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Tackling Marine Plastic Pollution in the Bay of Bengal: A Comprehensive Legal Approach

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Bangladesh, which has a large coastline along the Bay of Bengal, is one of the countries that faces a significant threat from the pollution caused by plastic. Inadequate disposal practices and the lack of effective waste management systems result in plastic pollution infiltrating rivers and eventually making its way to the oceans. The Bay of Bengal is of global significance due to its historical significance as a vital economic conduit for commercial marine trade routes and its diverse biodiversity. The Bay has been recognized as one of the world's largest marine ecosystems due to the presence of extensive biological diversities. The Bay of Bengal meets the protein requirements of a substantial population. Bangladesh has a well-established legal framework for the protection and conservation of the marine environment. Despite this, the Bay of Bengal is disproportionately affected by plastic pollution, posing a serious danger to its biodiversity, life, and livelihood. By applying a qualitative approach, the author attempted to provide a clear picture of prevailing issues regarding plastic pollution in the Bay of Bengal and provide necessary recommendations for tackling plastic pollution.

Keywords: Bangladesh, Bay of Bengal, and plastic pollution.

INTRODUCTION

The Bay of Bengal remains pivotal in influencing geopolitical dynamics due to its advantageous geographical position, vast natural resources, and immense geographical importance as a maritime trade route. As the largest natural bay in the world, it is of crucial significance to the countries that are located on its neighbouring coasts. Taking a broader perspective, the demographic, economic, and security transformations that have taken place in the area have significant repercussions for Asia and the global order. The extent of the bay is commonly characterised as a 'Triangular Basin'.¹ The Bay of Bengal, which is a stunning body of water, serves as the southern boundary of Bangladesh. It also washes the coastlines of Myanmar and India, which are adjacent countries, and eventually joins the massive Indian Ocean to the south. The Bay of Bengal extends to around 2,172,000 square kilometres and has several islands.² Rivers flowing into the Bay of Bengal include the Padma, Jamuna, Meghna, and Brahmaputra.³ The Bay of Bengal is disproportionately affected by plastic pollution, leading to a severe threat to its biodiversity, life, and livelihoods. Experts opined that the number of plastics entering the Bay of Bengal would be five times greater in 2025 than it was in 2010.⁴ Coastal and Marine ecosystems play a vital role in supporting economic prosperity and social welfare in developing countries like Bangladesh. The biological and ecological values of the Bay of Bengal have been pointed out by many authors. The coastal and marine fisheries have been playing considerable roles not only in the social and economic development of the country but also in the regional ecological balance. So, it is now highly imperative to implement available legal mechanisms and adopt further necessary legal arrangements to prevent plastics from floating into the Bay of

¹ Alik Naha, 'Geostrategic Significance of the Bay of Bengal in India's Maritime Security Discourse' (2022) 9(2) *Journal of Territorial and Maritime Studies*

<https://www.researchgate.net/publication/361649027_Geostrategic_Significance_of_the_Bay_of_Bengal_in_India's_Maritime_Security_Discourse> accessed 09 October 2024

² Md Masud-UI-Alam et al., 'Seasonality of Stratification Along the Offshore Area of the Northern Bay of Bengal' (2020) 4(1) *Bangladesh Maritime Journal*

<https://www.researchgate.net/publication/342748318_Seasonality_of_Stratification_Along_the_Offshore_Area_of_the_Northern_Bay_of_Bengal> accessed 09 October 2024

³ Kazi Faiz Alam, 'Assessment of Land Use Land Cover Changes and Prediction of Vulnerable Agricultural Land in River Basins of Bangladesh Using Remote Sensing and a Fuzzy Expert System' in Tofael Ahamed (ed), *Remote Sensing Application: A Climate Change Perspective in Agriculture II* (Springer 2024)

⁴ Nurul Islam Hasib, 'Bay of Bengal to receive 5 times more plastics in 2025 than in 2010' *Dhaka Tribune* (Dhaka, 05 March 2024) <<https://www.dhakatribune.com/bangladesh/bangladesh-environment/341099/bay-of-bengal-to-receive-5-times-more-plastics-in>> accessed 18 October 2024

Bengal. Therefore, this paper aims to explore the available legal arrangements to combat plastic pollution in the Bay of Bengal.

CAUSES OF PLASTIC POLLUTION IN BANGLADESH

Bangladesh, with its extensive coastline along the Bay of Bengal, encounters considerable risk from marine plastic pollution. Improper disposal and the absence of appropriate waste management systems lead to plastic entering rivers and ultimately reaching the oceans.⁵ The fast-growing manufacturing of throwaway plastic items has overwhelmed the world's capacity to deal with them, which has resulted in plastic pollution being one of the most significant environmental challenges. The most obvious manifestations of plastic pollution may be seen in impoverished nations across Asia and Africa, where garbage disposal services are ineffective or even nonexistent.⁶ Plastic pollution is a subject that has recently acquired momentum in Bangladesh. According to government data, the current annual plastic waste generation in the country is 821,250 tons, while only 27% of the total waste (228,000 tons) is recycled or utilised, with the remaining portion being disposed of in the environment.⁷ A number of factors contribute to the problem of plastic pollution in Bangladesh. These factors include the unregulated manufacture of plastic items, insufficient waste management, high use of single-use plastics, and indiscriminate disposal of single-use plastics.⁸ Plastic manufacturer enterprises are also a significant contributor to the rising amount of plastic trash that is being improperly handled in Bangladesh. According to the Bangladesh Investment Development Authority (BIDA), there are around 5,000 enterprises in Bangladesh that deal with plastic goods.⁹ Plastic

⁵ Md Jashim Uddin, 'The Future of the Plastics Industry in Bangladesh' *The Financial Express* (Dhaka, 24 January 2024) <<https://today.thefinancialexpress.com.bd/special-issues/16th-bangladesh-international-plastic-packaging-and-printing-industrial-fair/the-future-of-the-plastics-industry-in-bangladesh-1706035074>> accessed 18 October 2024

⁶ Laura Parker, 'The world's plastic pollution crisis, explained' (*National Geographic*, 22 February 2024) <<https://www.nationalgeographic.com/environment/article/plastic-pollution>> accessed 18 October 2024

⁷ Shamima Rita, 'Plastic pollution: Where is the solution?' *Dhaka Tribune* (Dhaka, 04 June 2023) <<https://www.dhakatribune.com/bangladesh/312844/plastic-pollution-where-is-the-solution>> accessed 13 October 2024

⁸ Fahmida Khatun et al., 'Wrapped in Plastic: The State of Plastic Pollution in Bangladesh' (*International Growth Centre*, 23 November 2023) <<https://www.theigc.org/sites/default/files/2023-11/Wrapped-in-Plastic-The-State-of-Plastic-Pollution-in-Bangladesh.pdf>> accessed 10 September 2024

⁹ 'Business Journey Map of Plastic Industry in Bangladesh' (*G2B Team*, 19 June 2023) <https://a2i.gov.bd/wp-content/uploads/2023/06/12.-BJM_Plastic-Industry.pdf> accessed 18 September 2024

producers produce a wide range of plastic items, including kitchen and tableware, lids, bottles, sanitary products, toys, packaging, and building materials. Manufacturers additionally produce plastic hangers and transparent film, buttons, transportation materials, and other plastic components for industries such as textiles, pharmaceuticals, and electronics.¹⁰ In Bangladesh, around 646 metric tons of waste plastic are collected every single day; however, only ten percent of this material is recycled, and thirty-seven point two percent of it is disposed of in an improper way.¹¹ Garbage management issues in Bangladesh's main cities are becoming more prevalent as the population grows. Municipal solid waste (MSW) management in Dhaka, a fast-growing metropolis, is a major issue and there hasn't been much technical innovation in Bangladesh's garbage collection management system until now.¹² People have extremely limited access to the appropriate waste management and disposal services, which eventually leads to a rise in the difficulties associated with garbage mismanagement. In addition, the overall percentage of garbage collection in large cities in Bangladesh, such as Dhaka, is just 37%.¹³ Due to improper disposal of solid waste that pollutes the environment and poses risks to human health, sustainable solid waste management is one of the criteria for sustainable environmental management. This is due to the fact that solid waste also poses risks to human health.¹⁴ However, the majority of wastes are not collected properly and are unauthorized disposed of. Single-use plastics, such as polythene bags, have become a significant environmental challenge for the nation. In Bangladesh, there is a prevalent and unrestrained use of single-use plastic products in daily activities, encompassing shopping bags, food packaging, disposable cutlery, and beverage bottles. The majority of packaging and single-use plastic bags are produced from

¹⁰ Fahmida Khatun et al., 'Reducing Air and Plastic Pollution - Towards Green Cities in Bangladesh' (*Centre for Policy Dialogue*, 01 September 2023) <<https://cpd.org.bd/resources/2023/09/Reducing-Air-and-Plastic-Pollution-Towards-Green-Cities-in-Bangladesh.pdf>> accessed 13 September 2024

¹¹ Md Abdullah and Mohammad Zoynal Abedin, 'Assessment of plastic waste management in Bangladesh: A comprehensive perspective on sorting, production, separation, and recycling' (2024) 15 *Results in Surfaces and Interfaces* <<https://www.sciencedirect.com/science/article/pii/S2666845924000412>> accessed 13 September 2024

¹² Mohammad Zoynal Abedin and A S M Luthful Karim, 'Waste to Energy Technologies for Municipal Solid Waste Management in Bangladesh: A Comprehensive Review' (2022) 7(3) *International Journal of Engineering Materials and Manufacture* <<https://deerhillpublishing.com/index.php/ijemm/article/view/230>> accessed 13 September 2024

¹³ *Ibid*

¹⁴ Md Ashikuzzaman and Md Hasan Howlader, 'Sustainable Solid Waste Management in Bangladesh: Issues and Challenges' in Agamuthu Pariatamby et al. (eds), *Sustainable Waste Management Challenges in Developing Countries* (IGI Global 2020)

polyethylene or polythene, which significantly contributes to global plastic waste. The Environment and Social Development Organization (ESDO) reports that around 87,000 tons of single-use plastic is discarded annually in Bangladesh.¹⁵ The findings from ESDO (Environment and Social Development Organisation) highlight the urgent necessity for improved waste management strategies and policies aimed at decreasing plastic usage in Bangladesh.

SIGNIFICANCE OF THE BAY OF BENGAL

The Bay of Bengal has significant importance for several reasons. It possesses a historical significance as a crucial economic pathway for commercial marine trade routes that link the Eastern and Western hemispheres. The ports on the shores of the Bay of Bengal bear the imprint of political, religious and economic tensions over the centuries.¹⁶ From ancient times to the Middle Ages, Arab traders and missionaries flocked to the ports on the shores of the Bay of Bengal via the Arabian Sea.¹⁷ The Bay serves as a crucial maritime connection between the Indian and Pacific Oceans, significantly influencing global economic dynamics.¹⁸ It is serving as good economic prospects for India, Sri Lanka, Bangladesh, and Myanmar, which are boosting their economic significance in Asia and beyond. Approximately 50% of global container traffic flows through this area, with its ports managing almost 33% of international trade.¹⁹ Moreover, the seafood of the Bay of Bengal is a significant contributor to satisfying the protein requirements of many people. The Bay of Bengal yields roughly 6 million tons of fish each year, accounting for 4% of world catch, and provides protein to approximately 400 million people.²⁰ A considerable number of these individuals are dependent on fishing for their means of livelihood, either entirely or in part, and marine resources provide a major contribution to matters of

¹⁵ Kamrun Naher, 'The world is looking to rein in single-use plastic. Will corporations in Bangladesh pay heed?' *The Business Standard* (Dhaka, 04 January 2023) <<https://www.tbsnews.net/features/panorama/world-looking-rein-single-use-plastic-will-corporations-bangladesh-pay-heed-562582>> accessed 13 September 2024

¹⁶ Pathik Hasan, 'Strategic significance of Bay of Bengal' *Daily Observer* (Dhaka, 2 November 2021) <<https://www.observerd.com/news.php?id=338004>> accessed 27 August 2024

¹⁷ *Ibid*

¹⁸ Naha (n 1)

¹⁹ Tariq Karim, 'The Bay of Bengal and Bangladesh in the Indo-Pacific region' *The Daily Star* (Dhaka, 11 May 2023) <<https://www.thedailystar.net/opinion/news/the-bay-bengal-and-bangladesh-the-indo-pacific-region-3316926>> accessed 01 September 2024

²⁰ MM Majedul Islam, 'Alarming plastic pollution in the Bay of Bengal' *The Daily Star* (Dhaka, 10 August, 2019) <<https://www.thedailystar.net/opinion/environment/news/alarming-plastic-pollution-the-bay-bengal-1784278>> accessed 01 September 2024

income, livelihood, food security, and employment. As a result of the Bay's abundance of natural resources, which include natural gas deposits and other seabed minerals, as well as the fertilizer input from the Ganges and Brahmaputra rivers, the Bay's waters are able to support substantial fishing stocks. It itself contains vast untapped natural resources of oil, gas, mineral ores, and fishing stocks, promoting investment and economic interest from India, China, and Japan.²¹ The Bay has been recognized as one of the world's largest marine ecosystems due to the presence of biological diversities such as coral reefs, estuaries, fish spawning, nursery areas, and mangroves. The Bay of Bengal is a tropical ecosystem in a monsoon belt.²² The Bay of Bengal coastal region is an area of high biodiversity, with many endangered and vulnerable species, such as dugongs and sea turtles and has important reservoirs of the world's critical marine habitats, including 12 percent of the world's mangroves, eight percent of coral reefs and vast expanses of seagrass.²³ From nutrient cycling to fish stocks to water quality to biodiversity to raw materials to climate control, the Bay of Bengal provides various ecological services that support human well-being. Important fisheries include inshore small pelagics, demersal fish species, shrimp fisheries and offshore tuna, including species of special value Indian mackerel (*Rastrelliger kanagurta*), hilsa (*Tenualosa ilisha*) and several shark species.²⁴ A considerable contribution to the region's food security is being contributed to by the Bay of Bengal's abundant biodiversity, which serves as a large supply of protein for the populations who live there. Both mangrove forests and seagrasses are functioning as substantial carbon sinks, meaning that they are absorbing considerable quantities of carbon dioxide from the atmosphere. This helps to moderate the impacts of greenhouse gases. In addition, the coastal ecosystems of the bay contribute to the regulation of local climate patterns by regulating humidity, precipitation, and temperature. Furthermore, the phytoplankton in the bay contributes to the global carbon cycle by absorbing carbon dioxide during the process of photosynthesis.

²¹ Philomene A Verlaan and Suri Balakrishna, 'Bay of Bengal' (*Britannica*, 24 September 2007) <<https://www.britannica.com/place/Bay-of-Bengal>> accessed 27 August 2024

²² M Habibur Rahman, *Legal Regime of Marine Environment in the Bay of Bengal* (1st edn, Atlantic Publishers & Distributors 2007)

²³ 'The Bay of Bengal: An Overview of a Large Marine Ecosystem' (*BOBLME*, 20 December 2015) <<http://www.boblme.org/documentRepository/BOBLME-2015-Brochure-05.pdf>> accessed 27 August 2024

²⁴ Md Atiqur Rahman et al., 'Economic Benefits from the Bay of Bengal Ecosystem Services' (2017) 6(2) *International Journal of Science and Research* <<https://www.ijsr.net/articlerating.php?paperid=ART2017907>> accessed 27 August 2024

LEGAL MECHANISMS

The government of Bangladesh, from time to time, has implemented many laws and policies to reduce, control, and prevent marine pollution, including plastic waste. At present, Bangladesh has a comprehensive legal framework related to the environment to address various environmental concerns. The legal framework related to the environment primarily focuses on the protection and conservation of the environment, ecology, and ecosystem. The environmental laws of Bangladesh aim to control pollution, protect natural resources, and promote sustainable development. In Bangladesh, the principal law related to the protection and conservation of the environment is the Bangladesh Environment Conservation Act 1995. Plastic pollution is becoming one of the most serious environmental concerns in Bangladesh. Thus, the Bangladesh Environment Conservation Act, 1995 along with some other laws that are currently in force within Bangladesh, can be utilized in tackling plastic pollution in the Bay of Bengal. The protection and conservation of the environment is a global concern that transcends national borders. For this purpose, the international community has adopted several international and regional agreements in order to protect the environment at large, enabling countries to collaborate on shared environmental concerns and establish legally binding commitments. Bangladesh is a party to several international agreements related to the environment (e.g., the United Nations Convention on the Law of the Sea), reflecting its commitment to addressing global environmental challenges. Further, judicial decisions of the High Court Division and Appellate Division of the Supreme Court of Bangladesh are playing an immense role in addressing environmental issues. These courts, by leveraging public interest litigation (hereinafter referred to as PIL), have become important forums in enforcing existing environmental laws and holding violators accountable. Judges interpret and expand the scope of environmental regulations, set legal precedents, and often direct government agencies to take specific actions for environmental protection.

United Nations Convention on the Law of the Sea: The United Nations Convention on the Law of the Sea (hereinafter referred to as UNCLOS) lays down a comprehensive regime of law and

order in the world's oceans and seas, establishing rules governing all uses of the oceans²⁵ and their resources.²⁶ It enshrines the notion that all problems of ocean space are closely interrelated and need to be addressed as a whole.²⁷ However, Part XII of the UNCLOS explicitly deals with the protection and preservation of marine environments. It establishes a positive obligation on states to protect and preserve the environment from various kinds of marine pollutants.²⁸ Article 194 of the UNCLOS elaborates on the measures to be taken by States, individually or jointly as appropriate, consistent with UNCLOS, to prevent, reduce and control pollution of the marine environment from any source.²⁹ Article 197 of the UNCLOS mandates states to cooperate on a global or regional basis to develop rules, standards and recommended practices and procedures to protect and preserve the marine environment.³⁰ Article 200 of the UNCLOS mandates that states cooperate directly or through international organizations to promote studies, conduct scientific research, and share information on marine pollution.³¹ Article 266 of the UNCLOS further encourages States to foster the advancement and sharing of marine technologies. Bangladesh ratified the UNCLOS on 27 July 2001.³² Being a party to the UNCLOS, Bangladesh is under an obligation to take the best practical measures, consistent with this convention, to prevent seas from plastic pollution. Bangladesh can also develop rules, standards and recommended practices and procedures to protect the marine environment from plastic pollution through regional cooperation. UNCLOS further mandates Bangladesh to conduct scientific research and adopt modern technologies to tackle marine pollution. Therefore, the provisions listed under UNCLOS can be interpreted as a request to Bangladesh to implement technological and practical measures and approaches to control plastic pollution in the marine

²⁵ John R Stevenson and Bernard H Oxman, 'The Future of the United Nations Convention on the Law of the Sea' (1994) 88(3) *American Journal of International Law* <<https://www.jstor.org/stable/2203716>> accessed 27 August 2024

²⁶ Minh Vu, 'UNCLOS – Constitution for the Ocean: Group of Friends' *Hanoi Times* 15 June 2022) <<https://hanoitimes.vn/unclos-constitution-for-the-ocean-group-of-friends-321029.html>> accessed 27 August 2024

²⁷ *Ibid*

²⁸ Tony George Puthucherril, 'Protecting the Marine Environment: Understanding the Role of International Environmental Law and Policy' (2015) 57(1) *Journal of the Indian Law Institute* <<https://www.jstor.org/stable/44782490>> accessed 27 August 2024

²⁹ United Nations Convention on the Law of the Sea 1994, art 194

³⁰ United Nations Convention on the Law of the Sea 1994, art 197

³¹ United Nations Convention on the Law of the Sea 1994, art 200

³² Stephen Fietta and Robin Cleverly, *A Practitioner's Guide to Maritime Boundary Delimitation* (1st edn, Oxford University Press 2016)

environment of the Bay of Bengal. Additionally, several technologies such as TrashBoom, Marine Microplastic Removal Tool, and TrashTrap can assist in collecting and eliminating microplastics from the water. TrashBoom is a swimming barrier designed to effectively capture the majority of floating plastic debris from the rivers.³³ In particular, TrashBoom is incredibly successful at catching plastic garbage and preventing it from entering the ocean. The Marine Microplastic Removal Tool is a specialized sand filter that has been designed for capturing microplastics directly, while TrashTrap has a 97% effectiveness in eliminating plastic debris.³⁴

The Bangladesh Environment Conservation Act 1995: The Director General of the Department of Environment³⁵ has the authority to implement essential actions to protect and preserve the environment, enhance environmental standards, and manage and reduce environmental pollution.³⁶ According to this legislation, the production and consumption of polyethylene or polypropylene are illegal in Bangladesh.³⁷ This legislation puts restrictions on the manufacture, sale etc. of articles which are injurious to the environment. Article 6A of this Act stipulates that if the Government, based on the advice of the Director General or other considerations, determines that any sort of polythene shopping bag or any article made from polyethylene or polypropylene is harmful to the environment, it may issue a notification in the official Gazette imposing a complete ban on the manufacture, import, marketing, sale, demonstration for sale, stock, distribution, commercial carriage, or commercial use of such items. The notification may also specify conditions under which these activities may be permitted, and compliance with such directions is mandatory for all individuals. Polyethylene bags and single-use plastics are being used indiscriminately right under the gaze of law enforcers, despite the fact that the legal frameworks of Bangladesh have made the production and consumption of polyethylene bags illegal. According to the findings of a study that was carried out by the Environment and Social Development Organization (ESDO), more than 2.5 billion polythene bags are discarded in

³³ Karsten Hirsch, 'Stopping marine plastic pollution from rivers requires efficient and cost-effective technologies' (*World Economic Forum*, 03 March 2022) <<https://www.weforum.org/stories/2022/03/how-technology-can-help-us-stop-marine-plastic-pollution/>> accessed 11 August 2024

³⁴ Emma Schmaltz et al., 'Plastic pollution solutions: emerging technologies to prevent and collect marine plastic pollution' (2020) 144(8) *Environmental International* <<https://www.sciencedirect.com/science/article/pii/S0160412020320225>> accessed 27 August 2024

³⁵ Bangladesh Environment Conservation Act 1995, s 2

³⁶ Bangladesh Environment Conservation Act 1995, s 4(1)

³⁷ Bangladesh Environment Conservation Act 1995, s 6A

Dhaka city every single day after being used just once every single day.³⁸ Polythene and plastic bags pose numerous environmental hazards. The expansion of the global economy correlates with an increasing demand for single-use plastics. However, when single-use plastics are discarded into the environment, they decompose into harmful microplastics, which adversely affect both the environment and human health.³⁹

The Territorial Waters and Maritime Zones Act 1974: The government has the authority to adopt effective measures to ensure that the marine environment is not endangered by plastic pollution.⁴⁰ It is estimated that every year, about 2 lakh tons of plastics enter the Bay of Bengal from Bangladesh.⁴¹ Plastic bags entering the ocean present significant risks to marine life, as numerous species, particularly sea turtles, often confuse these bags with their primary food source, jellyfish. Animals that ingest shopping bags may experience choking or suffocation, and they risk becoming entangled, potentially leading to strangulation. The method of death for these animals is both gruesome and unnatural, and the increasing disposal of plastic bags exacerbates the threat to marine life.⁴²

The Climate Change Trust Fund Act 2010: Some objectives of the Climate Change Trust,⁴³ as outlined in the Climate Change Trust Act of 2010, include utilizing trust funds, creating and executing strategies for climate change adaptation and sustainable development, finance, technology transfer, investment, conducting research on climate change adaptation, mitigation, and implementing both short and long-term action plans⁴⁴ to address climate change and mitigate plastic pollution in the Bay of Bengal. Plastic pollution is unquestionably associated with climate change, as plastics are endangering the global community's capacity to limit the

³⁸ '2.5 crore single-use polythene bags are thrown away daily in Dhaka: Study' *The Business Standard* (Dhaka, 25 June 2023) <<https://www.tbsnews.net/bangladesh/environment/25-crore-single-use-polythene-bags-are-thrown-away-daily-dhaka-study-656046>> accessed 18 October 2024

³⁹ Harry Cooper, 'Plastic Shopping Bags' (*Interfaith Center for Sustainable Development*) <<https://interfaithsustain.com/plastic-shopping-bags/>> accessed 18 October 2024

⁴⁰ Territorial Waters and Maritime Zones Act 1974, s 8(2)(b)

⁴¹ Md Minarul Hoque, 'Marine Pollution by Plastic: Menace to the Marine Environment' (*BIMRAD*, 18 April 2023) <<https://bimradbd.org/public/storage/upload/paal/articles/230418064839-3896Marine%20Pollution%20by%20Plastic%20Menace%20to%20the%20Marine%20Environment.pdf>> accessed 08 October 2024

⁴² Cooper (n 39)

⁴³ Climate Change Trust Fund Act 2010, s 2

⁴⁴ Climate Change Trust Fund Act 2010, s 6

increase in global temperature to 1.5°C due to the emission of greenhouse gasses (GHGs) throughout the plastic life cycle. In fact, the extraction, **refining, and manufacturing of plastics are all carbon-intensive processes.**⁴⁵

BELA v Ministry of Environment, Forest, and Climate Change and others: In *BELA v Ministry of Environment, Forest, and Climate Change and others*, the High Court Division of the Supreme Court of Bangladesh issued a Rule Nisi requiring the Ministry of Environment, Forest, and Climate Change and others to provide explanations for their failure or inaction in enforcing the existing legal ban on polythene and plastic bags. The court mandates respondents to rigorously implement the existing laws and rules corresponding to the plastic bag prohibition by means of consistent market surveillance, closure of polythene manufacturing facilities, and confiscation of equipment. The Court mandates the government to implement a prohibition on single-use plastics in coastal regions and within all hotels, motels, and restaurants within one year, with a requirement to report compliance to the Court.⁴⁶ However, there has been no discernible progress made by the government in terms of putting an end to the manufacture and use of single-use plastics.⁴⁷

CONCLUSION AND RECOMMENDATION

Despite ratifying the UNCLOS and implementing several domestic measures, Bangladesh must do more to prevent plastic from floating into the Bay of Bengal. For this purpose, some further necessary mechanisms need to be adopted. Firstly, we urgently need to enact separate legislation on plastic pollution prevention to effectively address and combat the disposal of plastics in the Bay of Bengal.⁴⁸ Secondly, Bangladesh must allocate funds from the Bangladesh

⁴⁵ Geneva Environment Network, 'Plastics and Climate Change | Plastics and the Environment Series' (*GEN*, 23 September 2024) <<https://www.genevaenvironmentnetwork.org/resources/updates/plastics-and-climate/>> accessed 18 October 2024

⁴⁶ *BELA v Ministry of Environment, Forest and Climate Change and Ors* (2019) WP No 14941/2019

⁴⁷ Pinaki Roy, 'Ban on single-use plastic: No visible step to enforce HC order' *The Daily Star* (Dhaka, 06 June 2023) <<https://www.thedailystar.net/news/bangladesh/news/ban-single-use-plastic-no-visible-step-enforce-hc-order-3338746>> accessed 11 May 2024

⁴⁸ Shah Maruf Uddin Ahmad, 'Blue Economy and Deep Seabed Mining: Sustainable Ocean Governance in the Bay of Bengal' (*BCOLP*, 15 November 2024) <https://bcolp.blogspot.com/?fbclid=IwY2xjawGAIpleHRuA2FlbQIxMAABHOX6sW7qmSQdeIrp33BKyiVhYdvpJirE9P3bgVILrIqfX-NjeSPPSjMchw_aem_pVbo8K9Oyof85JsSWv93tw> accessed 18 October 2024

Climate Change Resilience Fund to protect the marine environment from plastic pollution. Thirdly, to meet the obligations outlined in Article 266 of the UNCLOS, Bangladesh must adopt advanced technologies from developed nations, such as TrashBoom, Marine Microplastic Removal Tool, and TrashTrap. Fourthly, to produce environmentally friendly plastic goods, Bangladesh needs to make a structural change toward a circular economy. It is often advocated as a remedy for the growing issue of plastic pollution since it has the potential to eradicate plastic waste by using inventive recovery methods, bio-based substitutes, and strategies that emphasize reuse and reduction. Specifically, a circular economy focuses on recycling and reusing plastics to reduce environmental waste and pollution. This approach will allow Bangladesh to continue exporting plastics while fulfilling environmental criteria. Recycling and reuse will help Bangladesh maximize its plastic consumption, reducing the requirement for new plastic manufacturing from raw materials. Although implementing CE in Bangladesh remains a major challenge due to the significant rate of corruption, Bangladesh needs public-private collaboration, thought leadership from pertinent parties, and an open mind to new ideas in order to turn obstacles into opportunities and implement a large-scale circular economy. Fifthly, Bangladesh needs to adopt Extended Producer Responsibility (EPR) approaches and principles. Numerous countries frequently incorporate the application of EPR to marine plastic pollution into their national legislation, particularly in the context of product packaging and waste management. EPR for plastics now includes material selection and design. Producers are required to comply with this regulation by limiting the presence of microplastics in product formulations, adhering to the packaging specifications for single-use plastic beverage containers, and ensuring that products contain a set amount of recycled plastic. Additionally, the economic responsibility of plastics producers encompasses expenditures related to the development of waste collection infrastructure and the dissemination of information to the public regarding the dangers associated with plastics and recycling. Sixthly, to improve efficiency and reduce environmental impacts, the plastic manufacturing industries must adopt new technologies and innovations. Lastly, the government of Bangladesh should collaborate with NGOs to create public campaigns and advertisements that highlight the dangerous impacts of plastic pollution. To conclude, Bangladesh, as a party to the UNCLOS, should consider these challenges by adopting the standards and policies mentioned earlier.