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Waste Colonialism In The Indian Ocean:
A Comparative Legal Study Of Transboundary Movement Of Maritime Waste

- **Khushi Lathwal**[1]

Abstract

In a striking illustration, in 1988, the small fishing village of Koko in Nigeria became infamous as "drums of death" when Italian businessmen dumped thousands of containers of toxic waste disguised as fertilizer, poisoning residents and forcing hundreds to flee. Less than two decades later, in 2006, the Probo Koala, a Panama-registered tanker chartered by Trafigura, released 500 cubic meters of hazardous sludge in Abidjan, Ivory Coast, killing 17 and sickening thousands.[2] *These catastrophes are not isolated incidents; rather, they are a part of a broader trend known as 'waste colonialism', where developed nations externalize 'toxic burdens' onto developing states. Despite the Basel Convention, regulatory disparities and enforcement gaps are shown by the judicial reactions in Bangladesh and India. The Indian courts adopt a pragmatic, incrementalist approach, whereas the judiciary in Bangladesh employs rights-based interventions. The most prominent and lethal example of waste colonialism in the context is shipbreaking, which reiterates the boundaries of international environmental law and sustains systemic injustices in the global maritime industry.*

The transforming dynamics of waste colonization are examined in this paper. The Indian Ocean, which was formerly a conduit for colonial trade, currently serves as a passage for transboundary garbage flows that mimic past exploitative patterns. Through the theoretical framework of Max Liboiron's Pollution Is Colonialism, it scrutinizes the manifestation of the colonial-era waste trade. According to the study, pollution induces Southern regions into 'sacrifice zones' and is a manifestation

[1] A Student of Jindal Global Law School, OP Jindal Global University.

[2] United Nations Environment Programme, '*Parties to the Bamako Convention reaffirm their commitment to protect Africa from hazardous waste dumping*' (2020). https://www.unep.org/news-and-stories/press-release/parties-bamako-convention-reaffirm-their-commitment-protect-africa accessed 30 October 2025.

of colonial entitlement. Additionally, the present research contrasts and assesses the regulatory structures that govern transboundary marine waste in Bangladesh and India, incorporating crucial statutes, judicial rulings, and international agreements.

This study uses a qualitative, conceptual, and analogous legal method to ascertain how the judicial procedures of Bangladesh and India to cross-border maritime waste symbolize the ongoing waste colonialism within the Indian Ocean. The research, which is based on Max Liboiron's 'pollution as colonialism' thesis, portrays waste and pollution flows as extensions of imperial entitlement to land and sea, wherein legal frameworks frequently perpetuate inequalities of disposability and extraction. In order to investigate how international waste trade regulations and practices perpetuate colonial power relations beyond legal compliance, this study combines postcolonial and critical theory with doctrinal legal analysis.

Keywords

maritime waste, waste colonialism, shipbreaking, ship recycling, environment

INTRODUCTION

Defining waste colonialism

The expression "waste colonialism" emerged in the late 1980s through the efforts of environmental activists to denounce the exploitative practice by which industrialized nations exported hazardous waste to developing and economically disadvantaged states, which were bereft of the technological capacity and regulatory infrastructure necessary for its safe management. In the modern era, this phenomena evolved into an international trade of enormous amounts of post-consumer material, paper, and electronic trash rather than toxic waste in and of itself, sustaining an unfair transfer of environmental liabilities from wealthy countries to less fortunate nations in the Global South.[3]

Waste colonialism, according to environmental scientist David Naguib

[3] Lekha Sridhar, Parul Kumar. Lekha Sridhar, Parul Kumar, *'the New Face of Waste Colonialism: A Review of Legal Regulations Governing the Import of Waste into India' (2019) https://repository.nls.ac.in/cgi/viewcontent.cgi?article=1218&context=slr accessed 30 October 2025.*

Pellow, is an aspect of global environmental imbalance in which the Global North allocates its waste burdens to underprivileged populations in the Global South. While ecological justice initiatives strive to advance autonomy, fairness, and sustainability, it reinforces pollution hierarchy rooted in capitalism, race, and class.[4] The notion of 'waste colonialism' is akin to what Rob Nixon describes as '*slow violence*,' which is the gradual, invisible havoc brought on by pollution, waste disposal, and changes in the climate. This dynamic, which reflects the ongoing unfairness of global environmental exploitation and neo-colonial institutions externalizing ecological degradation onto vulnerable populations, exacerbates inequality, undermines livelihoods, and stokes social discontent.[5]

[4] David Naguib Pellow, *Resisting Global Toxics: Transnational Movements for Environmental Justice* (2007).
[5] Rob Nixon, '*Slow Violence and the Environmentalism of the Poor*' (2013).

Most recently, as Max Liboiron contends in *Pollution is Colonialism, that* pollution is an extension of colonial authority, whereby industrial and scientific methods oppress Indigenous cultures and territories. It exposes how colonialism persists through environmental harm, urging a shift toward anticolonial, ethical, and land-conscious approaches to knowledge and sustainability.[6]

LIBOIRON'S FRAMEWORK: POLLUTION AS COLONIALISM

Pollution as a Continuation of Colonial Entitlement to Land and Sea

Liboiron insists that "*pollution is not a mistake, not an accident, and not a sign of system failure*" but rather "*a way of maintaining colonial relations to Land*". Modern environmental pollution, she argues, is "*a continuation of the entitlement to Land as resource and receptacle*". The colonial system naturalized the assumption that land

[6] Max Liboiron, '*Pollution is Colonialism*'. (Duke University Press, 2021)

and sea exist to "*absorb*" the by-products of industrial expansion, a logic formalized through scientific concepts like assimilative capacity. These assumptions "*use Land as a sink for a relatively new form of waste characterized by unprecedented tonnage, toxicity, and heterogeneity.*" Thus, pollution is not accidental degradation but "*a structure of colonial relation enacted through waste*".[7]

Liboiron's central claim is explicit: "Pollution enacts colonial land relations".[8]

She critiques Western scientific and legal discourses that define land and sea as "*empty, ownable, and available*". By contrast, Indigenous worldviews understand Land as active, relational, and specific, "*a verb*" rather than a noun: "*A bay is a noun only if water is dead*". Colonial pollution science, however, flattens this relationality into "*a metaphysical flattening*" where places become abstract "*sinks*". This colonial ontology legitimizes the right to pollute and turns relational beings – land, sea, and non-human kin into disposable property.[9]

Relational Ethics vs. Extractive Logic

Liboiron distinguishes extractive logics, which treat land/sea as resources, from relational ethics, which are grounded in reciprocity and care. She contrasts Eurocentric disposal with Indigenous practices of return: "*When we're done researching the seal guts, we'll return them to the Land to feed our relatives*". Not all discarding, she reminds us, is pollution — "*not all forms of pollution and waste are colonialism*". What makes pollution colonial is the entitlement embedded within disposal practices: "*Settler access to Land gets in at every turn*". Relational ethics, by contrast, acknowledge "*the soul of the Land and of people [as] the same thing*", calling for humility and accountability in human-environment relations.

[7] Ibid.
[8] Ibid.
[9] Ibid.

OPERATIONALISING THE FRAMEWORK FOR LEGAL ANALYSIS

Law through Liboiron's Lens: Ontologies of Land, Sea and Waste

Reading environmental and maritime law through Liboiron's lens reveals how colonial land relations persist in legal systems. Laws setting pollution limits follow the idea of assimilative capacity, assuming the sea can '*self-purify*'. This mirrors colonial beliefs that water bodies like the Ohio River are '*a proper sink for pollution*'. Furthermore, such legal logic reflects colonial science's view of land and sea as property to be owned and managed. Western legal systems view land and sea as inert, separable, and ownable. Liboiron argues that "*Land is both a notion and an action*" representing relations, histories, and kinships. Yet, legal frameworks erase this relationality, reducing land and water to resources. Waste law similarly assumes a universal definition of 'pollution', ignoring cultural and ecological specificity.

Building on this, the question arises, *Do laws reproduce colonial relations?*

Most environmental laws, even when aiming at sustainability, perpetuate colonial control by defining what counts as pollution and where it can go. Liboiron writes, "*The call for more recycling still assumes access to Indigenous land for recycling centres and their pollution*". Laws that regulate disposal or designate "*waste zones*" reassert the colonial entitlement to sacrifice some lands and seas for others' prosperity – what she identifies as "*settler access to Land*".[10]

Core Concepts Relevant to Maritime Waste

Liboiron urges us to ask: "*Who gets to define what is waste and where it can go?*". The difference between pollution and discard is relational, not material. For Indigenous communities, returning matter to the sea reflects reciprocity, while for colonial regimes, dumping waste signifies domination, turning

[10] Ibid.

Global South waters into sacrifice zones for Northern pollution. In Liboiron's view, disposability is a colonial entitlement assuming some lands can absorb waste, creating "sacrifice zones" that justify pollution in marginalized and Indigenous areas while protecting others.[11]

Liboiron juxtaposes Indigenous epistemologies focused on concern, compassion, and responsibility with universal assertions made by colonial scientists, such as the 'assimilative capacity' conception. Relational understanding emphasizes accountability, coexistence, and a relationship to the earth, whereas science pursues authority and precision.[12]

Theoretical Bridge: Postcolonial Parallels in Indian Ocean

"*Out of sight, out of mind*" aptly represents contemporary 'waste colonialism,' where wealthier countries export their waste to underdeveloped, erstwhile colonized areas. The exploitative dynamics that were previously observed throughout the Indian Ocean, when colonial powers seized resources and inflicted long lasting ecological harm, are mirrored in this 'continuation of colonialism, albeit in a more subtle and indirect form'. Countries such as Malaysia and India, which are former British colonies, along with Vietnam and Indonesia, now receive millions of tonnes of Europe's and Japan's waste. As the UNODC's *Turning the Tide* report shows, "*imports from EU to ASEAN increased by 153%*," intensifying pollution in vulnerable regions like the Mekong Delta. These "*pollution transfers*" reproduce colonial hierarchies, making the Global South bear the ecological costs of the North's consumption. Postcolonial environmental legal studies urge a "*shift in scrutiny to the plastic producers*" and the creation of "*legally binding rules*" for global accountability.[13]

[11] Ibid.
[12] Ibid.
[13] Coleen salamat, '*Waste colonialism: The real reason why poorer countries are blamed for plastic pollution*' (2024)<https://scroll.in/article/1075844/waste-colonial

HISTORICAL AND GEOPOLITICAL CONTEXT: COLONIAL LEGACIES IN THE INDIAN OCEAN WASTE REGIME

Reversal of Cargo

India occupied a central position in the Indian Ocean world due to its strategic location, as well as its cultural and economic influence. For the British Empire, it became even more crucial since all major sea routes between Britain and the East passed through the Indian Ocean.[14] Through nodal ports, shipping routes, labour legislation, and legacies of infrastructures, colonial extraction-and-export regimes have imprinted their presence on the Indian Ocean in terms of maritime geography where outflows of resources and commodities are privileged.

Until 2017, China dominated global waste imports, but after it imposed a ban on most categories, waste exports were redirected to developing nations such as India. However, India lacks adequate infrastructure for safe recycling. Much of the waste sector operates through informal workers and small enterprises without labour protection or social security, particularly in collection and sorting. Nearly 40% of India's domestic waste remains uncollected due to weak enforcement, while only about 56% of recyclable waste and a mere 5% of total e-waste are actually recycled. Examining both domestic and international waste trade laws reveals that today's waste flows replicate the exploitative patterns of the 1980s, underscoring the urgent need for stronger global regulation and more effective national waste segregation and collection systems to support import restrictions.[15]

ism-the-real-reason-why-poorer-countries-are-blamed-for-plastic-pollution> accessed 30 October 2025.

[14] Sneh Mahajan, 'Foreign policy of colonial India' in 1st ed, *Colonial India and Indian ocean rim* (Routledge 2018).

[15] Lekha Sridhar, Parul Kumar. Lekha Sridhar, Parul Kumar, '*the New Face of Waste Colonialism: A Review of Legal Regulations Governing the Import of Waste into India*' (2019) https://repository.nls.ac.in/cgi/viewcontent.cgi?article=1218&context=slr accessed 30 October 2025.

The term "*waste colonialism*" emerged in the late 1980s and early 1990s to describe how industrialized nations exported hazardous waste to poorer countries lacking the capacity or regulation to manage it safely. One of the effects of globalization was the introduction of a growing trade in waste, scrap, and end-of-life products of the North to the South, rather than simply trade in commodities of the Global South to the North.[16] This pattern illustrates how 'colonial cargo has reversed', with India now importing waste from wealthy nations rather than exporting valuable commodities as it did during the colonial era. These asymmetrical flows of trash have affected the Indian Ocean and become a corridor of postcolonial environmental injustice because of their historical patterns of exploitation.

India and Bangladesh are at the centre stage of the Indian Ocean waste economy. India is a large importer and recycler of scrap metal and ship waste and the Chattogram yards in Bangladesh dismantle most of the outdated ships in the world. Both economies are dependent on informal labour and have poor environmental and regulatory implementation.

According to Max Liboiron, colonial connections are materially expressed through pollution. The global waste phenomenon is not a coincidence; rather, it perpetuates the hierarchical and exploitative structures put in place throughout colonialism. The historical flow of resources, labour, and commodities that formerly supported empire is reflected in the movement of harmful elements. Thus, the sea, which has long been envisioned as a location of trade and connectivity, continues to be a colonial geography, a setting where control, displacement, and extraction take place. One modern manifestation of these persistent colonial tendencies is

[16] Ibid.

the transboundary flow of marine garbage across the Indian Ocean.[17]

INTERNATIONAL LEGAL FRAMEWORKS ON TRANSBOUNDARY MARITIME WASTE

The Basel Convention

The Basel Convention was signed in 1989 and became effective in 1992 with the objective of regulating and minimizing the transboundary flow of hazardous and other wastes, in particular, those between the developed and developing countries. It commences by identifying the dangers that hazardous wastes expose to both human health and environment, and observes that reduction in generation and proper management is the best means of protection. The major requirements set forth in the Convention are as follows: Parties shall minimize the production of hazardous wastes; Parties shall make sure that the transboundary movement is made in a sound way and all possible efforts should be taken to safeguard health and the environment at all disposal locations. States are entitled to the sovereign authority to prohibit foreign hazardous wastes import or disposal. This Convention governs trade in hazardous wastes by establishing a notification and consent system whereby the importing and transit countries need written approval of such wastes. It specifies illegal traffic as traffic without authorization or false documents and imposes liability on countries of exportation to control the safe disposal of the products in an attempt to safeguard the vulnerable countries and enforce sound disposal of waste in the international environment.[18]

London Convention (1972) & London Protocol (1996)

[17] Max Liboiron, '*Pollution is Colonialism*'. (Duke University Press, 2021)

[18] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (adopted 22 March 1989, entered into force 5 May 1992) <https://www.basel.int/portals/4/basel%20convention/docs/text/baselconventiontext-e.pdf> accessed 1 November 2025.

The London Convention (1972), in force since 1975, was one of the first global agreements to protect the marine environment by controlling the dumping of wastes at sea. Its goal is to prevent marine pollution by regulating and minimizing harmful disposal practices. The London Protocol (1996) modernized and strengthened the Convention by adopting a precautionary approach and introducing a "reverse list," under which all dumping is prohibited unless specifically permitted. It also bans incineration and waste export for dumping at sea. Together, they aim to ensure effective global control of marine pollution from dumping activities.[19]

The *International Convention for the Prevention of Pollution from Ships (MARPOL),* adopted in 1973 and strengthened by the 1978 Protocol, is the primary global treaty preventing marine pollution from ships due to operational or accidental causes. It contains six technical annexes addressing pollution from oil, noxious liquid substances, harmful packaged goods, sewage, garbage, and air emissions. MARPOL sets strict regulations, including bans on plastic disposal, double-hull requirements for tankers, and limits on sulphur and nitrogen emissions. Through continuous amendments, MARPOL remains the cornerstone of international efforts to protect the marine environment from ship-based pollution.[20]

The *Bamako Convention (1991)* was adopted by African nations to address the Basel Convention's loopholes that permitted hazardous waste exports. Effective from 1998, it bans the import, dumping, and incineration of hazardous and radioactive waste in Africa. The

[19] International Maritime Organization, 'The London Convention and Protocol' https://www.imo.org/en/ourwork/environment/pages/london-convention-protocol.aspx accessed 1 November 2025.

[20] 'International Convention for the Prevention of Pollution from Ships (MARPOL)' <https://www.imo.org/en/about/conventions/pages/international-convention-for-the-prevention-of-pollution-from-ships-(marpol).aspx> accessed 1 November 2025.

treaty promotes safe waste management and regulates transboundary movement within the continent. During the 2020 Brazzaville conference, member states reaffirmed their commitment to stronger implementation, cooperation with related global conventions, and protection of environmental and human health across Africa. Subsequently, it was formed in response to the Basel Convention's loopholes, bans the import of hazardous and radioactive waste into Africa. It regulates transboundary waste movement, prohibits ocean dumping, promotes cleaner production, ensures safe waste disposal, and upholds the precautionary principle against "permissible emissions."[21] Thus, Its goal is to prevent the dumping of toxic waste in Africa; in 2020, its members reaffirmed their commitment to enhanced implementation and environmental cooperation.[22]

Gaps and Colonial Continuities: Loopholes allow "recycling" exports; shipping and flag-state jurisdiction obscure accountability

Loopholes within the global shipping system allow corporations to "*dodge accountability and dispose of ships cheaply*," creating what the article calls *"a murky world of shell companies, flags of convenience, and end-of-life flags."* By reflagging vessels to states with weak oversight, often small island countries like Comoros, Palau or Saint Kitts and Nevis, evade more stringent European environmental regulations. Immediately prior to dismantling, the ships are re-registered in these so-called flags of convenience countries, enabling the owners to avoid the EU Ship Recycling

[21] Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa – *Treaty of African States* (adopted 30 January 1991, entered into force 22 April 1998) https://www.unep.org/bamako-convention accessed 1 November 2025.

[22] United Nations Environment Programme, '*Parties to the Bamako Convention reaffirm their commitment to protect Africa from hazardous waste dumping*' (Press Release, 14 February 2020) https://www.unep.org/news-and-stories/press-release/parties-bamako-convention-reaffirm-their-commitment-protect-africa accessed 1 November 2025.

Regulation, which imposes that the scrapping should be done in EU-approved facilities that are environmentally and worker-safe. After being reflagged, the ships, which have been loaded with toxic wastes such as cadmium, lead and asbestos, are taken to be torn apart in beaches in India, Pakistan, and Bangladesh. In this way, "shipping and flag-state jurisdiction obscure accountability", making the oceans regulatory grey areas in which profit comes first before human life and environmental responsibility.[23]

COMPARATIVE OVERVIEW OF SHIPBREAKING IN INDIA AND BANGLADESH

Shipbreaking, the dismantling of obsolete vessels for recyclable materials, especially steel, has evolved into a major economic activity in both India and Bangladesh. However, this industry has long been criticized for severe environmental degradation and human rights violations. Additionally, the problem is indicative of a broader trend of 'waste colonialism.' The International Labour Organization (ILO) identifies shipbreaking as one of the world's most hazardous occupations due to exposure to toxic materials and unsafe working conditions.

Both India and Bangladesh allow ship dismantling without mandatory pre-cleaning of hazardous wastes before entry, making the practice lucrative but highly controversial. In response to mounting global concern, the International Maritime Organization (IMO) introduced the *Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships* (2009), aimed at ensuring safer, more sustainable ship recycling practices. Recognizing the risk of losing business if shipowners avoid non-compliant destinations, both countries have begun

[23] Paul Tullis, '*How the Shipping Industry Sails through Legal Loopholes*' (2022) https://hakaimagazine.com/features/how-the-shipping-industry-sails-through-legal-loopholes/ accessed 1 November 2025.

reforming their legal and institutional frameworks to align with international environmental and safety standards.[24]

India

Overview & Context

The shipbreaking industry is one of the most concentrated and dangerous types of maritime waste in India, and a vivid illustration of 'waste colonialism' on the global scale. The volume of trade on the sea constitutes more than 80 percent of the world trade and even though the developed countries own and operate the ocean-going ships, their disposal is usually done in the developing countries. This process generates cheap steel and employment, contributing to local economic growth, but it also imposes severe environmental and social costs. Shipowners and breakers gain significant profits by externalizing the environmental burden onto impoverished workers, farmers, and fishing communities who suffer from pollution, contaminated coastal waters, and declining livelihoods. The unequal distribution of benefits and harms, rooted in global power imbalances, reflects a broader ecological injustice – where the wealthier "core" nations shift their toxic waste burdens onto the "peripheries" of the world system. Thus, shipbreaking in India exemplifies not merely a recycling industry but a transnational flow of hazardous waste that perpetuates the logic of waste colonialism.[25]

Alang: The World's Largest Ship Graveyard

Alang, a coastal town in Gujarat, India, is the world's largest ship graveyard where old vessels from across the globe come to be dismantled. Along its muddy

[24] Prafula Pearce and Mohammad Zulfikar Ali, '*Shipbreaking in India and Bangladesh: A Comparative Legal Analysis of International Law, Judicial Decisions and Legislation*' (2022). *Australian Journal of Asian Law*, Vol. 23, No. 1, Article 2: 21-41.

[25] Federico Demaria, '*Shipbreaking at Alang–Sosiya (India): An ecological distribution of conflict*' (2010) https://www.sciencedirect.com/science/article/abs/pii/S0921800910003654 accessed 1 November 2025.

shoreline, hundreds of massive ships, from cargo carriers to cruise liners, are beached and stripped for parts by around 15,000 workers, most without protective gear. This workforce forms part of the half a million people in India whose livelihoods depend on the shipbreaking industry. Every year, nearly 800 large ocean-going vessels are scrapped, with about 75% of them ending up on beaches in South Asia, primarily Alang (India), Chittagong (Bangladesh), and Gadani (Pakistan). Together, these three countries handle 90% of the world's ship recycling by tonnage. Although ship recycling is often portrayed as an environmentally friendly practice, it remains one of the most hazardous occupations. Workers are frequently contaminated with hazardous substances including lead, asbestos, PCBs, and mercury, which can result in serious health problems like cancer and respiratory disorders. Environmental pollution is equally alarming. Hazardous residues, oil, and metal particles from dismantled ships seep into the Gulf of Khambhat, damaging marine life and coastal ecosystems. Ballast water from foreign countries adds the risk of introducing non-native species. Further pollution arises from steel mills that reprocess the scrap without proper emission controls, and the absence of safe waste management means even asbestos is resold. Despite its economic importance, Alang stands as a stark symbol of waste colonialism, where the developed world's discarded vessels are dismantled at great human and ecological cost in the Global South.[26]

International Legal Framework

Ship recycling has been regulated by a number of international conventions, such as the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (2009), MARPOL 73/78, the

[26] Kit Chapman, '*The toxic tide of ship breaking*' (2022) <https://www.chemistryworld.com/features/the-toxic-tide-of-ship-breaking/4015158.article> accessed 1 November 2025.

Stockholm Convention (2001), Maritime Labour Convention (2006), the Basel Convention as of 1989 with its 2019 Ban Amendment. Besides the Hong Kong Convention, the European Union applies the Ship Recycling Regulation (2013) and the Waste Shipment Regulation (2006). India is neither a signatory to the Ban Amendment nor EU regulations. The Hong Kong Convention which came into force on 26 June 2025 upon the ratification by Bangladesh and Liberia brings global standards of safe ship-recycling. Basel Convention is set to guarantee human health and the environment by the reduction and regulating of the hazardous waste trade with the prior consent. In Alang-Sosiya, the principal shipbreaking centre in India, 131 of 153 yards are operational, 106 of which have Statements of Compliance under the Hong Kong Convention and some are in search of EU certification.[27]

The Indian Laws Governing Ship Recycling

India's ship recycling industry operates under a comprehensive legal framework that aims to ensure environmentally sound and safe recycling practices. The key legislations and regulations are the Ship-breaking Code (Revised), 2013 and the Recycling of Ships Act, 2019, which together govern the dismantling and recycling of ships in India. The 2013 Code emphasizes pollution control, worker safety, and environmental compliance. It requires recyclers to follow the Water Act (1974), Air Act (1981), and Hazardous Waste Management Rules (2008), conduct Environmental Impact Assessments (EIA), and use authorized facilities for hazardous waste disposal. State Pollution Control Boards (SPCBs) are tasked with monitoring air, soil, and marine conditions around shipbreaking yards.

[27] Ms Rhythma Kaul and Commodore Debesh Lahiri, '*Sustainable Ship Recycling in India: Legal, Economic and Political Analysis*' (National Maritime Foundation, 2024),https://maritimeindia.org/sustainable-ship-recycling-in-india-legal-economic-and-political-analysis/ accessed 1 November 2025.

The Recycling of Ships Act, 2019 aligns India with the Hong Kong International Convention (2009), setting stricter environmental and safety norms. It directly holds recyclers liable for controlling dangerous materials, halting pollution, and backing up for adverse effects like oil leaks. Directors of companies are also held personally accountable for infractions under Section 34 of the Act. The law creates a National Authority for supervision and integrates pertinent environmentally conscious concepts like the Polluter Pays and Precautionary ideas. The 2013 Code and the 2019 Act collectively demonstrate India's gradual progress toward sustainable recycling of ships that strikes an equilibrium between industrial development and ecological conservation, despite ongoing enforcement shortcomings.[28]

Legal perspective : Waste Colonialism and Global Inequality

Ship recycling involves dismantling old ships, which are treated as hazardous waste due to the toxic materials they contain. Since the late twentieth century, developed countries have exported such waste to developing nations with weaker environmental laws and cheaper labour, a process often called "*garbage imperialism*." Although global and national frameworks like the 1989 Basel Convention and India's Hazardous and Other Wastes Rules (2016, 2019) aim to regulate this trade, inequality persists. India's Recycling of Ships Act, 2019 permits dismantling within national territory. The shift of ship recycling to nations like India is driven by rising steel demand, low labour costs, and lenient environmental regulations, making Alang-Sosiya a major global centre.[29]

[28] Mazyar Ahmad, '*Ship recycling in India-environmental stock taking*' (2022). <https://www.tandfonline.com/doi/full/10.1080/24730580.2022.2082100> accessed 6 November 2025.

[29] Ms Rhythma Kaul and Commodore Debesh Lahiri, '*Sustainable Ship Recycling in India: Legal, Economic and Political Analysis*' (National Maritime Foundation, 2024) https://maritimeindia.org/sustainable-ship-recycling-in-

Key Judicial Interventions and Case Studies

When the decommissioned French aircraft carrier Clemenceau anchored in Alang for dismantling in 2006, uncertainties regarding India's ship recycling sector emerged to be widely recognized. A Supreme Court intervention resulted from Greenpeace's discovery that the ship had more than 500 tons of asbestos and other dangerous materials including PCBs. The ship was refused admission into India after the Court constituted a technical team that verified the environmental risks. Earlier, in 2003, the Supreme Court had emphasized India's obligations under the Basel Convention, requiring ships to disclose and remove all hazardous materials before entering Indian ports. It also set up the Hazardous Waste Monitoring Committee to oversee compliance and issued guidelines to ensure environmentally safe ship recycling practices.[30]

The *Blue Lady*, a French passenger ship built in the 1960s, changed several owners before arriving at Alang for dismantling. Containing about 1,240 tonnes of asbestos and large quantities of PCBs, the ship became the centre of a 2007 Supreme Court case that shaped Indian jurisprudence on ship scrapping. While the Court recognized the *polluter pays* principle as a key part of Indian environmental law, it still permitted the dismantling, citing economic benefits such as 700 jobs and 41,000 tonnes of recoverable steel. This decision was criticized as prioritizing short-term economic gains over long-term environmental harm. However, the Court made a landmark move by directing the government to create a comprehensive regulatory framework for ship recycling.

india-legal-economic-and-political-analysis/ accessed 1 November 2025.

[30] Mohmmed Shahnawaz, '*The Effective Enforcement of National Ship Recycling Regulation: A Study on the Indian Ship-Recycling Industry* (World Maritime University, 2017).

Following this, the Ship Breaking Code of 2013 was introduced, reflecting the inadequacy of earlier regulations and aligning India's policy with international safety and environmental standards, driven also by growing civil society awareness.[31]

In the *Research Foundation for Science, Technology and Natural Resources Policy v. Union of India* case, the Supreme Court banned waste imports and instructed the government to align its regulations with the Basel Convention. Although India had adequate environmental laws, the Court found weak enforcement by public authorities. The Court ruled that ships entering Indian waters must be properly decontaminated as per the Basel Convention. The petitioner's claim was accepted, and officials were instructed to closely adhere to national and international standards to guarantee a clean, pollution-free maritime environment before permitting any vessel transporting dangerous or poisonous products into India.[32]

A comparison between the *Research Foundation* and *Blue Lady* cases shows a clear shift in the Supreme Court's approach. While the *Research Foundation* strictly enforced the Basel Convention's pre-cleaning rule, banning entry of contaminated ships, the *Blue Lady* judgment allowed the dismantling of a toxic vessel at Alang, prioritizing economic benefits over environmental safety. Despite being aware of the ship's asbestos and PCB hazards, the Court justified its decision by emphasizing the creation of 400 jobs and recovery of 41,000 tonnes of steel. Since the ship was already beached and could not be refloated, the Court favoured business interests and applied the principle of proportionality, valuing short-term industrial gain over sustainable

[31] Ibid.

[32] Prafula Pearce and Mohammad Zulfikar Ali, '*Shipbreaking in India and Bangladesh: A Comparative Legal Analysis of International Law, Judicial Decisions and Legislation*' (2022). *Australian Journal of Asian Law*, Vol. 23, No. 1, Article 2: 21-41.

development. Similarly, in the *Exxon Valdez* case, a ship banned in the US and EU for oil spill damage was eventually brought to India under a false identity. Although the Supreme Court initially rejected its entry, it permitted dismantling once the ship was within Indian waters. The Court again directed the government to establish a comprehensive regulatory framework for ship recycling, reinforcing India's pro-business stance despite environmental risks.[33]

The beaching controversy

At Alang-Sosiya, ships are brought ashore and grounded through a process known as beaching, which is irreversible once done. India follows the Hong Kong Convention (2009), which does not prohibit this method. In 2020, the National Green Tribunal (NGT) upheld beaching as a valid practice, relying on a 2007 Supreme Court judgment that allowed ship dismantling under the principle of sustainable development and balance. The NGT reasoned that banning beaching would harm India's ship recycling industry and cause large-scale unemployment. It also cited an expert study showing no major environmental harm since 1982. While this approach aligns with the EU Ship Recycling Regulation (EUSRR), it contrasts with the EU's own ban on beaching for EU-flagged ships, due to environmental and safety concerns identified in its scientific studies.[34]

Bangladesh

Historical Evolution of Ship Recycling in Bangladesh

The shipbreaking industry in Bangladesh traces its origins to the 1960s when the Greek vessel *M.D. Alpine* was driven ashore by a devastating cyclone and later dismantled at Faujdarhat,

[33] Ibid.

[34] Ms Rhythma Kaul and Commodore Debesh Lahiri, '*Sustainable Ship Recycling in India: Legal, Economic and Political Analysis*' (National Maritime Foundation, 2024)https://maritimeindia.org/sustainable-ship-recycling-in-india-legal-economic-and-political-analysis/ accessed 1 November 2025.

Sitakunda. This incident marked the beginning of ship recycling in the country. A decade later, the scrapping of the Pakistani naval ship *Al-Abbas* by Karnaphuli Metal Works Ltd in 1974 signified the start of commercial shipbreaking. Blessed with naturally suitable beaches, an abundant supply of inexpensive yet skilled labour, and a strong domestic demand for steel, Bangladesh rapidly emerged as a global centre for ship dismantling. Over time, the industry grew to be a significant contribution to the economy, covering around 20 kilometres of shoreline. Bangladesh currently contributes over 90% of the world's ship recycling, along with India and Pakistan, owing to its benefits along the coast and cheap labour. With about 50 operational yards with different safety and regulatory requirements, Chattogram, especially the Fauzdarhat area, is now the sector's central focus. Bangladesh has transformed into a major player in the worldwide shipbreaking business, contributing around 23% of the world's total Light Displacement Ton (LDT) in ship recycling.[35]

International Regulations Regarding Shipbreaking

Bangladesh's ship recycling sector has evolved toward more secure and ecologically sound practices due in significant part to international norms. The Basel Convention (1989) governs the transboundary transportation of hazardous waste, guaranteeing the responsible management of obsolete ships containing harmful materials. In order to protect workers and ecosystems, the IMO, ILO, and Basel parties created the Hong Kong International Convention (2009), which establishes international standards for sustainable ship recycling and demands certifications and authorized recycling strategies. The EU Ship Recycling Regulation (2013)

[35] Khandakar Akhter Hossain, '*Bangladesh's Ship Recycling Industry in the Global South: Readiness, Regional Competition, and Reform Imperatives*' (2025).

complements this by enforcing strict environmental standards on EU-listed facilities. Likewise, the London Convention (1972) prevents ocean dumping, while the Stockholm Convention (2001) focuses on eliminating persistent organic pollutants from ship waste. The ISO 30000:2009 Standard provides a global framework for transparency and management in recycling processes. Together, these instruments have greatly influenced Bangladesh's Ship Recycling Act, 2018, aligning national laws with international principles of safety, environmental protection, and sustainability.[36]

Legal and Regulatory Framework

The shipbreaking industry in Bangladesh, though economically beneficial, faces challenges related to worker safety and environmental hazards. Following legal disputes and a temporary shutdown in 2010, the government introduced regulatory frameworks to ensure safer and more sustainable practices. The Shipbreaking and Recycling Rules, 2011, established under the Factories Act 1965, created the Ship Building and Ship Recycling Board (SBSRB) to oversee permissions, inspections, and environmental compliance. Similarly, toxic substances like asbestos, lead, and mercury discovered in disassembled ships are governed by the Hazardous Wastes and Shipbreaking Waste Management Rules, 2011, which were established under the Environment Conservation Act of 1995. The Bangladesh Ship Recycling Act, 2018 was passed to implement the Hong Kong Convention (2009), create the Bangladesh Ship Recycling Board, and levy severe fines for transgressions with the goal to ensure adherence to international standards. These rules work together to make ship recycling in Bangladesh safer, more ecologically conscious, and compatible with international standards.[37]

[36] Ibid.

[37] Ibid.

Judicial Interventions and Environmental Accountability

In two particularly significant instances, *BELA v. Bangladesh* (the MT Alfaship case) and *BELA v. Ministry of Shipping* (the MT Enterprise case), the Supreme Court of Bangladesh adopted a more stringent approach than India between 2006 and 2012, prohibiting the import and deconstruction of hazardous ships. Both ships have significant levels of hazardous garbage and were included in Greenpeace International's list of the "*50 most toxic ships*." Because MT Alfaship lacked environmental certification, the Court prevented the ship from approaching Bangladesh's shipbreaking yards. Justice Mamnoon Rahman underlined that authorities had a legal obligation to uphold the Basel Convention and exclude dangerous ships from crossing. Despite the government's failure to enact new legislation in response to the ruling, the ship eventually departed Bangladeshi seas. A comparable scenario later occurred at MT Enterprise when a second dangerous ship arrived and was demolished without appropriate environmental clearance. BELA filed a petition with the court, claiming that shipbreaking yards were engaged in unlawful activity. \Another judgment in BELA's support, the Court banned the import of ships unless they had been pre-cleaned of toxic substances and ordered the cessation of all yards functioning without permission. The Bangladesh Ship Breakers Association filed an appeal despite the ruling temporarily shutting down the shipbreaking sector. The Appellate Division upheld the requirement for maintaining unlicensed yards shut while granting the motion for reconsideration. A major move for environmental accountability in Bangladesh was taken when the Court ordered the government to create particular legislation to control shipbreaking.[38]

[38] Prafula Pearce and Mohammad Zulfikar Ali, '*Shipbreaking in India and Bangladesh: A Comparative Legal Analysis of International Law, Judicial Decisions*

Environmental and administrative obstacles: Bangladesh's Path to Sustainable Ship Recycling

Due to its reliance on open beaching, Bangladesh's ship recycling sector has continually encountered environmental and legal challenges. Although the Ship Recycling Act (2018) and Ship Breaking and Recycling Rules (2011) aimed to improve safety and environmental standards, full compliance remains difficult because modernization costs exceed BDT 3,500 crore. While numerous yards keep upgrading to fulfil the requirements of the EU Ship Recycling Regulation (EU SRR) and the Hong Kong Convention (HKC), barely a few number, like PHP, SN Corporation, and KR Ship Recycling, have attained "green" accreditation. Bangladesh established a Ship Recycling Board to improve monitoring and ratified the HKC in 2023, with effect from 2025. However, there is a chance that businesses would relocate to more compliant neighbours like India and Pakistan due to the EU's beaching restriction and the scarcity of licensed yards. In the past, the industry seriously contaminated the coast with hazardous waste and spills of oil, harming wildlife and aquatic life. Circumstances have enhanced since 2015 due to changes and initiatives including Bangladesh's Green and Safer Ship Recycling and the IMO's SENSREC. Fish populations are rebounding, biodiversity is on the rise, and mangroves are developing again. Bangladesh's recent development indicates a definite transition toward safer and more sustainable ship recycling procedures, even though expensive costs and governance difficulties still exist.[39]

Liboironian Perspective

The shipbreaking industries of India and Bangladesh can be viewed through the prism of Pollution Is Colonialism (2021) by Max Liboiron, who provides an

and Legislation' (2022). *Australian Journal of Asian Law*, Vol. 23, No. 1, Article 2: 21-41.

[39] Khandakar Akhter Hossain, '*Bangladesh's Ship Recycling Industry in the Global South: Readiness, Regional Competition, and Reform Imperatives*' (2025).

insightful perspective in their interpretation. Liboiron posits that 'pollution is not a failure or accident of a system but rather a form of structure of colonial relation that is practiced through the dumping of industrial effluents by making land and sea to be spaces of ownership and extraction'. This can be traced in the manner in which the outdated ships owned by the Global North that contain toxins are dispatched to the Alang and Chattogram beaches. India is practicing pragmatic incrementalism of balancing economic profit with minimal environmental preservation, which indicates the settlers' access to Land which Liboiron describes there as development justifying further disposability. Contrarily, The rights-based judicial activism of Bangladesh in its turn points to what she refers to the so-called relational ethics, noting that Land is not a passive place but a relation of responsibility. Nevertheless, both systems are still influenced by colonial geographies where the Indian Ocean is a 'sacrifice zone'.

Shipbreaking is not industrial recycling, but, in the light of Liboiron, a material performance of pollution as colonialism, a world environmental politics that perpetuates past forms of power imbalances in the name of economic development and sustainable growth.

The argument presented by Liboiron also sheds light into the ways in which scientific and legal systems are recreating colonial relations by determining what is and is not considered pollution and who is allowed to control it. Environmental law in India and Bangladesh functions in what Liboiron describes as colonial ontologies of land, systems that make land and sea appear uninhabited, possessable and divisible. This is similar to the legal approach to coastal areas during shipbreaking when ecological and other human damages are abstracted into easy risks. Therefore, despite the courts and

policies seeking sustainability, they are acting in epistemic systems, which still prioritize control, ownership, and extraction over relational accountability.

Significantly, one might characterize India's waste colonialism and ship recycling procedures as pragmatic incrementalism. India's financial development is primarily driven by its manufacturing boom and ongoing enhancement in security and environmental settings. Similar to the Recycling of Ships Act of 2019, its regulatory architecture emphasizes both global compliance and national financial aspects and is progressive and centred around compromise. Courts frequently permit ship demolition regardless of sustainability issues, and steel recycling and labour regulations take primacy for protecting the environment. On the other hand, The stance of Bangladesh is indicative of right-wing activism. The judiciary has also defended people's entitlements to a healthy and secure atmosphere through litigation supported by the Bangladesh Environmental Lawyers Association (BELA), including prohibiting shipbreaking practices that contravene laws pertaining to the environment. This strategy places environmental rights and fairness ahead of profit. Bangladesh's legal actions are an upright and rights-centred reaction to waste colonialism, but India's slow improvements exhibit economic expediency.

TOXIC TRADE ACROSS BORDERS

Relevance of Pollution in the Mekong Delta

The Mekong Delta, stretching across China, Myanmar, Laos, Thailand, Cambodia, and Vietnam, is a vital ecological and economic region deeply affected by waste colonialism. Supplying most of Southeast Asia's inland fish and agricultural resources, it sustains millions of lives. Unfortunately, insufficient oversight and excessive recyclables have gravely contaminated

the waterways, endangering mangroves, fishing, and people's livelihoods. Riverine settlements have the most detrimental environmental impacts even though they generate minimal trash. When examined through the viewpoints of natural and societal ecology, the Delta displays the way national Dominance relationships and worldwide waste fluxes transform economies, habitats, and civilizations, requiring people to adapt in the face of rapid urbanization and environmental degradation.[40]

Case Studies: Waste Colonialism in Turkey and Vietnam

The ship recycling plant in Aliağa, Turkey, has turned into a glaring exemplar of waste colonialism, revealing systemic shortcomings in worker protection and environmental control. The appearance of toxic battleships like HMS Bristol and the fire aboard, the FSO Slough highlight the catastrophic repercussions of transboundary treacherous material dumping and legal incompetence. Hazardous ships continue to arrive under lax supervision despite explicit commitments under the Basel Convention, placing workers and ecosystems at peril. The continuous criminal accusations and demonstrations by civic society underscore how Turkey's shipbreaking industry operates as a dumping ground for the Global North's toxic legacy, masked as economic opportunity.[41]

Vietnam currently serves as an ideal instance of a nation impacted by waste colonialism. Vietnam tends to acquire significant amounts of trash from affluent nations like Japan, the United States, and the United Kingdom amid environmental constraints imposed by the 2005 Environmental Protection Law that differentiate amongst 'waste' and

[40] Andzelika Serwatka, '*The Global Waste Trade: Unveiling Waste Colonialism in Southeast Asia*' (2024) <https://instytutboyma.org/en/the-global-waste-trade-unveiling-waste-colonialism-in-southeast-asia/> accessed 30 October 2025.

[41] "*Upgrading Ship Recycling Practices in Turkey*" (2025) <https://shipbreakingplatform.org/upgrading-ship-recycling-practices-turkey/> accessed 2 November 2025.

'scrap' and intends to outlaw the import of plastic waste by 2025. Illegal garbage smuggling via important ports like Ho Chi Minh City and Hai Phong is rendered feasible by inadequate regulation, deficient facilities, and legislative gaps. These imports, which frequently pass for recyclables, impose pressure on Vietnam's meagre recycling resources and damage local ecosystems, particularly in areas like the Mekong Delta. Neo-colonial exploitation, in which wealthy countries transfer environmental obligations to underdeveloped countries, is sustained by the reliance on imported waste, which also threatens local recycling companies. Recognizing this unfairness, Vietnam is currently working to promote sustainability and stop transboundary waste exploitation through stronger import restrictions and regional cooperation.[42]

CONCLUSION

According to Yale University environmental expert Matthew Gordon, plastic dumping has spread dramatically over the world, with new hotspots appearing in nations like Bosnia, Thailand, Romania, Malaysia, and Turkey. He noted that South-East Asia emerged as a significant market for waste exports following China's import prohibition, thanks to inexpensive return freight for shipping containers.[43] In the same vein, Bangladesh and India have transformed into significant participants in the waste colonialism mechanism through ship recycling. Both nations confront the poisonous burden of the Global North's abandoned ships while combating inadequate regulation and environmental damage as they

[42] Andzelika Serwatka, '*The Global Waste Trade: Unveiling Waste Colonialism in Southeast Asia*' (2024) <https://instytutboyma.org/en/the-global-waste-trade-unveiling-waste-colonialism-in-southeast-asia/> accessed 30 October 2025.

[43] Ruth Michaelson, '*Waste colonialism: world grapples with West's unwanted plastic*' (2021). <www.theguardian.com/environment/2021/dec/31/waste-colonialism-countries-grapple-with-wests-unwanted-plastic> accessed 2 November 2025.

dismantle dangerous vessels in hazardous and polluting areas.

Robust international structures, efficient national waste legislation, efficient surveillance and data systems, and increased international cooperation are therefore necessary. In order to circumvent the Global South's absorption of the hazardous loads of the industrialized world, sustainable solutions must prioritize self-sustaining treatment of waste.[44]

How can such deep rooted disparities be envisaged?

To tackle the problem of waste colonialism, global and regional cooperation is essential. Activists emphasize the need for a binding international treaty to curb plastic production and enhance waste management systems. The EU's upcoming 2026 ban on plastic waste exports to non-OECD countries marks a crucial step toward accountability. Moreover, investing in Waste-to-Energy (WTE) technologies in Southeast Asia can transform non-recyclable waste into energy. Greenpeace urges the Global North to finance sustainable waste infrastructure in the Global South responsibly.[45]

[44] Lekha Sridhar, Parul Kumar. Lekha Sridhar, Parul Kumar, '*the New Face of Waste Colonialism: A Review of Legal Regulations Governing the Import of Waste into India*' (2019)

[45] Feng Zhaoyin and Hasya Nindita, *"Tracing 'waste colonialism' in Southeast Asia" Global Voices* (1 September 2025) https://globalvoices.org/2025/09/01/tracing-waste-colonialism-in-southeast-asia/ accessed 2 November 2025.