The Cost of Regulatory Failure: How International Frameworks Enable Bangladesh's Hazardous Shipbreaking Industry

Noa Lou Brawermann

Despite the existence of multiple international legal frameworks governing the disposal of hazardous waste, the shipbreaking industry remains one of the most egregious examples of their systematic failure. Shipbreaking is the term used for the dismantling and recycling of end-of-life ships. Through this process, companies are able to reuse or recycle up to 90% of an end-of-life ship. The opportunity to reclaim materials makes shipbreaking a profitable industry - companies will purchase end-of-life ships, dismantle them, and sell the metal or other valuable materials for profit. In 2024, this industry was valued at USD 3.98 billion. According to the World Bank (2010), 70-80% of ships are dismantled on the beaches of India, Bangladesh, and Pakistan each year. While the shipbreaking industry appears on paper to be well regulated by international conventions that deal with the handling of hazardous waste and the recycling of ships, the reality is that these regulations are often circumvented and the dangerous procedures are displaced to Global South states with weaker regulations, while profits remain in the Global North. This article will assess the international framework which regulates the movement of end-of-life ships and oversees shipbreaking facilities. Using Bangladesh as a case study, this article will show how the gaps of the current framework allow for private bodies to circumvent regulations and rely on facilities in Global South states, at a significant human and environmental cost.

The International Framework

Since 1989, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention) has been the main international treaty overseeing the treatment of hazardous waste, including end-of-life ships, and the restriction of transboundary movements of hazardous wastes except where it is perceived to be in accordance with the principles of environmentally sound management. The main pillars of the Basel Convention are to reduce hazardous waste, to restrict the transboundary movement of hazardous waste, and to develop a comprehensive regulatory system to process hazardous waste. Articles 1 and 2 of the Basel Convention provide the scope for the definition of hazardous waste. End-of-life ships, due to their toxic components which can be released when they are dismantled, fall within the definition of hazardous waste under the Convention. Hence, all rules for the disposal of ships must comply with the Convention.

Central to this Convention are the elements consent and capacity: Firstly, the Basel Convention requires that the exporting state receives written, prior and informed consent from all states on route of the waste transport as well as the receiving state (article 6 of the Convention). Second, the Basel Convention requires proof that the receiving state has capacity. For the international transport of hazardous waste to be legally permissible, the exporting state has to show that they do not have capacity to handle the waste domestically and the importing state is better suited to manage the waste. Alternatively, the importing state needs to show that they are able to manage the waste correctly and that they need the raw materials produced from the waste management. In addition to these requirements, the Basel Convention entirely bans the export of hazardous waste from OECD to non-OECD countries in what is known as the Ban Amendment. The intention of this amendment was to provide additional protection to non-OECD states, who were likely to have weaker waste management capacities, and to ensure that they were not over-charged with waste from states who had well-established waste management facilities.

Notably, the International Maritime Organisation (IMO) has adopted the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships (the "Hong Kong Convention"), which came into force on 26 June 2025. This

Convention is specifically focused on the management of end-of-life ships, with the aim of reducing both occupational and environmental risks linked to the shipbreaking industry. The Hong Kong Convention introduces several new obligations for contracting parties and their registered companies. One important element is the introduction of bans and restrictions on certain hazardous materials previously used freely in the construction of ships. The aim of these restrictions is to reduce the existence of hazardous material, as a way to limit the amount of hazardous waste that must be processed when a ship is recycled. Additionally, the Hong Kong Convention will require all ships by 2030 to carry an Inventory of Hazardous Materials (IHM), with a specific requirement to update the inventory at end-of-life, prior to recycling. This information is intended to help importing states evaluate if they have the capacity to safely manage and recycle these ships, based on their capacity and the amount of hazardous waste identified. The new convention also limits the management and recycling of end-of-life ships to recycling facilities which have been authorized by a Competent Authority of a Party in which they operate. This aims to prevent illegal shipbreaking operations in sites that do not have the capacity or safely manage the recycling process.

While the Hong Kong Convention does not focus on the transnational movement of ships , it is largely complementary to the Basel Convention. Combined, the two conventions should provide a stricter regulatory framework for the transport and management of end-of-life ships. However, critics have raised concerns regarding the effectiveness of the Hong Kong Convention in preventing end-of-life ships from ending up at illegal shipbreaking sites. Unlike the Basel Convention which requires prior consent from the receiving state before any hazardous can be sent for treatment, the Hong Kong Convention does not provide for an obligation to seek prior written informed consent from the receiving state. Instead, consent is not defined, leaving room for interpretation and creating the risk that tacit consent is considered sufficient. The reason behind this omission is connected to the logic of the Hong Kong Convention - the system focuses on recycling *operations* rather than on the import and export involved in transboundary movement. However, in practice, this lacuna significantly increases the risk of ships being sent to shipbreaking sites which lack capacity - without the receiving state being made aware of the issue. As such, private entities are still able to treat their ships in cheaper facilities, without obtaining prior consent from the receiving state.

Additionally, one key concern is that the Hong Kong Convention puts ownership of regulation duties on flag states - that is, the state under whose flag the ship is operating. However, this could create a loophole, as ship owners choose to operate under flags with weak regulatory standards to avoid following the Convention requirements. These flags are commonly known as 'flags of convenience'. Research has found that, while over 30% of the world's fleet was owned by European companies in 2022, less than 5 percent had an EU flag when sold for scrap. These flags create a loophole for ships to travel internationally without any scrutiny, since they can operate with a certainty that their chosen flag state will not monitor their behaviour nor sanction regulatory non-compliance. Consequently, without any supervision or monitoring, the private entities are able to transport their end-of-life ships to facilities that would not be accepted under the international framework.

More globally, a key challenge standing in the way of any effective international regulation on the shipbreaking industry - and the transnational movement of end-of-life ships to illegal shipbreaking facilities - is the difficulty in classifying ships as 'waste'. Specifically, it is difficult to pinpoint at which point a ship loses its function as a vessel and turns into waste that must be processed. As a result, many ship owners are able to move their boats across international waters without adhering to either the Basel Convention or the Hong Kong Convention, as long as the ship owners can keep hidden their intent to dismantle the ships. This challenge is further compounded by the use of flags of convenience, which help to remove any supervision over the movement or processing of end-of-life ships.

The consequences of these regulatory gaps are most visible in Bangladesh. Between 2020-2023, approximately 20,000 Bangladeshi workers dismantled more than 520 ships, which is far more than in any other country. According to a Human Rights Watch Report in 2023 (the HRW Report), the lack of regulations and the large scale of the industry in Bangladesh are not accidental. On the contrary, companies are intentionally relying on the unregulated Bangladeshi shipbreaking industry so as to maximize profits - to the detriment of the workers and the environment.

The result of these weak international regulations is that the Bangladesh treatment facilities are overwhelmed. Bangladesh has one of the biggest shipbreaking industries in the world, even though it is not equipped to comply with the high safety standards of the Hong Kong Convention. The mismanagement of the shipbreaking industry has negative consequences for both the people and the environment, especially on a local level.

One major concern is the use of forced labou to dismantle the ships. While there are international and national regulations in place to prevent modern slavery in theory, in practice there is not enough for on-site monitoring of the operations. Workers on the shipbreaking yards are often paid very low wages, and many were noted to work without having a formal contract, which exposes them to further exploitation without any legal protection. In Chittagong, the average monthly wage for

workers at the shipbreaking yards was 115 euros - making it roughly 5 euros per day. Recent investigation also found that up to 25% of workers on the yards were children, and that many were recorded to have died in accidents. Moreover, studies record a concern for the lack of health and safety regulations on shipbreaking sites, which puts the labourers at risk of injury. The workers are not provided with protective equipment, nor do they receive formal training, which puts them more at risk of being injured (or injuring others). As a result, accidents occur frequently, often caused by falling steel plates, explosions from trapped gases, and fires. Kamrul, a worker interviewed for the HRW report states that "[we] are not safe in the shipyard while working... Most of the workers at some point get burned. I never feel safe." The lack of formal contractual agreements exacerbates these concerns, as the employers can ignore their responsibility to provide safety training, and, in the case of an accident, places the burden of medical costs on the injured workers.

Moreover, the process of dismantling ships includes the management and disposal of hazardous materials. In Bangladesh, the dismantling of ships happens directly on the beaches- a method called beaching- meaning there are no barriers between the ship's waste and the ocean. This means that toxic materials from the ships are carried out by the tides and pollute the coastal waters. These materials include oil and fuel residue; heavy metals (such as lead, mercury, copper, and tin); asbestos; and Polychlorinated Biphenyls (PCBs). Some chemicals, such as asbestos, are legal in Bangladesh and, consequently, are not regulated or restricted. Excessive exposure to asbestos is recorded as a significant health risk for the workers in the yards. The heavy metals and PCBs build up in marine organisms and spread up the food chain. This has become a health issue for the local population who eat the fish that has ingested the toxins. Major shipbreaking coasts are also experiencing a drop in the fish population, since fish are dying from the toxic materials, which in turn adds more strain onto the local fishing communities. For example, a study by the Marine Institute of the University of Chittagong found that the Bangladesh shipbreaking industry is directly linked to the extinction of 21 fish and crustacean species.

These harms are the direct result of a regulatory system that permits shipping companies to externalise the true costs of ship disposal onto the workers and communities of the Global South. The processing of end-of-life ships to Bangladesh is made possible by the lack of strict regulations which companies are intentionally relying on so as to maximize profits. On a local level, the Bangladeshi government released new regulations in 2011 with the aim of reducing the harmful shipbreaking industry, namely by requiring shipowners to provide certificates proving there are no hazardous wastes onboard and requiring government inspectors to visit the ships before giving permission to the bay. However, the rules have been largely ineffective. The certifications created by the ship owners themselves are not verified by a third-party, making it very easy for the hazardous waste to reach the bay unregulated. The ineffectiveness of these certificate requirements was made clear in the case brought forward by the Bangladesh Environmental Lawyers Association regarding an oil tank provider named the North Sea Producer which was authorized for scrapping in Bangladesh in 2016. In 2019, the High Court Division of the Supreme Court of Bangladesh found that the ship's documents, which claimed they had no hazardous waste on board, had been 'superficially prepared'. This shows the lack of scrutiny of the certification by national authorities, to the detriment of the local population and the environment.

For example, the North Sea Producer had been European-owned and, therefore, by being sent to Bangladesh for disposal, the ship-owners violated the Basel Convention regulations. Ships, such as North Sea Producer, are able to reach Bangladesh and avoid international scrutiny because they are sent to Bangladesh before they are officially classified as 'hazardous waste'. In this way, ship-owners are able to portray the journey as an ordinary voyage. Once out of EU waters, ships are then operated under a flag of convenience. From there, the end-of-life ships are sold off to a 'cash buyer', who will send it to the shipbreaking yards and sell the leftover materials for profit. On an international level, this is made possible by sending the ships to Bangladesh before they are classified as waste, highlighting the need for stricter regulations regarding the classification of end-of-life ships as (hazardous) waste.

Notably, both the shipping companies and the cash buyers involved in the transfer of end-of-life boats into Bangladesh, whilst they may be aware of the international regulations, are incentivized by the high profit margins. On the one hand, the buyers in Bangladesh offer to buy end-of-life ships at a price that is at least double what competing buyers offer elsewhere, such as in Turkey. On the other hand, the cash buyer is able to maximize the profit margin from selling metal scraps by reducing the cost of labour and exploiting the workers. This also helps to explain the lack of scrutiny on a national level - Syeda Rizwana Hasan, Chief Executive of the Bangladesh Environmental Lawyers Association (BELA), emphasises that, "[if] Bangladesh does not comply with the international law on transboundary movement of hazardous wastes, it will remain a dumping ground for developed states. It will allow some companies to make huge profits at the cost of the environment. It is totally unacceptable that the environment, health and safety are made subordinate to a deadly industry".

Conclusion

There is a clear need for both international and domestic authorities to enforce stricter monitoring and regulatory oversight of hazardous waste shipping. On a domestic level, Bangladeshi authorities have a responsibility to enforce stricter health and safety and labour regulations, which should be closely monitored on a regular basis. On an international level, states need to address the structural gaps that allow private entities to circumvent regulations. By delegating oversight to flag States that often lack both capacity and incentive to regulate ships under their jurisdiction, the current system undermines the effective enforcement of the Basel and Hong Kong Conventions. To ensure effective monitoring of end-of-life ships, there is a need to re-evaluate which authority is best positioned for overseeing regulatory compliance, so as to close the flag-hopping loophole that allows European shipping companies to evade accountability. Additionally, end-of-life ships need to be clearly classified as (hazardous) waste, which will help to maximise the regulatory scrutiny of their movements under the international framework of the Basel Convention, as opposed to regular ships. Without these changes, economic interests will continue to override the social and environmental protections that international law nominally guarantees.

Author

Noa Lou Brawermann, Masters student in Economic Law at Sciences Po Paris

URL: https://www.biicl.org/blog/136/the-cost-of-regulatory-failure-how-international-frameworks-enable-bangladeshs-hazardous-shipbreaking-industry

© 2026 BIICL | A company limited by guarantee | Registered in England No. 615025 | Registered Charity No. 209425