the EU Commission in July 2016 has also recommended to introduce a compulsory accumulation of capital system in the form of a ship recycling licence for both EU and non-EU flag ships visiting EU ports. The SLC administrative fee and insurance premium will accumulate a ship recycling fund; see the EU Commission, 'Report From the Commission To the European Parliament and The Council on The Feasibility of a Financial Instrument' (The EU Commission, COM(2017) 420 final, Brussels, 8 August 2017).
[65] ECORYS-DNV-GL-Erasmus University of Rotterdam, Financial Instrument to Facilitate Safe and Sound Ship Recycling' (Research Report, The EU Commission Directorate-General for Environment, June 2016) 34. *(ECORYS-DNV-GL Study, 2016)*.
[66] Ibid 34.
[67] Ibid.
[68] Ibid.

licence by the 2016 Ecorys-Dnv-GL study. The European Commission published and backed the study officially.[69]

2 *Ship Recycling Licence*

A Ship recycling licence is also a payback system, but it aims at resolving the problem of uneven financial burden caused by high frequency and low frequency entries of ships to the EU ports. Unlike the capital fund that aims at creating a capital fund by charging a ship for the number of entries into a EU port, the ship recycling licence is designed as an administrative matter,[70] to charge shipowners depending on the type, size and age of a ship.

The ship recycling licence has two parts – the first part is to cover the administrative cost of issuing the licence and the second part is a premium that is levied from the shipowners annually. The premium depends on the age, size and type of a ship. In case of a ship recycling licence, a shipowner can also claim the price gap and it is payable after showing proof of recycling in a EU listed facility. In the case where a shipowner fails to break ship in a EU listed shipbreaking yard, the EU can forfeit the capital amount. The forfeiture of the capital will be a procedure of an administrative nature and subject to judicial review. The forfeited amount will pass to a general benefit fund in the area of the ship recycling fund.

The EU Commission backed the ship recycling licence, although the ship recycling licence is not beyond criticism. The Ecorys, the classification society, Det Norske Veritas (Dnv-GL),[71] and Erasmus University School of Law, who prepared the mechanism commissioned by the EU, argue that the mechanism will sensitise the shipowners to follow the *EU Ship Recycling Regulation*, who have a tendency to circumvent the regulation by reflagging a EU ship to a non-EU flag, or, outside the jurisdiction of the EU, to which the EU law does not apply. Therefore, the proposals on the desired financial mechanisms aim at bringing about a behavioural change of shipowners by paying them back what they lose by selling ships to *EU Ship Recycling*

[69] The EU Commission, *Report From The Commission To The European Parliament And The Council On The Feasibility Of Financial Instrument That Would Facilitate Safe And Sound Ship Recycling*, COM (2017) 420 final, Brussels, 8 August 2017.
[70] Ibid.
[71] Det Norske Veritas is the world's leading classification societies and a recognised advisor for the maritime industry. DNV, About Us (Web Page) https://www.dnv.com/about/index.html

Regulation compliant shipbreaking yard.[72] The environmental groups and academics are also optimistic about the ship recycling licence. According to NGO Shipbreaking Platform, the most active environmental group for safe shipbreaking, 'the time-based ship recycling licence affects all beneficial owners of a given ship by distributing the responsibilities and costs of sustainable ship recycling throughout the life cycle of the ship'.[73] Devaux and Nicolai argue that the ship-recycling licence would strengthen the *EU Ship Recycling Regulation* by internalising the cost of shipbreaking.[74] The European Environmental Bureau has also backed the 2016 study, stating that:

> We call on the European Commission to follow-up this report with a legislative proposal. The effective implementation of European environmental policies has been dependent on making the 'polluter pay'. If the EU is serious about its commitment to sustainable ship recycling, all shipowners trading in Europe need to be held financially liable.[75]

Despite receiving support from environmental groups and academics, the ship recycling licence did not convince the EU shipowners. The International Chamber of Shipping contends the proposal is 'unenforceable and unlawful since the owners have to pay the money, which will be repayable to them after many years when the ownership of a ship may also be changed'.[76] The Asian Shipowners Association contends the licence fee is without any service. A charge without service is not acceptable under international law.[77] The International Chamber of Shipping and the European Community Shipowners' Association, representing 80 per cent of the world's commercial ships, rejected the proposal, arguing that this mechanism would undermine the global IMO efforts for a safe disposal of end-of-life ships. It indicates that the mechanism would slow down the global process of improving the working

[72] ECORYS-DNV-GL Study, 2016 (n 65), 34.
[73] NGO Shipbreaking Platform, 2016 (n 53).
[74] Caroline Devaux and Jean-Philippe Nicolai, 'Designing A EU Ship Recycling Licence: A Roadmap' (2020) 117 *Marine Policy Journal*, 7.
[75] Cited in NGO Shipbreaking Platform, 'European Commission Report Recommends the Introduction of a Ship Recycling Licence' (Press Release, 6 July 2016). https://www.shipbreakingplatform.org/press-release-european-commission-report-
[76] The Maritime Executive, 'Shipowners Reject Proposal for Ship Recycling License', *The Maritime Executive* (online at 7 August 2016). https://www.maritime-executive.com/article/shipowners-reject-proposal-for-ship-recycling-license .
[77] Lee Lang Liang, 'Asian Shipowners' Rejects EU proposal on Paying Ship Recycling Licences' (online, July 2016). *Seatrade Maritime News.* https://www.seatrade-maritime.com/asia/asian-shipowners-association-rejects-eu-proposal-paying-ship-recycling-licenses

and environmental conditions in developing nations, where most ship recycling yards are located.[78]

The comments from the shipowners have legal value, with respect to the objective of the *Hong Kong Convention* and *EU Ship Recycling Regulation*. The primary objective of the *EU Ship Recycling Regulation* is to help promote quick ratification of the *Hong Kong Convention* by EU Members. However, the EU maintains a double standard with the financial mechanism. The accumulation of funds from a port levy and ship recycling licence incentivise the EU shipowners to send their ships only to the EU listed shipbreaking yards that have stricter requirements than the *Hong Kong Convention*. One of such requirements is that the *EU Ship Recycling Regulation* does not allow beaching, whereas beaching is allowed under the *Hong Kong Convention*.

Given that the beaching method is not allowed, the beaching yards who meet the *Hong Kong Convention* standard are not eligible to purchase EU ships. These yards may in fact lose one of the biggest ship recycling market shares from the EU owners. The international community can resolve the gap between the *Hong Kong Convention* and *EU Ship Recycling Regulation* by forming a global regime aimed at imposing liability on the maritime industry and creating scope for paying the workers if they face deaths, injuries or work-related diseases whilst breaking ships.

Globally there is no such mechanism to regulate the transnational transfer of ships for breaking and to address its negative effects on their value chain (for shipbreaking). A mechanism to regulate the inter-State transfer of ships for breaking would require the shipowners to contribute from their business profit to a fund leading to the provision of financial security for victims. In the context of oil spills, discussed in Chapter 7, the liability mechanism in the form of insurance plays the same role.

3 *The Ship Recycling Insurance*

Similar to capital fund and ship recycling licence, a ship recycling insurance refers to paying back the price gap between EU listed and non-EU listed facilities in South Asia. Importantly, the Milieu study (2013) named this a 'ship recycling liability insurance' and the Profundo study published by the NGO Shipbreaking Platform in

[78] Ibid.

2013 used 'ship recycling life insurance' in place of liability insurance.[79] Under the schemes, every ship is required to carry an insurance certificate issued by an accredited insurance company to enter into a EU port.

Regardless of the importance of the insurance, the Profundo study showed concerns about its proposal of a ship recycling life insurance mechanism, mainly since insurance companies may not be interested in insuring old vessels that are prone to more accidents during shipbreaking.[80] To resolve the gap, the Milieu study (2013) argued for a liability insurance rather than life insurance. Regarding the charge, both studies proposed a port levy similar to the capital fund discussed above and that every ship is required to carry an insurance certificate issued by an accredited insurance company.[81] To reclaim the contribution from the insurance, a shipowner must show evidence of sound recycling in a EU-approved recycling facility. Both the Milieu study (2013) and Profundo study (2013) suggest that a private sector company could be the best option to determine the insurance premium.[82] The amount of insurance premium would depend on the future monetary difference between sound and unsound recycling. The threshold to forecast the difference would include the ship type, the timeframe, and the market conditions. In case of ownership transfer of a ship, the new owner would open a new insurance and the insurance company would determine the premium.[83] Having said that, the proposal for an insurance mechanism for ship recycling could not turn into a policy, due to lack of an insured object.[84] An insurable object is the basis of all insurance policies, which if damaged or destroyed would result in financial contribution from the policyholder. In that sense, the loss of price for selling a ship to a EU listed facility is not legally acceptable.

[79] Milieu, 'Financing the Environmentally Sound Recycling and Treatment Ships', (Research Report, 2013) 14; Profundo Study, 2013 (n 62) 24-25.
[80] Profundo Study, 2013 (n 62) 29.
[81] ECORYS-DNV-GL Study, 2016 (n 65) 34-38.
[82] Milieu Study, 2013 (n 59) 15; Profundo Study, 2013 (n 62) 29.
[83] Profundo Study, 2013 (n 62) 27-28.
[84] Importantly, to implement the insurance mechanism, the Milieu Study (2013) proposed to amend the existing EU Directive 2009/20/EC on the *Insurance of Shipowners for Maritime Claims* that relates to the insurance of shipowners for maritime claims introducing the requirement of liability insurance for the EU as a whole. Under the directive, any ship sailing the flag of EU or ships that are calling at a EU port are required to carry a certificate of insurance with them; ECORYS-DNV-GL Study, 2016 (n 65) 40.

B *Lessons for Global Shipbreaking*

An important lesson learned from the three aforementioned options is that, at present, a global mechanism to impose financial liability on shipowners is a timely approach. In particular, an important lesson learned from the insurance proposals is that unless there is an insured object and unforeseen event, insurance, as a financial mechanism, cannot succeed. During the lifetime of a ship, a number of different forms of insurance, including Hull and Machinery Insurance, and Protection and Indemnity Liability Insurance can cover it.[85] Irrespective of their names, all insurances manage risks in the event of any uncertain incident, damage of property and environment and loss of life.[86] These issues do not exist within the insurance proposals but they must exist in the context of the framework proposed in this thesis (see Chapter 9).

Moreover, it is clear that the financial accountability of shipowners is the pre-requisite to bring transparency within the EU. Although the *EU Ship Recycling Regulation* has no provision that stops the EU shipowners selling ships to South Asia, one of the consequences of the strict mechanism is that the *EU Ship Recycling Regulation* will discourage shipowners from breaking ships in South Asia. Even so, the *EU Ship Recycling Regulation* has not been successful due to the legal practice of reflagging. It seems likely that the same would happen when the *Hong Kong Convention* starts operating. Therefore, a global financial mechanism with the aim of addressing liability of shipowners for the human harms is required to implement the *Hong Kong Convention*. In that event, the ship recycling licence seems to be a good option because it distributes responsibilities and cost of sustainable shipbreaking to all owners throughout the life cycle of a ship. However, a mechanism such as this should provide a service to the shipowners rather than only paying back the profit lost.

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[85] Hull and Machinery Insurance is an insurance to compensate physical damages of a ship happened in the event of a maritime peril or other covered perils: at Aligned Insurance, Hull and Machinery Insurance Explained. (Web Page), https://www.alignedinsurance.com/hull-and-machinery-insurance/> ; An insurance that covers all other risk and liability of a ship's owner is generally called Protection and Indemnity liability insurance. This may include coverage for damage of third-party risks during transit, oil spill, and subsequent environmental damage: at Insurance Business, 'What is Protection and Indemnity Insurance'. (Web Page) https://www.insurancebusinessmag.com/au/guides/what-is-protection-and-indemnity-insurance-164290.aspx

[86] Raunek, 'Different Types of Marine Insurance and Marine Insurance Policies'. (Web Page, Marine Insight, 2 October 2019) https://www.marineinsight.com/maritime-law/different-types-of-marine-insurance-marine-insurance-policies/

The thesis argues that shipowners can still export their unclean ship subject to undertaking financial responsibility under a global mechanism similar to the shipbreaking licence for remedying any accidental injuries or deaths within the maritime industry. Unlike the EU financial model discussed in the previous sections, the objective of such a financial liability framework would be to provide adequate compensation to workers. This corroborates with the already established and highly acclaimed *International Convention on Civil Liability for Oil Pollution Damage*, 1992 discussed in Chapter 7 that imposes liability on shipowners for providing adequate compensation to victims, both private and public.[87]

To reinforce the debate, it is important to examine what other approaches have been used by EU Member States. Recently, the District Court of Rotterdam (Rotterdam District Court) has imposed criminal liability on two Dutch shipowners to enforce both the *Waste Shipment Regulation* and *EU Ship Recycling Regulation*. The next Part explains the approaches; one was before the entry into force of the *EU Ship Recycling Regulation* and the second was after the entry into force of the *EU Ship Recycling Regulation*. Criticising the criminal liability approach, the next Part argues that the District Court of Rotterdam missed an opportunity to govern an adequate international mechanism. This discussion will lead to an argument that financial or civil liability within a global framework is more suitable than imposing criminal liability.

IV IMPOSITION OF CRIMINAL LIABILITY BY THE DISTRICT COURT OF ROTTERDAM

As discussed earlier, the *Waste Shipment Regulation* could not stop sending ships to the substandard shipbreaking yards due to the common reflagging practice. In this regard, the *Seatrade and* Holland *Maas Scheepvart Beheer II BV* are the two exceptional and interesting cases. In deciding these cases, the District Court of Rotterdam imposed heavy criminal fines on two European shipping companies, Seatrade and Holland Maas Scheepvart Beheer II BV.[88] This Part examines the cases

[87] *International Convention on Civil Liability for Oil Pollution Damage*, opened for signature 29 November 1969, [1969] UNTS 319 (entered into force 19 June 1975) *(1969 Civil Liability Convention)*; the Convention was replaced by the *1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 27 November 1992, [1992] UKTS 86 (entered into force 30 May 1996) *(1992 Civil Liability Convention)*.

[88] *State v Seatrade* [The District Court of Rotterdam, three-judge economic division for criminal cases], Public Prosecutor Office no. 10/994550-15 15 March 2018 reported in (2018) Rechtspraak.nl ; *State v Holland Maas Scheepvart Beheer II BV* [Rotterdam District Court, three-judge economic

in detail and identifies their limitations for not directing an inter-State liability framework.

The Court in *Seatrade* relied on the *Waste Shipment Regulation* and imposed criminal fines on a EU shipping company, Seatrade, for hiding its intention to dismantle the ships in India and Bangladesh.[89] In *Holland Maas Scheepvart Beheer II BV*, the District Court of Rotterdam fined another EU shipping company, Holland Maas Scheepvart Beheer II BV, applying the *EU Ship Recycling Regulation*.[90]

A *Seatrade and Holland Maas Scheepvart Beheer II BV Cases*

1 *Facts of the Cases*

In 2012, a Dutch shipping company, Seatrade sent four old ships from the ports of Hamburg and Rotterdam with an intention to break in India and Bangladesh with full trading condition, but the company did not disclose the intention of breaking the ships.[91] After Greenpeace, an international non-government organisation, published the news, the Office of the Public Prosecutor of Rotterdam conducted a thorough investigation to identify the real intention behind selling the four ships. As per art 2 of the *Waste Shipment Regulation*, the transfer of any 'hazardous waste' from the ports of Europe to non-OECD countries is illegal subject to having adequate evidence to prove the intention of its final disposal. The Office of the Public Prosecutor filed the case to enforce the law arguing that the Dutch Company, Seatrade, in fact intended to send the ships for final disposal as wastes, and breached art 2 of the *Waste Shipment Regulation*.

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division for criminal cases], Public Prosecutor Office 18 January 2019 reported in (2019) Rechtspraak.nl 1.

[89] Cash buyers are brokers who purchase ships from shipowners for a short period before selling the ships to a suitable shipbreaking facility. They work on behalf of the shipowners to identify a facility that can pay the shipowner the best price. Another advantage is the cash buyers, by becoming owners of ships, hide the identity of original owners of ships. This helps protects shipowners from being exposed. NGO Shipbreaking Platform, 'Seatrade Convicted For Trafficking Toxic' (Press Release, 15 March 2018). <shipshttps://www.shipbreakingplatform.or/press-release-seatrade-convicted>

[90] The Maritime Executive, 'Another Dutch Shipowner Fined for Beaching a Vessel' (online at 21 January 2019). < https://www.maritime-executive.com/article/another-dutch-shipowner-fined-for-beaching-a-vessel>; NGO Shipbreaking Platform, 'Another Dutch Ship Owner Faces Huge Fine for Having Beached a Vessel' (Press Release, 20 January 2019). https://shipbreakingplatform.org/press-release-dutch-ship-owner-holland-maas-fined/> *(NGO Shipbreaking Platform, Press Release)*

[91] Norton Rose, 'Seatrade: A New Approach to Violations of Regulations on Ship Recycling in the European Union?' (Web Page, May 2018) https://www.nortonrosefulbright.com/en/knowledge/publications/f686f825/seatrade-a-new-approach-to-violations-of-regulations-on-ship-recycling-in-the-european-union

In the related *Holland Maas Scheepvaart II BV* case, the Office of the Public Prosecutor investigated the sale of a ship named HMS Lawrence to an Indian cash buyer company, by a Dutch Company, Holland Maas Scheepvaart II BV, a subsidiary of an international shipping company, WEC Lines BV. The Netherlands is a member of the EU, and under art 14 of the *EU Ship Recycling Regulation*, a EU shipowner cannot export a EU ship beyond the EU border. Under art 22, Member States can introduce provision for penalties for deterring an infringement of art 14 and take steps to ensure their application. The Office of the Dutch Public Prosecutor sought to enforce the law with a criminal fine or sanction on the ground that it was a criminal offence to export a ship beyond the EU and in this case, the company engaged the cash buyer with the same objective.

2 *Arguments of the Shipowners and Prosecutors in Both the Cases*

The key claim in both cases was whether there was enough evidence to prove the sale of the ships violated the laws. The prosecution argued in both cases that they had enough evidence to prove the intention of the shipowners to send the ships beyond the EU border. In *Seatrade*, however, the accused Seatrade argued that the ships continued their commercial operation until the last moment, which suggests that the owner did not have an intention to declare the ships as wastes, and it would be illegal to consider the ships as wastes.[92] However, on the email communications and examination of crewmembers, the prosecution proved that there were instructions from Seatrade that the ships must not contain much fuel and oils on board at their final destination.[93]

On the contrary, in *Holland Maas Scheepvart Beheer II BV*, the company, Holland Maas Scheepvart Beheer II BV admitted the intention to send the ship to India, but disputed on the jurisdiction of the Netherlands court stating that the ship left Netherlands waters in 2013 when the *EU Ship Recycling Regulation* was not in force. The company lawyers also argued that the ship started its last journey to India from Italy rather than the Netherlands. However, the argument could not succeed since, even though the *EU Ship Recycling Regulation* had not come into force, as a EU Member State court, the District Court of Rotterdam had the power to enforce the EU laws as per art 22 of the *EU Ship Recycling Regulation*, which provides that

[92] Ibid.
[93] ibid.

> Member States shall lay down provisions on penalties applicable to infringements of this Regulation and shall take all the measures necessary to ensure that they are applied.

The Court used this power in deciding the case.

3 *The Decisions to Pay Criminal Fines and Disqualify the Directors*

(a) Seatrade

The Court accepted the evidence produced by the prosecutor and ruled that there were enough reasons to define the operational ships as wastes with respect to the *Waste Shipment Regulation* that considers any material or substance to be wastes subject to a proof of its holder's intention of disposal and ordered payment of a heavy fine of EUR 750,000. The Court also directed that sending ships to India and Bangladesh as wastes was a serious criminal offence that warranted imprisonment of the directors, however, considering it was an offence committed for the first time, the Court waived the prison sentence and alternatively imposed a 12 months' suspension on their directorship position in any company.[94]

(b) Holland Maas Scheepvart Beheer II BV

In *Holland Maas Scheepvart Beheer II BV*, the Court also found the shipowner, Holland Maas Scheepvart Beheer II BV guilty and ordered it to pay a heavy criminal fine. The Court accepted the evidence provided by the public prosecutor of the Netherlands and found that the ship that finally reached Alang, India was sold in 2013. An Indian shipbreaking yard broke the ship under conditions that caused serious damage to the environment and the health of workers and exposed the local population to grave danger.[95]

The Court ordered the company to pay a heavy fine of 780,000 EUR. The company afterwards paid a settlement of 2.2 million EUR. Altogether, the company had to pay almost three million EUR – roughly the price obtained from selling the ship. The Court accepted the settlement since the company made a commitment to avoid scrapping vessels on beaches located in South Asia in future.

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[94] Ince Maritime, 'The Seatrade Verdict: Has Scrapping Just Got A Lot More Onerous' (online at 2 October 2018). https://www.incegd.com/en/news-insights/seatrade-verdict-has-scrapping-just-got-lot-more-onerous-0

[95] NGO Shipbreaking Platform, Press Release (n 90).

B *Lessons Learned for Undertaking Responsibility by Shipowners*

The two cases are important for reinforcing the debate of imposing liability on shipowners, however, the Court imposed liability for recycling ships in South Asia, not for its negative consequences. In other words, the Court found the act of selling ships illegal, but not its consequences. The thesis thus argues that in deciding *Seatrade* and *Holland Maas Scheepvaart II BV*, the courts missed a good opportunity to inspire the improvement of standards in main ship recycling centres through an effective civil liability mechanism (see Chapter 9).

Even so, one of the important effects of both *Seatrade* and *Holland Maas Scheepvart Beheer II BV* is the naming and shaming effect against the EU shipping companies. Moreover, the decisions demonstrate that in the absence of a global liability system to bring the real owners to justice, imposing criminal liability seems to be an important course of legal action against the original owners in Europe. The importance of *Seatrade* lies with the fact that the Court pierced the veil of reflagging and held the original owner, Seatrade, responsible for selling four ships to the Bangladesh and Indian shipbreaking industry. Importantly, the intention of the shipping company and its direct link with the inter-State transfer process have formed the basis of the decision. The decision implies that more due diligence from shipowners is required in selling ships to developing countries. Otherwise, shipowners' decision-making process will be under further scrutiny. Rose argues that the decision will decrease reflagging, because the EU shipowners cannot escape the liability under the *Waste Shipment Regulation* simply by reflagging.[96] In case of any transboundary movement of ships for recycling, the *Waste Shipment Regulation* would continue to apply unless a ship falls within the purview of the *EU Ship Recycling Regulation*. For instance, in the case of a non-EU ship, the *Waste Shipment Regulation* may still apply, if there is a proof that a EU owner previously owned the ship or the shipping company that owned the ship was originally incorporated in the EU.[97]

Arguably, imposing criminal liability has some limitations. First, it can only penalise the owner who is caught red-handed. For instance, in *Seatrade*, the public prosecutor

[96] Rose (n 91).
[97] Ibid.

intervened after Greenpeace published the news against Seatrade Limited for its non-disclosure of intention to dispose of the ships in India. It shows that without Greenpeace's news, the company would have escaped the liability. In other words, if international environmental groups or media are not auditing the shipping companies there is a limited possibility to bring them to justice. Perhaps this is a reason for why, between 2019 and 2020, a number of ships reached South Asian beaches after reflagging, but not all of them were brought to justice.[98] Second, the decisions do not direct a strong mechanism to impose such liability on all EU ships. Juan Ignacio and others argue that imposing criminal liability to implement the *EU Ship Recycling Regulation* is a wrong approach, since such decisions have limited scope to recognise the inter-State liability of shipowners. Third, the *Seatrade* and *Holland Maas* cases did not direct the EU to pay attention to remedy the victims.[99] As remedy, the court imposed fines that go to the States' treasuries, not to the workers.

In fact, what benefit the decisions create is not clear. Except for the limited possibility to provide remedy to the workers, the decisions of both *Seatrade* and *Holland Maas* have two positive effects. First, the decisions provide a limelight effect; that is, in bringing the issue of liability of shipowners to light and second, they introduce a leverage effect, inspiring the bargaining position of victims.[100] The decisions are wake-up calls to those owners who have not taken the debate on accountability for the harms caused to workers from the shipbreaking seriously.[101] Nevertheless, it is true that scepticism remains of its effectiveness as the *EU Ship Recycling Regulation* imposes a unilateral approach providing a stricter mechanism than the *Hong Kong Convention*, upon which it is principally based.[102] More so, in fact, because the *EU Ship Recycling Regulation* aims to stop substandard shipbreaking practices without

[98] Michael Schular, 'NGO Shipbreaking Platform Counts 142 Ships Sent to South Asian Beaches in First Three Months of 2019', *gCaptain* (Online at 10 April 2019). < https://gcaptain.com/shipbreaking-platform-report-first-quarter-2019/>
[99] Juan Ignacio Alcaide, Emile Rodriguez-Diaz and Francisco Piniella, 'European Policies on Ship Recycling: A Stakeholder Survey' (2017) 81 *Marine Policy*, 262-272.
[100] Surya Deva, *Regulating Corporate Human Rights Violations: Harmonising Business* (Routledge, 2012) 6-7, citing August Reinisch, 'The Changing International Framework for Dealing with Non-state Actors' in Philip Aston (ed), *Non-State Actors and Human Rights* (Oxford University Press 2005) 74.
[101] The Maritime Executive (n 76).
[102] Silvia Pastorelli, EU Ship Recycling Regulation: What's in it for South Asia, European Institute for Asian Studies (August 2014).

imposing restrictions on the reflagging practice, the success may not be forthcoming.[103]

V LESSSONS LEARNED FROM THE EU APPROACHES AND STIMULATING THE DEBATE ON IMO LEADERSHIP IN SHIPBREAKING

The thesis does not propose to modify the reflagging practice for shipbreaking. Shipbreaking is a part of marine business and thus it is not practical to argue for changing the reflagging practice, which is legally embedded in the global maritime business. Instead, the thesis proposes an international framework to address liability of the shipowners who misuse the reflagging practice. The civil liability and insurance framework proposed in Chapter 9 outlines how a global liability and insurance framework for the shipbreaking industry would be established. The thesis posits that if the aim of the global mechanism for shipbreaking is to ensure liability of the shipowners using the global rectificatory justice theory as discussed in Chapter 2, it is important for the IMO to take leadership and introduce a global mechanism with the objectives outlined in this thesis. This is a key issue in the context of shipbreaking, since it is a complex global business and dependent on the structure and parties involved in the global maritime industry.[104]

The objective of the global governance would be to overcome the problems with weak governance and poor legal structure of developing nations to hold the relevant stakeholders liable. Shipbreaking is a part of the maritime sector and it is not beyond problems affecting the sector. The thesis argues that there should be a civil liability framework in addition to the *Hong Kong Convention* because the *Hong Kong Convention* does not address the liability of shipowners. From the perspective of a financial mechanism, an important lesson learned from the EU proposals is that such a liability mechanism should include financial guarantee or insurance from the maritime and shipbreaking industry.

It is worth repeating that the ship recycling insurance proposed for the EU is weak since it fails to include an insured object. The proposed ship recycling licence for the

[103] Nikos E. Mikelis, *The Recycling of Ships* (Global Maritime Services (GMS) Leadership, 2nd ed, 1 October 2019) 28.

[104] Juan Ignacio Alcadia, Francisco Piniella and Emilio Rodriguez-Diaz, '"The Mirror Flags": Ship Registration in Globalised Ship Breaking Industry' (2016) 48 *Transportation Research Part D* 378, 382.

EU is also weak, as it does not propose to give any service to shipowners in return for their cost. The IMO can resolve these gaps by combining both licence and insurance into one legal framework. The combination of licence and insurance should be used for compensating the workers who face deaths, injuries or work-related diseases in the shipbreaking industry. In other words, the insurance can cover the risk and economic loss of the workers, and the licence can tighten up the change of ownership throughout the life cycle of a ship. The possible nature and functional system of the mechanism is discussed in Chapter 9, drawing more lessons from Chapter 7.

In promoting a global standard, political support from the IMO Member States is also important. This is crucial for any legal reform under the IMO, as historically, the IMO showed a lack of willingness or ability to lead a global change unless Member States had demonstrated strong political will behind a policy reform. Such support from the Member States is also important in the context of shipbreaking.

This Chapter has demonstrated that the EU is a strong supporter of a financial mechanism, so there is a good ground for the EU Member States to push for such a global mechanism under the IMO. Buthe and Mattli have identified two specific reasons to suggest why such a role from the EU is useful.[105] First, an inter-State policy respects global preferences.[106] Second, a common position of the EU members can force the non-State actors to undertake responsibility for the compensatory harms.[107] In many cases, the EU has already shown leadership and advocated for global regulatory changes. An important role played by the EU Commission in adopting the *Kiev Protocol* in 2003 that imposes liability on mining industry owners for compensating the victims affected by the pollution of transboundary watercourses (see Chapter 8),[108] is a good example for moving forward the legal reform proposed in this thesis.[109]

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[105] Tim Buthe and Walter Mattli, *The New Global Rules: The Privatisation of Regulation in the World Economy* (Princeton University Press, 2011) 10.
[106] Ibid.
[107] Alasdair R. Young, 'The European Union as a Global Regulator? Context and Comparison' (2015) 22(9) *Journal of European Public Policy* 1233, 1245.
[108] *The Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents,* opened for signature 21 May 2003, UN Doc. ECE/MP.WAT/11-ECE/CP.TEIA/9 (not yet in force). *(Kiev Protocol*
[109] R Kissack, 'The performance of the European Union in the international Labour Organisation' (2015) 33(6) *Journal of European Integration* 651, 656.

VI CONCLUSION

The analysis of the EU mechanisms has been applied to answer the fourth research question of the thesis: What can the global shipbreaking industry learn from regulatory and financial measures of the EU in relation to shipbreaking? Chapters 7 and 8 explore this further drawing analogies from other global industries and their regulatory mechanisms.

This Chapter has argued that a mechanism encompassing liability of shipowners should include a financial liability in the form of a certificate together with insurance, but it must aim to compensate the most vulnerable parties to the business transaction adequately. The reason for this is that it is not certain whether the *Hong Kong Convention* promoting the interest of the maritime industry can control the human and environmental risks of breaking ships. The EU is a global leader in the protection of the marine environment by promoting their innovative and strict policy. Generally, the EU makes their own law and this can then lead to global reforms.[110] The Chapter has argued that the proposed EU financial mechanisms have already stimulated the debate for a liability framework based on financial liability that can lead to making global reforms for the shipbreaking industry.

Taking the financial mechanisms that proposed for the EU into consideration, Chapter 7 addresses the fifth research question: What can the shipbreaking industry learn from reform measures in other industries where catastrophic events, worker deaths, injuries and illnesses from unsafe working environments have brought about regulatory changes to the industries concerned? To assist in addressing the regulatory reforms, Chapter 7 undertakes a detailed analysis of liability frameworks adopted in three industries: oil transport, transboundary movement of ships, and offshore oil industries.

[110] Ibid.

CHAPTER SEVEN : LESSONS LEARNED FROM THE CASE STUDIES OF GLOBAL OIL, SHIPPING, AND OIL RIG INDUSTRIES

I INTRODUCTION

The thesis argues for the shipbreaking liability certificate (SLC), being a civil liability mechanism that aims at compensating the deaths, injuries and work-related diseases of shipbreaking workers.[1] The objective of this civil liability mechanism is to provide prompt and adequate compensation to workers who suffer a work-related injury or disease, or to a worker's family, if a worker faces death in the workplace from a work-related injury or disease. The mechanism is not a punitive instrument, and, strictly, it does not address the environmental harms associated with shipbreaking. However, implementation of the instrument may control the environmental harms and encourage improvements in occupational health and safety over time, as has occurred in other industries where such compensatory mechanisms exist.

The Chapter answers the fifth research question of the thesis: What can the shipbreaking industry learn from the reform in other industries where catastrophic events, deaths, injuries, illnesses of workers and environmental damages have brought about significant regulatory changes to the industries concerned? This Chapter adopts a normative analysis, which is used to ask: *what legal reform is required*. Following three case studies, this normative approach is used to examine the post-incident regulatory reforms that have focused on creating mechanisms for compensation, among other regulatory changes to improve business practices, while minimising risks of harm to people.[2] The examination leads to investigating three regulatory reforms and learning further lessons applicable to the shipbreaking liability certificate (SLC), being a civil liability mechanism proposed in Chapter 9.

First, the Chapter examines several catastrophic events and evaluates the regulatory changes that occurred in their aftermath, including the establishment of the industry-

[1] Brian D. Smith, '*State Responsibility and the Marine Environment: The Rules of Decision'* (Oxford University Press, 1988) and Gunther Handl, 'International Liability of States for Marine Pollution' (1984) 21 *Canadian Yearbook of International Law* 85-117.

[2] However, although the regulatory mechanisms do not focus on the problems with business practices within the industries, the approaches have an indirect impact to resolve the problems within the business practices.

specific civil liability mechanisms, and considers the factors and features that have made those civil liability mechanisms effective in the global industry context.

Second, this Chapter examines an effective insurance led enforcement mechanism triggered after a catastrophic offshore oil rig incident and argues for introduction of the same for shipbreaking to bring change in the shipbreaking industry.

Third, this Chapter analyses a ship-specific certificate system introduced after a catastrophic event in the UK maritime industry and evaluates the importance of such a system for the shipbreaking industry.

This Chapter proceeds as follows. Part II investigates the legal framework for managing oil spills (the 'International Oil Spill Regime') that has emerged following four major oil spill incidents, namely, the *Torrey Canyon* – 1967; *Amoco Cadiz* –1978; *Erika* – 1999 and *Prestige*– 2002, and specifically the legal developments on civil liability and compensation mechanisms that were implemented after these incidents. These incidents and the ensuing mechanisms are relevant to the shipbreaking industry since they establish how shipowners can effectively undertake liability and contribute to resolving a global problem. Initially, global shipping and oil industries undertook responsibility by agreeing to follow two voluntary schemes, the *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* and *Contract Regarding a Supplement to Tanker Liability for Oil Pollution*.[3] In the beginning, these two voluntary mechanisms contributed to establishing the global principles governing civil liability and compensation for oil spill incidents. Following global acceptance of the two voluntary schemes, the International Maritime Organization (IMO) State Parties adopted two international Conventions, the *International Convention on Civil Liability for Oil Pollution Damage* in 1969 and the *International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage* in 1971 (*1971 Fund Convention*), that guaranteed adequate amounts of compensation to both private and public victims.[4] The instruments are relevant for the shipbreaking

[3] *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution*, signed 7 January 1969, [1969] ILM 8(3) (entered into force 6 October 1969); *Contract Regarding a Supplement to Tanker Liability for Oil Pollution*, signed 14 January 1971, [1971] ILM 10(1) (entered into force 15 October 1977). They are called voluntary schemes since they were not mandatory mechanisms. It is only the decision on whether or not to participate that is voluntary. The mechanisms would be binding on shipowners and oil industries only after voluntary agreement to follow the mechanisms.

[4] *International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 29 November 1969, [1969] UNTS 319 (entered into force 19 June 1975) *(1969 Civil Liability*

industry since the instruments impose direct liability primarily on the shipowners, for causing harms due to oil spill accidents.[5]

Part III examines the Piper Alpha incident, an oilrig disaster that prompted the principle of 'high risk leads to high insurance premium' for enforcing the existing safety standards within the oil and gas exploration industry in the UK. Examining the effects of the principle, this Part argues that this insurance-based enforcement mechanism fits well with shipbreaking in South Asia, particularly because the enforcement mechanism within the domestic and international laws of shipbreaking is not adequate to put pressure on non-compliant shipowners.

Part IV discusses the Plimsoll line incident happened in 1871 that prompted an international legal mechanism for the mandatory use of a Load Lines Certificate. The IMO introduced the Load Lines Certificate to restrict ships from overloading with goods and addressed liability of shipowners for causing casualties from accidents. This Part and Chapter 9 argue for a similar certification system for the shipbreaking industry. This shipbreaking certificate will help to track whether the shipowners are following the international regulatory standards, such as maintaining an inventory of hazardous materials provided in the *International Convention for the Safe and Environmentally Sound Disposal of Ships* (*Hong Kong Convention*),[6] while operating their ships. A global certificate for shipbreaking would also ensure that shipowners are responsible for breaking their ships in a shipbreaking facility in South Asia. Part IV then concludes this Chapter with a recommendation that the shipbreaking regime should follow the civil liability approach, learning from the global civil liability and

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Convention); the Convention was replaced by the *1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 27 November 1992, [1992] UKTS 86 (entered into force 30 May 1996) *(1992 Civil Liability Convention)*; *International Convention on the Establishment of An International Fund for Compensation for Oil Pollution Damage*, opened for signature 18 December 1971, [1971] ILM 284 (entered into force 16 October 1978) *(1971 Fund Convention)*. This *1971 Fund Convention* was superseded by the *Protocol of 1992* to the *International Convention on the Establishment of An International Fund for Compensation for Oil Pollution Damage*, opened for signature 27 November 1992, [1992] UKTS 87 (entered into force 24 May 2002) *(1992 Fund Convention)*; The *2003 Protocol Establishing an International Oil Pollution Compensation Supplementary Fund*, opened for signature 16 May 2003, [2003] 92FUND/A.8/4, Annex I (entered into force 3 May 2005) *(2003 Supplementary Fund Convention)*.

[5] In the context of compensation claim under the *1992 Civil Liability Convention* both a State and its citizens or entities can claim compensation. A State claims compensation for cleaning up the oil wastes from the coastal area as a public body whereas the private parties, such as the fishery or tourism sector, can claim their respective loss as private parties.

[6] *The International Convention for the Safe and Environmentally Sound Disposal of Ships*, opened for signature 1 September 2009, IMO Doc. SR/CONF/45 (19 May 2009) (not yet in force) (*The Hong Kong Convention)*.

compensation mechanism discussed in this Chapter. Table 10 summarises the major approaches of the mechanisms discussed in the Chapter.

Table 10. The measures used in other global industries

Case Studies	*Principles*	*Approach Details*	*Measures*	*Region/Country*	*Discussion*
Torrey Canyon, Amoco Cadiz, Prestige and Eika Oil Spill	The International Oil Spill Regime	Shipowners and Oil industries pay compensation to victims	Oil Spill Insurance	International	Part II
Piper Alpha	The UK Offshore Act	As Low as Reasonably Practicable Practices	Goal Setting of protective measures	The UK	Part III
Plimsoll Line Incident	The International Load Lines Convention	International Load Lines Certificate	Restriction to overload a ship	International	Part IV

II CASE STUDIES ON THE INTERNATIONAL OIL SPILL LEGAL REGIME

The regime governing oil spill is a complex web of laws and therefore the next Section, II.A explains the regime in brief before discussing the mechanism in Section II.B.

A *Evolution of the Regime*

Similar to shipbreaking accidents, after a number of major oil spill incidents in international waters, a common realisation within the industry was that an 'oil spill accident is a statistical certainty that will exist as long as oil is moved by sea'.[7] The oil and shipping industries also have realised that as long as the ships keep transferring oil on the sea, the industry cannot stop the accidents.[8] However, unlike the shipbreaking industry, the oil spill incidents have brought about significant legal developments with respect to providing compensation to affected parties following a

[7] R Michael M'Gonigle & Mark W Zacher, *Pollution, Politics, and International Law – Tankers at Sea* (Berkeley, Los Angeles: University of California Press, 1979) 143.
[8] Astrid Kalkbrenner, 'Compensating for Catastrophic Harm: Civil Liability Regimes and Compensation Fund' (PhD Thesis, The University of Calgary, 2015) 187.

combined effort by oil and shipping companies from 1967 to 2005. The legal development occurred in three stages.

First, the *Torrey Canyon* incident in 1967 triggered regulatory changes under which the shipping industry accepted corporate liability for oil spillage accidents. The supertanker *Torrey Canyon*, flying the flag of Liberia, ran aground near the coast of Great Britain containing 120,000 tons of crude oil in 1967. Spill of the vast amount of oil polluted a large area of transboundary coastal land of the UK and France, but the question arose as to which principle and procedure would apply for the UK and French governments to claim the compensation from the shipping companies whose ships caused the oil spillage.[9] The existing law at the time had no direction for a compensation claim in the event of such oil spill causing pollution damage. The problem also shed light on the business structure of the maritime industry. Due to involvement of a number of private parties in this oil spill incident, it was difficult to determine the jurisdiction or law that would help the UK and France proceed with their compensation claims.[10]

Consequently, the legal gaps led to the shipping and oil industries undertaking responsibility under two voluntary agreements, which eventually converted into two very successful international conventions.[11] Primarily, the shipping industries agreed on a voluntary scheme, namely the '*Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution*' and set the legal standard for compensation claims. The IMO (formerly known as the Inter-Governmental Maritime Consultative Organisation

[9] Pham Van Tan, 'A Study of Compulsory Insurance for Civil Liability for Oil Pollution Damage Caused by Ships: What are the Rules for Small Ships that Have No Formal Obligations Under the Convention' (2021) 13 (2) *Australian Journal of Maritime and Ocean Affairs* 113-121, 113-114; Eve C. Southward and A.J. Southward, 'Recolonization of Rocky Shores in Cornwell After the Use of Toxic Dispersants to Clean Up the Torrey Canyon Spill' (1978) 35(5) *Journal of the Fisheries Research Board of Canada* 682, 682-690; International Tanker Owners Pollution Foundation, *Torrey Canyon, United Kingdom, 1967* (Web Page, 23 May 2014) , https://www.itopf.org/in-action/case-studies/case-study/torrey-canyon-united-kingdom-1967/ .

[10] The supertanker *Torrey Canyon* flying the flag of Liberia ran aground near the coast of Great Britain containing 120,000 tons of crude oil in 1967. In case of *Torrey Canyon*, the ship was owned by a Bermudan corporation called Barracuda that in fact was a subsidiary company of the Union Oil Company of California and before the final journey the ship was chartered to British Petroleum, a UK oil company: at Colin De La Rue and Charles B Anderson, *Shipping and the Environment* (Taylor and Francis Ltd., 2nd Edition, 2009); see also Khalid R. Aldosari, 'The Applicability of the International and Regional Efforts to Prevent Oil Pollution; Comparative Analysis Between the Arabian Gulf Region and the North Sea' in Angela Carpenter, Tafsir Martin Johansson, and James Anderson Skinner (eds) *Sustainability in the Maritime Domain: Strategies for Sustainability* 199-221, 202-204.

[11] Julie Adshead, 'The Application and Development of the Polluter-Pays Principle Across Jurisdictions in Liability for Marine Oil Pollution: The Tales of the 'Erika' and the 'Prestige' (2018) 30 *Journal of Environmental Law* 425, 433.

(IMCO)[12] adopted the *International Civil Liability Convention* in 1969, only after the widespread adoption of the *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* scheme. The *International Civil Liability Convention* included the essential features of the private *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* agreement. Strict liability of a shipowner to pay compensation, liability on shipowners, limited liability of shipowners, and maintaining liability insurance for each inter-State oil transport were some of the common features of the *Tanker Owners Voluntary Agreement Concerning Liability for Oil Pollution* and the *International Civil Liability Convention* adopted in 1969.[13]

The oil industries as a key party to the international oil transportation business also contributed to resolve the problem of financial compensation. The oil industries introduced a voluntary agreement, *Contract Regarding a Supplement to Tanker Liability for Oil Pollution* in 1971 to share the financial burden of the shipowners. Thereafter, the IMO parties adopted the 1971 *Fund Convention* with the same object of supplementing the corresponding *International Civil Liability Convention*.

Second, after the *Amoco Cadiz* oil spill incident in 1978 near the coast of France, IMO parties had to adapt to new challenges with exceeding amount of compensation claim due to accidents of even larger ships.[14] The consequence was the adoption of two amendments to the *International Civil Liability Convention, 1969* and the *1971 Fund Convention.* The aims of the amendments were to increase the maximum limit of compensation set under the *International Civil Liability Convention* and *1971 Fund Convention* and to meet the USD two billion cost for cleaning up the oil released into

[12] It is an special arm of the United Nations (UN). In 1948, the UN Member States adopted the *Convention on the Inter-Governmental Maritime Consultative Organisation* (IMCO) that entered into force in 1958. Primarily known as the Inter-Governmental Maritime Consultative Organisation (IMCO), was changed to IMO in 1982. Its main objective is to provide mechanisms for inter-State co-operation for following its regulations and practices affecting inter-State shipping. More so, the IMO aims to motivate Member States to adopt the best standards of practice not only for ensuring maritime safety and navigational efficiency, but for restricting marine pollution from ships: at The International Maritime Organization, *Brief History of IMO* (Web Page) http://www.imo.org/en/About/HistoryOfIMO/Pages/Default.aspx

[13] Third party refers to the party who has no interest in the inter-State transfer of oil. In other words, a third party means a party who is neither a party exporting nor importing the oil from one State to another.

[14] More than two billion USD of cleaning up challenged the earlier legal limit of compensation. The *Amoco Cadiz* ship had run aground in the territorial waters of France, discharging 230,000 tons of crude oil into the seawater on March 16, 1978, near the Brittany beach again within the territorial scope of the *Torrey Canyon*: at Linda Rosenthal and Carol Raper, 'Amoco Cadiz and Limitation of Liability for Oil Spill Pollution: Domestic and International Solution' (Fall 1985) 5(1) *Virginia Journal of Natural Resources Law* 259, 260-261.

the seawater after the *Amoco Cadiz* incident.[15] Even so, after the oil spill occurred in 1999 when the *Erika* broke into near the coast of Britanny in France,[16] and *Prestige* oil spill incident happened in 2002 near the coast of Spain,[17] the magnitude of the loss questioned the earlier limits of compensation. Consequently, with an aim of providing an adequate amount of compensation, parties to the *International Civil Liability Convention, 1969* and *1971 Fund Convention* introduced more amendments. The amendments turned the *International Civil Liability Convention, 1969* into *1992 Convention on Civil Liability* and *1971 Fund Convention* into *1992 Fund Convention*. In 2003, the parties to the *1992 Fund Convention* also adopted the *Supplementary Fund Protocol* (SFP) for increasing the liability limit. More parties, including the shipbuilder, are included under the *Supplementary Fund Protocol*. The *Supplementary Fund Protocol* entered into force in 2005.[18] After the *Supplementary Fund Protocol*, the maximum value of compensation has climbed to USD 1038 million. The *Supplementary Fund Protocol* pays anything above the threshold established in the *1992 Convention on Civil Liability* and *1992 Fund Convention* from the contribution of oil industries, without imposing any extra liability on shipowners. Thus, the *Supplementary Fund Protocol* created a new problem in imposing extra liability on oil industries in the event of an oil spill incident, which exceeds the maximum compensation limit of the *1992 Convention on Civil Liability* and *1992 Fund Convention*.

[15] Chao Wu, 'Liability and Compensation for Oil Pollution Damage: Some Current Threats to the International Convention System' (2002) 7 *Spill Science and Technology Bulletin* 105, 106.

[16] On 13th December 1999, a Maltese single hull oil tanker, the *Erika* broke into two parts 45 nautical miles off the coast of Brittany in France. The incident caused to spill around 20,000 tonnes of heavy fuel oil. That was a massive disaster affecting around 400 kilometres of shoreline. France, being the public victim, claimed for the cleaning up of the coastal environment cost. Private loss was also huge. It hit hard the fisheries and tourism sector, in particular around the affected area. The total value of claims was USD 521.18 million, but claimants received only USD 188.3 million under the Conventions: at Eduard Somers and Gwendoline Gonsaeles, 'The Consequences of the Sinking of the M/S Erika in European Waters: Towards a Total Loss for International Shipping Law' (2010) 41(1) *Journal of Maritime Law and Commerce* 57, 59-61.

[17] On 19 November 2002, the tanker *Prestige*, registered in the Bahamas (42,000 gross registered tonnages), carrying around 77,000 tons of Russian heavy fuel oil, sank off the Atlantic coast of Spain. The damage to the environment is considered one of the worst experiences in the oil spill history with many unseen consequences. The incident and spill affected three countries; France, Spain, and Portugal. During the incident, these countries were member States of the Conventions: at Adshead (n 10) 440-441.

[18] The requirement for entry into force was achieved in December 2004 when eight states receiving 450 million tons of contributing oil ratified the protocol: at Art 21 of the *2003 Supplementary Fund Protocol*.

Finally, to resolve the gap and ensure equal financial liability of both shipowners and oil industries, the International Group of Protection and Indemnity (P&I) clubs[19] placed two separate agreements, the *Small Tanker Oil Pollution Indemnification Agreement* (STOPIA) and *the Tanker Oil Pollution Indemnification Agreement* (TOPIA). The *Small Tanker Oil Pollution Indemnification Agreement* raised the liability limit of shipowners set under the *1992 CLC* for small vessels from 5000 Gross tonnage to 29,548 Gross Tonnage to cover ships with bigger size and minimise the burden on oil industries. The *Tanker Oil Pollution Indemnification Agreement* scheme introduced sharing of compensation equally (50%) between the shipowners and oil industries to indemnify the *Supplementary Fund Protocol*.[20] For example, if an oil industry has to pay an extra two million USD following the *Supplementary Fund Protocol*, under the *Tanker Oil Pollution Indemnification Agreement*, a shipowner has to refund USD one million to the concerned oil industry. In 2005, the IMO accepted all the voluntary agreements. They entered into force on February 20, 2006.[21]

From 1969 to 2006, the oil spill regime was developed, shifting responsibility to non-State parties, including shipping and oil industries. This was possible because the industries undertook responsibility for the compensatory harms.[22] Overall, the basic objective has remained the same and it has been to provide adequate and prompt compensation to the affected parties (victims) following a global mechanism. The next Section explains the oil spill liability and compensation system in detail.

[19] Oil spill incidents and their compensation have a close connection with Insurance industries. One of the major insurance providers in marine transport is the International Group of Protection and Indemnity (P&I) clubs. The club has thirteen principal underwriting member clubs and mutual insurers. Together, they provide a cover of liability (protection and indemnity) to 90% of the world ocean-going vessels: at Ling Zhu, Ming Zhao Zhang, 'Insuring against Marine Pollution Liability: An International Perspective' (2015) 46, *Journal of Maritime Law and Commerce* 373, 373.

[20] International Oil Pollution Convention Fund, *Small Tanker Oil Pollution Indemnification Agreement* (as amended 2017), opened for signature 28 February 2005, [2005] ILM 92FUND/A.ES.10/13 (entered into force 20 February 2006); *The Tanker Oil Pollution Indemnification Agreement* (as amended 2017), opened for signature 28 February 2005, [2005] ILM SUPPFUND/A/ES.2/7 (entered into force 20 February 2006).

[21] The basis of these two agreements is not to exceed the burden of either of the two industries for more than 60%. Reviews should be done after the first ten years that should follow further review in every five years: at Explanatory Note, The International Regime for Compensation for Oil Pollution Damage (The Secretariat of the International Oil Pollution Compensation Funds, January 2012) https://www.iopcFund.org/npdf/genE.pdf

[22] Marko Pavliha and Mitja Grvec, 'The 2003 Supplementary Fund Protocol: An Important Improvement to the International Compensation System for Oil Pollution Damage' (2008) 58(1-2) *Zbornik PFZ* 307, 330.

B *The Oil Spill Liability and Compensation System*

The oil spill liability and compensation system is an appropriate approach to give full effect to the corporate liability principle.[23] The oil spill regime has been a well-performing model. Up to 2020, the *1992 Fund* had paid USD 1038.85 million as compensation in relation to 150 incidents of oil spill.[24] Historically, shipowners paid a ninety-five per cent share of this amount.[25] The reasons for this success is its basic features, that is strict liability of shipowners, liability on registered shipowners, the limit on liability of shipowners, and compulsory insurance or financial security. This liability regime has three pillars. The first pillar is the *1992 Convention on Civil Liability* that provides the primary conditions to be fulfilled for imposing liability on a responsible party. The second pillar consists of the *1992 Fund Convention*, and the third pillar is the compensation system under the *2003 Supplementary Fund Protocol* that supplements the *1992 Convention on Civil Liability* limit for paying adequate compensation to victims of oil pollution because this Convention established a cap on the compensation to be paid to victims of an oil spill incident. The next section explains the main features of the overall liability and compensation system.

1 *Rules of the First Pillar under the 1992 Convention on Civil Liability*

An analysis of the *1992 Convention on Civil Liability* shows that subject to some exceptions, the shipowner is strictly liable for oil spill compensation. Following strict liability, the regime confirms a specific limit on liability beyond which a victim cannot claim any compensation. It requires the shipowners to maintain insurance or any other suitable financial guarantee. These features are discussed below.

(a) Liability on Shipowners

The *1992 Convention on Civil Liability* confirms shipowners' liability for the payment of compensation. Under art 3 (1) of the *1992 Convention on Civil Liability*, shipowners are liable for any pollution damage caused by a shipowner of a State Party in the

[23] Michele M. Comenale Pinto, *The Mechanism of Funds for the Compensation of Maritime Environmental Damage, International Law of the Sea: Current Trends and Controversial Issues*, ed Cura di Angela Del Vecchio (Eleven International Publishing, 2013) 262, 262-263.
[24] International Oil Pollution Compensations Funds, *Annual Report* (Final Report, 2020) 6-7.
[25] International Chamber of Shipping and International Group of P&I Associations, Submission No IOPC/APRIL17/4/6 to the International Oil Pollution Compensation Funds, April 2017 sessions, 2.

territory of another State Party.[26] Under the Convention, shipowner means a party registered as the ship's owner or, if the ship is not registered, the party who owns the ship.[27] In addition, 'who is controlling the ship or who has a passive interest in the ship' is defined as owner.[28] Whether the shipowner is strictly involved in the operation of the ship is not relevant under the Convention. The goal of the regime is to compensate victims of oil spill incidents during the course of transport, so it includes oil tankers (a ship which is used as any sea going vessel and seaborne craft of any type whatsoever construed or adapted for the carriage of oil in bulk as cargo) and does not apply to all other ships.[29] Oil means 'any persistent hydrocarbon mineral oil such as crude oil, fuel oil, heavy diesel oil, and lubricating oil, whether carried on board a ship as cargo or in the bunkers of such a ship'.[30]

For an easy access to compensation, the *1992 Convention on Civil Liability* follows the strict liability principle. Strict liability is a suitable route for victims in case of an oil spill incident so that victims do not need to find proof of fault of shipowners. Victims can claim directly from the responsible shipowners or insurance companies unless the damage is a result of 'an act of war', 'insurrection or a natural phenomenon', or was caused by 'an act or omission done with intent to cause damage by a third party'.[31] In a case where more than one ship is involved in causing pollution-related damage, they will be jointly and severally liable unless the damage can reasonably be separated.[32]

The *1992 Convention on Civil Liability* also strikes a balance by introducing a limitation on liability of shipowners alongside their strict liability so that shipowners do not have to pay unlimited amounts of compensation.

[26] International Oil Pollution Compensation Fund, *Decision Identification No 001676, Nefterudovoz-57M incident*, 28th sess, Agenda Item 5, IOPC Doc 92FUND/EXC.28/8 (22 March 2005).
[27] *1992 Convention on Civil Liability*, art 1(3).
[28] Peter Wetterstein, 'Environmental Impairment Liability after the Erika and Prestige Accidents' (2004) 46 *Scandinavian Study of Law* 230, 230.
[29] Kalkbrenner, (n 8) 212; *1992 Convention on Civil Liability*, art 1(1).
[30] Ibid art 1 (5).
[31] Ibid arts 3(2) (a)-(c).
[32] Ibid art 4.

(b) Exclusion or Limitation of Liability

Under the *1992 Convention on Civil Liability*, the financial liability is limited to an amount based on the tonnage of a ship.[33] Limited liability is subject to the proof of no involvement through knowledge or intention of the shipowner.[34]

Following an oil spill incident, a shipowner must establish a fund that represents the total sum following the limit of their liability either with a law court or other defined authority of any one of the State Parties. For fund creation, direct deposit, or bank guarantee or other guarantee is acceptable under the law of the State Parties and considered to be adequate by the court or competent authority.[35]

(c) Compulsory Insurance

Insurance is mandatory for shipowners. It is compulsory for every ships for carrying more than 2000 tons of oil in bulk as cargo. In spite of insurance, other financial security, such as the guarantee of a bank or a certificate from an international financial institution is also acceptable, but the amount covered under the insurance or financial security must reflect the respective limit of liability as laid down in Article 5 (1) of the *1992 Convention on Civil Liability*.[36]

The financial certainty has been a central element to the overall development of the *1992 Convention on Civil Liability*. At the initial discussion of the *Convention on Civil Liability*, 1969, State Parties disagreed with including a compulsory insurance system, but the US and French delegates strongly emphasised this as a direct process of compensation claims and its role in enforcing strict liability on shipowners.[37]

(d) Direct Claim of Compensation

Along with insurance, an innovative approach of the *1992 Convention on Civil Liability* is to allow victims to claim compensation from the insurer directly.[38] Every

[33] For a ship not exceeding 5000 units of gross tonnage, the *1992 Convention on Civil Liability* limit is 4510,000 units of account (Special Drawing Rights). For a ship between 5000 units of gross tonnage and 140,000 units of tonnage, the *1992 Convention on Civil Liability* limit is 4,510,000 Special Drawing Rights (SDR) plus 631 SDR for each extra unit of tonnage. For a ship carrying 14,000 units of gross tonnage or over, the *1992 Convention on Civil Liability* limit is 89,770.000 SDR.
[34] Ibid art 5(2).
[35] ibid
[36] Ibid art 7(1).
[37] Kalkbrenner (n 8) 216.
[38] *1992 Convention on Civil Liability*, art 7(8).

shipowner covered under the Convention needs to prove a financial security in respect of a direct claim of a victim. Art 7 (2) of the *1992 Civil Liability Convention* provides:

> The owner of a ship registered in a Contracting State and carrying more than 2000 tons of oil in bulk as cargo shall be required to maintain an insurance or other financial security, such as the guarantee of a bank or a certificate delivered by an international compensation fund, in the sums fixed by applying the limits of liability prescribed in Article 5, paragraph 1 to cover his liability.[39]

As a proof of an insurance or other financial security, every shipowner covered under the *1992 Civil Liability Convention* has to maintain a civil liability certificate (CLC) and demonstrate enforceability. The flag State of a shipowner issues the certificate of the ship after the shipowner provides proof of the insurance.[40] Art 7(2) of the *1992 Civil Liability Convention* provides:

> With respect to a ship registered in a Contracting State a certificate, attesting the insurance or other financial security shall be issued or certified by the appropriate of the State of the ship's registry.

An insurance or financial security provider cannot deny a claim arguing that the concerned shipowners has breached his or her insurance contract with the insurer or financial security provider.[41] It means the breach of contractual terms of an insurance agreement is not allowed as a defence to direct action.

The direct claim system is a deviation from the traditional marine insurance of indemnity, wherein the third party victim had no right to claim from the insurer. Traditionally, marine insurance is an agreement between insurers and insured and depends on the terms of the insurance agreement. In the context of an oil spill accident, the insurer or financial security provider takes the position of the shipowner in legal action and can take all the defences that are applied to a shipowner except for the defence of bankruptcy or winding up of the shipowner.

[39] Ibid art 7(1).
[40] Ibid, art 7(2).
[41] ibid art 7(8).

2 *Rules of the Second Pillar of the Regime under the 1992 Fund Convention*

The *1992 Fund Convention* has included two important objectives. The first objective is to provide full compensation, and the second objective is to share the compensation between shipping and oil industries.[42] Art 2 of the *1992 Fund Convention* formed the International Oil Pollution Compensation Fund (IOPCF) and endorsed it with the duty to decide on the claims in relation to substitution and addition, if the claims were not covered under the *1992 Convention on Civil Liability*. Substitution applies when the shipowner is not responsible to provide compensation due to legal exemptions under the *1992 Convention on Civil Liability* regime, for example, in case of application of a force majeure or when it is not possible to identify a ship.[43] The IOPCF also provides an upper limit on compensation and supplements the limit prescribed in the *1992 Convention on Civil Liability*.[44]

The *1992 Fund Convention* also has a liability limit similar to the *1992 Convention on Civil Liability*. The maximum amount of liability under the Fund is 203,000,000 units of account, which is equivalent to USD 286,130,292.18, including any amount paid under the *1992 Convention on Civil Liability*.[45] A victim can claim this even if the damage is the consequence of a natural disaster of an exceptional, inevitable, and irresistible character.[46]

The *1992 Fund Convention* has also conferred subrogation rights to the IOPCF. The IOPCF is the main administrative body of the IMO to handle any claim under the *1992 Fund Convention*. By dint of art 9(1) of the *1992 Fund Convention*, the IOPCF has the same right to claim compensation on behalf of a victim against a shipowner or shipowner's guarantor or insurer.[47] The *1992 Fund Convention* also confers the subrogation right to 'a State Party or agency that has paid compensation for pollution damage to private victims following its State law. In such a case, a State or agency can exercise the same rights as a victim'.[48]

[42] Kalkbrenner (n 8) 218.
[43] Ibid.
[44] Ibid.
[45] Ibid art 4(4) (a)
[46] Ibid art 4(4) (b).
[47] A Guarantor is a person who provides insurance or other financial security to cover an owner's liability under art 7(1) of the *1992 Convention on Civil Liability*: at *1992 Fund Convention*, art 1(7).
[48] *1992 Fund Convention*, art 9(3).

The contribution to the fund is to ensure the re-distribution of liability and costs of paying an adequate compensation. The fund is created from the contribution of private oil importers. Importers of oil must make primary and annual contributions using port or terminal or installation facilities of a State Party. Any person who has received more than 150,000 tons of oil by shipping and used any port or terminal or installation of a State Party of the *1992 Fund Convention* in a calendar year must contribute to the fund.[49]

3 *The Third Pillar of the Compensation System under the 2003 Supplementary Fund Protocol*

The *Supplementary Fund Protocol* provides a third tier compensation to the victims in addition to the amount paid under the *1992 Convention on Civil Liability* and the *1992 Fund Convention*. Table 11 below shows the limit set in each of the pillars and the highest is USD 1038 million. The three tiers are thus linked to each other. However, it is optional for parties to the *1992 Fund Convention* to join the *Supplementary Fund Protocol*, but without becoming parties to the *1992 Convention on Civil Liability* and *Fund Conventions*, a State cannot join the *Supplementary Fund Protocol*.[50]

The *1992 Fund Convention* has developed the pro-rata system of compensation payment for when the amount of compensation exceeds the legal limit. The pro-rata system is to reduce the actual compensation amount to the legal limit proportionately. When the claim amount is higher than the limit of the *1992 Fund Convention*, the victims receive compensation proportionate to the limit in lieu of their original claim amount. The reduction of claim of Portugal, France and Spain after *the Prestige* incident following the pro-rata system caused widespread criticism. Therefore, the *Supplementary Fund Protocol* aims to change this pro-rata system, yet still with a limit.[51] As per art 4 of the *Supplementary Fund Protocol*, subject to becoming a party to the *Protocol* and the *Fund Convention*, a State party or victim has to establish their claim meeting the requirements of the *1992 Convention on Civil Liability* and the *1992 Fund Convention*.

[49] *1992 Fund Convention*, arts 12(2) (a)-(b); Under Art 1(3), 'contributing oil includes coastal deliveries of oil which are then reshipped by coastal transport'. The same oil can be counted several times: at art. 10.
[50] Ibid.
[51] ibid.

Table 11. Limitations on liability under the civil liability regime between 1969 and 2003

Tanker Size (gross tonnage)	***1969 Civil Liability Convention* as amended (in million)**	***1992 Civil Liability Convention* as amended (post 2003) (in million)**	***1992 Fund Convention* (post 2003) (in million)**	***2003 Supplementary Fund Protocol* (in million)**
5000	$0.92	$6.24	$281	$1038
10000	$1.84	$10.61	$281	$1038
50000	$9.20	$45.53	$281	$1038
100,000	$18.40	$89.18	$281	$1038
140,000	$19.37	$124.06	$281	$1038
150000	$19.37	$124.21	$281	$1038
200,000	$19.37	$124.21	$281	$1038

The original figures are in SDR=Special Drawing Right, the exchange rate is 1 SDR= $ 1.39 as at 17.02.2021. The unit of account is defined by the International Monetary fund.
Source: The *United Nations Conference on Trade and Development Report 2017*

The assembly of the IOPCF then makes a temporary or final order of approval on that claim. The *Supplementary Fund Protocol* then intervenes if the shipowner or his insurer and the *1992 Fund Conventions* is insufficient to meet a valid demand of a claimant. Support from the *Supplementary Fund Protocol* is mandatory if the total damage goes beyond the limit or there is a risk of exceeding the limit of the *1992 Convention on Civil Liability* and *1992 Fund Convention*, currently, which is USD 281 million. After meeting the criteria, the *Supplementary Fund Protocol* is responsible for paying the difference in amount between the limit of the *Supplementary Fund Protocol* (around USD 1038 million) and the earlier conventions (which is USD 281 million under the *1992 Convention on Civil Liability* and *Fund Conventions*) to the victims.

The *Supplementary Fund Protocol* was against the basic principle of sharing responsibility between shipping and oil industries. Only oil industries had to contribute to the supplementary fund under the *Supplementary Fund Protocol* (*Protocol*). The *Protocol* does not shift any burden of the increased amount to shipowners. This

questioned the shared responsibility theory of the whole compensation system. The *Small Tanker Oil Pollution Indemnification Agreement* (STOPIA) and *the Tanker Oil Pollution Indemnification Agreement* (TOPIA) finally resolved the issue, and shipowners are now required to cover larger ships (29,548 Gross Tonnage) and contribute 50% to the supplementary fund as discussed above.

4 *Lesson Learned for the Shipbreaking Industry*

With respect to oil spill incidents, the above principles have established an effective system for addressing liability and paying compensation to victims. An important lesson learned from the three pillars of the oil spill regime is its effectiveness in stopping further accidents. The regime has a positive impact on the prevention of accidents. Kalkbrenner claims that the primary purpose of the *1992 Convention on Civil Liability* is to provide adequate compensation that has an indirect effect on prevention.[52] As discussed in Chapter 9, the civil liability framework proposed under the thesis for shipbreaking can also have an indirect effect on prevention. Oil industries prefer transporting oil using good shipping companies to save their funding expenditure and take less risk to contribute to the fund created after the *1992 Fund convention* and *Supplementary Fund Protocol*. This tendency of oil industries eventually works to prevent more accidents.[53] A successful implementation of the SLC framework discussed in Chapter 9 may guide the shipbreaking yards to improve their standard gradually. This would help indirectly to reduce the shipbreaking-related deaths, injuries and diseases.

Prevention requires every party to act together. The regime binds both the oil and shipping industries, being the main stakeholders. It is an implied way of controlling unsafe shipping practices. Financial security also acts to prevent accidents. It ensures the victims that their claim will be paid. Importantly, although a shipowner's liability to pay compensation is limited, a reckless or negligent behaviour of a shipowner contributing to an incident can turn the limited liability to an unlimited liability. This change of liability means there is every possibility to claim full compensation in law that results in taking care in oil transport and has an indirect effect on prevention.[54]

[52] Kalkbrenner (n 8) 23.
[53] Ibid.
[54] Ibid.

A different view is that there is no mechanism for direct compensation for environmental damage. The regime has no role to play to upgrade an already damaged environment. The regime does not compensate unless it is related to the economic loss (fishery, tourism, or scientific research). Nevertheless, economic loss is linked to environmental damage. For instance, pollution of water causes death to fish that eventually affects the fishing community. In that sense, environmental damage in intricately linked to economic loss, so the regime indirectly compensates for environmental damage.[55] Although the regime does not consider cleaning the environment and restoration to its original condition, it supports cleaning up costs, and it rests with the quality of each State as to how much they can clean and restore before successfully claiming and receiving compensation.

Historical comparison is used to assess the success of a regime. Jihong Chen and others claim that despite increasing oil transport by sea the rate of accidents is decreasing through the development of the regime since 1969.[56] Until 2020, one hundred and twenty States have become parties to the *1992 Civil Liability Convention* and this increased number of State ratifications signals the success of the regime.[57] Importantly, other specific areas, such as transboundary pollution and the carriage of hazardous and noxious substances by sea use the Conventions as guiding principles for developing a liability and compensation framework.[58]

The most important lesson learned from the oil spill regime is the significance to establish a special liability and compensation mechanism that considers the features of a particular industry. The thesis argues that the shipbreaking industry requires a specific legal regime. The mechanism would prevent future accidents in the shipbreaking industry by establishing the responsibility for both shipping and shipbreaking companies. Both should contribute to the compensation so that prevention and compensation work hand-in-hand.

[55] Kalkbrenner (n 8) 41.
[56] Jihong Chen et al, 'Oil Spills from Global Tankers: Status Review and Future Governance' (2019) 227 *Journal of Cleaner Production* 31, 31.
[57] IOPC Funds, 'State Parties to both the 1992 Civil Liability Convention and the 1992 Fund Convention' (Webpage) <www.iopcfunds.org>
[58] Pauline Marchand, 'The International Law Regarding Ship-Source Pollution Liability and Compensation: Evolution and Current Challenges' (Conference Paper, International Oil Spill Conference, 17 May 2017) 1-2.

The oil spill regime is a model of corporate liability principle discussed in Chapter 2.[59] Such a victim-oriented approach rooted in the corporate liability principle is required under the shipbreaking regime. The shipping companies may not support a similar regime due to the extent of the business compared to the oil spill regime. An oil spill could develop into legal action from industry because of the global nature of the business. In the case of an oil spill, the centre of focus is compensation – because of State Parties' proactive role to safeguard the victims of oil pollution, industries agree to take responsibility.[60] On the other hand, the shipbreaking industry operates in a few countries of South Asia, and shipbreaking problems are assumed to be the problems of nations with shipbreaking industry. Perhaps, for this reason, most powerful shipping countries are not concerned about this and they do not create any pressure on the shipping industry to introduce compensation for the victims, even though the extent of loss is much more visible in shipbreaking than oil spill incidents through the lens of human rights.

This Chapter compares to the oil spillage incidents in order to highlight the similar nature of adverse consequences between these incidents and shipbreaking incidents. There are a number of similarities, but their legal standards differ significantly. For instance, the shipbreaking incidents cause human deaths and injuries in the shipbreaking process along with damage to the coastal environment, but they did not spark any liability and compensation regime. The environment and shipbreaking workers directly become the victims of business activities of non-State parties, including the shipowners that generally act beyond the jurisdiction of countries, where the incidents occur. On the other side, while the incidents caused loss mainly to the natural habitats, and tourism in the surrounding areas, oil spill incidents have triggered a comprehensive legal framework for liability and compensation.

The issue of benefit is the key to both shipbreaking and the maritime industry. Enjoying the benefits while perpetuating injustice should not be acceptable unless it is backed by a liability and insurance regime. The question is, as the shipbreaking yards and shipowners are not compliant with the proposed standards provided in the *Hong Kong Convention*, who would blow the whistle to enforce the standards. The thesis contends that an enforcement mechanism led by the insurance industry would

[59] Kalkbrenner, (n 8) 231.
[60] Pavliha and Grvec (n 22) 330.

be the best option. This would create indirect pressure on shipowners and shipbreaking yards, with a risk of paying a high insurance premium if their standards are not enough to provide adequate safety for workers. The *Piper Alpha* incident discussed in the following section is a good example to illustrate this in facilitating the improvement of standards in the very risky, offshore oil industry.

III PIPER ALPHA INCIDENT: INSURANCE LED ENFORCEMENT MECHANISM

A *The Incident*

The Piper Alpha, a North Sea oil production platform exploded from a gas leak on 6 July 1988, triggering the regulatory changes worldwide so that the oil and gas extraction industry manage risk considering the practical circumstances.[61] Most importantly, this incident changed the inspection policy as to how the insurance industry should monitor the new safety standards.

Weak industry practice was mainly responsible for the *Piper Alpha* accident.[62] Piper Alpha was an offshore oil rig that was under maintenance. Because of a breakdown of communication between the night and day shift workers, the night shift workers – without knowledge of the ongoing maintenance work – switched on machineries that had a valve which had already been removed. As a result, the blind flange failed, causing the failure across Piper Alpha,[63] leading up to the explosion. The event cost 167 lives alongside releasing a huge amount of oil into the seawater.[64] The deaths and environmental damage to the coastal environment led to a significant impact in policy development in relation to stricter inspection and safety assessment by insurance industries.

[61] Lloyd's, '1988 The Piper Alpha Explosion' *Piper Alpha* (Web Page) < https://www.lloyds.com/about-lloyds/history/catastophes-and-claims/piper-alpha>
[62] J.R. Petrie, *Piper Alpha Technical Investigation Interim Report* London Department of Energy, Director of Safety, Petroleum Engineering Division Doc no. 643/4/10/1 (September 1988).
[63] North Atlantic Space Administration, 'The Case for Safety: The North Sea Piper Alpha Disaster' (System Failure Case Study No 7 (4), May 2013) 1-2.
[64] K Hales, 'Insurance- Piper Alpha "et al"' (1995) 13(2/3) *Special Edition: New Zealand Petroleum Conference: Selected Papers* 253, 253.

B *Regulatory Changes after the Incident*

Preceding the incident, the UK government enacted two relevant laws; *the Offshore Safety Act 1992* and the *Offshore Safety (Protection against Victimisation) Act 1992*. The *Offshore Safety Act 1992* introduced safety case requirements for new installations from 1993. 'A safety case is a structured argument, supported by a body of evidence that provides a compelling, comprehensible and valid case that a system is safe for a given application in a given environment'.[65] These laws introduced higher safety standards for offshore industries, but left it up to the industry concerned to enforce the standards. This led the insurance industries to step in.

The Piper Alpha incident hit the insurers hard. It was a huge business loss to the insurance industry for compensating twelve different losses, including liabilities for deaths and injuries.[66] An estimated value of the loss was USD 1500 million.[67] Because of the loss, insurers changed their risk assessment policy with more close inspections to check whether the offshore structures were following the *Offshore Safety Act 1992* reasonably. Many insurers increased the amount of insurance premiums if the offshore oil structure did not follow the recommended standards. This happened when underwriters found that the loss was higher than they anticipated.[68] Some insurers experienced loss in excess of their catastrophic reinsurance protections. This increased the value of premium with the renewal increased by 40%.[69] By increasing the premium, the leading energy underwriters, such as Lloyds, were trying to force a change in the market. However, the question is have these increased premiums and more scrutiny had a positive impact on the industry practice?

According to Dominick Hoare, joint active underwriter at Munich Re Underwriting, 'Piper Alpha revealed just how deficient some exposure monitoring systems were then'. He added that 'life has changed dramatically since'.[70] This comment shows that Piper Alpha was a turning point in the risk assessment of the insurance industry. Since

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[65] Catherine Menon, Richard Hawkins, and John McDermid, 'Defence Standard 00-56 Issue 4: Towards Evidence-Based Safety Standards'(Web Page) <https://www-users.cs.york.ac.uk/rdh2/papers/SSS09%20Paper%20final.pdf> 1-2; Ministry of Defence, Defence Standard 00-56: Safety Management Requirements for Defence System (Issue no. 4, 1 June 2007) < https://www.skybrary.aero/bookshelf/books/344.pdf>

[66] Hales (n 64) 254.

[67] Ibid 257.

[68] Ibid 258.

[69] Ibid.

[70] Lloyd's (n 61).

the incident, each installation has to show that they are following proper mechanism to control risk for main offshore complexes.

C *Lesson Learned for the Global Shipbreaking Industry*

The most important lesson learned from the Piper Alpha incident is the change of industry practice because of the insurance industry's risk assessment. Piper Alpha illustrates that the insurance industry's strict enforcement of the guidelines can change the industry practice. In fact, 'high risk leads to high premium for the insurance' was the principle that forced the industries to implement the *Offshore Safety Act 1992* and the *Offshore Safety (Protection against Victimisation) Act 1992.* This principle is relevant for the shipbreaking industry since it would put pressure on the shipowners to improve the standards. In other words, if there is a shipbreaking liability insurance for compensating the workers in the shipbreaking industry and they start making claims, the insurance will react to this risk, making it more expensive to cover shipbreaking risks and bring about change in the shipbreaking industry.

One difference between the regulatory approach followed by other incidents discussed in this Chapter and the Piper Alpha is that the latter initially triggered the development of national law that led to improvements in the global offshore oil extraction industry later,[71] whereas the thesis's objective is to propose an international framework of liability and compensation for the global shipbreaking industry. However, Piper Alpha is an important example for shipbreaking since it demonstrates that in making global regulatory changes, insurance industries can effectively contribute with their risk assessment policy, which can have a significant influence in the global context. The next part examines the Plimsoll Line incident, as an example that also pushed for a global mechanism after the United Kingdom passed an effective certificate system for tracking all shipowners in relation to the enforcement of standards for their shipping industry that eventually facilitated controlling the risks from overloading their ships internationally.

[71] Matthias Beck and Lynn T Drennan, 'Offshore Risk Management: Myths, Worker Experience and Reality' (Conference Paper, Qualitative Evidence-based Practice Conference, 15-17 May 2017) 4.

IV PLIMSOLL LINE INCIDENT AND IMPORTANCE OF A LOAD LINES CERTIFICATE

Overloading the cargo ships was one of the main reasons for frequent maritime accidents in the 19th century. To prevent further accidents, the IMO issues the Load Lines Certificate and, without the certificate, it is not permitted to sail a ship on international waters.

The 'Bridlington Gale' (gale) is a key example of a maritime incident that led to establishment of the Load Lines Certificate. The Bridlington Gale occurred at Bridlington on Friday 10 February 1871. The gale hit the ships sheltered near the town of Bridlington from the previous day's bad weather and killed around 70 seamen. The gale wrecked as many as 23 overloaded coal ships. Overloading with goods and poor maintenance were the two main reasons for so many ship wreckages and deaths.[72]

The incident is referred to as the Plimsoll line incident because after the incident, Samuel Plimsoll, a member of the UK parliament, campaigned for regulatory changes in the UK's maritime shipping law. His argument was to prevent ships from sailing with overloaded cargoes and reduce the risk to life for the boatmen introducing a mark onto the hull of the ships. He published his book "Our Seaman" just one year after the Bridlington Gale incident, adding momentum to his campaign around the country.[73] The UK government formed a Royal Commission for investigating merchant marine practices and conditions.[74] The Royal Commission supported Samuel Plimsoll's argument and proposed changes to the UK laws in a form of a bill.[75]

[72] William Gray, Bridlington RNLI Remember The Great Gale of 1871, 150 Years On (News Release, *Lifeboat*, 26 January 2021) < https://rnli.org/news-and-media/2021/january/26/bridlington-rnli-remember-the-great-gale-of-1871-150-years-on>
[73] Samuel Plimsoll, 'Our Seaman; An Appeal' (Virtue and Co., London, 1873).
[74] Harry Leach et al, *Report of the Royal Commission on the Merchant Marine Practices and Conditions*, Pro MT/9 36 M.5489/1873.
[75] Ibid 78.

A *Regulatory Changes after the Incident*

The UK parliament passed the *Merchant Shipping Act* in 1876 following the Royal Commission's report.[76] This new law introduced a mark onto the hull of all ships to ensure that they were not overloaded. The provision of keeping cargos under the mark line is one of the major developments in the UK's history of maritime regulation. This mark is called the Plimsoll line, recognising Samuel Plimsoll's contribution to establishing this concept.

The concept of Plimsoll line (also known as a Load Line or International Load Line) – a 'reference mark located on a ship's hull that indicates the maximum depth to which the vessel may be safely immersed when loaded with cargo'– eventually turned into an international principle because major shipping companies started implementing this concept as a general industry practice.[77] For example, Lloyd's of London, a major shipping company, made it a requirement for every ship to follow the Plimsoll line. Insurers also started following the principle strictly while insuring any maritime transport. Eventually after wide acceptance of the Plimsoll line, the IMO adopted the first *International Load Lines Convention* in 1930 following the UK *Merchant Shipping Act* and introduced it as an international mechanism.[78] In 1966, the IMO amended the Convention featuring the provisions for freeboard of ships by subdivision or compartmentation and damage stability calculations.[79] With respect to the subdivision and damage stability calculations, the *1966 Load Lines Convention* takes into account the possible dangers in different zones and different seasons.[80] The main purpose of the *1966 Load Lines Convention* is 'to ensure that a ship has sufficient freeboard (the height from the waterline to main deck) and thus sufficient reserve buoyancy (volume of ship above the waterline). It should also ensure adequate stability and avoid excessive stress on the ship's hull because of overloading'.[81] Preamble of

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[76] *The Merchant Shipping Act 1876 (UK)*, came into force in November 1876.
[77] INTLERG, 'Do You Know What Plimsoll Lines on Ships Are?' (Web Page, 30 November 2019) < https://intlreg.org/2019/11/30/do-you-know-what-plimsoll-lines-on-ships-are/>
[78] *International Load Line Convention 1930*, opened for signature 5 July 1930, UNTS 858 (entered into force 1 January 1931) superseded by *1966 International Convention on Load Lines* opened for signature 05 April 1966 , 640 UNTS 133 (entered into force 21 July 1968) as between contracting parties to later convention, to that extent their provisions conflict.
[79] Ibid.
[80] *Regulation of the 1966 Load Lines Convention,* Annex 1, regs 27(3) and 27(3) to 27(10).
[81] Gard, *Load lines* (Web Page, Insight 209, 16 January 2013) < https://www.gard.no/web/updates/content/20734108/load-lines#:~:text=The%20purpose%20of%20the%20load,as%20a%20result%20of%20overloading.>

the *1966 Load Lines Convention* provides that the Convention is to establish uniform principles with respect to the limits to which ships on international voyages may be loaded having regard to the need for safeguarding life and property.

To accomplish the objective, one of the important regulatory mechanisms of the *1966 Load Lines Convention* is to maintain a certificate of International Load Lines in each commercial ship. Under art 3 of the Convention, no ship flying the flag of a Member State can sail on international waters without obtaining an International Load Line certificate. With the exception of war ships, fishing vessels and small ships that are less than 150 gross tonnage,[82] the Convention applies to every ship registered in countries the governments of which are parties to the Convention or even unregistered ships flying the flag of State, the government of which is a party to the Convention.

Each Port State utilizes its existing Port State Control (PSC) system to check whether a ship maintains an updated Load Lines Certificate for its international safety, security and environmental standards. It makes no difference as to who owns the ship. Under the Paris Memorandum of Understanding, the organization that consists of 27 participating maritime Administrations, the basic principle is to make shipowners responsible for complying with the requirements laid down in the *International Load Lines Convention*.[83] If a shipowner does not follow the international standard, a port authority can deny port entry and arrest the ship for an indefinite time until the problems identified are resolved.[84]

B *Lesson Learned for the Shipbreaking Industry*

The thesis learns three important lessons from the above evolution of law following the incident.

First, the thesis learns from the certification system that deals with ensuring safety of ocean going ships and preventing loss of life for every ship irrespective of who owns the ship.[85] The Load Lines Certificate is a widely accepted concept in the maritime

[82] *1966 International Convention on Load Lines*, arts 4 and 5.
[83] Paris MoU, on Port State Control, 'Organisation' (Web Page) <parismou.org/about-us/organisation>
[84] See *Paris Memorandum of Understanding on Port State Control*, adopted 26 January 1982, IMO Res A.1052(27), entered into force 1 July 1982, ss 3(4), 3(6) and 3(8).
[85] It is one of the widely ratified of all the IMO conventions: at Phillip Alman et al., 'The International Load Lines Convention: Crossroad to the Future' (October 1992) 29(4) *Marine Technology* 233, 234.

industry. More than 140 nations have acceded to the Convention and ensured their shipping industries maintain the certificate.[86] Drawing from this Load Lines Certificate, the thesis proposes a shipbreaking liability certificate for every ship from cradle to grave (shipyard to a shipbreaking yard). By using the shipbreaking liability certificate (SLC), the IMO is to ensure that the industry accepts liability and ensures maintaining a shipbreaking insurance certificate.[87] The thesis recommends SLC in Chapter 9 and suggests that the international community to adopt this model of certificate as law. It further recommends the IMO should promote this shipbreaking liability certificate so it can tighten the changes of ownership and enforce the *Hong Kong Convention*'s regulatory requirements.

Second, the thesis learns from the evolution of the *1966 Load Lines Convention*, including the fact that without a strong political will, and support from the shipping industries, the mechanism proposed in Chapter 9, may not be achievable. The Plimsoll line incident has shown three clusters of contributions; first, from State law of the UK, second, from widespread industry use of the practice, and third, by its adoption by the IMO to introduce the *1930 and 1966 Load Lines Conventions*. Overall, mutually constituting States and private regulatory powers were the main force behind the law. It shows such an effective reform requires involvement of all interested parties, such as shipping companies, the insurance companies and large shipping States. If these entities support, the IMO would find it easier to form the proposed mechanism as a globally binding legal mechanism.

Third, the most important lesson learned from the case study of Plimsoll line is the responsibility of the IMO with respect to introducing the shipbreaking liability certificate. Because the business that is linked to the maritime industry, the IMO has the responsibility to sensitise shipowners, insurance companies and shipbreaking countries so that the mechanism proposed in Chapter 9 receives their acceptance. The proposed course of evolution of law for shipbreaking is not the same as for the 1966 *Load Lines Convention*. This is because, in the case of the *Load Lines Convention*, industries first followed a State's good practice that then became a global law when widely followed by shipping and insurance industries. However, in the case of shipbreaking, the same course of evolution of law is unlikely since there is a serious

[86] Ibid.
[87] See Chapter 9

regime competition among shipbreaking States. Therefore, it is highly unlikely that a shipbreaking State will take the risk of introducing a shipbreaking liability insurance and certificate proposed in Chapter 9, risking the profit of its industry, in the absence of a global policy.

V CONCLUSION

Following a normative analysis, the Chapter has answered the fifth research question of the thesis: What can the shipbreaking industry learn from reforms in other industries where catastrophic events, deaths, injuries, illnesses of workers and environmental damages have brought about significant regulatory changes to the industries concerned?

This Chapter has focused on liability and compensation mechanisms used in the oil transport business in Part II and argued that such a framework is required for the end-of-life ships so that developing countries continue purchasing ships for breaking, but at the same time, the shipowners remain responsible to pay compensation to the workers for breaking the ships. They cannot shift liability by selling ships to the companies in developing countries for breaking.

The current study argues that a multi-faceted approach is required for shipbreaking using regulatory and financial security, and insurance measures to prevent accidents and/or provide remedy for the victims of shipbreaking accidents. This is because it is not clear whether the highly acclaimed *Hong Kong Convention* is going to make the desired changes and promote improving standards in the South Asian shipbreaking industry, or whether the *Hong Kong Convention* will succeed in stopping future shipbreaking-related deaths, injuries and diseases.

Therefore, in reality an additional international mechanism is required to compensate the workers to ensure better legal protection. The IMO should adopt a law aimed at compensation, and impose obligations on all stakeholders – the original owner of a ship, cash buyers, open registry countries and shipbreaking companies – in order to ensure justice to victim workers, the most vulnerable party to the industry. The underlying reason to argue for an international compensatory framework is the dangerous character of the business and lack of an adequate mechanism in the *Hong*

Kong Convention and domestic laws of the South Asian countries to regulate the unsafe practices as discussed in Chapters 4 and 5.

The oil spill events discussed in Part II of this Chapter show that despite the environmental and human rights consequences of the oil spill incidents, the regulatory changes did not stop the business. The international community and the shipping companies introduced special mechanisms for liability and compensation in order to continue with their businesses. In comparison with shipbreaking, although the death and injury rate of the oil incidents is less, the laws on liability and compensation have developed, distributing liability for the incidents to international companies who have a higher share in the business and its profits.

As discussed in Part II of this Chapter, the IMO introduced the first *International Convention on Civil Liability for Oil Pollution Damage* after the *Torrey Canyon* incident. The subsequent incidents triggered changes to the early regime, increasing the maximum limit of the compensation amount.

Part III of this Chapter has introduced the insurance-based risk assessment mechanism, examining the Piper Alpha incident. Further, learning from the steps taken by the insurers after the incident, this Part has argued that unless insurers put pressure on the shipowners to comply with the existing regulatory and voluntary standards, this risky shipbreaking industry would remain non-compliant and risky for workers.

Part IV has discussed how the Plimsoll line accident facilitated the following regulatory changes. The regulatory changes after the Plimsoll line incident also did not aim to stop the business of carrying cargos by minimising the risk. Load Lines Certificates allow the shipping industry to use larger ships but within a limit. Learning from the Load Lines Certificate, a shipbreaking certificate should provide scope to a shipowner so that a shipowner can sell ships to the highest bidder, but a liability and compensation frameworks must supplement the shipbreaking certificate. Not only the shipping companies, but also the shipbreaking industry must also show a shipbreaking certificate for being eligible for purchasing a ship. The global regulatory mechanism proposed in the thesis requires an in-depth analysis of other global events that have triggered reforms in existing laws and regulations.

The next Chapter addresses the sixth research question stated in Chapter 1: What can be the salient features of a new international framework that can bring changes to the

workers' compensatory regime in the South Asian shipbreaking industry – exploring the liability protocols in relation to inter-State waste trade and inter-State effects of industrial accidents on transboundary waters.

CHAPTER EIGHT : LESSONS LEARNED FROM THE CASE STUDIES OF INTERNATIONAL MINING AND WASTE TRADE INDUSTRIES

I INTRODUCTION

This Chapter answers the sixth research question of the thesis: What can be the salient features of a new international framework that can bring changes to the compensatory regime for workers in the South Asian shipbreaking industry? This Chapter follows a normative analysis that refers to what legal reform is necessary in a given context and learns lesson for the shipbreaking industry. The Chapter investigates two catastrophic global events, namely the Koko and Baia Mare incidents, and learns from their post-incident civil liability protocols. These incidents are relevant to this thesis since their subsequent liability protocols apply the civil liability principle to shift liability from host States and their industry, to the industry in control of the business. Moreover, importantly, they implement the civil liability principle to supplement the existing international legal frameworks regulating the industry.

These jurisdictions accordingly offer a good model for the shipbreaking industry by introducing unique liability protocols to supplement their pre-existing special Conventions that mainly follow a preventive model. The two civil liability protocols examined in this Chapter are: the *Basel Protocol on Liability and Compensation for Damage Resulting from the transboundary Movements of Hazardous Wastes and Their Disposal (Basel Protocol), 1999* and *the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents, 2003 (Kiev Protocol).*[1] Although the *Basel* and *Kiev Protocols*

[1] *Basel Protocol on Liability and Compensation for Damage Resulting from the transboundary Movements of Hazardous Wastes and Their Disposal* opened for signature 10 December 1999, UN Doc. UNEP/CHW.1/WG/1/9/2 (not yet in force). *(the Basel Protocol)*; *the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents,* opened for signature 21 May 2003, UN Doc. ECE/MP.WAT/11-ECE/CP.TEIA/9 (not yet in force). *(Kiev Protocol)*

have not yet entered into force, due to an inadequate number of ratifications,[2] shipbreaking industry can learn lessons from their innovative approaches that include specific mechanisms for compensation and liability, including recoverable damages, limitation of liability, direct claim, insurance and enforcement mechanisms. The lessons learned from the specific mechanisms for compensation and liability are then used to develop the criteria for shipbreaking liability and compensation and design the shipbreaking liability certificate (SLC) in Chapter 9, which would similarly supplement the *Hong Kong Convention*.[3]

This Chapter has four parts. In Part II and III, the concerned incidents and regulatory changes are reviewed first followed by an analysis under the heading 'Lessons for the Global Shipbreaking Industry'. This Chapter will make concluding remark in Part IV. Chapter 9 will apply the lessons learned, where the thesis undertakes a critical examination of the SLC framework.

II LESSONS LEARNED FROM KOKO

In Koko, private traders collected high volumes of toxic wastes from different sites of Italy and dumped them in Koko, a Nigerian village.[4] Around 3800 tons of wastes reached Koko between August 1987 and May 1988 by five ships. Having no sound management system, the dumping led to deaths and severe injury to hundreds of people due to exposure of toxic substances during removal of the wastes.[5] Moreover,

[2] Art 29 of the *Basel Liability Protocol* provides that 'the protocol shall enter into force on the nineteenth day after the date of deposit of the twentieth instrument of ratification, acceptance, formal confirmation, approval or accession'. The requirement has not yet been met because up to 27 April 2021 only 12 States acceded into the *Basel Liability Protocol*: at United Nations Treaty Collection, 'Depository' (Web Page) < https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-3-b&chapter=27&clang=_en; Art 29 of the Kiev Protocol provides that the protocol shall enter into force on the nineteenth day after the date of deposit of the sixteenth instrument of ratification, acceptance, formal confirmation, approval or accession. The requirement has not yet been met since up to 27 April 2021 only Hungary has ratified the *Kiev Protocol*: at United Nations Treaty Collection, 'Depository' (Web Page) , https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-16&chapter=27&clang=_en>

[3] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force). *(Hong Kong Convention)*

[4] An Italian waste trading company, Messrs S.I Ecomar in collaboration with an Italian businessperson, Gianfrance Rafaellin, who lived in Nigeria, dumped the wastes: at Babade James Ayobayo, 'The Koko Incident- Law of the Sea and Environmental Protection' (Seminar Paper, University of Lagos, November 2014) 14-15.

[5] Ibid 16-17.

in relation to filing a compensation claim, it was revealed that there was no regulatory framework to compensate such human and environmental consequences from waste transfer except the 'good neighbourliness' or *sic utere tuo, ut alienum non laedas* principle of international law. Conceptually, the principle means, it is the duty of each State to limit their activities so that it is not detrimental to others.[6] Although the principle has been an integral part of customary international law, the rule alone was not adequate to regulate the transboundary movement of hazardous wastes or compensate the victims of the incident.[7] Consequently, after the Koko incident, the international community realised that a specific liability mechanism was a key to regulating the transboundary movement of such hazardous wastes.[8]

A *Basel Convention to Basel Protocol – Evolution of a Legal Regime of Liability and Compensation*

Despite the realisation noted above, initially only the Nigerian government campaigned for a global mechanism. A uniform international action did follow Nigeria's campaign, but it was a long process. Eventually, however, the widespread recognition to have a waste trade industry specific mechanism led the international community to adopt the *Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal* (*Basel Convention*) on 22 March 1989 at a conference held at Basel, Switzerland.

After more than three years, the *Basel Convention* entered into force on May 5, 1992, when Australia was the twentieth country to adopt the Convention. Unsurprisingly, the *Basel Convention* follows the same strategy as the oil rig and maritime industries discussed in Chapter 7. The *Basel Convention* does not explicitly ban the inter-State trade of waste; rather the *Basel Convention* provides each Member State a choice to restrict the import of hazardous waste by any national, individual, or inter-State

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[6] *Trail Smelter Arbitration (The United States v Canada) (Award)* (Trail Smelter Arbitral Tribunal Decision, 16 April 1938 and 11 March 1941) and re-established under Principle 21 of the *Declaration of the United Nations Conference on the Human Environment*: at United Nations Environmental Program, *the Declaration of the United Nations Conference on the Human Environment*, 11 ILM 1416 (16 June 972) online: UNEP website <http:www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503>

[7] See discussion on the problem with the application of customary international law: at Patricia Birnie & Alan Boyle, *International Law and the Environment*. (Oxford University Press, 2nd ed, 2002) 16-17.

[8] Ibid.

mechanisms.[9] From the perspective of the importance and interest of both developed and developing countries in waste transfer, the *Basel Convention* thus established a good foundation.[10]

The *Basel Convention* allows the waste trade, along with support from developed countries to developing countries, to improve waste management, but unlike the *1992 Civil Liability Convention*, the *Basel Convention* does not include an adequate compensation scheme. This limitation may be a fundamental difference between international laws triggered by developed and developing countries. The United Nations Environmental Program, a special arm of the UN adopted the *Basel Convention* to address the concerns of developing countries after the Koko incident, whereas the shipping nations developed the *1992 Civil Liability* and *Fund Conventions* to solve their problem after oil spill incidents.[11] It is open to speculation whether that is the reason why the *Basel Convention* did not address the issue of compensation to potential victims.[12] However that may be, by dint of art 12 of the *Basel Convention*, the State Parties opted to form a new protocol for liability and compensation. Art 12 provides that:

> States shall cooperate in adopting, as soon as possible, a protocol setting out appropriate rules and procedures in the field of liability and compensation for damages resulting from the transboundary movement and disposal of hazardous wastes and other wastes.

The above provision demonstrates the necessity for a financial mechanism for compensating victims.[13] Following art 12, the Member States of the *Basel Convention* eventually adopted the *Basel Protocol* in 1999 at their fifth Conference of the Parties (COPs) with an aim to pay compensation to the victims of an incident similar to Koko incident. In doing so, the *Basel Protocol* acknowledges the risk of damage to 'human

[9] *The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992) (*The Basel Convention*); Sylvia F. Liu, 'The Koko Incident: Developing International Norms for the Transboundary Movement of Hazardous Waste' (1992) 8 *Journal of Natural Resources and Environment Law* 148, 148.
[10] Ibid.
[11] See Chapter 7.
[12] Peter Lawrence, 'Negotiation of a Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal' (1998) 7(3) *Review of European, Comparative and International Environmental Law (RECIEL)* 249, 249.
[13] Ifeokma M. Onyerikam, 'Achieving Compliance with the Basel Convention on Transboundary Movement of Hazardous Waste' (LLM Thesis, University of Alberta, 2007) 13-15.

health, property and the environment caused by wastes and hazardous wastes and their transboundary movement and disposal thereof'.[14] Next Sections provide an overview of the structure and design of the *Basel Protocol*. In brief, the *Basel Protocol* imposes liability for damages when the wastes are in transit or disposal.

1 *The Liability under the Basel Protocol, 1999*

(a) The Objectives of the Basel Protocol

In particular, the *Basel Protocol* aims to establish international and national legal instruments and impose liability for adequate compensation.[15] Art 1 of the *Basel Protocol* explicitly states that ensuring liability for providing an adequate and quick compensation for damage to victims is its main objective.

(b) Who Bears the Liability?

The *Basel Protocol* imposes strict liability on a person in 'operational control of the wastes'.[16] This is a key legal development in transboundary waste transfer, since the trade generally involves a number of international parties, such as private importer, exporter, and their corresponding States. An exporter or importer becomes a notifier when the person notifies his corresponding State to secure prior informed consent, showing an intention of an inter-State waste transfer. An importer becomes a disposer when the importer finally takes possession of the wastes for disposal. Broadly, under the *Basel Convention*, a notifier may even include the State of Export or State of Import or a private trader. Whether an entity is a notifier depends on its intention to transport or accept the wastes, and if there is an intention, the entity owes a liability to notify the concerned States about the transfer of any wastes.[17]

Primarily, if both importing and exporting States are contracting parties to the *Basel Convention*, the liability for compensation lies on the notifier until the importer acting as disposer takes control of the wastes.[18] The notifier's liability transfers to a disposer upon the disposer taking possession of the wastes.

Other than the notifier's or disposer's strict liability, it is possible to impose liability on any person if their non-compliance with the provisions implementing the

[14] See Preamble of the *Basel Protocol* [4].
[15] Ibid [1] and [6].
[16] The *Basel Protocol*, art 22.
[17] The *Basel Convention*, art 6.
[18] The *Basel Protocol*, art 4.

Convention or 'their wrongful intentional, reckless or negligent acts' or omissions cause or contribute to the damage.[19] It is possible to hold both States of export and import responsible in the absence of notification, or while they have the operational control of the wastes before a disposer has taken possession of them.[20]

The liability has a link to the *Basel Convention*'s list of hazardous wastes. It is a requirement that the domestic legislation of a Party must list or declare the concerned wastes as hazardous to attract the provision of the *Basel Protocol*.[21]

(c) Liability Principle

The liability of a responsible person to provide compensation is strict.[22] A victim does not need to prove any fault from the responsible person if the fact proves to be a damage caused by the transboundary movement of wastes. As per art 4, the primary duty of a person in control of wastes is to ensure safety during loading, packaging, transit, unloading, and disposing of the wastes to prevent pollution. Despite taking proper measurers, enforcement of liability is still possible in case of the person's failure to limit the economic loss.

(d) Recoverable Damages

The *Basel Protocol* does not include all types of damage. The extent of damage within the *Basel Protocol* is economic rather than the costs of environmental damage having long-term adverse effects. According to art 2(2)(c), the claimable damages only include damage to personal injury and property, 'loss of income deriving from an economic interest in use of the impaired environment, costs of reinstatement of impaired environment, and costs of specific measures taken to prevent, minimise, or mitigate damage, or to effect environmental clean-up'.

(e) Limitation of Liability: Weight Matters

The strict liability for compensating the damage claim under the *Basel Protocol* has a maximum limit. Subject to the determination of the limit by the domestic law of each contracting Party, the limitation mainly depends on the weight of wastes.[23] The

[19] Ibid art 5.
[20] Ibid art 4(1).
[21] Ibid art 3
[22] Ibid art 4(1).
[23]For a weight below 5 tonnes, the amount is one million, or for a weight between 5 and 25 tonnes, the amount is two million, or for a weight between 25 and 50 tonnes, the amount is four million units of account. For any shipment between 50 and1000 tonnes, the amount is six million or 10 million

maximum amount is thirty million units of account based on the waste amount. However, the minimum limit differs between notifier, exporter or importer and disposer. Not less than two million USD for a claim against disposer and one million USD in case of a claim against notifier, exporter or importer.[24] The limitation of liability is not applicable when the cause of the damage is not compliant with the *Basel Convention* requirements or someone has intention or negligence in inflicting the damage.[25]

(f) Financial Security

Insurance plays a vital role in providing adequate compensation when the assets of a responsible entity fall short. The *Basel Protocol*'s primary aim is to provide adequate compensation and therefore a prospective entity wishing to trade waste has two mandatory obligations: first, the trader has to cover the minimum liability amount as specified in Annex II and second, it is required to confirm that its insolvency is not going to affect a higher compensation claim. The *Basel Protocol* even accepts an insurance or bonds or any other forms of financial guarantees as financial security,[26] for an amount not less than the minimum limits specified in paragraph 2 of Annex B. One exception to this criterion is that the State-owned companies can fulfil the obligation through self-insurance without invoking any financial security. Importantly the parties are required to deliver a document of coverage to the competent authorities to guarantee the compensation.

(g) Direct Claim

The *Basel Protocol* allows victims to claim compensation directly from the insurer or financial guarantor. The insurer can later get the amount indemnified from the person liable.[27] Co-payment or deductibles between insurer or guarantor and insured are permissible to provide maximum protection to victims, but failure from the insured to pay deductibles or co-payments cannot be an excuse to delay any of such claims. Victims can also claim compensation for the damages 'in the court of a contracting

when the shipment is between 1000 tonnes and 10000 tonnes. An additional 1000 units of account for every additional tonne of waste up to a maximum amount of 30 million units of account: at *Basel Protocol*, art 12 and Annex II.

[24] Ibid.

[25] Ibid art 5 and 12(1).

[26] Ibid art 14.

[27] Ibid art 14(4).

party where the damage is the consequence of the incident occurred, or the defendant has a habitual residence or has his principal office of the business'.[28]

The *Basel Protocol* is yet to enter into force, but it has introduced a new tool for victims in identical industries. The waste transfer is difficult to manage by a specific mechanism, because of the involvement of a number of international parities,[29] but the features of the *Basel Protocol* create a good foundation for adequate and prompt compensation claims for victims involved in transboundary transfer of wastes. Shipbreaking is a kind of waste transfer. The *Basel Protocol* has therefore provided some important lessons for the shipbreaking industry.

2 *Lessons Learned from the Koko*

The *Basel Protocol* focuses both on the question of business, and of responsibility for any potential human and environmental consequences. An important lesson learned from the Koko incident and the *Basel Protocol* is that regulatory restriction with compensatory framework is a better option than banning an industry. It teaches that the goal of an international legal framework should be to keep the business open, but with a concrete focus on those most in need or vulnerable. The *Basel Protocol* has the means to do this by making the parties who promote the hazardous business accountable.[30]

Hence, a fundamental lesson learned from regulatory changes after the Koko event is, a supplementary liability and compensation framework is vital when an industry is highly dangerous in nature and involves a number of international private parties and this lesson is used to propose the SLC framework in Chapter 9.

The *Basel Convention* allows and regulates transboundary waste transfer alongside the *Basel Protocol*, whereas the *Hong Kong Convention* allows trading with old ships as a special form of waste trade, but does not have a liability and compensatory framework to compensate victims.[31] This lesson is important for shipbreaking since, subject to some control mechanism, although the *Hong Kong Convention* focuses on

[28] Ibid art 17.
[29] Lawrence (n 12) 254.
[30] Both developed and developing countries have shares in the trade. Developed countries must transfer the waste mainly because of the cost involved in their countries to dispose them. They also do not have adequate disposal facilities relative to the amount of waste they produce.
[31] See Chapter 5.

the continuation of the shipbreaking industry in South Asia,[32] it does not transfer responsibility for compensation to shipowners, who promote the business in South Asia. This is a basic difference between the international waste and shipbreaking laws. Shipbreaking is a special form of waste transfer. Focusing therefore on liability and compensation for shipbreaking, the lessons learned from the *Basel Protocol* can contribute to the SLC framework proposed in Chapter 9.

This SLC framework is therefore required to aim at adequate compensation. Developing countries have no capacity to manage such a dangerous industry that regularly kills and injures the workers. An effective financial system provided with the contribution of shipowners is therefore necessary. The amount of compensation should be limited to a certain level so that industries and insurers or guarantors have knowledge of this limit and the limit should follow the amount of wastes stored in a ship, similar to the *Basel Protocol*.

The second lesson is, the *Basel Protocol* allows victims to claim direct compensation from the insurance provider.[33] Such a strict approach is highly relevant to shipbreaking so that victims can directly claim the damage from the insurance provider or other financial guarantor of the responsible parties. As most of the ships come from developed countries without any prior notification, the direct claim could be useful to make the entities accountable directly. The principle recognises that waste trade has been a complex web of international trade including a number of parties. In shipbreaking, the original owners circumvent the legal obligation of pre-cleaning by changing flag. As discussed in Chapter 3, they also use cash buyers to hide their identity. Therefore, the principle of direct claim is crucial for shipbreaking so that the cash buyers or the final flag State cannot escape liability to pay compensation to the victims.

The third lesson is, in improving the disposal standard, notification is an essential step forward so that developed countries have knowledge about the waste transfer and developing countries can dispose the waste in a sound manner and obtain benefit from the waste trade. The *Basel Convention* recognises the dilemma faced by the developing countries and reflects the importance of improving the standard of developing

[32] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 1-2.
[33] *Basel Protocol*, art 14(4).

countries by a notification system.[34] Importantly, the *Basel Protocol*'s notification system includes State of export into the system, to track the waste transfer and know about the disposal standards of a private waster importer. This mechanism is important to inform about the waste transfer to the State bodies of a State of export, who can subsequently monitor the disposal facilities and may even support developing nations in improving the standards of individual disposal facilities. This lesson is important for shipbreaking because shipbreaking countries may have limited capacity to improve the standards alone without the involvement of major shipping nations. The thesis argues that the civil liability framework, namely the SLC proposed in Chapter 9, as an effective financial mechanism not only would require for compensating the workers adequately but it also would require to include the developed nations into the system so that they can support improving the shipbreaking standards of developing countries.

The final lesson learned from the Koko incident is that the corresponding State of a private exporter is required to take responsibility for the fault of its private enterprises. The reluctance of States to accept responsibility has been the point of debate in solving many international problems. It teaches an important lesson that unless the corresponding States undertake responsibility, taking the negative effect of the problems into account, it is hard to trigger global solutions.[35] This lesson is important for shipbreaking since the major shipping nations have hardly raised their voices against their private shipowners for sending ships as they do for shipbreaking. Learning this lesson, the thesis argues that the major shipping nations must take responsibility and push the IMO to adopt a shipbreaking liability protocol following the proposed SLC framework discussed in Chapter 9 of the current study. As discussed in the following part, this is the principle established after the *Baia Mare* incident. The EU commonly pushed the international community to introduce a global liability mechanism following the incident. This next section assesses the *Kiev Protocol* adopted by the international community after the *Baia Mare* gold mining spill incident. Similar to the *Basel Protocol*, the *Kiev Proto*col also supplemented its pre-existing conventions in this area that did not have a mechanism to compensate the victims of the incident.

[34] See Chapter 9.
[35] Liu (n 9) 122.

III THE BAIA MARE INCIDENT AND ITS POST LEGAL REFORMS: A LESSON FOR THE SHIPBREAKING INDUSTRY

A *The Incident*

Accidents in the mining industry can be destructive to the biodiversity of transboundary water resources. Mining is highly profitable but an accident in the mining industry can be costly both to home and neighbouring States and to private victims within them. From the perspective of providing compensation to victims of mining incidents, it was challenging because there was no mechanism under international law that concentrated on compensation. The Baia Mare incident first exposed such a gap in the transboundary water laws (mentioned below).

The Baia Mare incident occurred in North Western Romania in late January 2000 when the mine's tailings dam burst. A tailings dam is an earth-fill embankment used to store secondary products of mining operations after extracting the sought-after elements. The bursting of the tailings dam released 100,000 cubic meters of cyanide-contaminated water into the Lapos and Somes (Szamos), the two transboundary rivers flowing across three European Union countries River. The flow of cyanide caused severe damage to the aquatic life of these rivers mainly in three countries, Hungary, Yugoslavia and Romania. Aurul, a joint venture company formed between the Australian Company Esmeralda Exploration and the Romanian government, was the operator and party responsible to compensate the victims of the incident.[36]

B *Legal Gaps*

Primarily, *the Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, and *the Convention on the Transboundary Effects of Industrial Accidents (the 1992 Helsinki Conventions)* led to the establishment of the framework for prevention and mitigation of the transboundary effect of mining

[36] The joint venture between an Australian mining company, Esmeralda Exploration Limited and a Romanian Company Romanian Compania Nationala a Metalelor Pretiosasis si Neferoase (REMIN), was formed to re-process an abandoned tailings pond for extracting gold, silver, and other metals. The location of the gold mining industry was by the town of Baia Mare in Romania. The incident was named after the place of occurrence. At around 20.00 GMT, on 30 January 2000, the tailings pond overflowed near the city of Baia Mare: at
Fritz Balkau, 'Learning from Baia Mare' (2005) 3 *Environment and Poverty Times*, 1.

accidents.[37] The United Nations Economic Commission of Europe (UNECE), a specialised organisation of the United Nations, adopted both Conventions in March 1992 in Helsinki, Finland. The *1992 Helsinki Conventions* aimed to integrate cross-boundary support and national measures through compliance mechanisms providing a basic standard of notification, cooperation, and mitigation of loss, public access to information, and exchange of information.[38] However, after the Baia Mare incident, the international community identified the weaknesses in the pre-existing *1992 Helsinki Conventions*. Although the *1992 Helsinki Conventions* were applicable on the transboundary effects of industrial accidents, none of these *1992 Helsinki Conventions* contained any explicit determination for liability or compensation for damages to private victims.[39] The Baia Mare incident revealed that, as with shipowners in the shipbreaking industry, international operators of the mining industry had no responsibility for causing detrimental human and environmental consequences.

C *Evolution of a Legal Regime*

The Baia Mare incident exposed the gap in the existing system, especially when Hungary found it too difficult to claim compensation-imposing liability on Aurul, the inter-State mining company. Initially, Hungary offered Aurul to settle the compensation dispute, but the operator was not willing to take any responsibility and rejected the offer of settlement.[40] Afterwards, the Hungarian State filed a suit before their Capital Court at Budapest in April 2001 claiming a compensation of USD 143 million from the operator, Aurul.[41] Private parties, including anglers, also filed cases against Aurul, but the Court suspended the private cases until the court passed any final decision in the case filed by Hungary. In 2005, the Capital Court finally ruled that in the absence of a legal mechanism to claim the compensation, the defendant

[37] *The Convention on the Protection and Use of Transboundary Watercourses, and International Lakes*, signed 17 March 1992, 1936 UNTS 269 (entered into force 6 October 1996); *the Convention on the Transboundary Effects of Industrial Accidents*, signed 18 March 1992, 2105 UNTS 457 (entered into force 18 April 2000). *(the 1992 Helsinki Conventions)*

[38] Cadric Lucas, '*Baia Mare* and Baia Borsa Accidents: Cases of Severe Transboundary Water Pollution' (2001) 31(2) *Environmental Policy and Law* 108, 108.

[39] Ibid.

[40] Hungary argued that on September 2000 they were ready to settle with the Australian mining company. The firm denied: at Reliefweb, 'Hungarian Government Demands Compensation from "Aurul"' (Press Release, 14 March 2001) < https://reliefweb.int/report/hungary/hungarian-government-demands-compensation-aurul

[41] Reliefweb, 'Hungary Files Suit for Cyanide Leakage' (Press Release, 30 April 2001) , https://reliefweb.int/report/hungary/hungary-files-suite-cyanide-leakage

company was not legally responsible for the loss.[42] The decision stimulated a debate in the EU for a separate liability and compensation law in addition to *the 1992 Helsinki Conventions*. The international community soon responded following a call from the EU to address the problem.[43]

The United Nations Economic Commission of Europe (UNECE), a special arm of the United Nations, adopted the *Kiev Protocol* formally at the Ministerial Conference 'Environment for Europe' in Kiev, Ukraine, on 21 May 2003.[44] Twenty-two State Parties including Romania, Hungary, and Yugoslavia signed on to the *Kiev Protocol* during the Second Joint Special Session of the Meeting of the Parties to *the 1992 Helsinki Conventions*.

The *Kiev Protocol* has not yet come into force, due to an inadequate number of ratifying States. Notwithstanding this fact, because the *Hong Kong Convention* does not have a liability and compensation mechanism for the shipbreaking industry, *the Kiev Protocol* provides a foundation to argue for a supplementary international framework for the shipbreaking industry. The following section focuses on the structure and design of the *Kiev Protocol*. The *Kiev Protocol* resembles the principles of strict liability, channelling liability on the polluters, and proof of financial security similar to the *Basel Protocol* as discussed previously, but differs in relation to defining a person who is financially responsible for the harms and compensation payment.

D *Goal and Salient Features of the Kiev Protocol, 2003*

The *Kiev Protocol* outlines an important objective in its Preamble, which is to provide third party liability for adequate and prompt compensation.[45] Art 1 of the *Kiev Protocol* provides that the objective of the *Kiev Protocol* is to 'ensure adequate and prompt compensation for damage caused by the transboundary effects of industrial

[42] *Hungary v Aurul* (Hungarian Capital Court, case no. 4.P. 23.771/2001 137) Decision dated 8 May 2006; Stephen Stec et al, 'Transboundary Environmental Governance and the Baia Mare Cyanide Spill' (2001) 27(4) *Review of Central and East European Law* 671, 671.
[43] Ibid 648.
[44] United Nations Economic Commission of Europe, *Draft Decision by the Parties to the UNECE Conventions on the Protection and use of Transboundary Watercourses and International Lakes and the Transboundary Effects of Industrial Accidents Regarding the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters*, Environment for Europe, 5th Ministerial Conference, UN Doc. ECE/MP.WAT/2003/2 CP.TEIA/2003/4 (21-23 May 2003).
[45] Preamble of the *Kiev Protocol*, [3] and [6].

accidents on transboundary waters'.[46] Unlike the oil spill legal regime discussed in Chapter 7, which aims to build an equitable system of loss distribution, the *Kiev Protocol*'s aim is to introduce civil liability on companies that can 'contribute to the practical application of safety measures and hazardous activities and thus help to prevent industrial accidents and limit their adverse effect on people and environment'.[47] Following the objectives of that link both to compensation and to prevention, the *Kiev Protocol* includes the following features for imposing responsibility on responsible parties and paying compensation.

1 *Who Bears the Liability*

The *Kiev Protocol* acknowledges 'the risk of damage to human health, property, and the environment caused by transboundary effects of industrial accidents[48] and imposes liability on the operator of an industry'.[49] On proof of industrial accident and damage, unless otherwise provided in art 4 and 5 of the *Kiev Protocol*, the operator of an industrial installation is liable.[50] The Section, 'Immunities, Exonerations, and Defences to Operators' below discusses the exceptions to the operator's liability rule. Imposing liability on the operator has dual functions. It is direct and accessible for the victims to impose liability on a particular person and the victims find it easy since it does not require finding proof of a fault. The nature of the damage may find one or more operators liable. The *Kiev Protocol* addresses the issue by imposing joint and individual liability on the operators in case the share of damage is not reasonably separable.

2 *Scope of the Liability*

The liability of an operator is strict for the damage caused by an industrial accident.[51] Art 4 of the *Kiev Protocol* imposes 'the liability in the event of any damage caused by an industrial accident in the course of a hazardous activity'. The victim does not require

[46] The *Kiev Protocol*, art 1.
[47] Ibid 5.
[48] Preamble of the *Kiev Protocol*, [5].
[49] Phani Dascalopoulou-Livada and Alexandros Kolliopoulos, 'The 2003 Kiev Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, in the UNECE Convention on the Use and protection of Transboundary Watercourses and Lakes Its Contribution to International Water Cooperation Series' (Brill Online Publication, 2015). https://brill.com/view/book/edcoll/9789004291584/B9789004291584-s024.xml
[50] The *Kiev Protocol*, art 4(1).
[51] Ibid art 4.

proving any fault from the operator if the fact proves to be transboundary damage caused by an industrial operation.[52]

Foreseeability of a damage has a special place in the *Kiev Protocol*. The classic exoneration clauses, including force majeure or intervention of third parties, are in place in the *Kiev Protocol*, but if a victim can show that the damage was foreseeable, an operator cannot escape the liability using the exoneration clauses. Whereas strict liability is the basis of shifting liability on the operator, the *Kiev Protocol* also includes the scope to impose fault liability upon the operator. Based on knowledge of the person liable, it is an area to be addressed by the domestic law of the parties to the *Kiev Protocol*.[53]

3 Immunities, Exonerations, and Defences to Operators

What liability an operator can escape depends on the facts and circumstances of each case. As mentioned above, operators have strict liability for any transboundary damage caused by industrial accidents, but in the presence of some facts and circumstances, the operators may evade responsibility – for example, where an operator can show that the damage was the result of the victim's fault. Conversely, escaping liability is not absolute, given that it depends on surrounding circumstances during the time of occurrence. Art 4(3) states that 'the compensation may be reduced or disallowed having regard to all the circumstances'.

4 *Recoverable Damages*

A victim can only claim compensation for economic loss to property and person under the *Kiev Protocol*. Under art 2(d) of the *Kiev Protocol*, a victim can claim damage if it causes him (i) 'loss of life, or personal injury'; (ii) 'loss of, or damage to, property other than property' belonged to the person liable under the Protocol; and (iii) 'loss of income' directly causing because of a victim has lost his or her legally protected interest in any use of the transboundary waters for economic purposes.

More so, under art 2(d) of the *Kiev Protocol*, a victim can claim compensation for the damage, if his or her loss is the consequence of the damage to the transboundary waters that can even include account 'savings and costs'; such as the 'cost of measures of

[52] United Nations Economic Commission for Europe (UNECE), 'Background Document for the UNECE Workshop to be Held in Budapest, on 21-22 May 2007' (Background Report, 11 April 2007) 32.
[53] The *Kiev Protocol*, art 4.

reinstatement of the impaired transboundary waters, limited to the costs of measures actually taken or to be undertaken'; and 'the cost of response measures, including any loss or damage caused by such measures, to the extent that the damage was caused by the transboundary effects of an industrial accident on transboundary waters'.

5 *Limitation of Liability*

Subject to further improvement, the amount of strict liability is fixed under the *Kiev Protocol*. Annex II of the *Kiev Protocol* provides the mechanism to determine the maximum liability. There are three categories: A, B, and C in Annex II and the amount applicable in each category depends on the types and amount of the hazardous substances.[54] For the maximum liability, the amount is between 10 million and 40 million units of account. The limitation is not applicable when damage is the consequence of the fault of an operator.[55] The *Kiev Protocol* also allows the minimum limits of liability. The amount ranges between 2.5 to 10 million units of account within A, B, and C groups. The minimum liability scheme brings about justification on the claim addressing the nature of the industrial installation or the hazardous substances involved in an incident and the difficulty in determining the liability of the operator.

6 *Insurance to Provide Financial Security*

Insurance plays a vital role in two ways: how to provide adequate compensation when the assets of the operator fall short, and how to ensure prompt compensation. Concerning adequate compensation, art 11 of the *Kiev Protocol* provides that the operators have two mandatory obligations. First, an operator has to cover the minimum liability amount as specified in Annex II, and second, an operator has to confirm that an operator's insolvency will not affect higher compensation claims. State-owned companies can fulfil the obligation of insurance by self-insurance without invoking any financial security. To fulfil their duties, they must have coverage by insurance or financial security, including bonds or any financial guarantee so that their assets do not fall short of meeting a compensation claim.

With respect to prompt compensation, the *Kiev Protocol* allows victims to claim the compensation directly from the insurer or any person providing a financial guarantee.

[54] *Annex II Limits of Liability and Minimum Limits of Financial Securities* to the *Kiev Protocol*, Part I and II.

[55] The *Kiev Protocol*, art 5 provides fault-based liability is unlimited.

Following the legal claim from a victim, 'the insurer or guarantor shall have the right of recourse from the person liable under art 4 to be joined in the proceedings'. In addition, co-payment or deductibles between insurer or guarantor and insured are acceptable under art 11 to provide the highest safeguard to the victims. However, insurer or financial provider cannot delay any claim by taking the defence that the insured has failed to pay deductibles or co-payments.

7 *Enforcement Mechanism*

Two options are open to the victims for enforcing the mechanism. The first route is to file a case. For legal proceedings, the place of suit is the place of occurrence, or damage, or in a country of residence of the defendant. If the defendant is a company or another legal person, the victim has to file a case in its principal office, or its statutory seat or central location. It is worth mentioning here that Hungary, after the *Baia Mare* incident, filed the case in its Capital Court, as the place of residence of the defendant.[56] The second route is to agree with the operator to settle the dispute in arbitration as per *Permanent Court of Arbitration Optional Rules for Arbitration of Disputes Relating to Natural Resources and the Environment*.

These innovative approaches are especially crucial for any industry-specific liability and compensation mechanism. Considered more in Section 'E' below, the legal and innovative features of the *Kiev Protocol* provide essential lessons for the shipbreaking industry.

The *Kiev Protocol* is yet to enter into force due to lacking adequate ratification from a sufficient number of States. An underlying reason for this is that the Protocol has not made all profitable entities responsible other than the operator of the industries. For example, in the case of gold mining industry in *Baia Mare*, beneficial entities would include the gold user, gold seller, the dam construction company, and the cyanide producer. They are the beneficial parties from gold mining, but the *Kiev Protocol* has not addressed their contribution to the damage. Phani argues that one of the main impediments to the success of this *Kiev Protocol* is the uncertainty over the amount of such transboundary damage caused by industrial accidents. This obligation causes the insurance premium to go up.[57]

[56] The *Kiev Protocol*, art 13(1).
[57] Dascalopoulou-Livada and Kolliopoulos (n 49) 334.

Despite the limitations, the *Kiev Protocol* is an excellent start to solve a complex transboundary problem. The operator of an industrial installation is liable for damages, subject to the proof of the damage that results from an event resulting from an industrial accident. An industrial accident links closely to the hazardous activity. It means an event resulting from an uncontrolled development in the course of hazardous activity during manufacture, use, storage, handling or disposal, transportation on-site or off-site via pipelines from an installation. As per the definition, it is possible to make companies liable for both the production and transportation of waste using pipelines. Hazardous activity is related to the use of hazardous substances beyond the prescribed limit provided by Annex I, and is sufficient to cause transboundary damage to transboundary waters and in their water uses in case of an industrial accident.[58]

There is little difference in defining responsible parties in both shipbreaking and other inter-State industries. In both cases, the responsible parties are international in character who remain out of reach of existing international mechanisms due to legal gaps (as discussed previously). This characteristic of the two industries allows the learning of essential lessons from the Baia Mare incident and its legal development in the matter of liability and compensation for shipbreaking industries.

E *Lessons Learned from the Baia Mare Incident*

The first lesson learned for the shipbreaking industry is the practical application of the 'beneficiary to pay principle'. In establishing the civil liability of the principal stakeholders, the beneficiary to pay principle has formed the foundation by reusing the already well-established tools, including strict liability, a shift of liability, and financial security.[59] A fundamental feature of the *Kiev Protocol* is the strict liability of the operator to pay compensation for the damage. It is an innovative tool to apply the corporate liability principle and is highly relevant to the shipbreaking industries of South Asia.

The *Kiev Protocol* focuses on liability and compensation. For the shipbreaking industry, the *Hong Kong Convention* includes no liability and compensation system.

[58] The *Kiev Protocol*, art 2(e).
[59] Dascalopoulou-Livada Kolliopoulos (n 49), 336.

The salient features of the *Kiev Protocol* are therefore crucial to argue for such a framework for shipbreaking.

Moreover, instead of environmental liability, the *Kiev Protocol* argues for civil liability. Civil liability includes both environmental and financial liability, whereas environmental liability does not. In the context of shipbreaking, the workers are the direct victims due to the presence of hazardous substances within a ship's structure. Given the nature of the shipbreaking industry in South Asia, the priority for an international framework is to establish accountability for the deaths and injuries of workers. According to the Court of Appeal of England and Wales, they have a duty of care and a responsibility to pay compensation for creating the danger motivated by making profit.[60] The thesis corroborates with the principles, and argues for responsibility of shipowners to provide adequate and prompt compensation.

Knowledge follows responsibility is the second important lesson learned from the *Baia Mare* incident for the shipbreaking industry. Shipping companies have never accepted responsibility, despite knowing the human consequences in the South Asian shipbreaking industry. In this connection, the *Baia Mare* teaches the lesson of extension of liability to industries, even if the accident was not directly their fault. Aurul built the tailings dam based on the zero tolerance system to stop leaks. Although the company, on the face off legal challenges, defended that bad weather conditions were responsible for the damage, the argument could not be acceptable. A report revealed that the weather conditions were exceptional but not unprecedented, since they are foreseeable in every twenty-five years.

The third lesson learned is the foreseeability of damage. Foreseeability or knowledge of the accident was the issue to transfer responsibility onto the operator after the Baia Mare incident. The EU Commission set up the Baia Mare Task Force (BMTF) to evaluate the situation followed by specific recommendations. The BMTF published their final report in December 2000, in which they found fault in not only the design, but also in how the operator monitored and operated the dam. While the company blamed the weather, the report revealed that the weather was 'severe but not exceptional' in that area.[61] The same argument is applicable in the case of shipbreaking

[60] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326.
[61] The European Union Commission, 'Report of the Baia Mare Taskforce' (Investigation Report, December 2000) <http://viso.jrc.ec.europa.eu/pecomines_ext/docs/bmtf_report.pdf>

because shipping companies are well aware of the poor condition of shipbreaking in South Asia and thus must recognise that the accidents and pollution in the shipbreaking industry are not exceptional.

The fourth lesson learned comes from the financial security system of the *Kiev Protocol*. The financial security system with a maximum amount provides an important lesson for the shipbreaking industry. South Asia mainly holds the major part of the global shipbreaking industry; therefore, the financial security system that includes a minimum and a maximum limitation is suitable for shipbreaking. This would let the shipowners know about their maximum liability and contributions to the system.

Similar to the *Koko incident* and other incidents discussed in Chapter 7, the fifth lesson learned from the incident is, a supplementary protocol is required to follow the *Hong Kong Convention*. As discussed in this Chapter, two *1992 Helsinki Conventions* were adopted to regulate transboundary damages from industrial accidents without banning industrial activities. The *1992 Helsinki Conventions* aim to continue the industrial activities with regulatory requirements including notification, emergency procedures, mitigation, and co-operation when a catastrophic incident occurs. There is no provision in *1992 Helsinki Conventions* regarding civil liability for environmental pollution and compensation to victims.

The domestic laws covered the area, but domestic laws and institutions had limited success in enforcing liability and compensation due to the international character of the business.[62] For example, Hungary failed to enforce liability and receive compensation for the private victims under their domestic laws against Aurul. This argument corresponds with the arguments of Stephen Sec and others. Drawing evidence from *Baia Mare*, their research criticised the domestic laws of Romania on mining that preferred investment in mining to industries' liability.[63] Similarly, domestic laws of South Asia have the same approach,[64] which is not adequate to impose liability on beneficial entities or ship sellers for the human cost of shipbreaking in South Asia (see Chapter 4 and 5).

[62] Allan L. Springer, *Cases of Conflict-Transboundary Disputes and Development of International Environmental Law* (University of Toronto Press, 2016) 99.
[63] Stec et al (n 42) 671.
[64] See Chapter 3.

On the international side, *the Hong Kong Convention* also does not propose a mechanism for liability and compensation (see Chapter 5). Rather, it encourages the shipbreaking business as it is done under the *1992 Helsinki Conventions* for mining industries. However, the *Kiev Protocol* supplements the *1992 Helsinki Conventions* to ensure liability and compensation. The UNECE introduced the *Kiev Protocol* as a separate law on liability and compensation, but no such mechanism is in place for the shipbreaking business to supplement *the Hong Kong Convention*.

The enforcement mechanism of the *Kiev Protocol* provides the last lesson for this study. With respect to ensuring liability and compensation, domestic laws should have a special place in an international law. Importantly, a victim can file a case for compensation before his/her domestic court. In seeking additional rights, procedural importance of national law cannot be underestimated given that judicial institutions of a country well accept them. The *Kiev Protocol* acknowledges the importance of domestic laws in three ways. First, domestic laws apply when the *Kiev Protocol* is silent about any substantive and procedural matter.[65] Second, it allows for any additional rights and protective measures to the *Kiev Protocol* despite 'matters of substance regulated by the *Kiev Protocol'*.[66] Third, the most important of all is that the domestic law may even override the *Kiev Protocol* if the victim applies to the court.[67]

These features are useful to remove procedural discrepancies of an international mechanism and relevant to shipbreaking. If in any case, the civil liability framework proposed in Chapter 9 does not work, the domestic courts must act as the last resort and there must be a scope in the framework so that domestic court can accept a claim of compensation using domestic procedures.

IV CONCLUSION

This Chapter has used a normative approach to legal research using two case studies. This Chapter has learned important lessons from the case studies in international mining and waste trade industries, drawing examples from the Baia Mare and Koko

[65] The *Kiev Protocol*, art 16 (1).
[66] Ibid art 17.
[67] Ibid art 16(2).

incidents. These lessons will assist in designing the shipbreaking liability and compensation framework discussed in Chapter 9.

Both case studies show that the legal reforms followed a similar approach – a separate liability and compensation framework to supplement the pre-existing conventions. This happened because the international community felt that there was a failure to provide adequate compensation for the victims of these disastrous incidents. This means that a successful policy change requires support from the large shipping companies and their corresponding States with clear objectives, without changing the current profit base of the maritime industries along with proper enforcement mechanisms.

The *Basel* and *Kiev Protocols* are yet to enter into force, due to inadequate ratification. However, they are crucial initiatives to resolving the global problem of the waste trade and transboundary damage to watercourses from industrial activities. These incidents and their post-legal framework on liability and compensation provide a good example and analogy for the international shipbreaking business.

Lessons from these case studies and the review of their corresponding policies in Chapters 7 and 8 have provided enough information to examine in the next Chapter, the choices available to the international community to resolve the shipbreaking problems identified in Chapter 1 of this thesis.

CHAPTER NINE : PROPOSAL FOR A SHIPBREAKING LIABILITY CERTIFICATE AND SHIPBREAKING INSURANCE

I INTRODUCTION

This Chapter draws on the lessons from the findings presented in Chapters 2 to 8, and in particular from the compulsory *Load Lines Certificate* case study discussed in Chapter 7, Part IV, to propose a global civil liability framework for workers in the shipbreaking industry based on the introduction of a compulsory shipbreaking liability certificate (SLC) for all commercial ships sailing on international waters that would:

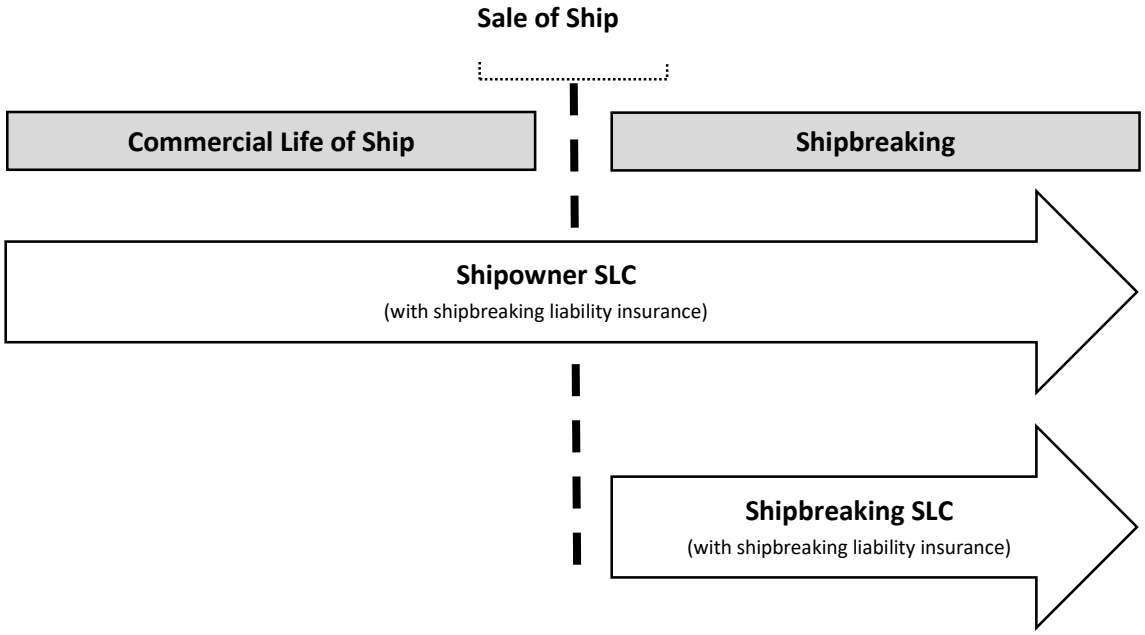
(1) apply throughout the operating life and the shipbreaking process for the ship;

(2) be renewed annually and at any transfer of ownership for the ship; and

(3) be issued and administered by the International Maritime Organisation (IMO).

Figure 4 below illustrates the proposed SLC framework.

Figure 4. The proposed SLC system



Under the proposed framework, a shipbreaking yard would need to obtain a separate SLC for each ship if it intended to break a ship. As seen in Figure 4 above, the existing SLC, held during the commercial life of the ship, would also remain in place until the shipbreaking process was completed. The corollary being that the last shipowner, prior to the sale of the ship to a shipbreaking yard, would need to retain the responsibility to renew the SLC and thus maintain shipbreaking liability insurance for the ship.

The thesis recommends that issue or renewal of an SLC by the IMO would require proof of shipbreaking liability insurance (i.e. the shipowner or shipbreaking yard must provide evidence of an active shipbreaking liability insurance with a maritime insurance company to have an SLC issued or renewed).

A core aspect of the SLC framework is a requirement for overlapping (or concurrent) insurance during the shipbreaking process and, as a consequence, joint liability (i.e. sharing of costs) for any worker compensation claims that arises during the breaking of the ship. The overlapping insurance would be achieved by the dual SLCs (i.e. the SLC held by the last shipowner and the SLC held by the shipbreaking yard) in place during the shipbreaking process. The idea is to have two SLCs and insurances during the shipbreaking process, and thus to create joint liability for shipowners and a shipbreaking yard such that, following a compensation claim, both insurances would jointly be liable to pay compensation to shipbreaking workers through their corresponding insurances.

The proposed SLC would thereby practically follow ‘cradle to grave’ (or a 'shipyard to shipbreaking yard') approach for all shipowners involved in the shipbreaking business chain and make them accountable for breaking ships. The SLC framework would necessarily be an international compensatory legal framework for shipbreaking workers and fill in the gaps in the *Hong Kong Convention* (see Chapter 5).[1] Importantly, in introducing the SLC framework, this Chapter answers the principal research question: What legal and liability framework is required to make the maritime industry accountable for the harms to human life and health (workers’ deaths, physical injuries, and work-related diseases) in major shipbreaking countries?

[1] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force). (*Hong Kong Convention*)

This Chapter consists of six Parts. Following the introduction, Part II restates the problems that the SLC would need to resolve. This Part mainly argues that the existing regulatory model of shipbreaking is weak and is not going to control fatalities from shipbreaking in the near future. Therefore, it is essential to have the SLC model to introduce a financial instrument for compensating shipbreaking workers who face deaths and injuries, including workers who have contracted work-related disease (e.g. through short-term or chronic exposure to occupational health hazards such as mutagens, carcinogens, and asbestos-containing material).

Part III explains the basic features of the proposed SLC framework, including joint liability for the payment of compensation through corresponding insurances of both commercial and shipbreaking operations of a ship. For the joint insurance coverage during the shipbreaking process, shipowners will need to open the insurance for the commercial operation of a ship, which will remain in place paying an annual premium until a ship is finally broken. Shipbreaking yards will also open the insurance for shipbreaking operations, showing the intention of purchasing a ship for breaking. The shipbreaking yard's insurance will remain in place for as long as it holds ownership of the ship for completing the shipbreaking operation. This Part also introduces a verification process conducted by an independent verifier and discusses a policy of concession from the cost of the insurance premium.

Part IV then discusses the baselines and a formula to determine the cost of the SLC administrative fee and shipbreaking insurance premium and potential compensation amount. This Part argues for an international standard of compensation following the ILO's *Employment Injury Benefit Convention*.[2] Further, in calculating the international standard of compensation for shipbreaking workers, this Part compares the rate of compensation between ship selling and shipbreaking nations and then recommends for the ship selling nations' rate of compensation amount. Part V recommends measures for enforcing the SLC, stating that an affected worker should have the right to claim compensation directly from the insurers or through an independent entity (e.g. Worker's Advocate), and a brief conclusion follows in Part VI.

[2] *Employment Injury Benefits Convention, 1964* (amended in 1980), adopted on 17 June 1964, ILO Convention no. 121, entered into force 28 July 1967 (*Employment Injury Benefits Convention)*.

II THE SHIPBREAKING PROBLEMS REITERATED

Shipbreaking workers or their families should be compensated for any work-related deaths, injuries and diseases they suffer in the course of their work, but this is unlikely to happen in the near future under the current business model of shipbreaking. As seen in Chapter 3, Part IV and Chapter 5, Part III, the maritime industry earns a high profit from the price of old ships and for this, instead of following a compensatory and liability model, the global model of shipbreaking is designed to follow preventive mechanisms. The preventive mechanisms thus in principle allow the shipowners to send hazardous ships to developing countries and to exploit their cheap cost of labour. Under this model, even though shipowners have complete knowledge of the dangerous shipbreaking process of the South Asian shipbreaking industry, it is legal for shipowners to sell the hazardous end-of-life ships to developing countries. It is also legal for them to use cash buyers, who act as critical intermediaries in the overall shipbreaking transaction by taking such steps as changing the flag and name of the ship and negotiating the final sale of ships to the shipbreaking industry in South Asia. Furthermore, there is no legal requirement either for a shipowner to pre-clean the inbuilt wastes of a ship or for the South Asian shipbreaking industry to break ships following a standard dry dock method or restrict the risky manual method of shipbreaking (see Chapter 3).

The thesis argues that this weak model is not going to control fatalities from shipbreaking in the near future, and thus proposes the SLC model to introduce a financial instrument for compensating shipbreaking workers who face deaths and injuries, including workers who have contracted work-related disease. Part V of Chapter 3 has argued that deaths, injuries and work-related diseases in the South Asian shipbreaking industry happen regularly, but the workers cannot claim adequate compensation from their shipbreaking yard owners because of the temporary nature of their job. The SLC framework is to address this problem and empower the workers so that they can claim compensation through an established framework that is supported by all parties. The proposed SLC therefore addresses the needs of workers for adequate compensation (see Chapter 3) and the deficiencies in domestic and

international legal frameworks as regards worker compensation (see Chapters 4 and 5).

Chapter 2 argued that although workers in the shipbreaking industry are the wheel of the South Asian shipbreaking industry, without a global compensatory framework shipbreaking is a matter of global injustice. The proposed SLC would resolve this problem, ensuring rectificatory justice to workers where the responsibility would primarily lie on the shipping industry for compensation. This development is crucial because, as was seen in Chapter 3, the shipowners' earn around USD 2350 million per annum from the industry, but existing international and national frameworks on shipbreaking have not addressed the financial accountability of shipowners for the human harms that occur in a shipbreaking yard, which is in fact their value chain.

Chapter 3 showed that shipbreaking also benefits the South Asian shipbreaking industry by providing a significant amount of revenue income, but the domestic legal frameworks in South Asia do not contain a specific mechanism for providing adequate compensation to the victim workers. Recent law and policy reforms in South Asian countries also do not provide proper mechanisms for workers' compensation. These national laws are not practicable in the short-term because their focus is mainly on prevention rather than compensation.

As seen in Chapters 4 and 5, the absence of a compensation mechanism in South Asian law is a reflection of the international shipbreaking legal regime. Existing international frameworks on the shipbreaking industry do not deal with workers compensation. In particular, the *Hong Kong Convention* only deals with occupational safety and health, and does so only by proposing voluntary regulatory guidelines. These voluntary guidelines have not been successful in improving the current industry practice. The thesis argues that two critical factors – the significant annual profit of the maritime industry and existing weaknesses in international and national systems for worker compensation – support a shift in the onus for compensation primarily onto the global maritime industry, and away from the South Asian countries, who have neither the financial resources nor the legal systems to provide suitable worker compensation. Shifting liability onto shipowners through the proposed SLC is essential to ensure the financial accountability of the international maritime industry.

The proposed SLC will require shipowners to take responsibility for human harms. This taking of responsibility is an important corrective to the global injustice that occurs under current arrangements. In this regard, the proposed SLC framework focuses on implementing insurance as a financial guarantee for worker compensation, and on the principles of strict, limited liability used in maritime, mining and waste trade industries (see Chapters 7 and 8).

The thesis also recognises that the proposed SLC must be reasonably practicable. It should be easy to implement and maintain under current and foreseeable market realities for the shipbreaking industry in South Asia. In this context, the function of the proposed SLC is not only to introduce compensatory liability for shipowners, but also to persuade other companies within the maritime and shipbreaking industries, such as cash buyers and shipbreaking yards, to comply with the requirements of the *Hong Kong Convention*. Chapter 5 discussed two key reasons for this. First, the three South Asian countries – Pakistan, India, and Bangladesh – are unlikely to act unilaterally, in the short-term, to implement legislative and policy changes that: eliminate beaching as a shipbreaking practice; mandate full pre-cleaning of ships prior to their arrival for breaking; and prohibit all unsafe practices during shipbreaking. Such reforms are not practically feasible in economic, social and technical terms,[3] because of their limited internal financial and political capacity to develop potentially costly regulatory arrangements and implement enforcement options.[4] Second, although a few companies are individually improving their standards through their own internal funding and business practices, these actions only involve a handful of the hundreds of ships that are broken each year.[5] This research acknowledges these gaps in regulatory capacity and in the capacity of individual shipbreaking countries to adopt better, less harmful, business practices.

In regional and domestic context, the EU and South Asian Courts have also heard a number of shipbreaking cases (see Chapters 4 and 6), but the outcomes from these judicial proceedings have focused on the environment and have not substantively considered the issue of worker compensation. The thesis submits that courts have not

[3] Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 224-226.
[4] Emmanuel Yujuico, 'Demandeur Pays: The EU and Funding Improvements in South Asian Ship Recycling Practices' (2014) 67 *Transportation Research Part A: Policy and Practice* 340, 349.
[5] NGO Shipbreaking Platform 'Biennial Report' (Investigative Report, 2019) 4.

followed a rights-based approach. For example, as discussed in Chapter 4, in *Research Foundation for Science Technology and Natural Resource Policy v Union of India and Others, Supreme Court of India* (*Blue Lady*),[6] the Indian Supreme Court allowed the breaking of the contaminated and dangerous Blue Lady ship because of the economic benefits of the breaking, but left the issue of compensating the victim workers unresolved. Similarly, as seen in Chapter 6, the District Court of Rotterdam in the Netherlands has fined two EU shipowners for sending ships to India and Bangladesh in breach of the *EU Ship Recycling Regulation*'s restriction on the sending of ships beyond the EU borders (see Chapter 6), but has not proposed a legal mechanism to address the question of compensation to the workers who broke the ships.

In contrast, a UK shipping company, Zodiac, recently accepted responsibility and paid compensation directly to a victim worker, Idris, who lost both legs while breaking a Zodiac's ship in a Bangladeshi shipbreaking yard. NGO Shipbreaking Platform has welcomed the approach,[7] although the victim worker received the compensation after signing an undisclosed agreement. In addition, as discussed in Chapter 2, in recent *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* (*Maran Shipping*),[8] the Court of Appeal of England and Wales found that the wife of a victim worker, who died during the breaking of a UK ship, has a legitimate claim of compensation from the UK owner of the ship.[9] These two outcomes have opened a new avenue for victim workers to claim compensation. The voluntary actions by companies to compensate workers in the Zodiac case and the naming and shaming effect of the judicial decision in *Maran Shipping* are two important instances in relation to compensation payment. The SLC model applies the principles developed by these decisions and voluntary approaches as well as the lessons learned from the case studies discussed in Chapters 6, 7 and 8.

The proposed SLC also addresses the question of whether a ship and participants in the shipbreaking industry are compliant with the *Hong Kong Convention*'s cradle to

[6] Civil Original Jurisdiction, Writ Petition No 657 of 1995 (November 2007). *(Blue Lady)*
[7] Ibid.
[8] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. (*Maran Shipping)*
[9] See Section A in Part III of Chapter 2.

grave approach. The SLC therefore supports the efforts to meet the expected sustainable development goal of the *Hong Kong Convention*.

The SLC is a financial framework for paying compensation to workers. As a legal reform, the SLC is intended to make shipowners, including commercial ship operators, cash buyers, and shipbreaking companies, accountable for harms suffered by shipbreaking workers and to ensure that all owners of a ship share responsibility for worker compensation across the full lifespan of a ship. In this way, the proposed SLC framework will apply the rectificatory justice framework developed earlier in this thesis, and specifically the associative duty held by shipowners because of the financial benefit they derive from the shipbreaking industry.

III THE SHIPBREAKING LIABILITY CERTIFICATE (SLC) FRAMEWORK

Restating the problems identified in the thesis, the study submits that unless the SLC resolves three problems identified below, it will not provide a truly comprehensive framework for worker compensation that accords with the requirements of rectificatory justice. They are:

(1) the lack of any financial international or national instruments to compensate workers in the South Asian shipbreaking industry;
(2) the inability of existing preventive mechanisms in the international and national shipbreaking legal regime to improve occupational health and safety conditions and thereby reduce rates of work-related deaths, injuries and diseases; and
(3) the lack of transparency in the international transfer of ships for breaking and specifically the failure of the IMO to effectively supervise these transfers.

Next Section explains goals of the SLC before discussing the legal frameworks in detail in Sections B to I.

A *Goals of the SLC Framework*

As a means to resolve the above problems, the thesis recommends that the SLC should meet the following goals:

- Provide prompt and adequate compensation to shipbreaking workers for serious economic loss that workers (or their families) incur because of deaths, injuries, and work-related diseases suffered during shipbreaking work.
- Implement appropriate and effective procedures for workers to claim compensation, for claims to be determined, and for compensation payments to be administered.
- To improve transparency in the employment of shipbreaking workers to support a worker's ability to claim compensation for deaths, injuries, and work-related diseases suffered during shipbreaking work.
- To create a legal framework for worker compensation based on ship-specific insurance as a financial guarantee for payment of compensation and strict and limited liability for shipowners, following approaches used in maritime, mining and waste trade industries.
- Implement prompt and effective enforcement measures to ensure compliance by all shipowners, including short-term owners (cash buyers) and shipbreaking yards.

The thesis submits that unless the SLC meets the above goals it would not be a complete framework for worker compensation. The following sections discuss in detail how the proposed SLC would meet the goals.

B *Two Points of Intervention under the SLC Framework and Method of Financial Contribution to the Shipbreaking Insurance and the SLC Administrative Fee*

The central idea of the SLC framework is to have insurance in place across the life span of a ship as a pre-condition for obtaining the mandatory SLC from the IMO. In fact, an important purpose of the SLC framework is to maintain two shipbreaking insurances and SLCs (that is, one for commercial operation and one for the shipbreaking operation) during the process of shipbreaking (i.e. the final days of a ship's life in a shipbreaking yard). The SLC would therefore intervene in two points of a ship's life: (a) its general commercial operation, and (b) at the end of its commercial operation, prior to its breaking.

The SLC framework would have two categories- shipowner (must have shipowner SLC and shipbreaking liability insurance) and shipbreaker (must have shipbreaker SLC and shipbreaking liability insurance. The shipowner category would include short-term buyers, including cash buyers and open registry countries. A cash buyer or an open registry country becomes the owner of a ship following a transfer of ownership from a shipowner (see Chapters 3 and 5), who operated the ship commercially for a long time (or another cash buyer, if the ship is on-sold several times before it is ultimately sold to a shipbreaking yard). Likewise, a shipbreaking yard becomes the owner of a ship following a transfer of ownership from a cash buyer or an open registry country, or directly from a shipowner. A shipbreaking yard owns the ship until it is finally broken.

The SLC would make two critical interventions at these junctures. First, it intervenes in order for the IMO to issue an SLC for a ship. The proposed SLC has two basic components that apply to any commercial ship: (1) a 'certificate' (the SLC) for the ship, to be issued and administered by the IMO and (2) shipbreaking liability insurance for the ship, to be issued by a maritime insurance company. Under the proposed SLC framework, in order for the IMO to issue the SLC for a ship, a shipowner must file an application stating that his or her ship complies with the defined safety and environmental standards required under the *Hong Kong Convention* for a safe shipbreaking process before the ship commences operation on international waters (see Figure 6). Not only new ships, all existing ships that are already on commercial operation must also file an application to the IMO. Besides existing requirements for commercial ships,[10] these new requirements would act as a set of separate arrangements under the proposed SLC framework to ensure active participation of the IMO in regulating the shipbreaking industry. An alternative mechanism would be to require flag States to administer the above requirements. This has a risk of weak flag State supervision, however, and so the involvement of the IMO is more reasonable than involvement of the flag State in this process.

[10] International Maritime Organisation, Registration of Ships and Fraudulent Registration (Web Page) https://www.imo.org/en/OurWork/Legal/Pages/Registration-of-ships-and-fraudulent-registration-matters.aspx

In obtaining the SLC from the IMO, one of the important requirements is for a shipowner to maintain a ship-specific inventory of hazardous materials issued by an internationally recognized institution. Once the SLC is issued, the IMO (or someone acting on the IMO's behalf) must ensure that the administrative arrangements for it are maintained (e.g. the ships' details are updated, payments are recorded). In the context of the commercial operation of ships, the IMO would not issue or renew the SLC unless a ship can show a shipbreaking insurance certificate issued by an international maritime insurance company and maintain it annually by paying an annual insurance premium.

Second, before purchasing a ship, a shipbreaking yard must open a separate shipbreaking insurance and then apply for a new ship-specific SLC. The proposed SLC for a shipbreaking yard also has two basic components that apply to any shipbreaking yard willing to purchase and break a ship: (1) a 'certificate' for the ship, to be issued and administered by the IMO, and (2) shipbreaking liability insurance for the ship in relation to its breaking, to be issued by a maritime insurance company. The proposed SLC framework for shipbreaking operations requires the yard to open a new insurance and SLC and maintain them until a ship is finally broken, alongside the SLC and shipbreaking insurance of a shipowner. Continuing the insurance and SLC until the last day of a ship would be a one-off payment for a shipbreaking yard, whereas for commercial shipowners, it would be an annual continuous payment until a ship is completely broken. In case, a shipbreaking yard holds ownership for more than a year, it would have to pay the insurance premium only for the additional period.

During its commercial operation the SLC would encompass a two-part payment (SLC charge), payable by the shipowner, on an annual basis: (1) a smaller (30% of the annual payment) SLC administrative fee to cover the establishment cost of issuing and administering the SLC, payable to the IMO, and (2) a larger (70% of the annual payment) payment to cover an insurance premium to continue the insurance policy, payable to the insurer until the final day of a ship.

The SLC for the shipbreaking operation would also encompass a two-part payment, payable by the shipbreaking yard only for the duration of shipbreaking. Similar to the commercial operation, the SLC for shipbreaking operations would include: (1) a smaller (30% of the annual payment) SLC administrative fee to cover the

establishment cost of issuing and administering the SLC, payable to the IMO, and (2) a larger (70% of the annual payment) payment to cover an insurance premium to continue the insurance policy, payable to the insurer until the final day of a ship.

To calculate the cost for insurance premium (70%) and SLC administrative fee (30%), the SLC framework recommends using the common attributes of the shipbreaking market, including annual average shipbreaking volume, and deaths and injuries occurring in global shipbreaking yards see further below – *Determination of Costs for Insurance Premium* for both commercial and shipbreaking operations.

The thesis prefers maintaining the two SLCs and insurances (of both commercial and shipbreaking operations) until a ship is finally broken in a shipbreaking yard for two specific reasons. First, keeping joint insurances until the final day of a ship is to introduce a joint compensation payment mechanism for workers suffering injury or disease, or for family of deceased workers. Second, continuity of two insurances until the very last day of a ship would ensure that the responsibility to pay compensation is shared between all shipowners and a shipbreaking yard. In this way, as both insurances would remain in operation, a reasonable expectation is that a shipbreaking worker could receive compensation from both insurances.

An alternative to keeping both SLCs and insurances (of both commercial and shipbreaking operation) until the last day of a ship is that the shipbreaking insurance policy for commercial operation of a shipowner merges into the shipbreaking insurance policy for the shipbreaking operation. Unlike the joint insurance policy, the merging policy means that there will be a single shipbreaking liability insurance in place across the operating life of a ship. Regarding the merging policy, a shipbreaking yard would need to signal an intent to break the ship to the insurer for opening the shipbreaking insurance so that appropriate changes in the premium would be made, noting that all parties must act on utmost good faith and the policy would not respond if a claim was made without a shipbreaking yard having signalled an intent to break a ship.

In the case of cash buyers or open registry countries who become owners for a short period, the proposed SLC framework would require them to inform the IMO about purchasing and selling a ship and to continue the previous shipowner's SLC, paying the prescribed SLC administrative fee and shipbreaking insurance premium for their

intended duration of ownership. Presumably, the SLC requirements would become a part of the formal transfer of ownership requirements imposed by the IMO in contrast to the present requirements maintained by flag States.[11] At this stage, an intervention from the IMO would be critical, especially concerning the IMO requirements for transfer of ownership by a cash buyer or an open registry country. Under the proposed SLC, the IMO could simply require the applicant to indicate whether (1) the applicant (the cash buyer or open registry country) will operate the ship as a commercial ship, or (2) the applicant (the cash buyer or open registry country as) will sell the ship for breaking. With the first option, the normal SLC charge requirements will apply and continue with annual payments for insurance and SLC administrative fee in the same way as for a ship's commercial operation, whereas with the second option, the SLC charge would be a single (one off) payment of the SLC administrative fee and insurance premium, similar to a shipbreaking operation.

The declaration to the IMO under the SLC framework would also be an express indication of intention. The declaration of intention could be framed either as an intention to break the ship or that the owner intends that the ship is on its last journey for dismantling. The legal consequences then for non-disclosure would be to require a cash buyer or an open registry country to pay the annual SLC administrative fee and insurance payments similar to the commercial operator's SLC charge scheme. Moreover, in consequence of not making the annual payments, the IMO under the SLC would refuse to process any subsequent application for transfer of ownership.

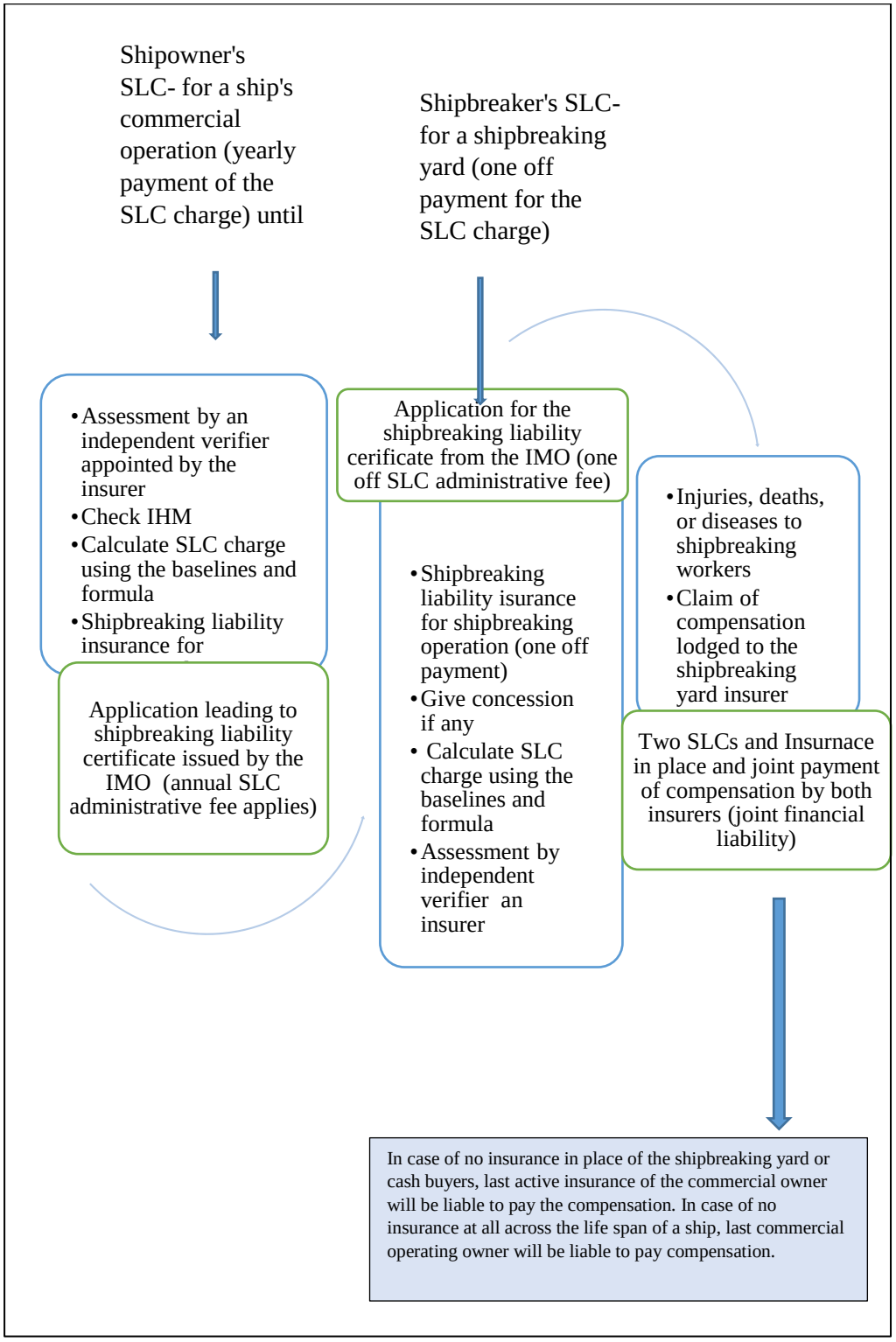
The thesis recognises the difficulty in enforcing the above arrangements for transfer of ownership, because a cash buyer, or an open registry country, or shipbreaking yard might decide to avoid the transfer of ownership process recommended under the proposed SLC framework.

To resolve such a problem, considered further in Section F below, the study recommends the 'Liability of Last Active Insurance Policy', meaning that the last

[11] It is the duty of all flag Member States to monitor the change of ownership: at arts 91 and 92 of the *United Nations Convention on the Law of the Seas*, adopted on 10 December 1982, 1982 UNTS 397, entered into force on 1 November 1994; However this mechanism is not effectively working which has led the IMO to interfere into the process: at See International Maritime Organisation, 'Registration of Ships and Fraudulent Registration Matters' (Webpage) Registration of ships and fraudulent registration matters (imo.org)

active insurer of the original owner will pay the compensation, in the event of a death, injury, or disease faced by a worker in a shipbreaking yard. Figure 5 sets out the process flow of the SLC and Figure 6 sets out the proposed SLC framework.

Figure 5. Process flow of the two SLCs and insurances leading to compensation payment



C *Determination of Costs for the SLC Administrative Fee and Insurance Premium*

In terms of determining a shipowner's cost for insurance premium and the SLC administrative fee (whether an annual payment for a commercial operator or a single payment for an owner who declares they intend to break the ship), an insurance company would employ an independent verifier.

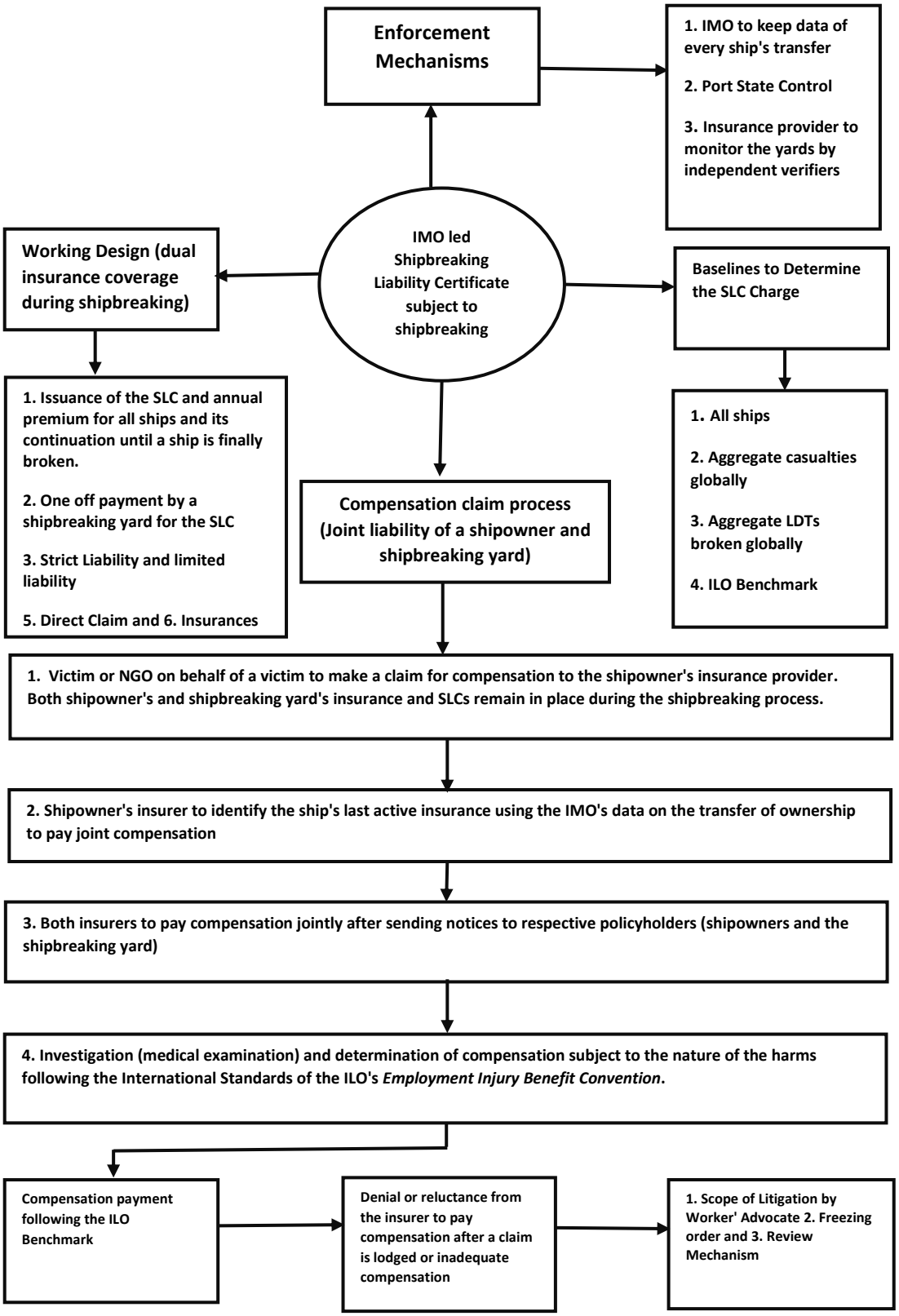
In terms of policing the SLC mechanism for commercial operation of a ship, the thesis finds that using the well-established Port State Control (PSC) mechanism of the Paris Memorandum of Understanding for commercial ships (see Chapter 7). Considered further below, Port State Control officers (PSCOs) who are already serving in many State ports under the existing PSC mechanism would inspect whether commercial ships are following the SLC requirements. For policing the shipbreaking yards, the thesis recommends for the independent verifier to inspect whether a shipbreaking yard follows the regulatory requirements, listed in Table 12 further below, that are provided in the *Hong Kong Convention*. The Section entitled *Enforcement Measures* below discusses the enforcement mechanism.

As the proposed SLC framework would include short-term owners (e.g. cash buyers and open registries) and long-term owners (e.g. shipping companies) as shipowners, it is necessary to consider the basis on which the premiums would be calculated. For example, a short-term owner may only own a ship for a few months or days. In this respect, this study recommends that premiums would be calculated on a monthly or daily basis. Alternatively, the premiums would always be levied on an annual basis but parties could credit the remaining term on an insurance policy to the purchasing party when the ship is sold.

D *Last Active Insurance to Compensate Victims*

Aiming at the payment of an adequate compensation promptly to shipbreaking workers, the proposed SLC must address what happens if: (a) a shipbreaking yard abandons a shipbreaking insurance upon purchase of a ship, or (b) a previous shipowner has abandoned the shipbreaking insurance and the shipbreaking yard does not act to re-acquire a SLC and insurance when it purchases the ship. The study proposes that, in these circumstances, the last active insurance for a ship will be targeted for compensation.

Figure 6. The proposed framework



The ‘last active insurance’ approach refers to imposing liability on the original owner of a ship. If an investigation relating to a claim for compensation for death, injury or work-related disease made under the SLC-supported scheme reveals that the ship did not have insurance at the time it was broken, then the last active insurance of the ship, if any, would be held responsible for the payment of any compensation. It follows from this approach that if a cash buyer or an open registry country or shipbreaking yard maintains no insurance, the last active insurance of the original owner who used the ship commercially would be liable for the compensation.

In this respect, it is also proposed that the IMO under the proposed SLC framework would maintain a SLC and insurance database for each ship's SLC and assist the workers in identifying the last active insurance. Alternatively, if breaking of a ship causes casualties, but investigation reveals that the commercial operating owner has not maintained a shipbreaking insurance or a SLC, still the responsibility would lie on the commercial operating owner to pay the compensation claims jointly with the concerned shipbreaking yard. If it is not possible to identify the last active insurance or, alternatively, there has never been shipbreaking insurance in place for a ship, then the SLC framework would support or encourage lodging a legal claim before a ship's host or home State court. In this context, the preferred method is to allow a defined independent entity (e.g. a Worker's Advocate) to make the claim on behalf of the affected workers and sustain the legal proceedings. The litigation by the Worker’s Advocate could be supported through the annual or one-off SLC administrative fee paid to the IMO.

The ability to identify and target the last active insurance is a crucial aspect of the liability scheme that the SLC framework would impose. It is critical in at least three respects. First, it encourages the parties to the sale of a ship to deal with the SLC and shipbreaking insurance as part of their contractual agreement, because the seller will want to ensure that they will not subsequently be targeted as the last active insurance. Second, it will encourage compliance with the SLC framework because it will be easier and more cost effective to maintain the shipbreaking insurance and SLC by paying the annual premiums and SLC administrative fees than facing court cases (see Chapter 3 and 6). All shipowners, whether shipbreaking yards, cash buyers, or even open registry countries who own ships for a short period would fall under the scope of the proposed SLC, and would have two options: (a) if they maintain insurance, a victim

worker can claim from the insurance through an established compensation scheme administered by a third party insurance company or (b) if they do not maintain insurance, they risk legal action against them before their domestic Court. Finally, it would link the subsequent shipowners of a ship to its original SLC. Linking a ship to its previous owners would resolve the reflagging problem because, before the final sale, the last owner would have to maintain shipbreaking insurance and the SLC and notify the intention of the sale to the IMO. This link would help a victim in identifying the last active insurance and claiming compensation directly from the insurance provider of a shipbreaking yard, who would then add the insurance provider of the shipowner to pay compensation.

In this context, it is also helpful to address the basis upon which it is appropriate to expose previous owners to liability. As discussed in Chapter 2, the basis for exposing previous owners to liability lies in the business profits they have earned from the operation and sale of the ship, their involvement in the operation and maintenance of the ship, and their previous responsibilities to meet any domestic or international regulatory requirements that apply to a commercial ship.[12] The *UN Guiding Principles* state that 'a business enterprise is responsible for all adverse human rights impacts that it may cause or contribute to through its own activities, or which may be directly linked to its operations, products or services by its relationships'.[13] The principle establishes that responsibility depends on 'linkage' rather than 'control' and that this nexus of linkage covers a broad area of responsibility of previous owners in this context.

E *Direct Claim*

A principal aim of the SLC framework is to introduce a system to pay prompt compensation to victim workers. Promptness here refers to 'the procedures that would govern access to justice and influence the time and duration for rendering decisions

[12] Reto Walther, 'UN Guiding Principles on Business and Human Rights and Effective Remedies- A State-Based Non-judicial Grievance Mechanism for Switzerland' (Bachelor Thesis, Zurich University of Applied Sciences- School of Management and Law,15 May 2014).
[13] John Ruggie, *Guiding Principles for the Implementation of the United Nations 'Protect, Respect and Remedy Framework,* Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, UN Doc A/HRC/17/31 (March 2011), art 17(a).

on compensation payable in a given case'.[14] The case studies discussed in Chapters 7 and 8 have established two approaches for a prompt compensation claim. The first is the direct claim from the insurer, and the second is the litigation. Regardless of these mechanisms' capacity to provide adequate compensation individually, the SLC framework proposes to use the two approaches alternatively for ensuring that no compensation claim is unsuccessful because it has been caught up in a procedural gap.

First, the victims or their legal representative (e.g. Worker's Advocate) should have an opportunity to claim directly from the insurance provider of the shipbreaking company, and be able to seek legal redress if the insurer fails to respond for some reason (other than by denying the claim). Concerning legal redress, there should also be scope for victims or their legal representatives to file petition to their local Court having appropriate jurisdiction. Considered further below, the SLC framework recommends for the shipbreaking nations to pass domestic legislation that aims at providing a cause of action for workers when the insurance provider or a shipbreaking yard fails to respond. The proposed domestic legislation should also include a provision to apply for a freezing order on assets based on an allegation that the victim has arguable grounds for a cause of action (e.g. fraud or breach of contract).

Second, having learned lessons from the case studies (see Chapter 8), the thesis recommends that the proposed domestic legislation also provide a legal scope for litigation if an insurer denies a direct claim. Under the proposed domestic legislation, a victim should have an opportunity to claim the damage against the concerned shipbreaking yard in the Court of a contracting party where the incident has occurred. Nations with shipbreaking industries can also include a provision into the proposed domestic legislation to introduce a review mechanism for a worker in the event that his or her compensation claim under the SLC framework was unsuccessful.[15] Because

[14] International Law Commission, *Draft Principle on the Allocation of Loss in Transboundary Harm Arising Out of Hazardous Activities, with Commentaries*, UNGA, Fifty-eighth Session, UN Doc no. A/61/10 (2006).

[15] There are maybe five reasons why a claim might be unsuccessful:

- damage not caused by an insurable event – 'the insurance policy will only cover damage caused by an insurable event (that is no damage that was pre-existing or caused by some other event)'
- non-disclosure – 'the shipbreaking yard has not disclosed information when they applied for or renewed the policy or the worker did not disclose something'
- 'operation of a condition or exclusion clause – the worker or the shipbreaking yard has failed to comply with an insurer's requirement or the policy does not cover the loss'
- 'fraud - the insurer believes the worker or the shipbreaking yard have acted fraudulently in some way'

there is no contractual relationship between the insurer of a shipbreaking yard and the worker, and possibly no employment relationship between the workers and the shipbreaking yard, the review mechanism would empower the local courts for reviewing a decision of an unsuccessful claim made under the SLC.

The SLC proposal emphasises the importance of State interventions through such domestic legislation for ensuring compensation payment. In this respect, States are not obliged to pay the compensation, but it is required that the State create a legal environment to ensure respondents respect a compensation claim without causing undue delay.

F *Strict and Joint Liability*

Apart from the compensation claim, it is required to put in place an appropriate liability regime.

Learning lessons from the case studies on the oil spill, waste trade, and mining discussed in Chapters 7 and 8, the proposed SLC recommends a strict and joint liability approach (as discussed above) for shipowners and shipbreaking yards through their corresponding insurances.

In terms of compensation payment through their corresponding insurances, the liability of the parties would be strict irrespective of any fault involved. Shipbreaking is a high-risk industry. It is unlikely whether the insurances would cover the losses, unless there is adequate coverage. Therefore, a joint liability approach of both the shipowner, for commercial operation, and the shipbreaking yard, for the shipbreaking operation, through their corresponding insurances will be useful. The shared costs of joint insurances are expected to provide enough insurance coverage to ensure the payment of compensation claims within certain limits proposed in this study (see below in Part IV of this Chapter). The long-time payment of premiums from shipowners across the life of a ship would therefore be a vital component for the insurers.

- 'policy cancellation': See for detail at Legal Aid Queensland, Understanding the Reason for an Insurance Claim Refusal (Web Page) < Understanding the reason for an insurance claim refusal - Legal Aid Queensland>

As the main contribution for the compensation comes from the shipowners' insurance, the real relevance of the shipbreaking yard's policy is to provide direct and easy access to the SLC mechanism linking the shipowners' insurers to the compensation claim and to cover the insurance claims adequately. This will allow affected workers to file a claim to a shipbreaking insurance provider as an immediate contact, who then links the last insurer of the shipowner to the claim (see Part V below) maximising the chance of receiving the insurance. There is, however, a question of unreasonable increases of insurance premiums by insurance companies. Depending on certain baselines, the SLC framework therefore proposes strict liability limited to a certain amount for commercial and shipbreaking operations of a ship.

Discussed further in Part IV below, the baselines include the highest number of deaths, injuries and diseases and the average weight of ships, giving insurance companies limited possibilities to raise premiums. Another positive side of this baseline-based compensation calculation approach is, if shipbreaking yards experience no deaths, injuries or diseases, the amount of premium and SLC administrative fee will decrease substantially to a minimum level. On the other hand, if shipbreaking yards experience increasing numbers of deaths, injuries or diseases continuously, the premium will rise to the maximum value set under the baselines (provided in Part IV below) and in consequence, the IMO would need to intervene and stop issuing further SLCs to certain shipbreaking yards for not improving their standards. Precisely, the driving factors for improving safety and health standards would be the reduced premium and fear of losing the business following the IMO's intervention.

As one of the aims of the SLC is to introduce prompt compensation, it excludes the requirement of the proof of fault and any conditions, limitations, or exceptions placed by the parties. The strict liability for damages in the event of a shipbreaking accident or pollution in the course of shipbreaking activity is to avoid the difficulty and delay of proving a fault liability. Strict liability is required to avoid, for example, circumstances in which a non-compliant shipbreaking company may seek to escape the liability by arguing that the damage resulted from the fault of the victim. With strict liability, a shipbreaking company cannot seek to escape liability in this way.

The thesis recommends the same meaning for the strict liability in the context of insurance coverage, meaning that except in very limited circumstances, such as a

fraudulent claim, the insurers must not try to escape compensation payment for the harms caused to a shipbreaking worker.

G *Limitation of Liability and Insurance for Financial Security*

Under the proposed SLC, the insurance premium would be the financial security for the compensation payment. In terms of compensation payment, the SLC proposes limited liability of both commercial and shipbreaking operations of a ship depending on the baselines discussed in Part IV below. The limited liability is important in this context because it also allows the insurers' liability to be restricted to a certain amount for each claim. Further, the limited liability of the insureds removes the possibility of increasing the premium cost and the SLC administrative fee unreasonably. The limited liability would serve three essential purposes: (1) providing certainty about the liability of both commercial and shipbreaking operations of a ship, (2) providing certainty of the insurance provider's liability, and (3) providing certainty about the liability limit of workers, being the beneficial parties.

Despite proposing limited liability of shipowners for commercial operation, a question may arise whether it would be feasible to require a commercial owner of a ship to pay the insurance premium throughout a ship's commercial life leading up to end-of-life. From the perspective of shipbreaking, as it is compensation insurance and impliedly for risk management, this study proposes that shipowners be able to pass the cost of insurance and the SLC administrative fee on to those who use the ships for their individual and commercial purposes. As discussed before, a shipbreaking yard, being the last owner of a ship needs to obtain a new shipbreaking insurance and a new SLC, independent of the SLC and insurance of the ship's previous owners meaning that every new ship purchase would be followed by a new insurance policy for a shipbreaking yard. The subsequent insurances thus allow for continuous oversight of their operational standards. The premiums for shipbreaking insurance would thus reflect their progress towards ensuring adequate standards.

The baselines in Part IV below are to set the maximum premium by an independent verifier appointed by an insurance company who can, however, consider concession from the cost of insurance premium followed by an onsite inspection. The standards listed in Table 12 that provide the regulatory standards required under the *Hong Kong Convention* can be used as a checklist to give such a concession. As the same shipbreaking yard needs to have a new insurance and SLC for later purchase of a new ship, the next insurer will re-examine existing standards for a decision on concession. In consequence, a positive outcome would be that the subsequent onsite assessments by insurance industries for subsequent ship purchases would push for gradually improving the standards. The inspection reports will also act as the data regarding a shipbreaking yard's standards.

In the same vein, the insurance premium of a shipowner for an operational ship (other than a shipbreaking yard) would reflect the amount and nature of the hazardous materials (reported in an IHM) stored in the body of a ship. High amounts of hazardous materials would drive insurance premium for the shipowners up to the maximum level prescribed in the baselines in Part IV. Alternatively, lower levels of hazardous materials would decrease the premium cost. For example, if a shipowner maintains an inventory of hazardous materials (IHM) issued by an internationally recognised organisation and continues regular surveys following the *Hong Kong Convention*, then the premium would decrease to 50% from 100% of the maximum limit because that would reduce the shipbreaking risk. Similarly, if a shipbreaking yard maintains one good standard for breaking a ship, such as workers' registration, the insurance would decrease around 8-10% of the maximum limit set under the baselines discussed in Part IV.

The insurance industry is increasingly global and common in the maritime business, and it's regulatory standard is mainly based on utmost good faith in disclosing information.[16] The good faith principle requires each party to act in good faith in respect of any matter. According to the principle, an applicant has a mandatory duty to disclose all material facts relevant to the acceptance and rating of the risk.

Presumably, following the insurance contract, there would be a clear picture of the standard of a shipbreaking yard. However, supplying information to the insurer may

[16] *Insurance Contracts Act 1984* (UK), s 13.

not be enough. Shipbreaking is an industry with many technical features, with a complex structure and thereby considerable additional potential risks over and above normal shipping operations. Due to these uncommon features and risks, the study as previously mentioned, proposes introducing an independent verification process carried out by an additional specialist independent third party to review and approve the shipbreaking operations on behalf of the insurers. Presently, classification societies are performing the role of certifying the shipbreaking facilities in South Asia, but this new requirement would see an increase in a particular class of verifiers.

There are a number of benefits to using independent verifiers, including resolving current problems with the certification model of shipbreaking yards. As discussed in Chapter 3, most of the shipbreaking yards are certified by classification societies which are not independent of shipowners. International bodies, such as the United Nations and the European Union, do not recognise their role. If the SLC takes effect, an independent surveyor, such as Grieg Green, would intervene through the insurance company.[17] This independent verification process would also create a platform for the private bodies to work with the IMO, and the private-public partnership would strengthen the inspection of global shipbreaking industries.

H *Insured Object*

Under the proposed SLC framework, the shipbreaking insurance is a pre-condition for the SLC and it includes liability for both shipowners and shipbreaking yards for death, injuries and work-related diseases suffered by workers. Since workers are the ultimate sufferers, with no funds, and hence no one to champion their injury and/or death,[18] the SLC framework puts emphasis on the issue of injustice to them.

From the perspective of a financial instrument, although the framework is similar to the ship recycling licence proposed under the *EU Ship Recycling Regulation*,[19] the proposed SLC framework is different. Unlike the *EU Ship Recycling Regulation* licence framework (see Chapter 6), the proposed SLC aims to remedy work-related deaths, injuries and diseases based on the rectificatory justice theory. Notably, a

[17] GRIEG GREEN, 'Ship Recycling' (We Page) https://grieggreen.com/project/ship_recycling/
[18] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 125-126.
[19] See Part III of Chapter 6.

consequence of the proposed SLC framework is that the insurance industry will likely monitor rates of deaths, injuries, and work-related diseases (based on claims) for shipbreaking yards, and the IMO will likely use the data maintained by the insurance industries to evaluate improvements in the occupational health and safety standards of the shipbreaking yards. Under the proposed SLC framework there is scope for the IMO to take a larger regulatory and compliance role and, for example, to determine that a shipbreaking yard has failed to take adequate steps to improve standards, and thus to decide that a shipbreaking yard should not be issued a further SLC until standards improve. Such an interventionist approach is vital to encourage non-compliant shipbreaking yards to improve their standards.

I *Serious Economic Loss*

The proposed SLC is for compensating the economic loss of the workers. The SLC would therefore include claims concerning damages for personal injury and future income as a means to provide financial security to a family member of a dead or disabled worker. The SLC would broadly allow claims for compensation, such as 'economic loss, pain, and suffering, permanent disability, loss of amenities, or consortium, and the evaluation of the injury, directly associated material loss such as loss of earnings and earning capacity, and medical expenses including costs for achieving full rehabilitation. Compensation would also be payable for non-material damages, including for loss of loved ones, pain and suffering, as well as the affront to sensibilities with an intrusion on the person, home or private life'.[20]

In determining compensation for economic loss, it is crucial to establish practical baselines. The insurance premium and compensation payment amount to workers should be neither too high nor too low. The thesis submits that the proposed SLC framework will not create an unreasonable financial burden on the maritime industry. In order to determine an acceptable level of liability, it is necessary to have the cost linear, such that bigger ships have more liability than smaller ships. This mechanism ensures that the ratio of the licence cost of bigger ships would be more than the smaller ships. Considered in detail below, this is why the framework proposes that the annual

[20] V.S Mishra, 'Emerging Right to Compensation in Indian Environmental Law' (2001) 23 *Delhi Law Review* 58-79; International Law Commission, *Draft Articles on State Responsibility for Internationally Wrongful Acts*, (Yearbook 2001) 2 (Part Two) 98-105, art 36 (b).

SLC administrative fee and the annual insurance premium are determined with reference to a ship's weight rather than the number of ships broken each year in all global shipbreaking yards.

The proposed SLC framework is comprehensive – all ships would be required to participate in the scheme, regardless of the age, size, and type of ship and the amount of internal wastes that it has. Older ships with large amounts of hazardous internal waste present higher risks to workers and thus are a core focus for the proposed SLC framework, and insurance premiums will be higher for such ships (relative to younger ships). Next Part explains this in detail.

IV ESTABLISHING THE BASELINES FOR THE SHIPBREAKING INSURANCE AND SLC ADMINISTRATIVE FEE

For a shipbreaking worker compensation scheme to function properly (i.e. to pay an adequate amount of compensation to shipbreaking workers) there must be an effective methodology for determining the annual SLC administrative charge and the annual premium to be paid for a ship. It is proposed that the following factors will be taken into account as the critical baselines for determining the premium to be paid for a particular ship:

- insurance for all ships;
- the average amount of Light Displacement Tonnage (LDTs) recycled in the last five years globally;
- the aggregate number of deaths and injuries over the last five years in global shipbreaking yards; and
- the compensation benchmark set under the ILO's *Employment Injury Benefits Convention, 1964*.

Using the above baselines, the proposed SLC framework would use a simple formula to calculate the premium for the shipbreaking insurance, and the SLC fee would be:

$$\frac{\left\{\text{(last 5 years' aggregate number of global deaths \& injuries} \times \text{compensation benchmark)}\right\}}{\text{average amount of LDTs broken (last 5 years)}}$$

The proposed SLC recommends the formula to determine an overall SLC charge for a ship and a shipbreaking yard, which would be proportionated as 30% SLC administrative fee, and 70% for annual insurance premium payment. Considered further below, the proposed SLC framework also proposes the appointment of an independent verifier by an insurance company, who will use the formula to calculate the maximum SLC charge for a ship. However, the amount is not absolute. Under the proposed SLC framework, after fixing the maximum SLC charge for a ship, an independent verifier representing the insurer can give concession to the insurance premium upon examining the amount and nature of hazardous materials reported in a ship's IHM. The idea is to monitor whether a ship follows the *Hong Kong Convention*'s guidelines on IHM. This means the quality of an IHM would be the basis for an independent verifier to decide on a premium concession. This would not affect the SLC fee which will not change. For an effective application of the system, the thesis recommends that unless an internationally recognised institution issues the IHM, the independent verifier should not accept the IHM as the basis for providing such a concession on the premium.[21] The IMO can issue a list of such institutions and update the list regularly to assist in following the SLC requirements.

The above formula would also determine an overall SLC charge for a shipbreaking yard, with an independent verifier appointed by an interested insurance company determining the maximum charge. Then, under the proposed SLC framework, the independent verifier would examine the existing facilities maintained by a shipbreaking yard and calculate the amount of concession from the insurance premium. As noted above, this would also not affect the SLC administrative fee. Accordingly, if a shipbreaking yard follows all the f requirements as listed in Table 12 below, it will pay no premium except the primary SLC administrative fee (30% of the SLC charge).

[21] *Bangladesh Environmental Lawyers Association (BELA) v Janata Steel Corporation*, [Writ Petition No. 8466 of 2019] High Court Division (26 February 2020) (*Janata Steel*).

Table 12. Checklist for compliance with the Hong Kong Convention, 2009 and the IMO Guidelines for Development of the Ship Recycling Plan, 2004 (Guidelines)

No.	*Checklist*	***Hong Kong Convention* (HKC) article/regulation/ the *IMO Guidelines for the Development of the Ship Recycling Plan (Guidelines)***	***Required Standards under the Hong Kong Convention (HKC)* for considering concession on premium to be paid by a shipbreaking yard**
1.	Worker registration and personal protective equipment (PPE)	(R 22)	As per the HKC, the registration of workers is one of the important requirements. Providing PPE is also an important requirement of the HKC.
2.	On-site pollution and safety control equipment	(R 22) (S 4 of the *Guidelines*)	Before issuing SLC, it is a regulatory requirement to check the on-site management capacity of a shipbreaking yard. As a standard shipbreaking yard, the Turkish shipbreaking industry maintains a 200 sqm storage building, roofed and unique sealed floor plus drainage. It is built for storage of asbestos/6tons, bilge water/50t, sludge/12t, waste oil/214t and further dangerous solid waste/55 m^3 for controlling on-site oil pollution and wastes are transported to waste management facility.
3.	Emergency preparedness. On-site equipment (variable)	(R21 of the HKC) (S 3 of the *Guidelines*)	Frequent accidents require appropriate emergency responses
4.	Prevention of adverse effects of human health (gas-free entry, spill prevention)	(R 19) (S 4 of the *Guidelines*)	Free a ship's chamber from any unseen gas is necessary to prevent adverse effects on human health. In addition, an on-site inspection team is required to check any spill prevention.
5.	Preparation of various plans (Emergency Health and Safety management, ship recycling action plans)	(R 18) (S 5 of the *Guidelines*)	Proper plans in an emergency and a proper ship-recycling plan can reduce shipbreaking accidents on a large scale.
6.	Incident reporting	(R 23)	The reporting requirement is a vital issue in case of a shipbreaking accident.
7.	Training of workers	(R 22) (S 3.3 of the *Guidelines*)	Following the regulation of the HKC, minimum 4 one-day training requirement is required. The Turkish ship recycling industry maintains the evidence of suitable workers' training
8.	Establish management systems to protect workers and the environment	(R 17) (S 4.2 of the *Guidelines*)	Discharging the waste into seawater has been the main problem in the sound management of a ship's waste. Therefore, proper drainage, collection and disposal of the waste are essential requirements under the HKC since these will have reduced environmental and health consequences.
9.	Safe and environmentally sound management of hazardous materials	(R 20) (S 4.2 and 4.3.4 of the *Guidelines*)	A standard shipbreaking yard uses specialists to remove and clean hazardous materials before starting the shipbreaking process.
10.	Reporting the start of shipbreaking	(R 24)	A shipbreaking yard is required to show the evidence of compliance with notification requirements.
11.	Reporting completion	(R 25)	Same as above

No.	*Checklist*	***Hong Kong Convention* (HKC) article/regulation/ the *IMO Guidelines for the Development of the Ship Recycling Plan (Guidelines)***	***Required Standards under the Hong Kong Convention (HKC)* for considering concession on premium to be paid by a shipbreaking yard**
12.	a. Upgrade facilities to Dry Dock b. Monitoring Laboratories c. Thermal Treatment Facility d. Health care system	(Ss 3-5 of the *Guidelines* broadly)	Maintaining proper monitoring laboratories, thermal treatment facilities, and Healthcare systems are essential guidelines adopted within the Hong Kong convention guidelines.

Source: World Bank Report (2010), the *Hong Kong Convention*, and the IMO *Guidelines for the Development of the Ship Recycling Plan*[22]

The next few sections explain the basis for the baselines and their contribution to determining an adequate amount of compensation using the formula in Section F of this Part above.

A *Shipyard to Shipbreaking Yard Approach*

The proposed SLC framework would introduce a 'cradle to grave' approach that would require shipowners to maintain an SLC (and, thus, shipbreaking insurance) across a ship's life cycle.[23] A key aim of the cradle to grave – or shipyard to recycling yard – approach is to impose 'life of ship' (LoS) planning across the operating life of ships, such that contingencies for the ultimate recycling of the ship become an administrative part of the commercial operation of any ship, in the form of a requirement to maintain a SLC, from the time the ship leaves the shipyard until the ship is broken into its final pieces.

A shipyard to shipbreaking yard approach also avoids difficulties with linking the requirement for a SLC to a specific stage in the ship's operating life or to the average age at which a ship of a particular category is taken out of commercial service. There

[22] The Table was developed following report published by the World Bank in 2010; See details of the report Maria Sarraf et al, 'Ship Breaking and Recycling Industry in Bangladesh and Pakistan,' (Report No. 58275-SAS, World Bank, 2010) 46. *(World Bank Report 2010)*. The Maritime Environment Protection Committee, *IMO Guidelines for the Development of the Ship Recycling Plan*, IMO Doc MEPC/Circ.419, 12 November 2004.
[23]World Bank Report, Ibid 59.

are no binding rules on the age at which a ship is to be taken out of commercial service or decommissioned. Further, it is difficult to determine an 'average' age at which ships are decommissioned, particularly across the full range of commercial vessel types that fall under the *Hong Kong Convention*. IHS World Fleet Statistics reported that ships over 100 gross tonnages had an average life of 33 years before going to the demolition market in 2018.[24] A study by Ecorys, DNV.GL and Erasmus found that the average age of ships ranges between 10 and 29 years.[25]

The thesis proposes the SLC framework to supplement the *Hong Kong Convention*, and the framework must be flexible enough to apply to the broad range of vessels that fall under the Convention. Article 2(7) of the *Hong Kong Convention* defines 'ship' to mean 'a vessel of any type whatsoever operating or having operated in the marine environment and includes submersibles, floating craft, floating platforms, self-elevating platforms, Floating Storage Units (FSUs), and Floating Production Storage and Offloading Units (FPSOs), including a vessel stripped of equipment or being towed'. Article 3 goes on to provide that the Convention will not apply to 'any warships, naval auxiliary, or other ships owned or operated by a Party and used, for the time being, only on government non-commercial service' [art 3(2)] or to 'ships of less than 500 GT or to ships operating throughout their life only in waters subject to the sovereignty or jurisdiction of the State whose flag the ship is entitled to fly' [art 3(3)].

The SLC should, however, recognise that as a ship ages the amount of internal wastes increases and thus, as a general statement (and in the absence of measures to pre-clean ships), older ships present greater occupational health and safety risks to shipbreaking workers. Thus, although the overall SLC framework will operate without regard to the age of the vessel, an additional proposal is that the framework can include a special requirement for ships over 30 years to obtain a modified SLC with a higher administrative charge and shipbreaking insurance premium.

[24] IHS Markit, 'World Fleet Statistics 2018: A Composition of the World Fleet Development' (Web Page, 31 December 2018) <https://ihsmarkit.com/industry/maritime.html>.
[25] ECORYS-DNV-GL-Erasmus University of Rotterdam, Financial Instrument to Facilitate Safe and Sound Ship Recycling' (Research Report, The EU Commission Directorate-General for Environment, June 2016) 34. *(ECORYS-DNV-GL Study, 2016)*

B *The Supply of Ships for Breaking*

The insurance premium and SLC administrative fee would depend on the average tonnage of ships broken each year globally. As indicated in Table 13 below, the average annual gross tonnage of ships that entered the demolition market for the period 2014-2018 was 23.5 million tonnes. Of the total gross tonnage, the South Asian shipbreaking nations accounted for an average of 80% of the tonnage per year, including 91.78% of the tonnage in 2018. On these data, most of the global fleet is broken in shipbreaking yards in South Asia, in workplaces that present significant occupational health and safety concerns to workers and in employment relationships that are insecure and short-term and which often lack any direct contractual relationship between the worker and the owner/operator of the shipbreaking yard.

Table 13. Country specific amount of shipbreaking between 2014 and 2018

Countries	***2014***	***2015***	***2016***	***2017***	***2018***	***Average***
Bangladesh	4346296	8050930	9530264	6869287	8687384	
India	6966362	5167041	9477130	6938028	4719968	
Pakistan	3909134	4519769	5480340	3795033	3968452	
Total	15221792	17737740	24487734	17602348	17375807	
Percentage	67.9%	76%	84.4%	76.8%	91.78%	80%
China	5281169	4414908	3331546	3445145	359073	
Percentage in China	23.54%	18.9%	11.44%	15.03%	9.1%	
World total	22431039	23339989	29134953	22915519	189304082	23.5 million

Source: The United Nations Conference on Trade and Development[26]

The demand for ships in the South Asian shipbreaking industry depends on the steel price and the demand for steel scrap in Bangladesh, India and Pakistan, and market forecasts for the Asian subcontinent indicate a strong ongoing demand for ships to be broken. The data sourced from the United Nations Conference on Trade and Development[27] reveal that the steel price will continue to increase. Recent sale price

[26]United Nations Conference on Trade and Development, 'Ship Scrapping by Country of Demolition' *Annual Report* (Webpage) https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=89492
[27] Ibid.

of old ships also provides evidence of such high sale prices; for example, a Bangladeshi shipbreaking yard has recently purchased a ship paying around USD 600 per LDT.[28] Allied Shipbrokers, a Greek shipping company, has also noted that the offered price for ships is on the rise, citing the increasing demand for steel scrap as the reason.[29] In the maritime industry, gross tonnage (GT) from the sellers' perspective is typically used to measure the size of a ship. However, in the global shipbreaking market light displacement tonnage (LDT) is used to measure the weight of a ship.[30]

C *Average Rate of Deaths, Injuries, and Diseases*

The most critical baseline is the aggregate deaths, injuries, and diseases of workers in global shipbreaking yards. Thousands of workers have lost their lives, and many more have received severe injuries from shipbreaking.[31] The South Asian shipbreaking industry accounts for the vast majority of these deaths and injuries. According to several sources, one worker dies in South Asian shipbreaking yards weekly, and at least one worker suffers an injury every day.[32] The sources do not include unreported deaths and casualties because of work-related diseases; however, considering these sources, it is likely that around 50 workers die from work-related diseases (and the number may be significantly higher), and around 200 workers suffer serious injuries each year in global shipbreaking yards, meaning the total rate of casualties is around 250 per year.[33]

[28] Bestoasis, 'Global Ship Recycling Market' (Week 33 - Ship Recycling Report- Best Oasis Limited, 6 to 13 August 2021) <https://www.best-oasis.com/reports/week-33-ship-recycling-report-best-oasis-limited>

[29] Kirstein Leinnekopper, 'Ship Recycling Market Waking Up after Disappointing Summer' *Recycling International* (Web Page, 9 October 2019) https://recyclinginternational.com/ferrous-metals/ship-recycling-market-waking-up-after-disappointing-summer/27942/

[30] *ECORYS-DNV-GL Study, 2016*, 70

[31] See Section H, Part V of Chapter 3; Greenpeace, 'End of Life Ships: The Human Cost of Breaking Ships' (Research Report,2005) *(Greenpeace Report*); Young Power in Social Action, 'Shipbreaking in Bangladesh: Worker Rights Violation' (Web Page) https://shipbreakingbd.info/worker-rights-violation/

[32] Ibid; Young Power in Social Action, Death Trap? A-List of Dead Workers from the Year of 2005 to 2012 (September 2012) < Death Trap | Shipbreaking in Bangladesh (shipbreakingbd.info)>; Karim (n 18) 20; NGO Shipbreaking Platform, *Annual Report 2009* (Annual Report, 2009) to *Annual Report 2018* (Annual Report, 2018)

[33] Ibid.

D *Application of the ILO's Employment Injury Benefit Convention, 1964 as an International Standard*

An international benchmark is required to fix the annual premium and compensation payment. It is an established principle that compensation frameworks should link the amount of compensation payable to the profits generated by an enterprise.[34] The amount of compensation payable, however, should not punish (i.e. be punitive) or award more than the actual loss suffered.[35]

The thesis proposes that the SLC framework brings shipowners within a civil liability framework for compensating the workers in the shipbreaking industry in accord with the equity-based principle that an industry must provide workers with respectful and dignified treatment.[36] The SLC framework – by creating a requirement that all ships maintain an SLC across their operating life – also makes the chain of business relationships transparent that relate shipowners to the shipbreaking yards. This accords with the principle that, for a global industry, a multi-national enterprise should seek ways to 'prevent or mitigate adverse human rights impacts' in circumstances where a multi-national enterprise does not itself contribute to adverse human rights impacts, but these impacts are 'nevertheless directly linked to its operations, products or services by its business relationship with another entity'.[37] Even rudimentary human rights due diligence by shipping companies would reveal the potential for end-of-life ships to be ultimately sold into the South Asian shipbreaking industry and then for the breaking of that ship to result in deaths, injuries and work-related diseases.[38] Therefore, in the global industry context of the maritime industry (and its linkage of commercial shipping with shipbreaking in South Asia), the thesis submits that it is preferable for the proposed SLC to relay on an existing international benchmark and, specifically, for the framework to rely on the international standards of the International Labour Organisation's (ILO) *Employment Injury Benefits Convention 1964*. Among other things, the *Employment Injury Benefits Convention* provides that,

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[34] Law Commission of India, Proposal to Constitute Environmental Courts, (Research Report No. 186, September 2003) 31.
[35] Berhard Graefrath, 'Responsibility and Damages Caused: Relationship between Responsibilities and Damages', in Recueil des Cours (ed) *Collected Courses of the Hague Academy of International Law*, (Vol 185, 1985) 9-150, 100-102.
[36] *MC Mehta v Union of India*, Supreme Court of India (1987) SCR (1) 819 (the Oleum gas leak case)
[37] *OECD Guidelines for Multinational Enterprises- Recommendations for Responsible Business Conduct,* 31-33.
[38] Ibid

in determining compensation, the competent authority of a Member State should consider the following:

- 'benefit for occupational accidents and diseases;
- requirements for the payment of medical care and rehabilitation services for workers; and
- maintenance of income for injured workers and their dependents during temporary or permanent disability periods or in case of death'.[39]

The *Employment Injury Benefits Convention 1964* provides that yearly medical care and sickness benefits for temporary and permanent disability must be set at 60% of the reference salary.[40] In addition, it is essential to pay a flat-rate benefit: at least 60% of the wage of the unskilled worker. Reference salary is the annual minimum wage determined by each State.[41] In case of permanent incapacity, a lump sum can replace these benefits, and in the event of death, the benefit must be 50% of the reference salary for a widow with two or more children.[42] The resulting pensions must be for life in the form of periodic payments, and for a dependent of the dead worker, it must be at least for the next 18 years or until a minor child becomes an adult.[43]

Using these parameters, Table 14 compares the minimum amounts of compensation of the nations where shipbreaking yards are based with those of the major ship selling nations, including Germany, Greece, and Russia. Table 14 provides a comparative outlook and determine an international standard for calculating the compensation and premium. Table 14 shows that, on average, the compensation available in major ship selling nations is much higher than that in South Asia's shipbreaking nations. The formula mentioned at the beginning of this Part will use this more generous amount as an example in the next Part to calculate the premium and SLC administrative fee. Under arts 9 and 10 of the *Employment Injury Benefits Convention*, an injured worker can receive adequate medical care and allied benefits. The benefits include: a) general

[39] See ss 9-12, 18-20 of *the Employment Injury Benefits Convention*.
[40] Ibid, Ch 2.
[41] Arts 19 and 20 determine payments according to either the previous earnings of the workers or an ordinary adult male labourer: at Ibid
[42] Ibid; Ariel Pino, Employment Injury Schemes-The ILO Perspective, International Labour Organisation office for the Caribbean, file:///C:/Users/277587K/Documents/Employment%20Injury%20Schemes%20-%20the%20ILO%20Perspective.pdf
[43] *Employment Injury Benefits Convention, 1964*, arts 13, 14, 19 and 20

practitioner and specialist in-patient and out-patient care, including domiciliary visiting; b) dental and nursing care at home or in the hospital or other medical institution; c) maintenance in hospital; d) dental, pharmaceutical, optical and other medical or surgical supplies including prosthetic appliances kept in repair and renewed as necessary; and e) emergency treatment at the workplace.

E *Compensation Amount under the Proposed Baselines*

The purpose of Table 14 is to propose amounts (and types) of compensation for killed, injured or ill workers in the shipbreaking industry, who would be the intended beneficiaries of the proposed SLC. Following the above benchmark of the *Employment Injury Benefits Convention* and the average wage of major ship selling nations, if a worker becomes permanently disabled or sick, he or she will receive around USD 15,000 per year, and the payment will continue until his or her death, or until his or her last minor child becomes an adult (see Column 7 of Table 14). If a worker dies, his or her next of kin would receive USD 6226 per year until his or her youngest child reaches adulthood (see Column 8 of the Table 14). On the other hand, following the national average wage of major shipbreaking nations, the amount would be much lower. For instance, if a worker becomes permanently disabled or sick, he or she will receive around USD 1900 per year, and the payment will continue until his or her death, or his or her last minor child becomes an adult (see Column 7 of Table 14). If a worker dies, his or her next of kin would receive just USD 800 per year until his or her youngest child reaches adulthood (see Column 8 of Table 14).

Between the two rates of compensation, as is considered further below, the SLC prefers the rate of major ship selling nations to major shipbreaking nations for proving the best benefit to workers. As the national wage is the basis of the international standard introduced under the *Employment Injury Benefit Convention* to provide compensation, and this is much lower in shipbreaking nations than in ship selling nations, recommending the rate of shipbreaking nations would provide a back door exit to shipowners and shipbreaking yards. Shipowners and shipbreaking yards should not escape their responsibilities by the payment of such a low compensation amount.

Table 14. Comparative rate of employment injury benefit between shipbreaking and ship selling nations on the minimum wage for unskilled workers

Countries	*Category of worker*	*Reference salary/ Minimum wage per day (USD)*	*Reference salary/ Minimum wage per month (USD)*	*Reference salary/ Minimum wage per year (USD)* **(column 5)**		*Compensation Amount*		
			Incaapacity-60% of the average wage as periodical payment/pension (USD) + 60% flat rate benefit (column 7)			**Death- Pension 50% of the average in the event of death of the breadwinner (USD) (column 8)**		
1	**2**	**3**	**4**	**5**	**6** *Average Salary (USD)*	**7** *In case of incapacity*[44]	**8** *Death case*	**9** **Total-7+8**
Shipbreaking countries								
India	**unskilled**	**5.61**[45]	**145.86**	**1750.32**	**1583.04**	**949.82 +949.82 = 1899.64**	**791**	**2690.64**
Pakistan	**unskilled**	**6.11**	**152.70**[46]	**1832.40**	**1583.04**			
Bangladesh	**unskilled**	**3.74**	**97.20**	**1166.40**	**1583.04**			
Ship selling countries								
Germany	**unskilled**		**1831.60**	**21,979.2**	**12,452**	**7471.2 +7471.2 = 14942.62**	**6226**	**21168.62**
Greece	**unskilled**		**880.76**	**10,569.12**				
Russia	**unskilled**		**326**	**3912**				
Japan	**unskilled**		**1439.78**	**12,277.36**				
Singapore	**unskilled**		**915**	**10980**				
South Korea	**unskilled**		**1250**	**15000**				

Note: Table 14 was prepared using the following sources: Country Comparison, 'India vs Pakistan', *Country economy.com* (Web Page) https://countryeconomy.com/countries/compare/india/pakistan?; Country Comparison, 'The Minimum Wage Goes Up in Bangladesh', *Country Economy.com* https://countryeconomy.com/national-minimum-wage/bangladesh; D. Elagina, 'Monthly Minimum Wage in Russia and Its Major Cities in 2020' (Web Page, June 2020) ; 'John Stotz, 'Average and Minimum Salary in Singapore' *Check in Price* (Web Page, 25 January 2020 https://checkinprice.com/average-minimum-salary-in-singapore/

The SLC also recognises the notion of adequacy. Accordingly, besides the standard system for determining compensation mentioned above, it is required to include a clear mechanism for dispute resolution. For example, subsequent to a dispute on the compensation amount, compensation can be fixed by mutual understanding between

[44] Ibid.

[45] India has different level of minimum wages for unskilled workers in different industries, but from April 2020 per day 420 rupees is used as the standard for workers in mining and related industries whereas for the workers engaged in telecommunication the amount is 629 rupees per day: at Office of the Chief Labour Commissioner, 'Ministry of Labour and Employment, Government of India' (Report no.1/VDA(2)/2020-LS-II, 08 May 2020).

[46] Pakistan follows the *Minimum Wages Ordinance*, 1961 (Pakistan) for the payment of minimum wages to all unskilled workers which applies to all industrial establishments' employees except of Federal or Provincial Governments' employees: at Wage Indicator.org, *Work and Wages* (Web Page) < Fair Work wages in Pakistan - About Basic wage and Payment of Bonus Act - WageIndicator.org> I entered the search term 'minimum wage of Pakistan'.

parties following a due process of law, but this would need to be administered carefully to take account of the weaker bargaining position of workers and their families.[47] Therefore, in this context, an arbitration system may be a useful platform. Using arbitration under the existing law of shipbreaking nations would provide recourse if the parties cannot agree on some aspects of a claim.

F *Compensation Amount of the Major Ship Selling Nations*

As indicated in Chapter 2, since shipbreaking is the value chain of major shipping nations and statutory compensation amounts are well below the international standard in South Asia, the proposed SLC framework preferably should apply major ship selling nations' standard compensation amounts as opposed to that of major shipbreaking nations. A question may arise, however, as to whether a worker of a developing country should receive such a high standard of compensation.

An underlying reason to argue for the higher standard is to consider the loss to the global maritime industry from not being able to break ships in South Asia. The thesis submits that supporting the shipbreaking industry in South Asia, by providing a compensation rate based on the wage rate of major ship selling nations and the ILO's *Employment Injury Benefit Convention*, is more reasonable than losing the profit that shipowners receive from selling ships to South Asian shipbreaking countries. As was considered in Chapters 3 and 5, shipbreaking in the major shipping nations, including Germany, Greece, Japan, Singapore, Russia, South Korea, and the United Arab Emirates, is not profitable for their maritime industry because their shipowners would not receive the same high sale profit as they receive by selling ships to South Asia's shipbreaking industry.[48] One of the reasons is the modest demand for the steel scraps and reusable materials of the old ships in developed countries.

Another argument to prefer the compensation rate of major ship selling nations to that of major shipbreaking nations is the global character of the proposed SLC mechanism. The amount of compensation should reflect the standard maintained in developed countries, and in doing so the SLC would establish an acceptable standard by basing

[47] International Law Commission, *Draft Principle on the Allocation of Loss in Transboundary Harm Arising Out of Hazardous Activities, with Commentaries*, UNGA, Fifty-eighth Session, UN Doc no. A/61/10 (2006).
[48] NGO Shipbreaking Platform, Annual Reports (n 32).

the annual compensation on the ILO benchmark following average compensation paid in to major ship selling nations. Moreover, given that the objective of the SLC is to provide adequate compensation to workers, the standard will assist in that direction.[49] It would also create an obvious incentive for the insurance industry to monitor and seek improvement in workplace conditions. However, the thesis also recognises the difficulties with this preference for two main reasons.

First, preferring the compensation rate of major ship selling nations to that of major shipbreaking nations may have some unintended consequences, such as making shipbreaking insurance prohibitively expensive, or encouraging workers to injure themselves. Second, the thesis is also mindful that it is against the guiding principle of the post-incident compensation scheme. In particular, it does not corroborate with the 'Respecting National Sovereignty' principle, which refers to giving preference to national laws and institutions in deciding a compensation scheme unless they do fall below the international standards of the ILO's *Employment Injury Benefit Convention*.[50]

Alternatively, to resolve the above difficulties, the SLC may instead follow the rate of compensation available in the major shipbreaking nations (see Table 14), being the host states of shipbreaking yards where workers face casualties, in consonance with the framework of international standards of the ILO's *Employment Injury Benefit Convention*. By analogy, in terms of providing post-incident compensation to workers in the readymade garments industry (RMG) based in Bangladesh, the international community has followed the same scheme, despite recognising the fact that they are the supply chain of global brands, based in developed nations.[51] Although, by comparison with developed countries, the rate that follows the developing countries' standard is very low, the positive side is it is less questionable under the established principle of compensation and it is in line with the international standards of the ILO's *Employment Injury Benefit Convention*.[52]

The *Employment Injury Benefit Convention* determines compensation payments according to arts 19 and 20; these refer to either the previous earnings of the affected

[49] International Law Commission (n 47) 78.
[50] Rebecca Prentice, 'Workers' Right to Compensation after Garment Factory Disasters: Making Rights a Reality', *University of Sussex* (Research Report, C&A Foundation, 2018) 3.
[51] Ibid.
[52] See details about the principles: Ibid 3.

worker or an 'ordinary adult male labourer'. In line with the ILO's *Employment Injury Benefit Convention*, workers are eligible to claim compensation for lost wages following their domestic rate, for the entire period of impairment, or in the case of a deceased worker for up to the period of a dependent's eligibility to get a job. As seen in Table 14, following the international standards of the ILO's the *Employment Injury Benefit Convention,* which provides for compensation based on the national wage of a host state, the possible amount of compensation would be much lower in South Asian shipbreaking countries than in major ship selling nations, but it would not make the shipbreaking insurance too expensive for commercial operation of a ship or instigate workers to make false claim by injuring themselves. Moreover, it would not go beyond the established principle of 'Respecting National Sovereignty' referred to above.

G *An Estimate of the Annual SLC Administrative Fee and Insurance Premium*

Using the major ship selling nations' rate of compensation, a shipowner or a shipbreaking company would pay = USD 250×14,943 / USD 23,500,000/2 = 0.080 per LDT for the SLC approximately. Conversely, using the major shipbreaking nations' compensation rate, the amount would be only USD 250×2000 / USD 23,500,000/2= 0.0106 per LDT. These two alternatives are determined using the formula (see Part IV above) and taking the average casualties at 250 into account (see Section B above of this Part), average total ILO benchmark compensation for major ship selling nations (around USD 14,943) (see Table 14 mentioned in Section C), and average LDT (23,500,000) broken every year (see Table 13).

The above amount includes both the premium for the shipbreaking insurance and the SLC fee. As the amount would include a 30% fee for the SLC and the remaining 70% for paying an insurance premium, for a cargo ship weighing 20,000 LDT,[53] a shipbreaking yard owner would pay a maximum (20,000× 0.080) or USD 1600 for the shipbreaking liability insurance and the SLC. A shipowner also has to pay the same amount per year until the end of the life of the ship. The amount is just an indicative value using the above baselines. Conversely, considering the second estimate mentioned above, a shipbreaking yard would have to pay only around (20,000×

[53] The average highest LDT contained by each ship broken in Bangladesh is 20000: at Mohammad Sujauddin et al, 'Characterisation of Shipbreaking Industry in Bangladesh' (2015) (17) *Journal of Material Cycles and Waste Management,* 72-83.

0.0106) or USD 212 for the shipbreaking liability insurance and the SLC, whereas for a ship's commercial operation, the USD 212 amount would be an annual payment across its lifespan.

For the SLC fee and the insurance premium for a shipbreaking yard, the thesis recommends charging a lesser fee from a shipbreaking yard, which is fully compliant with the *Hong Kong Convention* requirements, than from a shipbreaking yard, which is not compliant with *Hong Kong Convention* requirements, because of the potential risks. It may even be a minimum fee if a shipbreaking yard can show evidence of the highest level of compliance with the *Hong Kong Convention*. Table 12 provides an example of a checklist that could be used as a model for how fee concessions could be provided to shipbreaking yards. This is to encourage the improvement of standards of shipbreaking, with the intention that charging lesser fees and premiums would encourage the non-compliant shipbreaking yards to be compliant with the *Hong Kong Convention* standards.

Before justifying the SLC in the context of providing compensation and preventing accidents, the next Part explores the enforcement measures of the proposed SLC system.

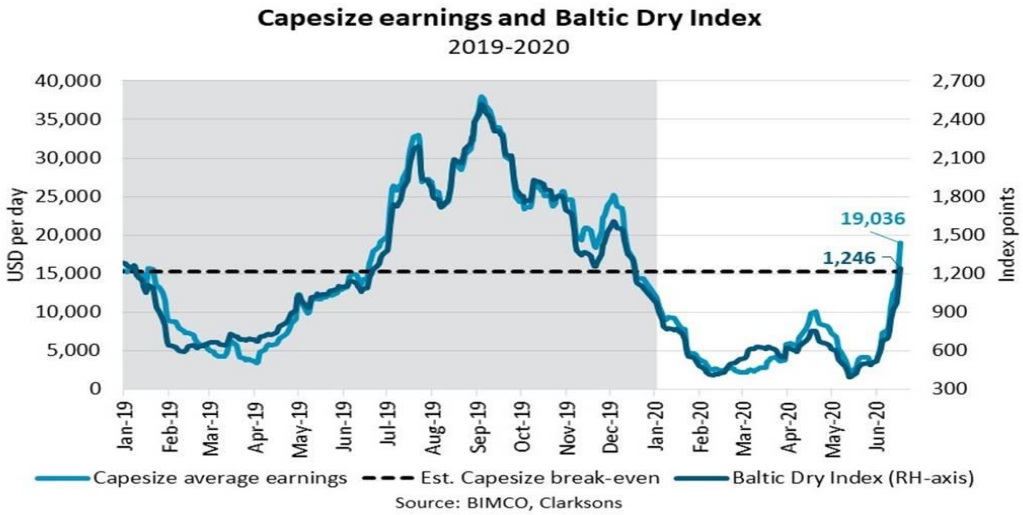
V ENFORCEMENT MEASURES

A *Minimum Premium Amount*

The unwillingness of shipowners to take on extra financial burden is likely to be a significant challenge for the proposed SLC. The thesis argues, however, that compared with the amount shipowners earn from the commercial operation of their ships, the amount prescribed under the formula is reasonable. For example, data published by the Hellenic Shipping, an online daily newspaper for international shipping, shows that in June 2020 the average daily earnings of a Capesize ship, the largest cargo ship in the world, reached USD 4250/day and between January 2019 and June 2020, earnings were around USD 15,000 per day (see Figure 7).[54]

[54] Dry Bulk Market, 'Capsize Earnings Leap USD 4250 per Day- Largest Daily Jump since 2013', *Hellenic Shipping News Worldwide* (online at 19 June 2020) < https://www.hellenicshippingnews.com/capesize-earnings-leap-usd-4250-per-day-largest-daily-jump-since-2013/>

Figure 7. Daily earnings of a Capesize vessel



Source: Hellenic Shipping News Worldwide[55]

B *Periodical Inspection of a Shipbreaking Yard by the Insurer*

Another challenge for the SLC would be to police the shipbreaking yards. As discussed previously, the proposed SLC framework recommends that there be periodic inspections of shipbreaking yards by an independent verifier, appointed by the insurer to ensure their independence from shipbreaking companies. A good option would be to appoint reputable international organisations with experience in this verification process.

C *Policing the Commercial Life of a Ship*

In relation to policing commercial operations of a ship, the SLC framework proposes using the existing Port State Control (PSC) mechanism.[56] By introducing PSC under the proposed SLC, one of the lessons learned from the case study of the *Load Lines Certificate* (see Chapter 7) is applied. Each Port State already utilises its existing PSC system to check whether a ship maintains an updated *Load Lines Certificate* for its international safety, security and environmental standards, and these administrative arrangements could be adapted to include compliance with the SLC requirements.

[55] Ibid.
[56] Captain Anwar Shah, 'Port State Control and Memorandum of Understanding' (Blog Post, 1 September 2016) http://captainanwarshah.blogspot.com/2015/09/port-state-control-and-memorandum-of.html

The Port State Control system is a mechanism introduced by the Paris Memorandum of Understanding, consisting of 27 participating maritime administrations. The basic principle is to make shipowners responsible for complying with the requirements laid down in the international maritime conventions.[57] According to the PSC system, unless shipowners follow the international standards required for their ships, a port authority can deny port entry and arrest the ship for an indefinite time until the problems identified are resolved.[58] The proposed SLC recommends applying the same system for maintaining and ensuring the proper maintenance of a shipbreaking liability insurance and SLC by a commercial ship. This independent inspection under the PSC system would also ensure transparency during the commercial life of a ship.[59]

As most of the major ship selling nations are already involved in the PSC system, another advantage of this approach is the reduced administrative costs achieved through sharing each PSC's existing administrative set-up. Notably, the *Hong Kong Convention* also empowers State parties to detain, warn, dismiss, or exclude a ship if a ship entering a port of a Member State does not follow the requirements of the *Hong Kong Convention*.[60] However, the *Hong Kong Convention* does not explicitly mention the PSC or any other system to enforce this requirement. The proposal to use the PSC system is to fill in this gap.

D *Role of the Insurance Provider in Respecting the Claim of Compensation and Enforcement*

Insurance providers would have the duty to respect each claim for compensation made and to conduct an impartial investigation into each claim. As well as managing and investigating claims, insurance companies will also assess the risk presented by a proposed insure (i.e. a shipbreaking yard, for shipbreaking insurance) before issuing an insurance policy, continue periodic investigations, and monitor the level of risk and other factors. As the cradle to the grave approach proposed under the *Hong Kong*

[57] Paris MoU, on Port State Control, 'Organisation' (Web Page) <parismou.org/about-us/organisation>
[58] See *Paris Memorandum of Understanding on Port State Control*, adopted 26 January 1982, IMO Res A.1052(27), entered into force 1 July 1982, ss 3(4), 3(6) and 3(8)
[59] Ibid.
[60] The *Hong Kong Convention*, art 9.

Convention requires a survey of each ship, the insurance provider would assess the risk for potential shipowner insurances following such survey.

The mechanism would be acceptable to insurance providers since introducing an insurance mechanism from early life would reduce their risk. It would also lead to regular inspection and suggested repairs so that the risks relating to breaking a ship are reduced, leading to less pressure on the insurance companies.

E *Consequence of Breach*

The objective of the instrument is to facilitate swift and efficient access to compensation if a valid claim is made. The proposed SLC framework is a model based on global governance and rectificatory justice theory. Failure to comply with the requirements of maintaining the SLC and shipbreaking insurance should be followed by no further sale of ships for breaking to a shipbreaking yard. The proposed SLC should also explicitly mention that non-compliant shipbreaking yards might be blocked and barred from purchasing more ships. This denial of an SLC and blacklisting of a shipbreaking yard would be a strategy to assist shipowners in making informed decisions about the final destination of a ship and being informed about the risks ahead of selling ships to those blacklisted shipbreaking yards. Alternatively, if a shipowner continues selling a ship to blacklisted shipbreaking yards, the IMO may impose heavy fines on a shipowner. Shipbreaking nations should also ban the blacklisted shipbreaking yards locally and impose heavy fines for continuing shipbreaking. The fines can be used to pay the Worker's Advocate or NGO for their involvement with the claim process of the affected workers.

The insurance and certification based regulatory model is rooted in the principles of Corporate Social Responsibility (see Chapter 7). This model is a basis for solving many other global problems, including waste trade and sound management (see Chapter 8). The initiative dominated by insurance and certification would remove elements viewed as counter to business profits, such as litigation.

VI CONCLUSION

This Chapter has described the SLC framework that aims to provide a systemic approach to ensure an international standard of compensation for shipbreaking workers facing work-related deaths, injuries, or diseases.

The Chapter has also argued that by introducing the SLC system, the IMO would be responsible for supervising the flag change of a ship and the facility standard of a shipbreaking yard. This mechanism is similar to the IMO passing an international mechanism to control the overloading of a ship or to pay compensation to a victim of an oil spill incident (see Chapter 7, Part IV).

Under the proposed framework, the SLC and insurance would attract maximum USD 0.080 per LDT from a shipowner and shipbreaking yard each year upon registration. This is a minimal amount compared with the annual operating income of a ship and a shipbreaking yard, for a system which would provide a good amount of compensation to a shipbreaking worker (around USD 15,000 for a permanently disabled worker and USD 6226 to a deceased worker's family annually). The framework also recognises that the relevant insurance industry would determine the actual SLC and insurance premium, after considering the risk involved in breaking each ship.

The global shipbreaking industry would meet the challenge concerning the periodical inspection of a ship and shipbreaking yard by introducing the framework. The insurance industry would monitor a ship and shipbreaking yard to assess the premium each year based on the baselines discussed in this Chapter. Thus, the SLC and insurance premium would be higher for a ship with more wastes than others would, and a shipbreaking yard will pay the maximum premium if the yard owner cannot ensure full compliance with the *Hong Kong Convention*, as demonstrated in Table 12. An important development of the framework is to address the liability of the shipowners, including cash buyers and shipbreaking yards. Under the proposed framework, neither a long term nor a short-term shipowner can transfer a ship without notifying the IMO. Moreover, for breaches of insurance contracts, another critical challenge that the SLC could meet is to empower the shipbreaking workers by providing a means to fund the lawyers (e.g. Worker's Advocates) from the SLC administrative fee to fight on behalf of the individual worker.

Notably, a direct implication of the proposed SLC is that the insurance industry will globally monitor the substandard shipbreaking yards, and the IMO would use their data to assume their progress rate. An indirect consequence would be that if the IMO finds that a shipbreaking yard is not taking any steps to improve its standard, then the IMO might decide to block them and issue no further SLC. Such an interventionist approach is vital to motivating the non-compliant shipbreaking yard to improve its standards.

Chapter 10 undertakes an evaluation of the SLC as rectificatory global justice theory and its potential to change the non-compliant behaviour of the maritime and shipbreaking industry towards its safety standards.

CHAPTER TEN : CONCLUDING REMARKS

I INTRODUCTION

The thesis has proposed an industry-specific civil liability framework to provide compensation to workers who face deaths, injuries or contract a work-related disease in the shipbreaking industry – in effect, to change current industry practice through the implementation of a civil remedy system. Although the thesis focused on the shipbreaking industry in South Asia, the Shipbreaking Liability Certificate (SLC) scheme could have a broader regional or global application if the shipbreaking practices used in Bangladesh, India or Pakistan (e.g. beaching of ships and reliance on manual labour) are used elsewhere.

This thesis identified and demonstrated the fundamental legal and policy issues in the shipbreaking industry.[1] One of the underlying issues is that the existing domestic and international legal frameworks provide no mechanism to address the financial responsibility of shipowners. Because of this legal gap, although all the parties in the business chain, including the shipping industry, cash buyers, and open registry countries, earn high profits,[2] none of them has to bear legal responsibility for the regular deaths, injuries and diseases suffered by shipbreaking workers.[3] The thesis argued that the regulatory gap is a global justice issue and proposed the SLC as a means of remedying this global injustice.[4]

In proposing the SLC, the thesis draws on the theory of rectificatory justice to establish the argument that striking a balance between business profit and human consequences is instrumental in regulating the shipbreaking industry.[5] Rectificatory justice's emphasis on remedying an injustice is especially useful to this study, as it has allowed for thinking through the ways in which injustice to workers in the shipbreaking industry can be rectified. To that end, the conceptualisation of rectificatory justice is used to identify and remedy an injustice in the shipbreaking industry; i.e., the want of

[1] Chapters 4 and 5.
[2] Chapter 3 has first evaluated the business interest of the maritime industry and found that annual income of the industry is around USD 2350 million.
[3] Chapter 5.
[4] Chapter 2.
[5] Peter Singer, 'Famine, Affluence and Morality' (1972) 1 *Philosophy and Public Affairs* 229, 229-233

adequate and prompt compensation for workers who face shipbreaking related deaths, injuries, and diseases.[6] In other words, as it is not possible to stop the casualties in the shipbreaking industry completely in the near future, with the rectificatory justice theory, the thesis has established that the SLC would at least introduce a remedy system and ensure justice to workers in the shipbreaking industry.[7]

With respect to rectificatory justice theory, the thesis has drawn attention to the dominant side of the shipbreaking industry; i.e., the maritime industry's business profit. A discussion on the dominant side is of value for informing how the shipbreaking industry is a clear instance of injustice by its failure to recognise and account for the interests of workers.[8] In that matter, the thesis has primarily drawn on postcolonial theory that examines whether the laws have provided enormous power without responsibility to controlling entities based in Western nations.[9] Using postcolonial theory, the thesis has claimed that the shipbreaking laws, adopted long after the end of colonialism, in fact serve the interest of international shipowners based in Western nations and concentrate more on their business profit than the resource limitation of developing countries. The laws in practical terms do not recognise that developing countries have limited resources to improve the standards of their shipbreaking industry. Utilising the postcolonial argument, the thesis has also argued for the proposition that global institutions are inherently biased in favour of developed nations.[10] This biasness is evident in the design of the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships* (*Hong Kong Convention*).[11] Although it is the only international instrument in this area, the *Hong Kong Convention* promotes a business model that allows companies from major shipping countries to sell ships with hazardous materials to shipbreaking companies in South Asia and escape financial responsibility both for cleaning hazardous

[6] Amartya Sen, 'Rawls versus Bentham: An Axiomatic Examination of the Pure Distribution Problem' (1974) 4 *Theory and Decision* 301, 302-309 https://doi-org.dbgw.lis.curtin.edu.au/10.1007/BF00136651
[7] Amartya Sen, *The Idea of Justice* (Allen Lane, 2009) 7.
[8] Corinna Mieth, 'Global Injustice: Individual Duties and Non-Ideal Institutional Circumstances' (2012) 12(1) *Civitas-Revista de Ciencias Sociais* 47, 47-50.
[9] Christopher George Weeramanty, *Universalising International Law* (Martinus Nijhoff Publishers, 2004) 85.
[10] Thomas Pogge, 'World Poverty and Human Rights' (2005) 19(1) *Ethics and International Affairs* 1-7.
[11] *The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*, opened for Signature 1 September 2009, IMO Doc. SR/CONF45 (not yet in force) Annex ('*Regulation for Safe and Environmentally Sound Recycling of Ships)*.

substances from their ships and compensating for the work-related deaths, injuries, and diseases.[12]

The thesis has accordingly developed the global injustice argument with an emphasis on the postcolonial theory and has claimed that the shipbreaking industry, as one component of the global maritime industry, does not impose any liability for work-related deaths, injuries, diseases, and environmental problems on the international shipowners, who are the parties that benefit most from the industry.[13] Then, applying the rectificatory global justice approach, the proposed SLC, through a civil liability framework, paves the way for shipowners to be responsible for work-related deaths, injuries and diseases in the shipbreaking industry and to pay adequate compensation.[14]

Before establishing the SLC framework, the thesis assessed the global debate on human rights abuses using the global injustice and postcolonial theories and determined whether shipowners should undertake responsibility.[15] From the examination of a number of international reports, case studies in the EU, international oil transport, and shipping industry, this study has developed the argument that a global regulatory framework could be an important step forward to regulate the industry.[16] The examination also developed the argument that the success of the regulatory framework would depend on its capacity to compel all parties involved in shipbreaking to assume responsibility for deaths, injuries and work-related diseases in the South Asian shipbreaking industry.[17]

A further examination of the impact of improving the standards in the shipbreaking sector revealed that the improvement of shipbreaking standards must not lead to increasing the cost of shipbreaking. If South Asian countries improve their standards, this would eventually increase the shipbreaking cost. Shipowners would in consequence stop selling ships to South Asia.[18] Competition from newly established

[12] Md Saiful Karim, 'Recycling of Ships' in *Prevention of Pollution of the Maritime Environment from Vessels: Potential Limit of the International Maritime Organisation*' (Springer, 2015) 98-100.
[13] Stephen M. Gardiner, 'Ethics and Global Climate Change' (April 2004) 114(4) *University of Chicago Press Journals* 580, 555-600; Alpana Roy, 'Postcolonial Theory and Law: A Critical Introduction' (2008) 29 *Adelaide Law Review* 315, 317.
[14] Chapter 9.
[15] Chapter 3.
[16] Ibid.
[17] Chapter 3.
[18] George Cairns, 'A Critical Scenario Analysis of end-of-life Ship Disposal: The Bottom of the Pyramid as Opportunity and Graveyard' (2014) 10(3) *Journal of Critical Perspectives on International Business* 172, 172-175.

shipbreaking industries in other areas with lower costs would then cause the shipbreaking industry to relocate from South Asia to elsewhere.[19]

Against this background, the thesis claimed that the main problem for the South Asian shipbreaking industry is to strike a balance between high prices paid to the shipowners and better labour practices. The South Asian shipbreaking industry has retained its global competitiveness by offering high prices to the shipping industry, with a consequent need to minimise spending on labour and workplace health and safety, and thus the heavy costs to the environment and to workers. One estimate suggests that South Asian shipbreaking companies spend 82% of the total shipbreaking cost for the price of a ship and almost nothing for maintaining environmental and work-related safety standards.[20] This business model, in fact, creates a race to the bottom scenario in the shipbreaking industry.[21] Shipowners prefer to sell their ships to a South Asian shipbreaking yard where they are willing to pay them a higher price than elsewhere by maintaining very low health and safety standards. The industry is heavily dependent on the cheap but unsafe standards – beaching, importing ships without pre-cleaning, and breaking ships with bare hands – to offer high purchase prices to shipowners.[22]

Unfortunately, this business model causes regular deaths, injuries, and work-related diseases to workers, and pollution to the environment, with long-term impacts on coastal and estuarine communities.[23] However, neither the workers nor the environment has the legal standing or resources to pursue compensation.[24] Shipbreaking workers have no employment contracts, identity cards or registration processes. This context underpinned the first major inquiry of this thesis, namely:

What legal and liability framework is required to make the international maritime industry accountable for the harms to human life and health (workers' deaths, physical injuries, and work-related diseases) in shipbreaking countries?

[19] Yaa Agyare-Dwomoh, A Green Compliant Ship Recycling Facility in South Africa, Frost and Sullivan Africa (online) https://frost-sullivan-africa.prezly.com/a-green-compliant-ship-recycling-facility-in-south-africa
[20] Chapter 3.
[21] Chapter 4.
[22] Chapter 3.
[23] Chapter 3.
[24] Saiful Karim, *Shipbreaking in Developing Countries: A Requiem for Environmental Justice from the Perspectives of Bangladesh* (Taylor and Francis Group, 2018) 105-106.

The thesis undertook a review of the existing national and global legal frameworks to answer this question. The next Part briefly reiterates this discussion.

II NEED TO STRIKE A BALANCE BETWEEN BUSINESS PROFIT AND HUMAN CONSEQUENCES

An examination of the national and international legal frameworks also demonstrated a legal failure to strike a balance between high business profit offered to the shipping industry and human cost in the shipbreaking industry.

The regulatory frameworks undertaken by India, Bangladesh and Pakistan,[25] tend to be dictated by each country's need for steel, obtained from broken ships, and for the local employment the industry generates. These factors require each nation to maintain a significant market share in the global shipbreaking business. The three South Asian shipbreaking countries thus follow weak regulatory policies out of fear they might lose their market share of the shipbreaking business.[26] Their weak regulatory policies are therefore favourable to retaining the shipbreaking industry, but are not enough to create safe workplaces and compensate workers for work-related deaths, injuries and diseases.

The regulatory frameworks at the international level have even more problems.[27] In contrast to most global industries, which have both prevention and compensation systems,[28] the international legal frameworks for shipbreaking only concentrates on a weak preventive system that has done little to improve workplace health and safety in South Asian shipbreaking yards and which provides no compensation scheme for workers.

The thesis argues that this situation represents a global injustice. The injustice argument in the current research stems from two additional reasons. First, the *Hong Kong Convention* does not consider the specific needs of developing countries. The *Hong Kong Convention* requires shipbreaking countries to make their own investment to improve occupational health and safety standards in shipbreaking yards in their

[25] Chapter 4.
[26] Ibid.
[27] Chapter 5.
[28] Mining and Waste Trade as discussed in Chapter 7.

jurisdictions.[29] As other authors have pointed out, shipbreaking in South Asia is a matter of global injustice as this requirement shifts the responsibility for workplace health and safety and worker compensation exclusively to developing countries.[30] In this way, the *Hong Kong Convention* is unjust in that it creates a substantial benefit for the global shipping industry at the expense of developing countries and their environments and workers.[31] Second, whilst shipbreaking reportedly engenders a heavy cost to workers in developing countries, the *Hong Kong Convention* does not prioritize compensation for work-related injuries, deaths, or diseases to workers.[32]

The critical examination of the existing regulatory options for the shipbreaking industry reinforces the need to strike a more just balance between the benefits that the South Asian shipbreaking industry provides to the global shipping industry and loss to the workers in the downstream shipbreaking activities is the best option. The proposed SLC focuses on the balancing approach. Further, the implementation of the SLC scheme focuses on changing the industry practice. The central claim of the thesis is that the shipbreaking industry requires such a global civil liability mechanism not only to compensate shipbreaking workers who suffer work-related fatalities, injuries or diseases, but also to change the industry practice by tightening the change of ownership from cradle to grave of all ships.[33] This would also require ensuring responsibility of everybody in the business chain by keeping the business profitable for all parties.

[29] K. Jain, J.F. Pruyn and J. Hopman, 'Critical Analysis of the Hong Kong International Convention on Ship Recycling' (2013) 7 (10) *International Journal of Environment, Ecological, Geological and Mining Engineering* 683, 686.
[30] Karim (n 24) 16-19.
[31] Saurabh Bhattachargee, 'From Basel to Hong Kong: International Environment Regulation of Ship-Recycling Takes One Step Forward and Two Steps Back,' 2009 (2) *Trade Law and Development* 193, 214-215; Michael Galley, *Shipbreaking: Hazards and Liabilities* (Springer International Publishing, 2014) 155.
[32] Ingvild Jenssem et al, 'Impact Report 2018-2019' (Research Report, NGO Shipbreaking Platform, 2020) https://shipbreakingplatform.org/wp-content/uploads/2020/06/NGOSBP-Bi-Annual-Report-18-19.pdf ; NGO Shipbreaking Platform, 'Two Fatal Accidents at Indian Yards Under EU Scrutiny' (Press Release, 10th September 2019) https://shipbreakingplatform.org/fatal-accidents-at-indian-yards-under-eu-scrutiny/
[33] Chapter 9.

III LESSONS LEARNED FROM THE CASE STUDIES FOR AN EFFECTIVE BALANCE BETWEEN PROFIT AND LOSS

A *Financial and Criminal Liability Approaches of the European Union*

The case study approach of the thesis examined the regulatory mechanisms of the European Union (EU) to explore a potential model for the SLC. The examination showed that although the EU supports imposing responsibility on shipowners, the EU mechanisms have not gone far enough.[34] They fall short of promoting an ethical and sustainable shipbreaking practice in South Asia and thereby supporting an appropriate balance between business profits and workers' welfare.

The main problem is that the *EU Ship Recycling Regulation*, being the principal legal mechanism in the EU, does not regulate the reflagging practice strictly.[35] A EU-based owner can thus change flag from its original EU jurisdiction to a non-EU jurisdiction and, in this way, can send ships to the South Asian shipbreaking industry.

The EU has received several proposals from a number of institutions, such as Erasmus University of Rotterdam, to address the problem of reflagging by the introduction of a financial mechanism. The main idea behind these proposals is to impose financial liability on EU shipowners if ships from the EU go to South Asia by changing flags.[36] Imposing financial liability is crucial for a legal intervention in the system for effective checks and balance, but considered further below, these proposals do not introduce a system to compensate workers who suffer deaths, injuries, or work-related diseases whilst breaking the reflagged EU ships in South Asia.[37]

A proper financial mechanism, on the contrary, must function to allocate the business profit to those who face the loss. From the perspective of rectificatory justice, the main entity to benefit from the system should be the shipbreaking workers. The system should benefit and empower the workers, so that they can claim compensation as of right, but this approach is missing from the financial mechanisms proposed by several institutions to the EU.

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[34] Chapter 6.
[35] Reflagging refers to changing of flag of a ship in consequence of changing the ownership of a ship; *Regulation (EU) No. 1257/2013 of the European Parliament and of the Council of 20 November 2013 on Ship Recycling and Amending Regulation (EC) No. 1013/2016 and Directive 2009/16/EC, 2013*, OJ (L 330) 1. (*EU Ship Recycling Regulation)*
[36] Chapter 6.
[37] Chapter 6.

The proposals submitted to the EU fall short of imposing financial liability on shipowners in the true sense. Instead of proposing to compensate the victims, the proposals set mechanisms to raise funds from EU shipowners throughout the life span of a ship and to pay them back from the fund at the end-of-life of their ships if they can show evidence of recycling their ships in a EU listed shipbreaking yard. This proposed payback system in fact has recognised that the EU shipowners may lose a significant amount of selling price if they sell their ships to a EU listed shipbreaking yard.

The central idea is therefore to give a financial incentive to EU shipowners to sell ships to EU listed shipbreaking yards by returning them from the accumulated funds – the cost equivalent to the price gap for selling a ship to a EU listed shipbreaking yard and a non-EU listed shipbreaking yard. The proposal is based on the statistics that a non-EU listed shipbreaking yard would pay a higher price for purchasing ships since they do not need to comply with the greater health and safety requirements of the *EU Ship Recycling Regulation*. None of the South Asian shipbreaking yards could gain a place in the shipbreaking yards' list published by the EU in 2021.[38] A South Asian shipbreaking yard can still offer a higher price by not complying with environmental and safety standards. An obvious reason not to comply with the environmental and safety standards is their local legal system and the business model as discussed in Chapter 3.

This payment option to shipowners is, however, an incorrect approach to regulating EU shipowners. Having said that, it is true that the proposed financial mechanisms in the EU present a lesson for the global shipbreaking industry. Importantly, the EU financial mechanisms underpin the argument of the thesis for a global shipbreaking licence and insurance, which can address the problem in the shipbreaking industry in a global context.

Criminal liability on shipowners is the other EU approach discussed in Chapter 6. Under the EU *Ship Recycling Regulation*, sending ships to shipbreaking yards that use beaching practice is a criminal offence.[39] A recent decision of a District Court of

[38] See Chapter 6.
[39] Chapter 6.

Rotterdam in *Seatrade*, is one of the most recent examples of this approach.[40] In this case, the Court ordered a Dutch shipping company, Seatrade to pay a heavy fine of EUR 750,000 for their intention to break four ships at India and Bangladesh's shipbreaking yards. The Court also directed that sending ships to India and Bangladesh as wastes was a serious criminal offence that warranted imprisonment of the directors, however, considering it was an offence committed for the first time, the Court waived the prison sentence and alternatively imposed a 12 months' suspension on their directorship positions in any company.[41] The thesis has argued that this criminal liability approach is not practical in the global context of the business.[42] As the Court has imposed heavy fines on the EU shipowners for sending ships to South Asia, this criminal liability approach may have a deterrent effect on EU shipowners and in consequence, stop the sale of ships to South Asia's shipbreaking industry.

The analysis of the EU approaches demonstrate that the EU has not perceived shipbreaking as a means by which South Asian countries can pursue their economic development by sourcing iron ore and providing livelihood to poor workers. In contrast, the EU approaches purport to improve the situation as regards shipbreaking but do not actually do so. The EU approaches also demonstrate that the developed economies have used shipbreaking to externalise their wastes, as an end-of-life activity of the maritime industry's business. From the perspective of developing countries, that dependency must not lead to exploiting their workers and environment.[43]

From the analysis of the domestic, international and EU based regulatory frameworks it is clear that there are limited mechanisms to compensate the shipbreaking workers who suffer deaths, injuries or diseases. Because of the legal gap, common law actions in tort are the only current means by which a civil court can find shipowners responsible for harms suffered by workers and obliged to pay compensation as damages. By using the duty of care principle before the home State court of shipowners, workers can engage in a highly contested and lengthy tort action – however, in practice, such an action is not feasible to seek redress for workers in the

[40] *State v Seatrade* [Rotterdam District Court, three-judge economic division for criminal cases], Public Prosecutor Office 10/994550-15, 15 March 2018 reported in (2018) Rechtspraak.nl 1, ECLI:NL:RBROT:2018:2108 .
[41] Chapter 6, Part IV.
[42] Chapter 3.
[43] Chapter 2.

shipbreaking industry in South Asia except in rare cases (e.g. where a third party supports the costs of the litigation).

B *Tort Liability Approach in the UK*

A positive aspect of *Maran Shipping* is,[44] unlike the criminal fine in *Seatrade,* the Court of Appeal found a UK shipowner primarily responsible for the payment of compensation to the wife of a shipbreaking worker who fell to his death whilst breaking a ship of a UK owner, Maran (UK) Shipping Limited. Subject to a final decision on compensation payment, the Court also found that the shipowner had a duty of care because the owner received a high sale price and created scope for a substandard shipbreaking yard to exploit the worker and environment. As Lord Justice Bean (concurring) stated: 'the Defendant obtained the highest possible price for the Vessel and sought to wash their hands of responsibility for anything, however foreseeable, which happened after that'.[45]

The Court established the duty of the shipowners because the shipowner created the danger for the shipbreaking worker mainly for profit and with full knowledge about the outcome.[46] However, the problem with such tort action is its length and the lack of real outcome from the proceedings. As happened in *Maran Shipping*, the plaintiff is yet to receive any compensation payment declared by the Court, after four years of a lengthy and highly contested case. The Court of Appeal of the England and Wales only had to decide whether a duty of care existed but it is the High Court of Justice, being the Court of original jurisdiction will decide the final issue of compensation after trial. The prolonged time and still an undecided issue of compensation demonstrate the difficulty of obtaining compensation under tort law. In tort cases, it is also essential to establish jurisdiction, but establishing jurisdiction is difficult with respect to shipbreaking related deaths, injuries, and diseases, because of the involvement of many inter-State parties, including the operating owner of a ship, cash buyers, open registry country, and shipbreaking yards.

[44] *Hamida Begum (on behalf of MD Khalil Mollah) v Maran (UK) Limited* [2021] EWCA Civ 326. ('*Maran Shipping*'): at Chapter 2.
[45] Ibid [141].
[46] Ibid [116].

The thesis therefore concludes that although tort law remains relevant to the question of compensatory damages, a cause of action in tort does not offer a reasonable solution to plaintiff workers. The claim may fail, unless a plaintiff worker can prove that he or she was injured or suffered a disease (or, for a family member bringing the claim, that the relative faced death) while breaking a ship owned by a particular shipowner, and that the original shipowner had tight control over the total process of selling a ship. Hence, the thesis examined other post-incident legal reforms in the shipping industry that aim at creating a civil liability scheme to ensure responsibility of all parties involved in the business and pay compensation to the injured parties. The post incident legal reforms in the shipping industry thus effectively guided the thesis in proposing the SLC framework.

C *Civil Liability Approach in the Shipping Industry in Oil Spill Incidents*

With the aim of paying adequate compensation in the event of maritime oil spill incidents, the International Maritime Organization (IMO) adopted the *Convention on Civil Liability for Oil Pollution Damage* (1969 *Civil Liability Convention*) in 1969 and the *Convention on the Establishment of An International Fund for Compensation for Oil Pollution Damage* (1971 *Fund Convention*) in 1971.[47] The goal of the regime is to compensate victims of oil spill incidents that occur during the course of transport of oil. From 1969 to 2006, these two Conventions went through several changes to make the shipowners accountable and address the actual loss suffered by the injured parties.[48] Forming these policies would not have been possible unless the shipping and

[47] *International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 29 November 1969, [1969] UNTS 319 (entered into force 19 June 1975) *(1969 Civil Liability Convention)*; the Convention was replaced by the *1992 Protocol to the International Convention on Civil Liability for Oil Pollution Damage,* opened for signature 27 November 1992, [1992] UKTS 86 (entered into force 30 May 1996) *(1992 Civil Liability Convention)*; *International Convention on the Establishment of An International Fund for Compensation for Oil Pollution Damage*, opened for signature 18 December 1971, [1971] ILM 284 (entered into force 16 October 1978) *(1971 Fund Convention)*. This *1971 Fund Convention* was superseded by the *Protocol of 1992* to the *International Convention on the Establishment of An International Fund for Compensation for Oil Pollution Damage*, opened for signature 27 November 1992, [1992] UKTS 87 (entered into force 24 May 2002) *(1992 Fund Convention)*

[48] Steven Edward Farnworth, 'Liability for Pollution Damage from Offshore Oil Spills: the CLC and Fund Conventions, The EU's Environmental Liability Directive and their Implications for New Zealand Law' (PhD Thesis, University of Waikato, 2017) 329.

oil industries had accepted their responsibilities in terms of corporate liability and associated duties for the harms suffered to humans and environment.[49]

By applying the shared responsibility approach of the oil and shipping industries, the IMO achieved an effective policy to address a global problem of oil spillage. There are several key features to this approach. First, the approach resolves the issue of establishing who bears liability. Under the 1969 *Civil Liability Convention*, a ship of a State Party is responsible to pay a limited amount of compensation for polluting the coastal environment and causing economic loss to another State Party in the event of a maritime oil spill. Nevertheless, as the limitation of the compensation amount had proved to be inadequate in the case of larger ships, the IMO introduced the 1971 *Fund Convention* that required the oil industries to undertake liability and supplement the financial limit set under the 1969 C*ivil Liability Convention*. Second, the approach resolved the issue in relation to the scope of liability. According to the 1969 *Civil Liability Convention*, liability is strict. The Convention based the liability on size, rather than value of a ship. Every ship has to maintain insurance for inter-State oil transfer and an injured party can claim directly from the insurance for any economic loss.

Maintaining the global nature of the 1969 *Civil Liability Convention* and the 1971 *Fund Convention* was another very important development of law in this area. These Conventions originally gave the power to the national courts of the host States to define and quantify the damage. As a result, national courts awarded unexpected and very large amounts of compensation. In a number of cases, the national courts declared compensation based on some theoretical models, as with Soviet Methodica in the *Antonio Gramsci* case, which referred to calculating liability by estimating the amount of water contaminated by an oil spill incident.[50] In order to maintain the global nature of the regime, the IMO adopted two amendments in 1992 that converted the earlier 1969 *Civil Liability Convention* and 1971 *Fund Convention* into the 1992 *Civil Liability* and 1992 *Fund Conventions* – and introduced post-spill pollution damage studies to quantify compensation claims. Overall, the main idea was to calculate actual

[49] Chapter 7.
[50] *International Maritime Organization Official Records of the International Conference on Liability and Compensation for Damage in Connection with the Carriages of Certain Substances by Sea, 1984* and *the International Conference on the Revision of the 1969 Civil Liability Convention and the 1971 Fund Convention*, 1992 Vol 2 (IMO, London, 1993) LEG/CONF.6/C.2/SR.3 AT 348-349.

remediable harm caused by an oil spill incident rather than any speculative or punitive damages.[51]

Under the 1992 *Civil Liability Convention,* shipowner means a party registered as the ship's owner, or if the ship is not registered, the party who owns the ship.[52] Whether the shipowner is strictly involved in the operation of the ship is not relevant under the Convention – owner refers to whoever is controlling the ship or who has a passive interest in the ship.[53]

Two important lessons learned from the above oil transportation regime are that: (1) the global shipbreaking industry can implement a civil liability framework with an insurance to act as financial security for any human loss; and (2) forming such a global framework for compensation requires industry support. From the perspective of shipbreaking, the maritime industry, as an influential part of the shipbreaking industry, must take the responsibility to trigger such a legal framework, respecting their corporate liability for the human face of the problem. However, oil transportation and ship transfer are two different perspectives. In the case of shipbreaking, a number of parties get involved, including cash buyers and open registry countries, due to the change of ownership. So direct adoption of the features of the oil transportation mechanisms is not enough for shipbreaking. The thesis therefore learned lessons from the certification system of the *International Load Line Convention 1930 and 1966* (*Load Lines Convention*) to track a ship's ownership changes.

D *Certification System for Tightening the Change of Ownership*

The *Load Lines Convention* operates to ensure the safety of ocean going ships, irrespective of who owns the ship.[54] Every ship must maintain the *Load Lines Certificate* for sailing on international waters and for confirming whether the ship

[51] Steven Edward Farnworth, 'Liability for Pollution Damage from Offshore Oil Spills: the CLC and Fund Conventions, The EU's Environmental Liability Directive and their Implications for New Zealand Law' (PhD Thesis, University of Waikato, 2017) 330-331.
[52] *1992 Civil Liability Convention,* art 1 (3).
[53] Peter Wetterstein, 'Environmental Impairment Liability after the Erika and Prestige Accidents', (2004) 46 *Scandinavian Study of Law* 230, 243.
[54] *International Load Line Convention 1930,* opened for signature 5 July 1930, UNTS 858 (entered into force 1 January 1931) superseded by *1966 International Convention on Load Lines* opened for signature 05 April 1966 , 640 UNTS 133 (entered into force 21 July 1968). *(Loadlines Convention*); It is one of the widely ratified of all the IMO conventions: at Phillip Alman et al., 'The International Load Lines Convention: Crossroad to the Future' (October 1992) 29(4) *Marine Technology* 233, 234.

complies with international maritime standards. Drawing analogy with the *Load Lines Convention*, the thesis proposes for every ship to maintain a shipbreaking liability certificate from cradle to grave. A shipbreaking liability certificate issued by the IMO can thus tighten the change of ownership.[55] However, since the IMO has no onsite inspection system, it may not be possible for the IMO to implement the certificate for shipbreaking yards.

Shipbreaking yards require an additional financial mechanism to push for changes to the unsafe shipbreaking practices, such as beaching, and conventional shipbreaking practices, and to facilitate the payment of compensation.[56] For these particular aspects, the thesis learned from the Piper Alpha incident, an offshore oil rig explosion that killed 167 workers. The Piper Alpha incident presented an important lesson with respect to the insurance industry's risk assessment and its influence in changing such unsafe industry practices.[57]

E *Insurance System for a Risk Assessment and Change to the Unsafe Shipbreaking Practices*

Piper Alpha illustrated that the insurance industry's strict enforcement of relevant guidelines can change industry practice. In fact, 'high risk leads to high premiums for insurance' was the principle that forced the offshore industries to implement existing regulatory guidelines for offshore complexes. This risk-based insurance approach is equally relevant to putting pressure on the shipbreaking yards. In other words, this approach would allow insurance to react in line with potential risks in breaking ships. For instance, if the injured workers in the shipbreaking industry have insurance coverage and they start making claims, the insurance will react to this risk, making it more expensive to cover shipbreaking risks and bring about change in the shipbreaking industry.

Based on this example from the Piper Alpha incident, the thesis proposes a compulsory shipbreaking liability insurance for each shipowner and shipbreaking yard, so that insurance companies can conduct risk assessments followed by onsite inspections of a ship and shipbreaking yard. Further, this current study argued that unless insurers

[55] Chapter 7.
[56] Chapter 1.
[57] Chapter 7.

put pressure on the shipowners to comply with the existing regulatory and voluntary standards, the shipbreaking industry would remain non-compliant and risky for workers.

Learning from the post incident legal forms, the thesis has argued for a multi-faceted approach using the above regulatory and insurance measures. The approach is to provide a remedy for the victims of shipbreaking accidents and improve workplace health and safety. Importantly, rather than replacing the *Hong Kong Convention*, the thesis has argued for an additional mechanism to it because the *Hong Kong Convention* is still relevant in regulating the industry. Indeed, the *Hong Kong Convention* has become a customary principle of law for shipbreaking and its regulatory approach because major shipbreaking nations in South Asia have been using the *Hong Kong Convention* as a model for developing their national laws on shipbreaking. Further, it is not clear whether the highly acclaimed *Hong Kong Convention* is going to address the desired changes and promote improved standards in the South Asian shipbreaking industry. It is also not clear whether the *Hong Kong Convention* will succeed in stopping future shipbreaking incidents and pollution. Considering this, the current study drew lessons for a supplementary mechanism from the *Basel* and *Kiev Protocols*.[58]

The international community introduced the *Basel Protocol on Liability and Compensation for Damage Resulting from the transboundary Movements of Hazardous Wastes and Their Disposal* (*Basel Protocol*) and *Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters* (*Kiev Protocol*) to supplement their corresponding conventions after two inter-State incidents involving the waste trade and mining industries.[59] A unique feature of the *Basel Protocol* is that the instrument

[58] *Basel Protocol on Liability and Compensation for Damage Resulting from the transboundary Movements of Hazardous Wastes and Their Disposali*, opened for signature 10 December 1999, UN Doc. UNEP/CHW.1/WG/1/9/2 (not yet in force). *(Basel Protocol)*; *the Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents,* opened for signature 21 May 2003, UN Doc. ECE/MP.WAT/11-ECE/CP.TEIA/9 (not yet in force). *(Kiev Protocol)*

[59] *The Convention on the Protection and Use of Transboundary Watercourses, and International Lakes*, signed 17 March 1992, 1936 UNTS 269 (entered into force 6 October 1996); *the Convention on the Transboundary Effects of Industrial Accidents*, signed 18 March 1992, 2105 UNTS 457 (entered into force 18 April 2000). *(the 1992 Helsinki Conventions)*

transfers liability to the person in control of the wastes and resolves the gap in its pre-existing *Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal* (*Basel Convention*).[60] The *Basel Protocol* also allows the victims to claim compensation directly from the insurers and has a provision to allow workers to claim compensation before a court. Insurance is thus mandatory for each inter-State transfer of wastes. The *Kiev Protocol* also resolves the gap in its pre-existing conventions: *Convention on the Protection and Use of Transboundary Watercourses, and International Lakes* and *Convention on the Transboundary Effects of Industrial Accidents* (*Helsinki Conventions*) and provides important lessons for introducing the strict liability of the most beneficial party for paying compensation to the injured parties.

Lessons learned from these *Basel* and *Kiev Protocols* revealed that as a globally accepted legal approach, the IMO may introduce a protocol or regulation to supplement the legal gaps in the *Hong Kong Convention* that does not address the issue of compensation payment to injured workers, those suffering from work-related diseases, or to the families of deceased workers. Such a supplementary liability and compensation framework is vital when an industry is highly dangerous and global in nature involving a number of international private parties.

IV TRANSLATING THE LESSONS INTO THE SHIPBREAKING LIABILITY CERTIFICATE

The thesis used the lessons learned from the case studies to develop the SLC framework that aims to reform the industry practice with a focus on compensation to the workers who suffer deaths, injuries or work-related diseases.

The SLC framework considers the characteristics of the shipbreaking business and the factors that promote the industry in South Asia. The SLC includes the annual volume of ships for breaking, the rate of deaths and injuries, and the international standard of compensation, to determine the SLC charge that includes 30% for SLC administrative fee and the remaining 70% for the shipbreaking liability insurance premium.[61]

[60] *The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 126 (entered into force 5 May 1992). (*The Basel Convention*)
[61] Chapter 9.

Moreover, the thesis proposes to introduce the certificate system for each shipowner as a mechanism to tighten the change of ownership. It also includes mandatory shipbreaking insurance for each ship both for commercial operation and shipbreaking operations. Chapter 9 has explained the administration, operation and enforcement of the SLC in detail. The IMO is to administer the proposed SLC following the two mechanisms stated below.

First, with respect to the commercial operation of ships, every ship has to maintain the SLC both for sailing on international waters and for breaking. Being an umbrella institution, the IMO or someone acting on its behalf would administer the two SLCs. This would be useful to bring transparency in inter-State transfer of ships. The proposed SLC for a shipbreaking yard would mean that a shipbreaking yard willing to purchase a ship must have IMO confirmation to determine whether a ship has been maintaining a SLC for sailing on international waters. The underlying concept behind this process is to monitor a ship's inter-State sale process. A cost-free IMO verification process would assist a shipbreaking yard in this process. As discussed in Chapter 1, as a sale agreement between a shipowner and shipbreaking yard starts the process of shipbreaking, the proposed SLC recommends that the sale agreement must include a declaration that the ship has an updated SLC and that the IMO has verified the SLC. The thesis proposes that without confirmation from the IMO, a shipowner, including a cash buyer, cannot transfer a ship. After sale, the parties must inform the IMO about change of ownership so that the IMO has information about the last sale of a ship. In the same vein, before final sale of a ship to a shipbreaking yard, a shipowner must obtain verification from the IMO that the shipbreaking yard has the ship-specific SLC issued by the IMO or someone acting on its behalf.[62]

Second, the thesis argues for mandatory shipbreaking insurance as a pre-requisite to obtaining the SLC for both shipowner and a shipbreaking yard. Besides a guarantee to pay compensation, this insurance mechanism would assist in bringing about accountability for shipowners. Historically, insurance has played a key role in regulating an internationally recognised business, especially if it is risky to human health. For example, Section II of Chapter 7 has discussed the role of insurance to cover the losses of victims of oil spills, and bring accountability of all interested parties

[62] Ibid.

in the maritime business in relation to these incidents. Both the oil and the shipping industries are committed under the *Civil Liability Convention 1992* and the *Fund Convention 1992* to insure each inter-State transfer of oil, which is a key component to tracking each shipowner and oil industry involved in an inter-State oil transfer. Learning from these case studies, the thesis argues for a compulsory shipbreaking insurance for all ships, not only to cover the risk of deaths and injuries of workers from shipbreaking but also to track all shipowners, including a cash buyer involved in selling a ship.[63]

In proposing the SLC, the thesis undertook a detailed analysis to evaluate the premium, SLC administrative fee and compensation of a death, or injured, or ill worker. The proposed SLC has two parts in relation to its expenditure.[64] The first 30% of the total cost is for the administrative cost to run the SLC system by the IMO – for example, the IMO may use the amount to maintain a database for all ships, their owners, and insurers. The remaining 70% is to pay the insurance premium. An international maritime insurer can open the insurance and maintain it.[65]

Chapter 9 also sets out a simple formula using the industry's perspectives, such as weight of a ship, average deaths and injury rates, and an international compensation standard. Based on this formula, the net forecast amount to obtain a shipbreaking liability certificate for a ship weighing 20,000 LDTs would be around USD 1600 annually for a shipowner. If a worker becomes permanently disabled or sick, he or she will receive around USD 5000 per year, and the payment will continue until his or her death or until his or her last minor child becomes an adult (see Column 7 of Table 14). The family of a worker who has died will receive USD 6226 per year, until his or her youngest child reaches adulthood (see Column 8 of Table 14). A lump sum amount would also be acceptable if it is not below the standard amount. Alternatively, insurance companies and the court system can determine the amount of compensation payout for the workers.[66]

The SLC model has the potential not only to be a good system to change overall industry practice by making all shipowners accountable for the deaths, injuries and

[63] Ibid.
[64] Ibid.
[65] Ibid.
[66] Chapter 9.

diseases in the shipbreaking industry, but it also includes a good compensatory mechanism for paying an adequate compensation payment. As discussed in the thesis, the mechanism would bridge the gap between the two scenarios. On one hand, it would bring about transparency and change industry practice in the international shipbreaking market, and on the other hand, it would provide an international standard of compensation to the victim workers.

In the end, this study has responded to the principal research questions mentioned in Chapter 1, confirming that the SLC, being a civil liability and compensation framework can bring about the necessary change in the industry practice by making all parties responsible in the business process. The shipping industry does bear responsibility for the deaths, injuries and work-related diseases and drive change in the ongoing unsafe industry practices. The thesis explored the relevance of the liability and compensatory measures of other global industries for the SLC and proposed a method for how the shipbreaking industry can implement them to achieve the desired aim of rectifying the ongoing injustice in the shipbreaking industry. The next Part explains the desired outcomes of the SLC.

V EVALUATION OF THE SLC FRAMEWORK

One of the important contributions of the mechanism would be to educate shipping industries about their role in the end-of-life consequences of a ship. Many shipping companies and international States with major shipping companies may not have enough knowledge of a ship's final destination, since a ship reaches a shipbreaking yard after reflagging and renaming. Such a mechanism would educate the parties as well as introducing financial obligations.

The SLC with insurance would ensure an adequate level of pre-cleaning of internal materials. The compulsory insurance and SLC would ensure that pre-cleaning has a link to the insurance premium and costs would be higher if the ships are not pre-cleaned. Alternatively, because pre-cleaning would reduce the in-built waste of a ship, and so the premium level, it would provide a choice to the shipping companies to select between higher premiums and pre-cleaning.

The proposed SLC recommends for a high amount of premium for shipbreaking yards that use the beaching method following a checklist approach (Table 12). As discussed

in Chapter 3, the beaching practice used in the South Asian shipbreaking industry is dangerous for workers and environment compared with the dry docking method used in the standard shipbreaking yards, and thus the mechanism and the amount of premium should distinguish between beaching and dry dock methods. Under the proposed SLC, a shipbreaking yard using dry dock method must not have to pay the same amount as for using the beaching method. The introduction of a high premium for substandard shipbreaking yards (e.g. beaching yards) may eventually incentivise the shipbreaking yards to adopt the dry dock method.

The SLC administrative fee and premium should not create a financial burden on the maritime industry. The proposed SLC thus follows a 'weight based' approach. This means the SLC fee and compensation would depend on the Light Displacement Tonnage rather than the number of ships broken each year.[67] This approach is practical because in order to determine an acceptable level of liability, it is necessary to have the cost linear, with bigger ships having more liability than smaller ships. This means that the ratio of the administrative fee and premium cost of bigger ships would be more than the smaller ships. The proposed SLC also follows the 'less rate of deaths and injuries, less insurance premium' approach. Put another way, the fewer the casualties, the lower the insurance premium. A reasonable expectation of this approach is to keep the insurance premium as low as possible, the shipowners and shipbreaking businesses will take genuine step to prevent casualties.

The proposed SLC would encourage improving the facilities of a shipbreaking yard anywhere in the world. This is because, under the proposed SLC framework, the insurer would consider the available facilities of a shipbreaking yard to determine the concession from the maximum premium calculated following the baselines (see Part IV of Chapter 9) for a shipbreaking yard before purchasing a ship-specific SLC. A shipbreaking yard with all *Hong Kong Convention* facilities would need not to pay a premium except the SLC administrative fee (30% of the total SLC charge). This would incentivise the compliant shipbreaking yards.

By accepting the proposed SLC, the international shipping industry would see shipbreaking as a means of improving the economy of the developing country, rather

[67] Light Displacement Tonnage means 'the weight of a ship with all its permanent equipment excluding the weight of cargoes, persons, fuel, dunnage and ballast': at *Dictionary.com* (online at 23 April 2020)

than only as an end for the maritime industry. The employment and economic impacts for the shipbreaking industry will depend on the volume of ships (calculated in LDT) broken in South Asia. Accordingly, if, because of the SLC framework, the health and safety standards in shipbreaking yards improve, this will not have an adverse impact on the shipbreaking business. Moreover, because of the financial security, the shipbreaking industry would acquire skilled workers. On the other hand, if the substandard shipbreaking yards do not invest in improving their standards to become compliant with the IMO guidelines, then the IMO should discourage the ship's purchase and use of the shipbreaking yard by not issuing the SLC.

An underlying objective of the SLC is to gradually change the industry practices and to monitor the changes taking place. The insurance premium should take into consideration the improvement of standards in the shipbreaking industry, and the SLC is to monitor the change of ownership from cradle to grave of ships. It is emphasised in the thesis that for shipbreaking to survive in South Asia, there needs to be a major shift from the current practices and the SLC can assist in bringing about the necessary change.

VI MAJOR LIMITATIONS

The current study has six major limitations. First, a limitation of the study has been the lack of industry participation. The research has not relied on interviews or surveys of shipping or shipbreaking industries, or insurance industries to obtain insights on the proposed SLC. Instead, the thesis has used international conventions, domestic legislations, judicial pronouncements and a wide range of collateral documentary source materials that have contributed to the breadth of the inquiry. Documentary sources included reports from international organisations, journal articles, books, industry reports, NGO reports, research studies, media reports and general literature.

Second, it is beyond the scope of the PhD thesis to test the desired outcome of the proposed SLC framework. A pilot study to test these recommendations would have required an extensive amount of funding, the involvement of many organisations and a large time commitment. Moreover, a pilot study at this stage would be premature. A

matter of hope is that the thesis ignites a debate in this area, which would persuade the shipping industry to take an active role in reforming the global shipbreaking policy.

Third, there is limited discussion on the shipbreaking laws of India's and Pakistan's provinces. India and Pakistan constitutionally follow a Federal Union model. They have both Federal and State laws in place for their shipbreaking industry. The study has mainly discussed the Federal laws and the decisions given by India's and Pakistan's Supreme Courts, noting their influence in making national policy in shipbreaking.

Fourth, the current study has not considered the re-insurance of the maritime insurance companies that will issue insurance for shipbreaking workers under the proposed SLC framework. The current study could have discussed how the limited scope of the current re-insurance market would affect the insurance for compensating the shipbreaking related deaths, injuries and diseases. However, as maritime insurance is mainly owned and controlled by the maritime industry, the proposed idea of undertaking responsibility by shipowners for the shipbreaking insurance could resolve the issue of re-insurance. Moreover, re-insurance is an issue that would follow, if the global maritime industry were serious about introducing the shipbreaking insurance.

Fifth, the current study has also not addressed the transparency issue in relation to the idea of higher insurance for increasing number of casualties (see Chapter 7) because the proposed SLC framework has rigorous processes of determination of both insurance premium and compensation. The SLC framework proposes certain baselines and a formula to calculate the maximum cost of the insurance premiums, and every claim would follow a process of investigation by the concerned insurers before paying a claim. A claimant would have to provide a detailed incident report. Then the concerned shipbreaking yard and shipowner would also have the opportunity to raise their concerns with a claim (see Chapter 9). Consequently, because insurance is mainly based on the principle of good faith, it is hoped that inclusion of each of the concerned parties in the claim process would ensure transparency under the proposed SLC framework.

Sixth, the current study has not discussed an alternative international organisation, in the case where the International Maritime Organisation (IMO) holds back on

introducing the proposed SLC framework. The current study would have discussed that the United Nations Development Program (UNEP) or the International Labour Organisation (ILO) might move ahead for introducing the proposed SLC framework or that the major shipping industries could introduce the SLC framework as a voluntary mechanism so that it becomes a globally accepted mechanism. However, as shipbreaking is related to the global maritime business, the intervention of organisations other than the IMO would not be acceptable to the maritime industry. Importantly the current study argues for a new policy direction in this area to persuade the shipping industry to an understanding of their moral and legal obligations to compensate for the deaths, injuries and diseases of shipbreaking workers where the IMO, that governs the industry, can play a significant role. If it should eventuate that the IMO is reluctant to introduce the SLC framework as a global mechanism to supplement the *Hong Kong Convention*, international organisations such as the ILO or UNEP could step in to introduce this as a global mechanism.

VII FUTURE RESEARCH DIRECTION

From the perspective of the shipbreaking industry's global nature, future researches would look for adequate government and industry support and aid to run a pilot study on the operation of the SLC. Future research also needs to focus on regulatory frameworks in other countries, such as in China and Turkey, to examine how their domestic legal frameworks address the legal gap in the compensatory framework and see how the SLC framework would contribute in these countries.

Future research could also investigate the willingness of the IMO Member States to introduce an international agreement following the SLC model. This could be similar to the *Kiev* and *Basel Protocols* to compensate loss of victims from transboundary harms of waste trade and industrial activities.

Another direction to future research would be to examine the importance of unionisation for making changes in the industry practice. This could be useful to persuade the ILO to introduce the proposed SLC framework in case of the IMO's reluctance to that direction. Future researchers could also investigate the reinsurance market in relation to the proposed shipbreaking insurance in the shipbreaking industry.

This would give more information about the possibility of introducing the shipbreaking insurance. Moreover, future researchers could also test the views of the industries, such as the maritime insurer, on the SLC framework.

VIII CONCLUDING COMMENTS

This work, of course, does not take the view that the proposed SLC mechanism is something that is achievable in a truly effective and practicable manner without support from the global shipping industry. Efforts to ensure policymaking and implementation of the SLC must in the first place come from the shipping companies and their States, who hold majority membership in the IMO. However, it is true that the EU, with its community based financial liability scheme, can make a useful contribution in that direction. Nevertheless, instead of giving benefit to the shipowners, the EU, being the biggest unit of major shipping nations, should take leadership to establish a remedy system as proposed in this thesis. The legal framework for the proposed SLC would thus originate from the IMO followed by the EU's support.

The assessment and review of the proposed SLC mechanism by the international community in general, and by the shipping industry in particular, should be based upon an integrated understanding of the above noted underlying values and policy objectives. Their coherency also is vital both for furthering the international principles of law by exposing the questionable business model of shipbreaking, and for bolstering support for applying the rectificatory justice theory that would in a true sense rectify the global injustice happening in the South Asian shipbreaking industry.

In conclusion, this thesis has identified the regulatory gaps that allows ships to be sailed onto the beach in South Asia for shipbreaking. Implementation of the proposed SLC would be the missing thread that would enable ships to complete their sailing from cradle to grave upholding justice to shipbreaking workers and environment.

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APPENDICES

APPENDIX A – Consent from the co-author

To Whom It May Concern

I, Mohammad Zulfikar Ali, contributed significantly in doing legal research, analysis, structure, references and writing to the paper entitled 'The South Asian Shipbreaking Industry and its Unsafe Mining Practices' (2020) *Aspects of Mining and Mineral Science*

Mohammad Zulfikar Ali

I, as Co-author, endorse that this level of contribution by candidate above is appropriate.

DR Prafula Pearce

APPENDIX B – Consent from the co-author

To Whom It May Concern

I, Mohammad Zulfikar Ali, contributed significantly in doing legal research, analysis, structure, references and writing to the paper entitled 'Effectiveness of the Hong Kong Convention on Ship Recycling in India and Bangladesh' (2019) 5 *Curtin Law and Taxation Review*.

Mohammad Zulfikar Ali

I, as Co-author, endorse that this level of contribution by candidate above is appropriate.

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(13/09/2021)

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Position: Associate Professor

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Name: Donovan Castelyn

Position: Academic Editor – Curtin Law and Taxation Review

Date: 16/09/20

APPENDIX E – Data on Deaths and Injuries in Shipbreaking Yards in Bangladesh between 2012 and June 2021

DATE	YARD	DESCRIPTION OF ACCIDENT	DEATH	NAME	AGE
28.02.2012	Seema Steel/ Madambibirhat	Falling from Height	1	Forkan (22)	22
18.01.2012	MAK Corporation	http://www.thedailystar.net/newDesign/news-details.php?nid=224379	4	Miraj,(18). Liton, (35) and Jubayed (22), Rubel, (25)	18,35, 22,25
15.03. 12	Mahin Shipbreking Yard, Sheetal pur, Sitakund	Fuel tanker Explosion	1	Md Nur Un Nabi (30)	30
02.05.2012	Seema Steel/ Madambibirhat	http://www.imfmetal.org/index.cfm?c=25221&l=2	1	Monsur Ali (32)	32
03.05.2012	Mishmack Steel Ship Breaking Yard, Kumira, Sitakund	Fall of Iron Plate	2	Mohammad Babul (25) and Foyzun (30)	25,30
17.07.2012	M R Ship Yard, Bhatiary, Sitakund	Crashed by a heavy hydraulic door. As Mansur was entering the room, the opened door swung back crushing him against the ship's wall and killing him instantly.	1	Khorshed Alam(16)	16
29.07.2012	S M Corporation/ Baro Awlia	http://www.thedailystar.net/newDesign/latest_news.php?nid=37438	1	Md. Jamal Uddin(45)	45
02.08.2012	United Ship Breaking Yard, Jora Amtol, Sonaichori Union, Sitakund		1	Md. Liton(27)	27
5.08.2012	Mishmak Steel at Kumira area under Sitakunda upazila in Chittagong	Crushed under a heavy steel plate and sustained critical injuries Though the autopsy of Babul was done at Chittagong Medical College Hospital the body of Foyzun was sent to his native village without autopsy. (Source Sitakund Police station)	1	Nuruddin (26)	26
20.08.12	Peninsula Super Shipyard in Sheetalpur area under the upazila	Huge metal plate fell on him. The 24, 000 ton ship, Khorshed and the other workers were cutting apart was the Kang Hua cargo ship (IMO 8128092) which was built in 1983 in Ulsan, South Korea, by Hyundai.	1	Mohammad Selim, 28	28
08.09.2012	K S B	http://recyclingships.blogspot.com/p/fatal-accidents-in-shipbreaking-yards.html	1	Maznu	
12.09.2012	Sayeed Steel, Bhatiary, Sitakund	---	1	Ershadul Hoque, 26	26
27.09.2012	S Trading ShipYard , Madam Bibir hat, Sitakund, Chittagong	---	1	Mohammad Aziz, (32)	32
21.11.12	Bhatiary Shipbreaking yard, Bhatiary, Sitakund, CHittagong	Slipping at work he fell from ship and sustained critical injuries	1	Yunus Rana, (26)	26
29.11.12	PHP Ship Breaking Yard in Shitalpur area, Sitakund, Chittagong		1	Shamsul Alam, (28)	28
17.09.12	Fortune Ship-Breaking Yard, Sitakund , Chittagong	Fall from height	1	Eskandar, (26)	26

18.10.12	KadamRasul Shipbreaking Yard, Bhatiary, Sitakund, CHittagong	--	1	Yousuf Ali, 63,	63
			Total=21		
03.03.2013	S N Corporation	Hit by Iron Plate		Rabiul	23
21.03. 12	Taher & Brothers, Shitalpur	Hit by Iron Plate		Md Ismail	45
23.03.2013	MAK Corporation	Fall from height		Md Taslim	38
02.06.2013 (10 PM)	Sheema Shipbreaking			shuvo	20
15.07.2013	Sagorika Shipbreaking yard			Anwar hossin ,Md. Nasir (25	22,25
08.07.2013	Seko Shipbreaking yard			Samim (22)	22
02.07.2013	Janata Steel Ship Cutting yard			Chandu Miah (26)	26
18.07.2013	Juma Enterprise			Md. Azgar Ali (26)	26
11.04.2013	Rocking Enterprise			Md. Raihan (32)	32
01.04.2013	Golden Iron Shipbreaking yard			Md. Abdul Majid (38	38
17.09.2013	Kabir Steel			Md. Hamidul (41)	41
10.09.2013	WW Trading		**Total=11**	Md. Alamgir	22
29.01.2014	Seko Shipbreaking yard	Hit by Iron Plate		Babul Das (25)	25
03.04.2014	Arafin Enterprise shipbreaking yard.	Gas cylinders exploded		Jashim uddin (30)	30
Same	Same	Same		Gias uddin (30)	30
Same	Same	Same		Arif (28)	28
Same	Same	Same		Md. Faruk (25)	25
07.04.2014	B.B.C Steel	Hit by Iron Plate		Md. Sultan	
07.05.2014	Golden & Iron Ship yard.	Hit by Iron Plate		Amjad Hossain (40)	40
14.05.2014	S. Trading Corporation	inhaling gas after a gas cylinder exploded		Saidur Rahman	
17.05.2014	Legend Holdi	Fall from Hight		Mohsin	
			Total=09		
06.01.15	P H P SHIP YA+C1+C2:C25	died crossing the road	1	Md. Gafur	40
11.04.15	Crystal Ship Breaking Yard	fell from height, head injury	1	Enamul	40
26.05.15	Nahar Depot of Ziri Subedar	fire	1	Saddam Hossen	22
06.06.15	Jhuma Enterprises	unknown	1	Nuruddin	27
06.06.15	Crystal steel and shipbreakers Ltd	hit by vehicle	1	Robiul	unknown
06.06.15	MM Ship Breaking	hit by falling plate	1	Borhan	23
06.06.15	S. N corporation	hand cut off from wrist; received treatment	1	Ali Hossein	22
27.06.15	Shagorika	injured in cylinder blast	1	Md. Elias	30
25.08.15			1	Shahjahan	40
25.08.15			1	Alamin	36

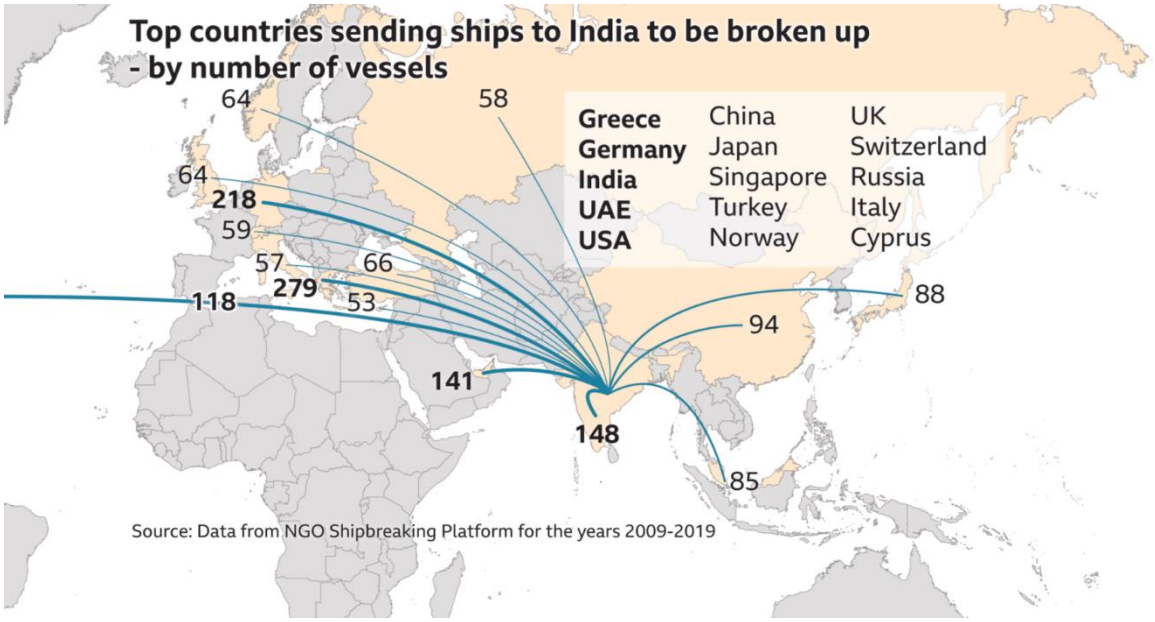
25.08.15			1	Mokshedul	30
05.09.15			1	Khokon	32
09.09.15			1	Aminul	42
14.09.15			1	Khairul	22
14.09.15			1	Russel	22
26.10.2015			1	MD. Selim	22
			Total-16		
19.01.2016	Asadi Steel Shipyard	death after being hit by an iron bar that fell from a ship	1	Md. Ali Akkas	50
09.02.2016	Habib Steel (Unit-2) or JANATA STEEL Corporation	A steel wire tore and slashed the worker.	1	Md. Saiful Islam	32
04.03.2016	OWW Ship Yard	While removing AC unit, a cut section tied to a rope fell on his thigh	1	Md Shafiqul Islam Shikder	34
16.03.2016	SL Steel Ship Breaking Yard	Falling from stairs	1	Morsalin	20
16.03.2016	Mahin Enterprise Ltd.	Heat Stroke	1	Minaj	43
28.03.2016	Kabir Steel Ltd.	run over by a car owned by local MP DIDAR's company inside Kabir Steel Shipbreaking yard	1	Md Sumon	26
				Delwar (Sumon's brother)	
15.4.2016	Premium Trade Corporation Ltd		1	Biplob Haldar	22
23.5.2016	DARUSSALAM Enterprise and MADINA Enterprise	fell from great height	1	Md. Rubel Islam	21
29.5.2016	Seiko Steel (also called DARUSSALAM Enterprise and MADINA Enterprise)	struck by falling plate	1	Md. Rana Mia	32
29.5.2016	Seiko Steel (also called DARUSSALAM Enterprise and MADINA Enterprise)		1	Mohammad Karim	26
5.6.2016	A.R.L Shipbreaking Ltd.	while cutting plates	1	Babul Mollah	35
19.6.2016	Bhatiary Steel Ship Yard	cylinder blast	1	Swapon	
27.7.2016	Master & Brothers	fell from great height	1	Md. Jalal Uddin	30
31.7.2016	Taher and Company Ltd.	Gas Line blast inside the ship	1	Md. Shibbir Ahmed	25
08.06.2016	Mahin Enterprise	Fell from height	1	Md. Alamgir	
08.06.2016	Mahin Enterprise	Fell From Height	1	Md. Anis	
28.08.2016	R.K Shhipbreaking/BBC Shipbreaking	Fall of heavy metal	1	Md. RAJU	30
			Total-17		
15/02/2017	BBC Steel Shipbreaking/KR (Kumira area)	Fall	**1**	Rongchan Tripura	55
28/02/2017	Seiko/Darussalam/Madina Enterprise	crushed by falling steel plate	**1**	Mohammed Azam Khan	26
05/03/2017	BBC Steel Shipbreaking/KR Shipbreaking yard (Foudzer Hat area)	crushed by falling steel plate	**1**	Shaheb Ali	35
15/03/2017	MA Ship Yard	crushed by falling steel plate	**1**	Anisur Rahman	32
06/05/2017	Jamuna Shipbreaking	fall	**1**	Shahinoor	26
09/05/2017	BBC Steel Shipbreaking/KR (Foudzer Hat area)	Hit by iron cable	**1**	Ishaq	46
21/05/2017	Kabir Steel (Khawja)	Hit by iron pipe	**1**	Shochindro Das	15
25/04/2017	Ratanpur Steel Re Rolling mills		**1**	Zishan	25
23/10/2017	Arifin Enterprise	Hit by iron plate	**1**	Jalal	40
11/09/2107	Ferdous Steel Shipbreaking	Suffocation from toxic gas	**1**	Md Khalil	35
14/11/2017	CBRA Fahim Enterprise	Fall from Height	**1**	Md Mizan	25
12/04/2017	SN CORPORATION	HIT BY IRON PIECES	**1**	MOJAMMEL	22
25/12/17	SNT Recycling Shipbreaking Yerd	hit by heavy metal	**1**	Md. Manik	35

26/12/17	RA Shipbreaking Yerd	Hit by Magnet	**1**	Masum	35
			Total-14		
28/01/2018	R A Shiprecycling	Fall from height	1	Md Abul Hossain Mondal	42
28/01/2018	Primium Trade Corporation	Hit by Iron Piece	1	Md Borhan Uddin	45
18/02/2018	Jomuna Shipbreakers	Burned by sudden fire	1	Harun ur Rashid	35
25/02/2018	Kabir Steel Ship Yard (KSRM)	Fall from height	1	Ajahar Molla	55
17/03/2018	MA Shipbreaking	Fall from height	**1**	MD BABUL (41)	41
28/03/18	Khawja Shipbreaking (Kabir Steel)	Burned to death. Fire broke out couse of falling flammalbe substance in a tank while cutting with flame.	1	OFFIL REMA	25
31/03/2018	Zuma Enterprise	Fall from height	1	Md Khalil	40
23/03/18	MA Shipbreaking	Hit by Iron Piece	1	SHOFIQUL ISLAM	25
20/02/2018	H.M. Steel Shipyard	Hit by falling plate	1	Abdul Mannan Juarder	52
24/04/2018	Zuma Enterprise	Hit by Iron Piece	1	Shohidul Islam (Rafiqul Islam)	28
19/05/2018	KR Steel	Hit by Iron Piece	1	Md Musa	45
5/12/2018	ASADI	Hit by Iron Piece	1	Belal Hossain	40
31/05/2018	JANATA STEEL	Hit by Iron Piece	1	Farid Ahmed	
6/03/2018	MS S. Trading Corporation	Hit by Iron pipe	1	Md Najmuddin alazy	
30/06/2018	Khawja Shipbreaking (Kabir Steel)		1	Nayon (?!)	22
21/10/2018	SN corporation	Hit by Iron	**1**	Kabir	30
11/04/2018	Golden Works	Hit by Iron	1	Abul Momin (Biplob)	
7/12/2018	Pacific Shipbreaking yard	Hit by iron	1	Md Samiul	45
11/06/2018	SH ENTERPRISE (Arefin Enterprise)	Hit by iron	1	Nazmul	23
25/12/2018	KR Steel	Hit	1	Hatem Ali	35
			Total-20		
28.01.19	S. S Green Ship Breaking	by Gas	1	Md. Motiur Rahman	50
18.02.19	Sagorika Ship breaking	by Fire	1	Md. Jalil	26
18.02.19	Sagorika Ship breaking	by Fire	1	Bipul Chandra	24
19.03.19	Bhatiyari Steel shipbreaking	Electeic shock	1	Md. Manik	35
08.04.19	Chittagong Steel		1	Delowar Mir	
15.05.19	Premium Trade Corporation	by fire	1	Mojbul Haq	27
15.05.19	Premium Trade Corporation	by fire	1	Hamidur Rahman Mondol	30
23.05.19	Premium Trade Corporation		1	Md. Jalil	
03.07.2019	Tahsin Shipbreaking Yard	by under plate	1	Md. Mamun Hossen	35
23.07.19	Khaja Shipbreaking Yard	Slip down	1	Shohidul Islam Mondol	40
31.07.19	Mac Corporation / Master er yard	Gas	1	Md. Nantu Hossen	24
31.07.19	Mac Corporation / Master er yard	Gas	1	Md. Rasel Matabbor	25
31.07.19	Mac Corporation / Master er yard	Gas	1	Md. Chobidul	26
31.08.19	Ziri Subedar Shipbreaking yard	Fall from ship, heat by iron plate	1	Aminul Islam	20
31.08.19	Ziri Subedar Shipbreaking yard	Fall from ship, heat by iron plate	1	Tushar Chakma	23
15.09.19	M.M/Laki Shipbreaking yard	affected by gass	1	Md. Akter Hossen	
26.09.19	Mother Steel Limited	sink into water	1	Md. Shawpon	19
29.09.19	Jomuna Shipbreaking Yard	slip down	1	Md. Arif	19
07.10.19	HM shipbreaking Yard	Heat by iron plate	**1**	**Rabiul Islam**	20

12.10.19	OWW Trading and shipbreaking	Gas	**1**	Saiful Islam	26
12.10.19	OWW Trading and shipbreaking	Gas	**1**	**Md. Masud**	22
07.11.19	H.M Shipbreaking Yard	Heat by iron plate	**1**	**Md. Muslim**	53
			Total=22		
20.01.2020	Mother Steel	Alledgely by sickness but not dead in the yard, NO Postmortem was conducted.	**1**	**Md. Sirajul Islam**	55
04.02.2020	Ziri Subedar Shipbreaking yard	Hit by Iron Plate	**1**	**Kiron Tripura**	28
10.02.2020	S.N Corporation Shipbreaking Yard	Hit by Iron Plate	**1**	**Md. Mizanur Rahman**	21
24.03.2020	Khaja Shipbreaking Yard Limited	Toxic Gases	**1**	**Nironjon Das**	65
24.03.2020	Khaja Shipbreaking Yard Limited	Toxic Gases	**1**	Suman Das	48
20.07.2020	NR Trading Shipbreaking Yard	Injured by wing Machine wire	**1**	**Rashedul Islam**	30
14.10.2020	Arefin Enterprise	Fall down from ship	**1**	**Md. Kholil**	32
03.12.2020	MA Ship Breaking Yard	Falling from upper deck	**1**	**Md. Mahfuzul Alam**	35
14.12.2020	Mother Steel	Heart attack	**1**	**Folen Tripura**	24
14.12.2020	Janata Steel	Heart attack	**1**	**Kartic Tripura**	25
25.11.2020	Khaja Ship Breaking Yard	Under investigation	**1**	**Md. Ibrahim**	35
			Total=11		
11.02.2021	NR Shipbreaking Yard	Fire explution in engine room while the cutting	**1**	**Md. Joshim**	45
05.03.2021	M/S Tasin Steel Limited	hit by iron sheet	**1**	**Ripon Mia**	37
12.04.2021	RA Shipbreaking Yard	hit by iron sheet	**1**	**Ataul Rahman**	45
16.04.2021	Jamuna Shipbreaking Yard	Fire explution in engine room while the cutting	**1**	**Md. Jihad**	18
27.05.2021	M/S Motaleb steel	Toxic Gas	**1**	Md. Toriqul Islam	24
06.06.2021	Premium Trade Corporation	Thanderstrom	**1**	**Md. Jolil**	
19.06.2021	S. N Corporation	Fire explution	**1**	**Ripon Chakma**	31

Source: Young Power in Social Action - 2021

APPENDIX F – The top ship-selling countries to South Asia



Source: NGO Shipbreaking Platform

APPENDIX G – Recent case of casualties in Bangladesh and India

Bangladesh

On 11 April, three young workers, Md. Samad (40), Md. Pilot (22) and Jihad (18), got severely injured after an explosion at Jamuna shipbreaking yard. The workers suffered burn injuries while cutting a pipe above the engine room of the ship, which contained oil that blasted during the cutting operation. The workers were transported to the Chattogram Medical College Hospital. The accident involved ARGO I (IMO 9083964), a vessel owned by a United Arab Emirates company.

On 12 April, another accident took place in Chattogram. Ataur Rahman (45) lost his life at R.A. shipbreaking yard when hit by an iron plate. The worker was dismantling the MV Gagasan Johor (IMO 9528897), owned by a Malaysian company. He was not wearing protective equipment, according to his fellow workers, and did not receive immediate assistance by the shipyard management. He had to wait three hours to be transported to the Bangladesh Ship Breakers Association (BSBA) Hospital in Sitakunda, which is not equipped to assist shipbreaking workers in case of serious accidents. Ataur Rahman was then re-transferred and died on the way to the public Chattogram Medical College Hospital, located at least half an hour from the Sitakunda area. The accident occurred at 7pm, making this a case of night work forbidden by the Shipbreaking Rules 2011.

On April 22, Raju (23) suffered an accident at Taher & Co Ltd. An iron plate fell on his head during dismantling operations on the vessel SALAM MEWAH (IMO 9135092), owned by a Malaysian company.

On April 24, Md. Delal (40) suffered burn injuries while cutting a pipe during the scrapping of WUYI HK (IMO 9082881), a vessel owned by a company from Hong Kong. The accident occurred at M.M. shipbreaking yard, and, according to local sources, the worker, who needed medical assistance from a hospital, only received basic treatment from a doctor at the yard.

0 7

On May 27, Tarikul Islam (35) lost his life while dismantling a platform rig at Motaleb Steel. Bangladesh media reported that the worker fell from the ship. Local sources claim that the real cause of the accident was the inhalation of toxic fumes when Tarikul opened a gas tank, which lead to the worker's fall.

On 19 June, an explosion at S.N. Corporation took place causing the death of Ripon Chakma (26). The workers were dismantling the vessel FORMOSA EIGHT (IMO 9110640), owned by a company from Taiwan. According to local sources, another three workers were injured - Md Sohel (29), Rocket Hossain (24) and Md Mintu (41) – by iron plates that fell after the explosion. According to Bangladesh media, the number of injured and deaths is much higher. The workers themselves are claiming that "the shipyard authority has hidden the bodies and injured workers". After the accident, government authorities closed the yard temporarily.

India

On June 10, an accident, which did not cause any injuries and/or deaths, took place in Alang. It occurred at Priya Blue shipbreaking yard, when one crane dangerously fell, damaging other structures nearby.

Source: NGO Shipbreaking Platform

APPENDIX H – Recent Case of Casualties in Pakistan

THE CATASTROPHE

On 22nd October 2016, an oil tanker named MT ACES, built in 1982, Japan, arrived at Plot # 54, Gadani, which is owned by Chaudhry Abdul Ghafoor. More than 120 workers enlisted to dismantle it. On 1st November 2016, the first day of work on the vessel, an explosion of gigantic proportions occurred while workers were cutting the oil tanker. It resulted in approximately 28 workers dead, and 58 injured. Firefighters from Gadani, Hub and Karachi battled the fire for three days; it is unclear whether the fire subsided as a result of their efforts or because the fire exhausted its fuel. The exact number of deaths, injuries and disappearances have been difficult to nail down because, as it will be seen in this report, there is immense controversy as to what records of the workers on board even existed in the first place.

Several of them had been burnt alive. Mangled body parts dispersed from impact were reportedly strewn across the plot when help arrived some workers jumped in to the sea, some of them survived, others could not make it, some did not know how to swim, others who made it to shore where gravely injured. They said the ship was not thoroughly cleaned, and there was oil and gas inside the ship when the work was started.

Ship breaking work is organized on a contractual basis. The main contractor is hired by the ship breaking plot d vessel owner or his management. Separate contractors are hired by the main contractor and each contractor is sponsible for a particular job or area of work. Any further contracting and hiring of labor is done by the bcontractors. It is believed that the main contractor in this case, a certain Gul Zamin, has expired in the explosion.

Two union leaders, workers and the Labor Department all suggest that the exact list of all workers on board d not been finalized; it was only the first day of work and contractors and sub-contractors were meant to take ɛndance aboard the ship that day.

The workers and union leaders further stated that a preliminary illed worker' attendance was conducted before they boarded the ship, and at record can be found with the plot management. The investigating officer, IO Zulfiqar of Hub Police on this case confirmed that he was in possession the list and read to us parts of it that are quoted in the casualties section. owever, note that this was not an exhaustive list and the remaining ɛndance record was yet to be brought off the ship before the catastrophe curred.

We note here that as per our sources in the government, it was not st the Plot#54 Chadhry Abdul Ghafoor's nephew and manager, Abdul afeez, who looked after the affairs of Plot # 54. Chaudry Abdul Ghafoor's usin, a Colonel (retd) Rafiq, also looked after the affairs at Plot#54. owever, this cousin has not been brought into the investigation at all

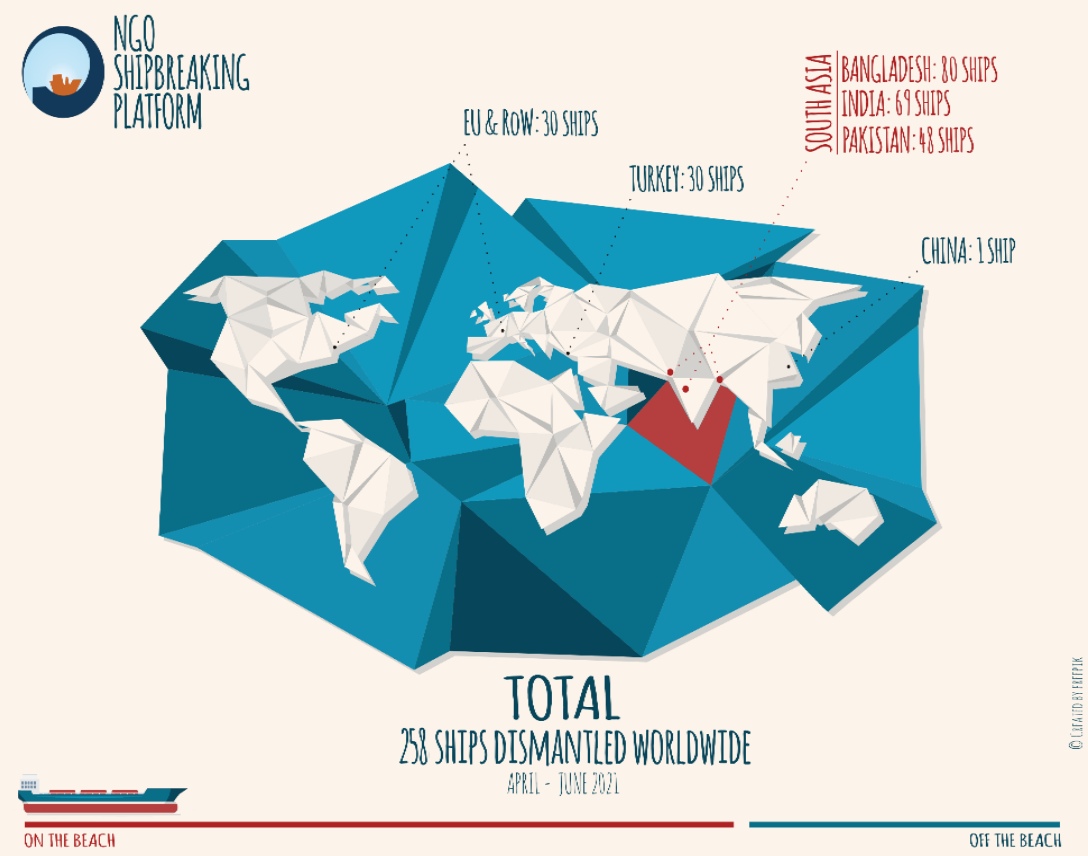
Ali Arqam reports this from his secondary research through marine enterprise databases and profiles.

Source: Human Rights Commission of Pakistan

APPENDIX I – The most expensive ship sold to a shipbreaking yard in South Asia

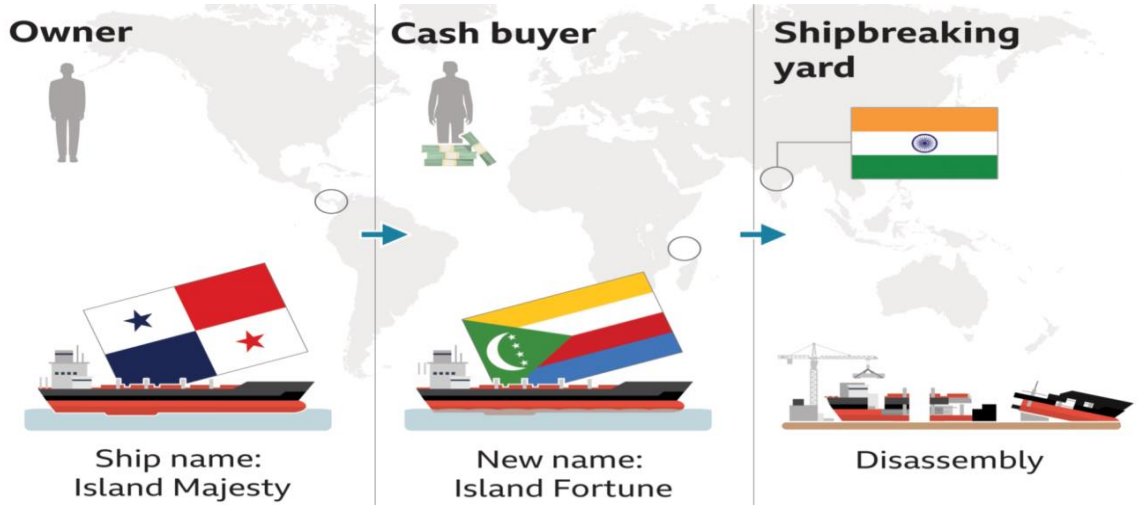
Source: The Daily Prothom Alo

APPENDIX J – Number of ships sold to South Asia between April and June 2021



Source: NGO Shipbreaking Platform

APPENDIX K – Non-transparent process of selling ships to South Asia



Source: British Broadcasting (BBC) 2020

APPENDIX L –INSURANCE CLAIM PROCEDURE

1 *The Grievance Procedure*

An injured or diseased worker or a family member of a deceased worker or a NGO on behalf of the worker or their family may file a claim. The most efficient way would be to allow for a defined independent entity, such as a Worker's Advocate as mentioned earlier, to represent the workers in making compensation claims. If necessary, the Worker's Advocate or other entity could also organise sessions to provide legal advice and representation. The SLC administrative fee may provide financial support to such entity for their legal fee.

Involvement of a defined independent entity would empower the victim. In the absence of collective representations and functioning worker-management dialogue,[1] representation by the entity may be a valuable means of improving access to justice for the workers.

Following a claim, the insurance provider or the shipbreaking yard may have the right to add the shipowner's insurer of the particular ship to the insurance claim and proceed with the payment jointly followed by medical examinations or such other steps, as are necessary steps. Co-payment or deductibles between the two insurers or guarantors are required to provide maximum protection to victims, but failure from the insured to pay deductibles or co-payments cannot be an excuse to delay any such claims. If necessary, the relevant shipowners and shipbreaking yards can later indemnify the amount of the insurances.

2 *Filing a Claim*

The proposed SLC may set up a toll-free 'Worker Helpline' to provide workers with an independent reporting channel to anonymise concerns about a shipbreaking yard to the insurance provider. In addition, the insurance provider of a shipbreaking yard would be required to open a website for the purpose of introducing an online platform to workers for filing a compensation claim. Under the proposed SLC, wearing a tag that includes the 'Worker Helpline' number and website address should be a compulsory requirement.

[1] International Metalworkers Foundation, 'Status of Shipbreaking Workers in India- A Survey' (Project Report, IMF-FNV Project in India, 2004-2007) 2.

The helpline and website should have an individualised channel for assisting the compensation claim. A better option would be to have a body such as a NGO to assist and support workers in making the claims before a defined independent entity such as a Worker's Advocate starts representing the workers in making compensation claims. The IMO can provide financial assistances to the NGO out of annual SLC administrative fees for ensuring the independence from insurers.

3 *Fact-Finding*

Following a claim, the duty would lie on the insurance provider of the shipbreaking yard to add the shipowner's insurance provider in the claim process and to notify the concerned shipbreaking yard owner immediately. The notification would allow shipbreaking yards to comment on the claim's authenticity. Equally, considering comments and the victim's claim, the insurance providers are to conduct a preliminary investigation and test the claim's veracity before proceeding to the final investigation. At this stage, the insurance provider of a shipbreaking yard can pay compensation to the victim, which can be set-off later from the final compensation amount after finalisation of the investigation process. The insurance providers would then pay the compensation from the insurances jointly. The process may empower the workers to seek relief quickly, as they are often otherwise unable to proceed with disputes due to impediments such as finances, distance, and weak labour status. The same procedure will be applied after a court's direction if a victim has to go to court at any stage. The IMO should consider these factors seriously.