

# PROTECTION OF COASTAL AND MARINE ENVIRONMENT IN BANGLADESH: A CRITICAL ANALYSIS UNDER DOMESTIC AND INTERNATIONAL LAW

*Written by Shadab Bin Ashraf*

*LLM Graduate, Bangladesh University of Professionals, Dhaka, Bangladesh*

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## ABSTRACT

This paper primarily illustrated Bangladesh's international legal standard and domestic legal approach to coastal and marine environment conservation. The nature and causes of coastal and marine environment pollution, including a range of land, vessel, and air-based contamination, were also described. It examines the international legal framework for the conservation of the coastal and marine environment, as well as Bangladesh's international obligations. Further it demonstrates the existing legal framework of Bangladesh regarding protection of coastal and marine environment and identifies its inconsistency with international standard. Finally, it makes a few recommendations for improving the current state of Bangladesh's domestic legal framework in order to appropriately safeguard the coastal and marine environment.

**Keywords:** Coastal Environment, Marine Environment, Pollution, Protection, International Obligation, International Standard, Legal Framework, Bangladesh.

## PROLOGUE

### *Background*

Bangladesh is a developing country situated in South Asia region sharing its boundary with India and Myanmar. It is one of the densely populated countries in the whole world. This nation is heavily dependent on its agriculture as the geographical status, soil fertility, and comprehensive network of large and small rivers contribute and facilitate in acceleration on the sector. However, Bangladesh is vulnerable to climate change in a great degree as flood and other natural calamities are common scenario in the state. Despite such adverse situation, Bay of Bengal is bestowed with phenomenon biodiversity which have been supporting coastal area community with their livelihood from the extraction of fisheries.<sup>i</sup> Besides fisheries, about 30 million people of coastal areas depend on salt farming, agriculture, offshore transportation and forestry.<sup>ii</sup> However, increasing amounts of inhabitants, industrial and commercial activities, over exploitation of marine resources, ship breaking activities without much concern on marine environment, introduction of foreign species, land and vessel based pollution wreaking havoc on marine environment.<sup>iii</sup> Moreover, in absence of proper and adequate number of wastewater treatment plants, abundant portion of industrial waste, urban sewage and wastewater comes in the contact with coastal water indirectly through river or directly.<sup>iv</sup> These incidents create legal concern regarding the protection of coastal and marine environment of Bangladesh as the biodiversity and ecosystem of Bay of Bengal is under threat.<sup>v</sup>

### *Statement of the Problem*

Prevention, reduction and control pollution of marine environment is not only the concern of Bangladesh rather became contemporary moto over the whole world. Over the middle of 20<sup>th</sup> century sources of marine pollution were identified by researchers and experts. The first international legal instrument which recognized protection of marine environment from pollution was the *International Convention for the Protection of Pollution of the Sea by Oil 1954*.<sup>vi</sup> This convention focused on protection of marine environment from pollution occurred by the discharge of oily waste from vessel operating in the sea. Later, in 1967 when *Torrey Canyon* incident took place international legal community started to develop more comprehensive legal instruments to protect the marine environment from such unexpected pollution.<sup>vii</sup> With the addition of various international legal instruments, *the United Nations*

*Convention on the Law of the Sea (UNCLOS), 1982* addressed the concern on preservation and protection of the marine environment<sup>viii</sup>. To ensure its objective over the marine environment, UNCLOS created several norms, principles and standards to be followed by state parties<sup>ix</sup>. Despite Bangladesh being a state party of *the UNCLOS, 1982* along with *International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969*; *Convention for the Prevention of Pollution from Ships 1973/78*; *International Convention on Oil Pollution Preparedness, Response and Cooperation (London, 1990)*, legal principle, norms and standards are hardly practiced in the country as comprehensive domestic legislation is yet to be promulgated.<sup>x</sup> Thus, perpetrators of coastal and marine pollution cannot be brought under justice even in this vulnerable coastal and marine environment era.

### ***Literature Review***

Legal concern regarding coastal and marine environment protection and preservation is hardly recognized in developing countries like Bangladesh. However, current *status quo* of the coastal and marine environment is alarming, and this issue needs to be addressed by legal mechanism. Numerous empirical writings and documents are written to address such alarming environmental crisis.

In pursuit of the hypothesis of this research, clarification regarding the conceptual issues of the coastal and marine environment and its legal aspects is required. Such rudimentary perceptions are discussed by *Faruque*<sup>xi</sup> where the author in chapter eleven discussed on prevention of marine pollution from international legal prospect. The author emphasized on the history of the recognition of international legal regime on the protection of marine environment. He also explained various source-based marine pollutions and envisage how international legal instruments deal with such types of haphazard situations. In chapter twenty-six the author of this book discussed prevention of marine pollution from Bangladesh perspective. Here he depicted why preservation of the coastal and marine environment in Bangladesh requires more recognitions. He criticized the absence of strategical approach, policies and guidelines for ship breaking industries of Bangladesh which is clearly worsening the marine and coastal environment. Lastly, he addressed some of the contemporary legislations which are currently dealing with marine environment and couldn't meet international standard.

The atrocity of coastal and marine environmental problems in Bangladesh is delineated in a report constructed by *United Nation Environment Programme*<sup>xii</sup>. UNEP in that report comprehensively urged for taking action-oriented program planning for curbing marine and coastal environmental degradation. This report identified marine resources and areas which are specialized for its ecological phenomenon. UNEP also took an initiative for marine environmental assessment of Bangladesh and recommended measures like legislative development, institutional activities and monitoring and surveillance mechanism in the report. Lastly, it also suggested some promotional mechanisms for raising awareness regarding marine and coastal environment conservation.

Every legal protection on a particular subject matter carries an historical background of evolution which signifies the importance of its existence. International standards regarding legal protection of marine environment can be elucidated by analyzing its inception and development in the international legal regime. Such historical overview and development can be traced from *Almutairi's*<sup>xiii</sup> drudgery where the author meticulously conversed about international legal instruments which established conspicuous module to protect coastal and marine environment from contemporary pollution. Notwithstanding the fact that, this document for the most part worked for Kuwait's legal protection of marine environment, several aspects are considered as useful for understanding marine environment and its international and domestic legal protection. In Chapter three titled as 'The Marin Environment' he discussed on the conceptual issues which are significant to understand every sphere of marine environment and effect of the pollution as a whole. The biological, scientific, global importance of marine environment got stupendous concentration here. One of the phenomenon aspects of legal protection of marine and coastal environment introduced by the author was the role of criminal law to combat environmental crime. This portion demonstrated recognition of environmental crime on international sphere by refereeing Article 19(2) of the *UN International Law Commission's Draft Article on State Responsibility*. This fraction is salient to construct a comparative analogy on the role of criminal law and to trace whether such analogy can be functionalized in other domestic legislations for protecting marine environment or not.

Protection of marine environment has been addressed in various international legal instruments. *United Nations Convention on the Law of the Sea (UNCLOS), 1982* is one of such international legal instruments which comprehensively discussed the conceptual framework,

source based marine pollution, obligation of state party to promulgate domestic legislation by not derogating international standards and also substantiate trial and investigation procedure if any Marine pollution, addressed by international legal instruments, occurs by any subject. *Htet*<sup>xiv</sup> in his thesis paper delved deeper into the above-mentioned issues. The author also demonstrated an international legal framework for the conservation of marine environment mentioned under UNCLOS. Furthermore, this document elaborately discussed on the jurisdiction of coastal, port and flag state enumerated under UNCLOS.

*SACEP*<sup>xv</sup> has exhibited synchronic issues, policies, legislations and institutions related to protection of coastal and marine environment of Bangladesh. Additionally, the role of judiciary to protect marine and coastal environment has been indicated in the document. With the conformity, *Arif and Karim*<sup>xvi</sup> has disclosed stand of Bangladesh judiciary on protection, preservation and management of coastal and marine environment by citing *BELA v. Secretary, Ministry of Environment and Forest and others*<sup>xvii</sup> where court criticized ship breaking business for risking and polluting ecosystem and biodiversity of coastal and marine environment of Bangladesh and prohibited such business until safety precautions are considered.

*IUCN*<sup>xviii</sup> evaluated national framework of marine protected areas and discussed regarding MPAs construction and management. This framework aims to constitute marine fisheries production, preserve biodiversity and restore fish resource in Bay of Bengal. This document manifest national policy to ameliorate *status quo* of eco system and biodiversity by conserving coastal and marine environment.

Aforementioned literatures assisted to conduct the current research work exceedingly. These literatures predominantly succoured to critically analyses the research objectives and to answer research questions.

### ***Research Questions***

This study delves into answering the following two primary research questions-

1. Is Bangladesh's contemporary environmental legal regime on conservation of the marine and coastal environment consistent with the international standards?

2. What legal action(s) should be taken to protect, manage and preserve the biodiversity and ecosystem of the coastal and marine environment of Bangladesh in a more sustainable manner?

### ***Research Objectives***

This research is conducted keeping in mind the following objectives-

1. To do a comparative analysis between international legal instruments and Bangladesh legislations for the protection and preservation of the coastal and marine environment.
2. To examine the strengths and weaknesses of domestic legislations concerning protection of coastal and marine environment of Bangladesh.
3. To provide possible recommendations for enhancing the existing legal framework related to the protection of coastal and marine environment of Bangladesh.

### ***Methodology***

This research is conducted focusing on the available primary and secondary data with aim of achieving multi-dimensional aspect over the topic. This research is qualitative in nature and conducted with the assistance of books, international legal instruments, domestic legislations, scholarly journal articles, case laws, commentaries, reports and online sources.

### ***Contribution of the Study***

The contribution of study are as follows-

1. Identifies international legal standards and domestic legal framework of Bangladesh for the protection of coastal and marine environment.
2. Finds out how marine ecosystem can be preserved more sustainably.

### ***Limitation of the Research***

To begin with the primary, constrain is the limitation of time. Many aspects of the study could not delve deeper due to such limitation along with collection of adequate information to do so. Furthermore, due to corona pandemic, it was not possible to take direct interview with relevant personalities who were victim of such circumstances. Finally, since the work was done from

home, numerous journals, research paper, books and articles were inaccessible due to lack of access to relevant websites.

### ***Thesis Structure***

This research is divided into six chapters. Chapter one of this research contains background, statement of the problem, literature review, research questions, research objectives, methodology, contribution of the study and a brief discussion on limitation of the research.

The second chapter of this paper discusses regarding theoretical and conceptual issues which need to be clarified. It signifies various sources of coastal and marine environment pollution recognized by international legal community.

International legal regime through various declarations, principles and conventions addressed protection, preservation and management of coastal and marine environment from pollution. Such international legal regime is being discussed in the third chapter of this paper. Furthermore, international obligation of Bangladesh over the coastal and marine environment will also be discussed in this chapter.

The fourth chapter of this paper will critically analyze how domestic legal system of Bangladesh is protecting coastal and marine environment. This chapter will also examine whether measures taken by Bangladesh on such issue amount to meet international legal standards and obligation or not.

Lastly, chapter five will envisage findings of this research with some probable recommendations and concluding remarks on the research topic.

## **CONCEPTUAL AND THEORETICAL FRAMEWORK**

### ***Introduction***

Coastal and marine environment carry phenomenal characteristics which are distinguishable from other elements of nature. Such environment plays a vital role on human life and livelihood as it balances biological factors and proffers nutritious along with industrial resources.<sup>xix</sup> In the previous decades, seas and oceans were reckoned capable to absorb any

sort of pollutants thrown in it without much of a change in its basic component.<sup>xx</sup> Such erroneous perception was perished after research shown the suffering of marine and coastal environment due to thrown pollutants.<sup>xxi</sup> Oceans and seas are still a subject of rigorous research as their component and process are underdeveloped compared to terrestrial environment.<sup>xxii</sup> Even the law of the sea prior to 1970s hardly recognized the protection of coastal and marine environment.<sup>xxiii</sup> After several incidents of oil tanker disaster during 1960s and 1970s, spark of awareness finally ignited in the international community regarding impact of marine pollution on human life and environment.<sup>xxiv</sup> Before executing in-depth analysis, focus must be shifted towards the conceptual issues and basic understanding regarding coastal and marine environment and its pollution. This chapter will also explore various sources of marine pollution and its legal recognition.

### ***Environment and Pollution***

As the coastal and marine environment is a component of environment, priority must be given on understanding the concept of ‘environment’ itself. Such conceptualization from the very basic will help to extract the nature, characteristics and intriguants of the subject matter vividly. With such objective, it is important to explore the legal domain dealing with environment and analyze how it is being defined by law. According to section 2 of The Bangladesh Environment Conservation Act 1995, ‘environment’ means, “the inter-relationship existing between water, air, soil and physical property and their relationship with human beings, other animals, plants and micro-organisms.”<sup>xxv</sup> This definition recognizes the relationship of human being and other animals, plant and micro-organism with coastal and marine environment as it comes under the purview of water. International legal instruments also emphasized defining environment from legal prospect. Environment is defined in Stockholm Declaration 1972 as, “a number of natural, social, and cultural systems in which human and other living organisms live and from which they get their resources and carry out their activities.”<sup>xxvi</sup> Coastal and marine environment must count as parts of environment as these components also provide resources for human and other living organisms.

The primary objective of environmental law is to curb pollution. It is important to understand what actually amounts pollution. Basically, pollution means an incidence of change among the components of environment which degenerates the ecosystem by reducing its ability to hinder



contaminants.<sup>xxvii</sup> Pollution is also being defined in The Bangladesh Environment Conservation Act 1995 as “the contamination or alteration of the physical, chemical or biological properties of air, water or soil, including change in their temperature, taste, odor, density, or any other characteristics, or such other activity which, by way of discharging any liquid, gaseous, solid, radioactive or other substances into air, water or soil or any component of the environment, destroys or causes injury or harm to public health or to domestic, commercial, industrial, agricultural, recreational or other useful activity, or which by such discharge destroys or causes injury or harm to air, water, soil, livestock, wild animal, bird, fish, plant or other forms of life.”<sup>xxviii</sup>

### ***Coastal and Marine Environment***

In the recent years threats of coastal and marine environment is gradually getting focus among researchers and intellectuals. The components and characteristics of coastal and marine environment can be traced from its legal definition established under legal instruments and by different jurists. Agenda 21 of United Nation Conference on Environment and Development, 1992 provides a broader sense to the understanding of marine environment.<sup>xxix</sup> Conforming to paragraph 17.1 of Agenda 21 marine environment includes, the seas, oceans and all the adjacent coastal areas which constitutes an essential component for the global life and provides support as a positive asset to achieve sustainable development. UNCLOS does not define the term ‘marine environment’. However, it is commonly agreed by jurists that marine environment refers as the ocean space as a whole and comprised chemical and physical component including marine life.<sup>xxx</sup> The marine environment is a notion that encompasses all zones of maritime jurisdiction defined by the UNCLOS, including internal waters and the high seas, and is not a spatial entity outside of any single state's territorial authority.<sup>xxxi</sup>

Coast is as a specific area start from coastline and its ceiling is marked by the high tide level.<sup>xxxii</sup> The edge of the land which meets with the marine environment is called coastline.<sup>xxxiii</sup> Cox’s Bazar, Sonadia Island, St Martin’s Island and Sundarban are considered as the coastal zone of Bangladesh. The term ‘coastal environment’ is not defined in any international legal instrument nor in any domestic legislations of Bangladesh. However, such term can be traced from the legal instruments of other countries. According to 1.1.2 (28) of Rhode Island Code of Regulations Title 650 (Coastal Resources Management Council) ‘coastal environment’ means,

“the complete system of living organisms and physical surroundings within the waters and shore lands of estuaries, the nearshore ocean and the terrestrial areas influenced by this system.” From Western Cape government perspective, ‘coastal environment’ means the environment which comes under the purview of coastal zone.<sup>xxxiv</sup> It can be agreed that coastal environment means surroundings of water till high tide level and adjacent shorelines.

### ***Coastal and Marine Environment Pollution***

Protection of coastal and marine environment have become most concerning issue in this era for maintaining healthy environment for human living. Coastal and marine pollution not only occurs by the state (having jurisdiction over the sea in accordance with UNCLOS) but also by the other states belonging to other continents. The detrimental practice of coastal and marine pollution is increasing everyday all over the world which negatively affects all the major environment components.<sup>xxxv</sup> It is being often argued that industrialized nations are more to blame for polluting marine environment based on several incidents. Torrey Canyon<sup>xxxvi</sup>, Exxon Valdez<sup>xxxvii</sup> and Amoco Cadiz<sup>xxxviii</sup> are one of such significant incidents. UNCLOS has envisaged the interest of developing countries over generating special obligations of developed countries to protect and preserve marine environment as the convention often use the words ‘and in accordance with their capabilities’.<sup>xxxix</sup> Thus, the legal framework and mechanism to protect and control coastal and marine environment bear complex paradigm. Before exploring such legal entanglement, it is important to analyze how international legal instruments acknowledge coastal and marine environment pollution. According to World Health Organization (WTO) ‘coastal environment pollution’ means, “The introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects such as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”<sup>xl</sup> The International Convention for the Prevention of Pollution from Ships defines ‘marine environment pollution’ as contact of hazardous substance which “if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea, and includes any substance subject to control by the present Convention.”<sup>xli</sup> The classical definition of marine pollution is demonstrated in UNCLOS 1982 as “the introduction by man, directly or indirectly,

of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”<sup>xlii</sup> Different jurists have also tried to explain the concept of coastal and marine environment pollution from their perspective. According to a group jurists ‘coastal and marine environment’ denotes existence or contact of any substance in the marine environment which can harm human life, marine resources, fishing activity, tourism and overall hinder marine activities.<sup>xliii</sup> It can finally be concur that coastal and marine environment connotes existence of any hazardous foreign substance or element in the coastal or marine environment effectuated from human activities related or not related to marine resource utilization which ultimately derogate eventual use of the sea.

### ***Source Based Pollution Recognized under International Legal Instruments***

The coastal and marine pollution is a contemporary concern all over the world. In the era of globalization and industrialization, coastal and marine environment is blisteringly used for resource utilization and commercial purpose. However, oblivious use of coast and marine area causing immense harm to its environment everyday.<sup>xliv</sup> On such basis, empirical research has identified different sources of marine pollution which are also in the ambit of legal recognition. Generally accepted source based coastal and marine pollution are categorized as- 1) vessel-based pollution, 2) ocean dumping, 3) land-based pollution, 4) pollution from seabed activities and 5) pollution through or from the atmosphere.<sup>xlv</sup>

- **Vessel-Based Pollution**

Vessel transportation has been the most popular means of transportation due to its high cargo capacity and low cost. As industrial technology and the global population have advanced year after year, ship tonnage and size have risen dramatically.<sup>xlvi</sup> However, such vessel transportation creates one of the core sources of coastal and marine pollution known as vessel-based pollution. Vessel source pollution basically occurs due to activities of shipping. Vessel-based pollution can be categorized in two phenomenon aspects. First one is ‘operational pollution’ which occurs during usual function of the ship and the other one is ‘accidental pollution’ which takes place by sinking of large tankers in the sea.<sup>xlvii</sup> Empirical research has

found around 20 per cent of marine pollution is caused due to vessel activities.<sup>xlvi</sup> Article 211 (1) UNCLOS of 1982 directs member state to prevent, minimize and manage vessel-based marine pollution by adopting international standards and rule in national level and routing system of vessels.<sup>xlix</sup> Member states can also impose laws regarding protection of marine environment in their territorial sea upon foreign vessels including those using innocent passage.<sup>l</sup> According to Article 221 of UNCLOS 1982 states can take extra territorial jurisdiction to protect their coastline from maritime casualties.<sup>li</sup> This means states can impose legislative measures even beyond their territorial sea to protect marine environment from vessel-based pollution.

- **Ocean Dumping**

Dumping is considered to be one of the renowned ways for waste disposal in the sea from land-based activities which contributes 10 percent of overall marine pollution.<sup>lii</sup> Such waste includes toxic waste, radioactive waste, sewage sludge and weapons.<sup>liii</sup> Legal definition of ocean dumping can be traced in UNCLOS 1982. According to Article 1 (5) (a) of UNCLOS 1982 dumping occurs when any aircraft or vessel in the sea or any structure constructed by man disposes waste or other material in the sea deliberately. Dumping also eventuate when any aircraft, vessel or any structure is intentionally disposed in the sea.<sup>liv</sup> While defining 'ocean dumping' it is important to consider intention of disposal.<sup>lv</sup> Prevention of ocean dumping was previously regulated by International Convention on the Prevention by Dumping of Wastes and Other Matter 1972.<sup>lvi</sup> Now it is being regulated by London Protocol 1996.<sup>lvii</sup>

- **Land-Based Pollution**

Land-based pollution occurs when hazardous substance discharged from coastal infrastructures, or any source situated or adjacent to land.<sup>lviii</sup> This is a major concern for every state as 80% of coastal and marine pollution is caused by land-based occurrence.<sup>lix</sup> Industrial and municipal trash are major polluters in Bangladesh's marine environment. Exposure to marine pollution increases the chance of developing chronic diseases for coastal residents.<sup>lx</sup> Contaminated seafood consumption increases the risk of cancer, birth deformities, hormone imbalance, and other long-term health problems when consumed with raw or undercooked fish.<sup>lxi</sup> While fish is Bangladesh's second largest export, the number of fish collected along the coast has decreased recently because of marine pollution harming fish reproduction in

Bangladesh.<sup>lxxii</sup> The liver, nervous, and digestive system of marine mammals are all compromised because of land based pollution. Additionally, this source-based pollution directly causes immunosuppression and reproductive abnormalities in the living organs of the sea.<sup>lxxiii</sup>

Article 207 of UNCLOS 1982 indicates land-based sources which includes outfall structures, rivers, pipeline and estuaries.<sup>lxxiv</sup> Montreal Guidelines define land-based pollution as a source of pollution which is in contrast to offshore sources.<sup>lxxv</sup> Definition of marine pollution by land-based source mentioned by Paris Convention 1974 includes, pollution created by any pipeline or tunnel connected to seabed and manmade structures in marine jurisdiction.<sup>lxxvi</sup> Additionally, its being emphasized by paragraph 17.19 of Agenda 21 that wide range activity related to land can be a major cause for coastal and marine pollution.<sup>lxxvii</sup> Customary international law by the rule of *sic utere tuo ut alienum non laedas* prohibits every states from using their territory in such a manner which eventually result degrading for other states.<sup>lxxviii</sup> This rule was expressed in the arbitration of *Trail Smelter* case.<sup>lxxix</sup>

The International Programme of Action for the Protection of the Marine Environment from Land Based Activities (IPAMA) serves as an important guide for governments.<sup>lxxx</sup> To control land-based marine pollution, this program's primary objective is national regulation.<sup>lxxxi</sup> Its application in several nations provides significant insights into the success and challenges regarding prevention of marine pollution on a worldwide scale.<sup>lxxxii</sup> Article 194 (1) of UNCLOS 1982 also obliges state party to take necessary measures to prevent and protect coastal and marine environment from land- based pollution.<sup>lxxxiii</sup> Article 207(1) of UNCLOS 1982 also obliges states to take legislative measures for the protection of coastal and marine environment from land-based sources.<sup>lxxxiv</sup>

- **Pollution from Seabed Activities**

For the purpose of collecting marine resources, state explores, and exploit seabed situated in territorial sea and continental shelf. While conducting such exploration or exploitation hazardous substance may release in the marine environment.<sup>lxxxv</sup> About 1 per cent of marine pollution is contributed by this source.<sup>lxxxvi</sup> This sort of marine pollution is known as pollution from seabed activities. Article 208 and 214 of UNCLOS 1982 explicitly deals with prevention of pollution from seabed activities.<sup>lxxxvii</sup> Additionally, UNCLOS 1982 established International

Seabed Authority (ISA) which carries the duty to organize and control seabed mining and take necessary measures to prevent marine pollution during exploration and exploitation activities.<sup>lxxviii</sup>

- **Pollution through or from the Atmosphere**

While defining marine pollution it was mentioned that UNCLOS 1982 doesn't explicitly clarify what actually constitute marine environment. But considering juristic concepts, it was agreeable that air space over the delimited water column will also be consider as marine environment. For such reason it is logical to argue that air pollution as a source of marine pollution.<sup>lxxix</sup> Example of such can be identified in acidification of ocean which mainly occurs due to exhaust emission from surface of land.<sup>lxxx</sup> International Maritime Organization (IMO) also found that ships which are engaged in international trade emits Carbon Dioxide which contributes 2.1 per cent of global greenhouse gas.<sup>lxxxii</sup> Such contribution directly effects marine environment. Article 212 of UNCLOS 1982 regulates pollution through or from the atmosphere. Article 212 (1) explicitly oblige member state for promulgating domestic legislation to control air pollution within the sovereign territory.<sup>lxxxiii</sup> The scope of Article 212 (1) is broad as it covers prohibition of all vessel and aircraft created air pollution over the national jurisdiction through legislative measures.<sup>lxxxiii</sup>

### ***Jurisprudence behind Legal Protection of Coastal and Marine Environment***

According to Bosselmann, human ability to appreciate and protect the Earth's ecological integrity is critical to our survival.<sup>lxxxiv</sup> Protection of coastal and marine environment can be considered as an element of 'earth jurisprudence'. Earth Jurisprudence simply means moving away from an anthropocentric legal system and toward rules that are more eco-centric.<sup>lxxxv</sup> The continued anthropocentric view of law and mother nature has repercussions consequence for legal thinking and the function of law in environmental challenges..<sup>lxxxvi</sup> Berry strongly argues that currently several legal and political mechanism strengthening and legitimizing the exploitation of Earth.<sup>lxxxvii</sup> To mitigate such situation Berry proposes inclusion of earth jurisprudence in domestic governance and legal mechanism.<sup>lxxxviii</sup> Another philosophical approach is worth mentioning is 'deep ecology' which encourages implementation of legal framework for the protection of coastal and marine environment. Deep ecology is a modern ecological reformer school that believes the Earth and its living beings possess immanent value

regardless of their use to human needs.<sup>lxxxix</sup> The modern approach is that every member of the earth must have the opportunity to participate in the development of world.<sup>xc</sup> Coastal and marine environment pollution debar the species of marine environment and marine space from participating in the triumph of world development. This philosophy is known as ‘wild law’. According to Cullinan,

*‘Wild laws are laws that regulate humans in a manner that creates the freedom for all members of the Earth Community to play a role in the continuing co-evolution of the planet.’<sup>xcii</sup>*

He claims that if we are to survive, we must align our legal systems to the rules of nature.<sup>xciii</sup> To secure a harmony between human and species of coastal marine environment, laws concerning the protection of these areas is indispensable.

### **Conclusion**

Exploring conceptual issues regarding coastal and marine environment is important to understand the subject matter vividly. This conceptual framework will also help to interpret every legal aspect related to coastal and marine environment. Discovering the sources of coastal and marine environment pollution is significant as such approach helps to identify the wrongdoer or polluter. As international legal instruments classify coastal and marine environment pollution in several sources and impose preventive and rehabilitative methods respectively, member states are obliged to take concern on such issues in national level. Bangladesh as a member state of UNCLOS should also consider source based marine pollution and its preventive and rehabilitative measures maintained in the international standards and rules. Finally, the conceptual understanding discussed in this chapter will assist to interpret legal framework of Bangladesh for the protection of coastal and marine environment in the following chapters.

## INTERNATIONAL LEGAL REGIME FOR THE PROTECTION OF COASTAL AND MARINE ENVIRONMENT

### *Introduction*

Seas and coasts are increasingly being exploited to offer necessities as well as commerce and entertainment.<sup>xciii</sup> Overexploited fisheries, pollution from pesticides, fertilizers, and garbage washed off land, and overdeveloped beaches are some of the outcomes.<sup>xciv</sup> Growing demand puts pressure on ocean resources and governments to act, but short-term requirements often prevent them from adopting and implementing good long-term solutions.<sup>xcv</sup> Working together to combat marine pollution is more effective than each country acting alone. The presence of an international legal commitment to protect the coastal and marine environment is cabalistic in implementing such a communal mentality. There is a substantial corpus of international law, both global and regional, devoted to the protection and preservation of the maritime environment.<sup>xcvi</sup> It outnumbers that of any other aspect of the environment, and it is backed up by a basic, widely accepted legal framework that establishes States' rights and obligations in all ocean concerns, including marine environmental protection, resource conservation, and management.<sup>xcvii</sup> Each states signatory to certain conventions dealing with the protection of coastal and marine environment are oblige to perform specific duties. Reason of which, exploration of international legal regime concerning the protection of coastal and marine environment is indispensable. This chapter will attempt to explore the above-mentioned legal regime and justify international obligation of Bangladesh to comply with such phenomenon.

### *International Legal Instruments for the Conservation of Marine Environment*

Several regional and multinational conventions covering various aspects of the maritime environment evolved in the 1960s and 1970s.<sup>xcviii</sup> The ideas and criteria established in these numerous treaties served as the foundation for the Third United Nations Conference on the Law of the Sea's negotiations of a comprehensive system for the conservation and preservation of the marine environment.<sup>xcix</sup> The United Governments Convention on the Law of the Sea (UNCLOS), which went into effect in 1982, is the most comprehensive of the ocean treaties, requiring all nations to conserve and maintain the marine environment.<sup>c</sup> The International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of



1978 relating thereto, is another important international convention regulating vessel source pollution (MARPOL).<sup>ci</sup> There are many other accords that help to reduce marine pollution from ships in one way or another.<sup>cii</sup>

- **United Nations Convention on the Law of the Sea**

The United Nations Convention on the Law of the Sea (UNCLOS) acknowledges the uses and issues of marine space are intrinsically tied and must be handled as a whole, as stated in its preamble.<sup>ciii</sup> Thus, the protection and conservation of the marine environment is central and integral aspect of the maritime legal framework drafted in UNCLOS.<sup>civ</sup> Furthermore, the Convention is the first to control all forms of marine pollution as well as various aspects of marine degradation under one umbrella.<sup>cv</sup> The UNCLOS was regarded as the "*strongest comprehensive environmental treaty in existence or expected to emerge for quite some time*" at the time of its passage.<sup>cvi</sup> It was opened for signing in 1982. The Convention's system has acquired practically universal approval since its entrance on November 16, 1994. Environmental provisions of UNCLOS are widely regarded as reflection of customary law.<sup>cvii</sup> The legal regime of UNCLOS governs all aspects of oceans and seas and establishes regulations for the management of its usage.<sup>cviii</sup> UNCLOS also provides a framework for the development of conservation and management measures for marine resources and scientific research both within a country's Exclusive Economic Zone (EEZ) and on the high seas.<sup>cix</sup> Because of its broad reach and usage over water, UNCLOS is frequently alluded to as a "constitution of the oceans."<sup>cx</sup>

The "Protection and Preservation of the Marine Environment" mentioned in Part XII of UNCLOS covers both general and obligations of state parties to prevent, mitigate, and regulate pollution. This part is the first to try to address the problem of marine pollution on a worldwide scale. It is also the first codification of the soft law concepts on marine pollution, which were defined during the United Nations Conference on the Human Environment, often known as the Stockholm Conference, in 1972.<sup>cx</sup> Part XII of the UNCLOS is significant in the evolution of international law because it is the first attempt to create a public international law framework in response to the degradation and threats to the maritime environment.

Part XII is subdivided into eleven sections, each of which outlines the obligations that States have under the commitment not to harm the marine environment.<sup>cxii</sup> UNCLOS Article 192

mandates that states preserve and defend the coastal and marine environment. Article 193 states that the marine environment is not a separate entity from a state's territorial sovereignty, and that a state can use the marine environment in accordance with its policy. Articles 192 and 193 are often recognized as expressions of customary international law regarding the scope of a State's environmental obligation toward the oceans.<sup>cxiii</sup> Every member state is liable under international law if they meet their legal commitment to protect the coastal and marine environment, according to Article 235(1). The Part XII regime clearly addresses "all causes of contamination of the marine environment," and governments are required to take all necessary steps to "avoid, mitigate, and regulate pollution of the maritime environment from any source."<sup>cxiv</sup> States are expected to adopt all essential actions, based on their capacities and using the best practicable methods at their disposal. States must avoid from interfering with other states' exercise of their rights under the 1982 Convention by "unjustifiable interference."<sup>cxv</sup> States must not respond to the problem of maritime pollution by moving harm or hazards from one area to another, or by changing the nature of pollution.<sup>cxvi</sup> Furthermore, Article 197 focuses on states' essential obligation to collaborate with other governments on a global and regional level to protect the coastal and marine environment by developing international regulations.

Member states are required to implement measures for the conservation and management of marine life resources in their EEZs under UNCLOS. These methods must evaluate the effects of harvesting target species on species that are related with or dependent on the harvested species while ensuring that living resources are not endangered by overexploitation, according to UNCLOS Article 61(2) and (4).<sup>cxvii</sup> Highly migratory species, marine mammals, and anadromous and catadromous stocks are the focus of articles 64 to 67. These articles require member states to ensure that these species are preserved and managed in their home countries as well as in other parts of the world.<sup>cxviii</sup>

UNCLOS also ensures the preservation of the high seas' life resources. According to UNCLOS, all States have the right to allow their citizens to fish on the high seas if they do not violate UNCLOS' objectives and are in compliance with Articles 63(2) and 64-67, as well as Article 116, which deals with the high seas.<sup>cxix</sup> According to Article 116, all States are required to adopt measures to safeguard the living resources of the high seas and to do so they must cooperate with one another and, where appropriate, create regional or subregional fisheries organizations to achieve this goal.<sup>cxx</sup>

- **United Nations Fish Stocks Agreement**

The United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks adopted the United Nations Fish Stocks Agreement in 1995 on August 4, 1995. It finally went into effect on December 11, 2002.<sup>cxxxi</sup> Its breadth of application extends across national boundaries.<sup>cxxii</sup> The international collaboration between the member states is a key component of this agreement. Article 7 (a) requires states to work together to take the appropriate steps to protect stock in nearby high seas. Article 8 of the convention includes a requirement for the formation of regional and sub-regional fisheries management organizations in order to ensure effective implementation. Coastal states and states fishing on the high seas are also required to take conservation measures based on the most up-to-date scientific evidence<sup>cxxiii</sup>, safeguard biodiversity<sup>cxxiv</sup>, reduce pollution<sup>cxxv</sup>, and develop and enforce effective monitoring, control, and surveillance<sup>cxxvi</sup>. The UN Fish Stocks Agreement includes enforcement provisions such as the right of authorized inspectors to board and examine fishing vessels on the high seas in an area covered by a sub-regional or regional fisheries management organization or arrangement.<sup>cxxvii</sup>

- **United Nations Convention on Biological Diversity**

The United Nations Convention on Biological Diversity (UNCBD) was signed in Rio de Janeiro, Brazil, on June 5, 1992, and went into effect on December 23, 1993.<sup>cxxviii</sup> It was established to provide an international framework for biodiversity conservation, development, and usage that is ecologically sustainable.<sup>cxxix</sup> According to Article 2, 'protected area' is defined as "a geographically delimited area that is designated, regulated, and managed to meet certain conservation objectives". It also requires member states to create a system of protected areas or regions where additional precautions must be taken to preserve biological variety.<sup>cxxx</sup> Developing national policies, plans, and programs that, among other things, reflect the values expressed in the convention are among the measures for conserving biodiversity and guaranteeing ecologically sustainable development.<sup>cxxxi</sup> Member states are also urged to integrate biodiversity conservation policies and strategies into multi-sectoral planning.<sup>cxxxii</sup> Although the UNCBD does not directly include fisheries, it does apply to all terrestrial and marine biodiversity, which ultimately includes fisheries. The convention outlines, among other things, biodiversity conservation strategies. Additionally, UNCBD includes *in-situ*, and *ex-situ* conservation measures. Certain significant difficulties are addressed by the measures indicated

for *in situ* biodiversity protection. Protected places, ecosystems, and habitats are among them. Member states are required to regulate and manage dangerous processes that have or are likely to have a negative impact on biodiversity.<sup>cxixiii</sup> Signatory members must also develop and implement methods to limit and manage the risks associated with potentially dangerous activities, such as the use and release of organisms changed by biotechnology into the environment.<sup>cxixiv</sup> The UNCBD proposes that all member states conduct actions to ensure biodiversity protection in *ex situ* situations, in addition to the *in situ* conservation measures outlined in the convention.<sup>cxixv</sup> These activities should complement the *in situ* conservation measures outlined in the treaty.

The scope of this convention includes both maritime and terrestrial areas under national authority, as well as processes and activities that occur outside of national jurisdiction.<sup>cxixvi</sup> Although the requirements of the UNCBD do not apply to areas beyond national jurisdiction in and of themselves, they do apply to countries individually in terms of national activities that may have an unfavorable impact on biodiversity wherever it is found.<sup>cxixvii</sup> The UNCBD applies to processes and actions carried out under a party's jurisdiction or control in regions beyond national jurisdiction.<sup>cxixviii</sup> As a result, member states of the UNCBD are responsible for monitoring activities under their control that have a major negative impact on high seas ecosystems. The UNCBD also emphasizes the importance of member states cooperating for biodiversity conservation and sustainable use in regions outside national control.<sup>cxixix</sup> In terms of the marine environment, the UNCBD must be implemented in accordance with states' rights and obligations under international law.<sup>cxl</sup>

- **Convention on the Protection of the Underwater Cultural Heritage**

On November 2, 2001, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) adopted the Convention on the Protection of Underwater Cultural Heritage (CPUCH).<sup>cxli</sup> The Convention becomes effective on January 2, 2009.<sup>cxlii</sup> The convention's several parts applied to submerged cultural treasures within and outside of national jurisdiction. Protecting the Area's Underwater Cultural Heritage is the responsibility of the member states.<sup>cxliii</sup> Underwater cultural heritage is defined by the CPUCH as all remnants of human existence with a cultural, historical, or archaeological character that have been partially or completely submerged for at least 100 years.<sup>cxliv</sup> Shipwrecks and other historical or cultural objects can attract species, and the Convention's conservation measures may have the extra

benefit of safeguarding the biodiversity associated with them.<sup>cxlv</sup> The preservation of *in situ* cultural assets can be used as a criterion for establishing a high-sea marine protected area.<sup>cxlvi</sup> The Convention also includes a sophisticated framework of state collaboration. Marine ecosystems are also protected when submerged cultural heritage is preserved.<sup>cxlvii</sup>

- **Convention on International Trade in Endangered Species of Wild Fauna and Flora**

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is aimed at ensuring that international trade does not jeopardize survival of wild animal and plant specimens.<sup>cxlviii</sup> The national authorities of the member states must authorize the import and export of CITES-listed species in conformity with the Convention's rules and regulations.<sup>cxlix</sup> Species are included in three Appendices, resulting in a variety of protection levels and types.<sup>cl</sup> Many species of cetaceans, marine turtles, seahorses, corals, and commercial marine fishing species such as basking sharks are among the marine listings. The movement of a species into a state from the sea, which occurs outside of national sovereignty, is referred to as "introduction from the sea."<sup>cli</sup> Any species listed in Appendix I or II that is introduced from the sea must first get a certificate from the State of Introduction's Management Authority.<sup>clii</sup> Such prohibition does not apply to species listed in Appendix II taken by ships registered in a country that is also a party to another treaty that provides protection for that species and precedes CITES.<sup>cliii</sup>

- **Convention on the Conservation of Migratory Species of Wild Animals**

The Convention on the Conservation of Migratory Species of Wild Animals (CMS or Bonn Convention) aims to protect migratory species over their entire range, including terrestrial, marine, and avian species.<sup>cliv</sup> A migratory species' range is described as all the land or aquatic locations that it visits, stays in briefly, crosses, or overflies at any point along its typical migration route.<sup>clv</sup> The Range States shall work to take a variety of conservation and restoration actions for species listed in Appendix I that are in danger of extinction.<sup>clvi</sup> Range States are encouraged to enter into international agreements in the case of migratory species in poor conditions, as listed in Appendix II.<sup>clvii</sup> The CMS establishes rules for such agreements and acts as a clearinghouse for their approval. Several marine species agreements have been reached, with some addressing the creation of protected zones as a protection tool.<sup>clviii</sup> Range States are those whose vessels are involved in high-seas fishing for protected species.<sup>clix</sup> These states must

restrict the taking of Appendix I species, according to the CMS.<sup>clx</sup> The Range State are obliged to control the impacts of actions carried out within national jurisdiction that may harm species outside of national jurisdiction.<sup>clxi</sup> Range states must protect and restore essential ecosystems, as well as prevent and remove migration barriers.<sup>clxii</sup>

- **International Convention for the Prevention of Marine Pollution from Ships (MARPOL)**

International Convention for the Prevention of Marine Pollution from Ships was adopted in 1973 and updated in 1978 by the Protocol (MARPOL).<sup>clxiii</sup> MARPOL is a set of rules designed to prevent and reduce pollution from ships, and it governs both operational and accidental discharges. It also establishes Special Areas where oil, toxic liquid chemicals, and waste from ships are subject to more stricter discharge regulations.<sup>clxiv</sup> 'Special Areas' are defined as areas where the adoption of special necessary procedures for the prevention of sea pollution is required due to technical considerations linked to their oceanographic and ecological condition, as well as their maritime traffic.<sup>clxv</sup> Except for the dumping of land-based pollutants, the convention covers all forms of marine contamination.<sup>clxvi</sup> The MARPOL Convention, which was established in 1973, has regulations aimed at avoiding and minimizing pollution from ships, including accidental and routine pollution, and now has six Annexes.<sup>clxvii</sup> MARPOL applies to ships that are authorized to fly the flag of a Party to the Convention as well as ships that are not authorized to fly the flag of a Party but operate under its jurisdiction.<sup>clxviii</sup>

According to Article 3(3) of MARPOL, any warship, naval auxiliary, or other ship owned or maintained by a State and used solely for government non-commercial service is exempt. Those ships, on the other hand, shall be subjected to appropriate measures in accordance with the convention's implementing legislation.<sup>clxix</sup> The government is required to take the appropriate steps to punish any violations of the law and legal procedures under this commitment.<sup>clxx</sup> If another State Party provides adequate information and evidence of a violation, these procedures must also apply to own flag ships.<sup>clxxi</sup> Other ships that contravene within the jurisdiction, on the other hand, must be reported to their flag state, which must provide information and evidence of the violation of the present convention's requirements to be prohibited, as well as appropriate sanctions against the ship in question, wherever the violation occurs.<sup>clxxii</sup> Furthermore, regardless of where the violations occur, the penalty must be adequate and similarly severe.<sup>clxxiii</sup> These requirements should be reflected in national

legislation for MARPOL implementation, and a marine administration is required to meet these commitments.<sup>clxxiv</sup>

In the case of oil cargoes, Annex I defines oil as petroleum in any form, including crude oil, fuel oil, sludge, oil refuse, and refined products; however, it excludes petrochemicals, which are subject to Annex II's regulations. Furthermore, the phrases "crude oil," "fuel oil," and "oily mixture" are all defined precisely. Ship types are divided into three categories: "oil tanker," "crude oil tanker," and "product tanker." In terms of discharge criteria, it is more stringent in a "special area," which is also defined as a sea area where, for recognized technical reasons related to its oceanographic and ecological condition, as well as the unique character of its traffic, special mandatory methods for preventing oil pollution of the sea are required.<sup>clxxv</sup> The Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, Gulfs area, Gulf of Aden, Antarctica, Northwest European waters, Oman area of the Arabian Sea, and Southern South African waters are recognized special areas for the purposes of Annex I.

Annex III covers standards for preventing pollution from packaged hazardous chemicals. It covers packing, marking, labeling, documentation, stowage, and quantity limits, among other things. Any material that, if introduced into the sea, poses a risk to human health, harms living resources and marine life, damages amenities, or interferes with other authorized uses of the sea is considered a "harmful substance".<sup>clxxvi</sup>

There are sewage requirements in Annex IV that apply to ships with a gross tonnage of 400 or more or that are certified to carry more than 15 people on international journeys. These ships must have a sewage treatment plant, a sewage disinfection and comminuting system, or a sewage storage tank, according to the regulations. Ship sewage discharges must be kept to a minimum. If sewage is released at a moderate rate more than 3 nautical miles from the next land, it must come from a licensed sewage treatment plant or have been comminuted and disinfected.<sup>clxxvii</sup> Ships may discharge untreated sewage beyond 12 nautical miles. Parties agree to ensure that sewage reception facilities are available at ports and terminals without causing excessive delay to ships.<sup>clxxviii</sup>

Annex V deals with the prevention of maritime pollution caused by ship rubbish. "Garbage" refers to all types of food, domestic, and operational waste generated during the ship's normal operation.<sup>clxxix</sup> All plastics, from synthetic fishing nets to plastic waste bags, are prohibited

from being dumped into the water.<sup>clxxx</sup> Dunnage, lining, and packing materials that will float must be disposed of as far away from land as possible, but not less than 25 nautical miles. Food wastes and other garbage, such as paper, rags, glass, metal, bottles, crockery, and the like, may be disposed of no less than 12 nm from the disposal of all garbage, except for food wastes.<sup>clxxxii</sup>

MARPOL Annex VI contains regulations for preventing ship-related air pollution. A record keeping book regulates the emission of ozone damaging compounds.

Above all, the Administration bears main duty for ensuring MARPOL compliance. The Administration must have the appropriate resources to administer, enforce, and assure compliance with the convention's provisions in order to fulfill this commitment.<sup>clxxxii</sup>

- **Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and 1996 Protocol**

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 also known as the London Convention, with 1996 Protocol, strives to manage and prevent all forms of marine pollution produced by the intentional discharge of wastes or other materials at sea.<sup>clxxxiii</sup> It distinguishes between materials that are forbidden from being dumped and those that require a permission.<sup>clxxxiv</sup> The characteristics of the proposed dumping location must be considered when issuing a permit. States with common interests in conserving the maritime environment in a certain geographical area are required to participate into regional agreements under the London Convention.<sup>clxxxv</sup> Parties must also work together to devise procedures for the effective application of the convention on the high seas, such as reporting dumping by ships or planes.<sup>clxxxvi</sup>

The Protocol takes a more stringent approach, prohibiting all waste dumping except for materials listed in Annex 1, such as dredged materials, sewage sludge, and fish processing wastes, as well as vessels and platforms, inert, inorganic geological material, organic materials of natural origin, and carbon dioxide streams from carbon dioxide capture processes for sequestration in sub-seabed geological formations.<sup>clxxxvii</sup> Parties must also use a precautionary approach and take appropriate preventative measures when there is reason to believe that matter introduced into the marine environment is likely to cause harm, even if there is no conclusive evidence to prove a causal relationship between inputs and their effects, when implementing the Protocol.<sup>clxxxviii</sup>



### ***Principles of Customary International Law for the Protection and Preservation of Coastal and Marine Environment***

Principles of customary international law also contribute to the legal regime concerning protection of coastal and maritime environment. Regardless of being codified in international instruments, these principles are legally enforceable and universally applicable. Only a few of them, however, are relevant to the maritime environment, and their contribution to ocean preservation is minimal.<sup>clxxxix</sup>

According to the *preventive principle*, states have a general obligation to protect the maritime environment and to undertake dangerous activities under their national authority or control with "due diligence."<sup>cxc</sup> In such instances, countries must take suitable actions that they are financially and technologically capable of.<sup>cxcii</sup> The expenses of taking preventative measures may cost substantial amount to justify taking them. Furthermore, a high level of scientific certainty and predictability of the detrimental impacts of human actions are required for the implementation of preventive interventions.<sup>cxciii</sup>

States have a general obligation not to create "*severe or considerable*" damage to the environment of other states or places beyond national jurisdiction, such as the high seas, under the principle of *sic utere tuo ut alienum non laedas*.<sup>cxciv</sup> Furthermore, the principle of 'reasonable use' forbids nations from interfering unreasonably with other states' historic freedoms in this field.<sup>cxcv</sup> Nations must not allow their citizens to discharge hazardous substances or engage in harmful fishing techniques in a way that could harm or jeopardize the interests of other countries based on these principles.<sup>cxcvi</sup> Both principles, on the other hand, are exclusively applicable in transboundary situations.<sup>cxcvii</sup> They simply establish a responsibility to compensate for environmental damage, not a positive legal duty to protect the marine environment under national sovereignty or jurisdiction.<sup>cxcviii</sup> Furthermore, under the "*principle of good neighborliness and international cooperation*" governments have a general obligation to cooperate through information sharing, consultation, and notice.<sup>cxcix</sup> However, this obligation only applies in cases of transboundary pollution and/or in emergency situations.

In general, under customary rules, only those interferences, harms, or damages that are unreasonable, substantial, appreciable, or significant must be avoided or averted, and states

have considerable latitude in setting these levels.<sup>ccxcix</sup> As a result, these principles are far too broad and generic to compel states to take meaningful steps to protect the oceans.<sup>cc</sup>

### ***Significant Judicial Decisions regarding Protection of Coastal and Marine Environment***

In *Southern Bluefin Tuna (New Zealand v Japan; Australia v Japan)* case, Australia and New Zealand claimed that the amount of southern bluefin tuna caught under the experimental fishing program by Japan could jeopardize the stock's survival and asked the International Tribunal for the Law of the Sea for interim measures to stave off Japan from executing unilateral experimental fishing of southern bluefin tuna.<sup>cci</sup> ITLOS considered the protection and preservation of the marine environment includes the conservation of the sea's life resources.<sup>ccii</sup> It also urged the parties to use "prudence and caution" in order to ensure that effective conservation measures are implemented to avoid serious harm to the stock in question.<sup>cciii</sup> The tribunal ordered the parties to make additional efforts to negotiate an agreement with other governments and fishing entities participating in southern bluefin tuna fishing in order to ensure conservation and promote the stock's optimal exploitation.<sup>cciv</sup>

In *Land Reclamation in and around the Straits of Johor (Malaysia v Singapore)*, proceeding was instituted by Malaysia in order to protect nation's rights to the marine and coastal environment, as well as the right of maritime access to its coastline.<sup>ccv</sup> ITLOS estimated negative consequences of land reclamation activities on the maritime environment and ordered Malaysia and Singapore to establish systems for exchanging information, analyzing the risks or effects of land reclamation works, and creating measures to cope with them in the affected areas.<sup>ccvi</sup>

To avoid major harm to the marine environment, Côte d'Ivoire in *Delimitation of the Maritime Boundary in the Atlantic Ocean (Ghana/Côte d'Ivoire)* requested interim measures aimed at pausing all active oil exploration and extraction operations in the disputed area.<sup>ccvii</sup> The court decided that Côte d'Ivoire had not presented sufficient evidence to back up its claims that Ghana's actions in the disputed region pose an urgent risk of serious harm to the marine environment.<sup>ccviii</sup> However, it stated that the risk of serious injury to the maritime environment is of great concern to it<sup>ccix</sup>, and that the parties should act with caution and prudence to avoid serious harm to the marine environment in the circumstances.<sup>ccx</sup> It was ordered that Ghana keep a close eye on all activities in the disputed region to ensure that substantial harm to the maritime

environment is avoided, and that the parties work together to take all necessary efforts to protect the marine environment in the disputed area.<sup>ccxi</sup>

In 2013, the SRFC, a West African fishery organization, submitted a request to ITLOS on state commitments regarding illicit, unreported, and unregulated (IUU) fishing. ITLOS based on Article 138 of *the Rules of the Tribunal* issued an advisory opinion on the topic on April 2, 2015.<sup>ccxii</sup> Article 192 of the UNCLOS, according to the tribunal, applies to all maritime zones. Following an explanation of the flag state's due diligence obligation, ITLOS illuminated that, under UNCLOS Articles 58(3), 62(4), and 192, the flag state is required to take all reasonable steps to ensure that vessels flying its flag are not engaged in IUU fishing activities within the EEZs of the SRFC's member states.<sup>ccxiii</sup> Furthermore, ITLOS ruled that the flag state must take the appropriate administrative steps to guarantee that fishing vessels flying its flag are not engaging in activities in the EEZs of the SRFC's member states that are in violation of the flag state's obligation under UNCLOS Article 192.<sup>ccxiv</sup> ITLOS envisage that conserving marine life resources is an important part of safeguarding and preserving the maritime ecosystem.<sup>ccxv</sup> It further said that, as part of its general commitment to protect and preserve the maritime environment, the flag state must take the appropriate steps to guarantee that vessels flying its flag conform with the SRFC's member states' protection and preservation measures.<sup>ccxvi</sup>

### ***International Obligation of Bangladesh for the Protection Coastal and Marine Environment***

According to Article 26 of Vienna Convention on the Law of Treaties 1969, 'Every treaty in force is binding upon the parties to it and must be performed by them in good faith.' This provision is based on the *pacta sunt servanda* premise, which is the earliest principle of internal law. To combat coastal and marine pollution, Bangladesh ratified several international instruments related to the protection and preservation of coastal and marine environment. It ratified The United Nations Convention on the Law of the Sea on 27 July 2001<sup>ccxvii</sup>; United Nations Fish Stocks Agreement on 5 November 2012<sup>ccxviii</sup>; The United Nations Convention on Biological Diversity on 3 May 1994<sup>ccxix</sup>; Convention on International Trade in Endangered Species of Wild Fauna and Flora on 20 November 1981<sup>ccxx</sup>; The Convention on the Conservation of Migratory Species of Wild Animals on 1 September 2005<sup>ccxxi</sup> and Convention on the International Maritime Organization (IMO Convention) on 27 May 1976. Additionally, this nation also ratified International Convention on Oil Pollution Preparedness; Response and

Cooperation (London, 1990); Basel Convention on the Control of Trans boundary Movements of Hazardous Wastes and their Disposal (Basel; 1989); International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Brussels, 1969) and International Convention for the Prevention of Pollution of the Sea by Oil 1973 (MARPOL).<sup>ccxxii</sup>

Ratifying all these international legal instruments places legal obligations upon Bangladesh, and Bangladesh will be held responsible if these legal instruments are not followed. The Draft Articles on the Responsibility of States for Internationally Wrongful Acts 2001 of the International Law Commission provide customary international law standards that support the above-mentioned statement. A violation of an international obligation arises when action attributed to a state equal to that State's failure to comply with its international commitments, according to the Draft Articles on State Responsibility.<sup>ccxxiii</sup> Draft Articles on State Responsibility further illuminates that every internationally unjust act or omission by a state carries responsibility for that state.<sup>ccxxiv</sup> The unwillingness to fulfill a treaty commitment falls within the veil of international wrongful acts.<sup>ccxxv</sup> As a result, Bangladesh's inability to meet international responsibilities is correctly viewed as an international wrongful act. Further Article 27 of Vienna Convention on the Law of Treaties 1969 entails that party may not use elements of its domestic law to justify its failure to comply with an international treaty.<sup>ccxxvi</sup> So the debate of 'monism or dualism' is also irrelevant to justify Bangladesh's failure to comply with international treaty obligation.

### **Conclusion**

At present more than seventy international legal instruments are firmly interconnected with the preservation and protection of the marine environment. Many are not yet in force, and of those that are, a significant number have yet to be approved by a majority of States. These legal instruments are focused mostly on ship-sourced marine oil pollution, which has been reduced to significantly low levels. The inclusion of marine ecosystem management principles is one of the most prominent characteristics of international instruments when examining their strengths and limitations. The difficulty of combating an international problem originating from sovereign states is a common phenomenon which is also noticeable in the field of coastal and marine environment preservation. In most cases, international efforts to address

environmental concerns end in either guidelines or voluntary commitments from states. Although many States' environmental consciousness is currently reflected in new national environmental legislations, much of this development occurs on an *ad hoc* basis in response to a specific environmental concern. Another common issue with enforcing environmental regulations is the financial burden. Although much of work is pending to be executed to protect and preserve the marine environment, it must be acknowledged that states bear responsibility for ensuring an eco-friendly marine environment. International legal instruments establish a set of rules, regulations, framework and standards for the preservation of the marine environment. Global approaches must triumph if the global environment is to be protected. States must standardize and implement environmental norms and rules in this regard to provide fast and adequate compensation for damages caused by maritime pollution. To optimize a sustainable result for a secure coastal and marine environment, a balance must be achieved between international standards and domestic law enforcement mechanism by every states.

## **LEGAL PROTECTION OF COASTAL AND MARINE ENVIRONMENT IN BANGLADESH**

### ***Introduction***

The Bay of Bengal is blessed with immense assets, and its usage may play a crucial role in the country's socio-economic development. As a result, the sea of Bangladesh is known as a chance to meet the objective of poverty reduction.<sup>ccxxvii</sup> However, this will not be achievable in Bangladesh until and unless environmental protection and pollution prevention are assured. Around thirty million people live on the coast of Bangladesh, directly dependent on agriculture, salt planting, forestry, and fisheries for a living.<sup>ccxxviii</sup> Unfortunately, due to coastal and marine pollution, Bangladesh's shoreline has been classified as a zone of numerous risks. Coastal and marine environments are under threat from a variety of pollutants. The coastal and marine ecosystem of Bangladesh is being seriously harmed by industrial and urban sewage and persistent organic, sediments, wastewater, oils, and heavy metal directly dumped or carried by rivers into coastal water.<sup>ccxxix</sup> Furthermore, industrialized and developed countries use Bangladesh's coastline area as a dumping ground. Ships generate a variety of pollutants and gases into the ocean, harming the biodiversity and ecosystem.<sup>ccxxx</sup> The Bay of Bengal as we

know it today is not the same as it was 400 or 500 years ago, as it has grown in strategic importance.<sup>ccxxxii</sup> The coastal area contains a diversified and productive ecosystem that is critical for human settlement, development, and survival. Bangladesh has enacted a slew of legislations and regulations aimed solely at addressing environmental issues, in response to these necessities. However, existing legislative frameworks have not been created in a consistent manner, and they are insufficient to meet current demand in the marine environment. Bangladesh desperately in need of a comprehensive and integrated marine environment legislation that covers all the aspects of maritime activities and provides an integrated approach to the conservation and improvement of marine resources and their environment.

### ***Contemporary Condition of Coastal and Marine Environment Pollution in Bangladesh***

Under the UNEP's Global Program of Action, a domestic action plan for Bangladesh termed as National Program of Action 1999 was constituted which claimed that sewage disposal, industrial waste from shipbreaking yards, agrochemicals, solid waste management, deforestation, salinity intrusion, and rapid urbanization, erosion in the coastal zone, climate change, land use change, and coastal tourism are the principle sources of coastal and marine environment pollution in the Bay of Bengal.<sup>ccxxxiii</sup> These pollution sources are causing havoc not only for the people who live near the coast, but also for the creatures living in the ocean. In the following paragraphs, a brief discussion of different sources of pollution will be presented.

- **Pollution Caused by Ship Breaking Industries and Ships**

Approximately forty shipbreaking and recycling yards are currently operating along Bangladesh's coast.<sup>ccxxxiii</sup> Despite its reputation as a successful industry in underdeveloped countries, shipbreaking poses several environmental and human health risks.<sup>ccxxxiv</sup> Various shipping industry pollutants, such as asbestos, ozone-depleting compounds, polychlorinated biphenyl, chromium, cadmium, lead, mercury, oil spill, toxic gases, and other dangerous heavy metals, have contaminated Bangladesh's coastal environment.<sup>ccxxxv</sup> Oil from ships and oil spills from foreign and local ships harm the Bay of Bengal's marine water.<sup>ccxxxvi</sup> Oil spills in the Sundarbans and surrounding sea area are causing harm to a large number of fish, shrimp, fauna and flora, and other marine life resources.<sup>ccxxxvii</sup> Shipbreaking poses a danger to both the land and marine environments, as well as public health.

- **Pollution Caused by Human Waste**

Human waste refers to the entry of substances such as synthetics, plastics, and other materials into the water, either directly or indirectly. According to the Global Program Action 2005, over 9,000 metric tons of human waste are discharged daily from the seaports of Chittagong and Khulna. This could throw the Bay of Bengal's ecosystem off kilter and obstruct sustainable development.

- **Pesticides and Toxic Chemicals Pollution**

Statistical reports reveal that the soil-based refineries at the Chittagong Sea Port discharge over 50,000 tons of waste runoffs and 6,000 tons of crude oil each year.<sup>ccxxxviii</sup> Based on 2010 International Conference on Bangladesh's Marine Environment Aspects, Bangladesh imported around 3.5 million tons of refined and crude oil of which 1800 tons of pesticides enter directly in the Bay of Bengal that year.<sup>ccxxxix</sup> According to World Casualty Statistics 2011, the Chittagong shipbreaking yards discharge around 250 kg of polychlorinated biphenyl per day.<sup>ccxli</sup> These contaminated pollutants eminently affect the marine ecosystem and biodiversity.

- **Pollution Caused Due to Tourism**

A pollution-free marine ecosystem is required for sustainable marine tourism. However, coastal tourism in Bangladesh is threatened by rising marine pollution. Tourist and tourist stores and marketplaces dump tons of empty packaging and plastic water bottles along the beach, as well as debris, corals, and seashells, into the coastal region.<sup>ccxli</sup> Coastal tourism activities have resulted in a number of issues, including overcrowding, deterioration, trash generation, and increasing demand on natural resources, all of which have severe consequences for marine resources.<sup>ccxlii</sup>

### ***Existing Legal Regime Related to The Protection and Preservation of Coastal and Marine Environment in Bangladesh***

Environmental legal protection, particularly in relation to marine and coastal ecology and the maritime sector, is a complex issue. This due to its phenomenal characteristics, international legal standard concern, economic capability and issues related to enforcement mechanism. Bangladesh lacks adequate legislation for the prevention of maritime pollution and the conservation of the marine environment. However, the following are the major environmental

and maritime laws that are relevant to coastal and marine environmental protection in some form.

- **Constitutional Obligation to Protect Coastal and Marine Environment**

The Constitution of People's Republic of Bangladesh was amended in 2011, which is popularly known as fifteenth amendment, to insert Article 18A by section 12 of Act XIV of 2011.<sup>ccxliii</sup> Article 18A deals with the protection and improvement of environment and biodiversity. This Article states 'the State shall endeavor to protect and improve the environment and to preserve and safeguard the natural resources, biodiversity, wetlands, forests and wildlife for the present and future citizens'.<sup>ccxliv</sup> Despite the fact that this Article is found in Part II of the Constitution, titled Fundamental Principles of State Policy, and lacks judicial enforcement, it is essential to Bangladeshi governance and will be used in lawmaking, as a guide to interpret the Constitution, and as the foundation of the State's and citizens' work.<sup>ccxlv</sup> The incorporation of this Article in the Constitution carries a crucial value and reaffirms the government's commitment to protecting the environment, specifically the maritime environment, against pollution.

- **Territorial Water and Maritime Zones Act 1974**

The Territorial Water and Maritime Zones Act of 1974 was Bangladesh's first piece of law aimed at determining maritime boundaries and, to some extent, preventing marine pollution.<sup>ccxlv</sup> According to section 6 of this act, the government may establish conservation zones in the sea by gazette notification for the preservation of living resources.<sup>ccxlvii</sup> The Act also gives the government the authority to take reasonable measures to prevent and regulate marine pollution, as well as to maintain the quality and biological balance of the marine environment in the high seas adjacent to territorial waters.<sup>ccxlviii</sup> Although this statute authorizes the government to monitor pollution, it fails to define what constitutes marine pollution.<sup>ccxlix</sup>

- **Territorial Waters and Maritime Zones Rules 1977**

In 1977, the Territorial Waters and Maritime Zones Rules were enacted under the Territorial Waters and Maritime Zones Act 1974.<sup>cc</sup> This rule establishes guidelines for foreign ships operating in territorial waters.<sup>ccli</sup> Section 3 lays out the factors that will be used to assess if the foreign ship has broken Bangladeshi law.<sup>cclii</sup> According to the 1977 Rules, no one is authorized to explore or exploit fisheries, mineral oil, or any other natural resources, both living and nonliving, of the economic zone or sea-bed operations without first obtaining permission from



the government or obtaining a license from a competent body.<sup>ccliii</sup> The 1977 Rule gives the government the authority to declare a protected area in the economic zone for a specific reason. The government may declare any area within the economic zone to be a reserved area in the national interest of Bangladesh for the purposes of exploitation, exploration, and economic development, as well as the production of energy from tide, wind, current, and sun, by notifying it in the official gazette.<sup>ccliv</sup>

- **Port Authority Act and Ordinances**

Article 211 of UNCLOS requires port states to establish port state control measures in the port(s). Previously there was no specific provision present for the prevention of marine pollution in the Chittagong Port Authority Ordinance, 1976, or the Mongla Port Authority (Amendment) Ordinance, 1982/1987.<sup>cclv</sup> The Port Act of 1908 establishes penalties for dumping trash or discharging oil or oily water.<sup>cclvi</sup> The insertion to Section 41 (A) of the Chittagong Port Authority Ordinance 1976, provided for a greater penalty for pollution, which is likely to be 100,000 taka. In addition, the accountable person or vessel is responsible for the clean-up costs.<sup>cclvii</sup> These laws are only limited to port areas. However, provisions of this ordinance lack enforceability due to corruption, negligence, reporting and absence of strict monitoring mechanism body. Article 226(1) of UNCLOS also gives power to the port states to refuse the release of any foreign vessel if it causes any coastal and marine environment pollution. Due to the absence of a comprehensive legal framework in the domestic level regarding the protection of marine environment, such international obligation is not being practiced by port authorities of Bangladesh.

- **Coast Guard Act 1994**

Bangladesh's Coast Guard unit was founded in 1994 by the Coast Guard Act, with the goal of providing security in the coastal area and defending the coast from any threats.<sup>cclviii</sup> One of the Coast Guard's responsibilities is to discover actions that pollute the environment in Bangladesh's marine zones and to take action to stop them.<sup>cclix</sup>

- **The Marine Fisheries Ordinance 1983**

Bangladesh's marine fishing sector has been regarded as a vital aspect of the country's economy. With 475 kinds of fish, including cartilaginous fish like sharks, skates, and rays, Bangladesh's coastal waters provide a diversified fishery resource.<sup>cclx</sup> This ordinance addresses

the management, conservation, and development of marine fisheries in Bangladesh's fishing waters, as well as a number of other issues.<sup>cclxi</sup> The Marine Fisheries Ordinance of 1983 is critical for fisheries environmental preservation. The use or attempted use of any bomb, poison, or other noxious chemical in water is prohibited under Section 26 of the Marine Fisheries Ordinance 1983.<sup>cclxii</sup> Section 28 of the ordinance authorizes the government to proclaim any region of Bangladesh fishery water as a marine reserve for the special protection of aquatic flora and fauna within, in order to conserve the coastal and marine environment.<sup>cclxiii</sup>

- **The Shipbreaking and Recycling Rules 2011**

The Hon'ble High Court Division of the Supreme Court of Bangladesh passed the Shipbreaking and Recycling Rules, 2011 in accordance with section 13 and 87 of the Factories Act, 1965.<sup>cclxiv</sup> The Supreme Court of Bangladesh's High Court Division ruled that-

*'We cannot allow highly risky and polluting business as that of ship breaking to operate on our precious and irreplaceable coastal eco-system' and 'a hazardous and polluting operation as that of ship breaking cannot continue on open beaches without proper safety of the people of the coastal area as well as protection of the eco-system.'*<sup>cclxv</sup>

Having stated such concern, the court ordered the Ship Breaking and Recycling Rules 2011 to be published. The Bangladeshi government's Ministry of Industry released the Rules on December 12, 2011, after the court ordered it. In Rule 3 of the Shipbreaking and Recycling Rules, 2011, the Ministry of Industry established the Ship Building and Ship Recycling Board (hereinafter called SBSRB), which can issue NOCs (No Objection Certificates) to facilitate LC (Letter of Credit) to import vessels for recycling.<sup>cclxvi</sup> According to Rule 9, the recycler must present documents as listed in Annexure-II, as well as documents or certificates obtained through the SBSRB, to the Port Authority in order to get permission to beach a ship.<sup>cclxvii</sup> The ship would be boarded and physically inspected at the anchorage by officials from the Shipbuilding and Ship Recycling Board and other designated members of associate departments.<sup>cclxviii</sup> Rule 13 states that if it is discovered after gaining beaching permission that the ship is not recycled and is functioning as a cargo vessel domestic or ocean, the yard owner or firm to whom beaching permission was provided will be charged with a criminal offense.<sup>cclxix</sup> Furthermore, a ship recycling plan is required, which consists of two parts: a ship recycling plan and a plan for a ship recycling facility. While cutting a ship, the shipbreaking yard must

have ample area to maneuver around. A "Gas-free and fit for hot work" certificate given by the Department of Explosives is also required to avoid mishaps involving fire, explosion, or oxygen deficit. The Environment Conservation Act 1995 (Act 1 of 1995 revised in 2010) and other associated national environmental act or law (The Shipbreaking and Recycling Rules, 2011) require ship recyclers to carefully offer environmental compliance in line with soil, water, and air.<sup>cclxx</sup> As a result, these Regulations are critical in managing Bangladesh's shipbreaking industry and protecting coastal and marine environment.

- **The Bangladesh Ship Recycling Act 2018**

Bangladesh is the world's leading shipbreaking country, despite certain severe consequences for the maritime environment.<sup>cclxxi</sup> Bangladesh's Parliament just passed this Act to implement such instruments and control the marine environment and to work as a parent law of The Shipbreaking and Recycling Rules 2011.<sup>cclxxii</sup> This act is passed to give effect to the terms of the Hong Kong International Convention for the safe and environmentally sound recycling of ships 2009.<sup>cclxxiii</sup> Section 4 of the Act mentions the creation of a zone for the ship-recycling industry, while Section 25 states that anyone who establishes a shipbreaking yard without the government's permission will be punished with imprisonment of either description for a term up to two years, or a fine of up to Taka ten to thirty lac, or both.<sup>cclxxiv</sup> The Act's Section 8 was supposed to create a new entity called the "Bangladesh Ship Recycling Board" to oversee the ship recycling business.<sup>cclxxv</sup> In view of current laws and regulations covering the collection, preservation, and management of all types of waste produced by ship reprocessing activities, the Act and the 2011 Rule stipulated that the government may provide any guideline or instructions. The government is required by law to establish the Treatment Storage and Disposal Facility (TSDF) within three years of the law's enactment for effective management of waste generated from ship recycling.<sup>cclxxvi</sup>

- **The Bangladesh Environment Conservation Act 1995**

This legislation provides an integrated approach to coastal and marine environment conservation that can be used as an effective tool. The act establishes an ecological critical region and addresses environmental harm that is either direct or indirect..<sup>cclxxvii</sup> The government of Bangladesh has designated 10465 hectares of land between Cox's Bazar to Teknaf Beach, 4916 hectares of Sonadia Island, St. Martine Island, and a 10-kilometer region around the conserved forest of the Sunderbans as ecologically critical areas under section 5 of this

act.<sup>cclxxviii</sup> If any person does any activity (pollution) which is not permitted by government to any ecologically critical area then he/she will be punished for imprisonment not exceeding 10 years or fine not exceeding 10 lac taka or both.<sup>cclxxix</sup> This initiative only helps to curb land-based marine pollution.

- **The Environment Court Act, 2010**

In 2010, the Environment Court Act was created with the goal of resolving environmental conflicts and ensuring justice. In addition to his ordinary duties, the Act allows the Joint District Judge to serve as an Environment Court.<sup>cclxxx</sup> An Environment Appellate Court, on the other hand, is constituted with a District Judge or a District Judge can be given power in addition to his regular responsibilities.<sup>cclxxxi</sup> The basic purpose of an Environment Court is to ensure a quick trial.<sup>cclxxxii</sup> As a result, an Environment Court can play a critical role in coastal and marine environmental protection.

- **Draft Bangladesh Marine Environment Conservation Act 2004**

The Department of Shipping's Draft Marine Environment Conservation Act 2004 is an attempt to stay up with the international legal regime on marine pollution.<sup>cclxxxiii</sup> The draft law, which takes a holistic approach to the problem, aims to protect the marine environment and avoid marine pollution in Bangladesh.<sup>cclxxxiv</sup> This draft Act, once passed and enacted, is supposed to apply to all cases of pollution at sea where Bangladesh waters are likely to be polluted, as well as all ships and persons associated with ships within Bangladesh waters or ships involved in acts of pollution where Bangladesh waters are likely to be polluted.<sup>cclxxxv</sup> If passed, this proposal will serve as the enabling law for MARPOL 73/74.<sup>cclxxxvi</sup> The draft Marine Environment Conservation Act also gives the government the authority to use delegated legislation to implement seven other international accords relevant to the marine environment.<sup>cclxxxvii</sup>

- **The Draft Maritime Zones Act of 2019**

This draft law allows for the upgrading and strengthening of legislative components that should be considered by a coastal state like Bangladesh. The draft Maritime Zones Act of 2019 should include some measures related to a strict and continuous monitoring mechanism in order to fulfill the coastal state's obligation of exercising due diligence, keeping in mind the fragility of the marine environment and the uncertainty associated with marine exploration and

exploitation activities.<sup>ccclxxxviii</sup> Article 208 of the 1982 UNCLOS will be satisfied by this provision. Establishing a national scientific and technological organization for exchanging and integrating maritime biodiversity information among surrounding coastal states can fulfill the functions of a monitoring mechanism like this.<sup>ccclxxxix</sup> To detect any infractions of legal restrictions and to review exploratory activities, it is important to develop a marine database and information bank.<sup>ccxc</sup> State mechanisms can use a maritime dataset to forecast the need for international cooperation and coordination in which maritime sectors, submit reports to international institutions to highlight state compliance with international law obligations, and make recommendations for future hard and soft law drafting.<sup>ccxci</sup> The draft Maritime Zones Act, on the other hand, makes no mention of such legislative or database construction requirements.

### ***Inconsistency between Bangladesh's Domestic Legal System and International Legal Standards Related to Coastal and Marine Environment Protection***

Even though Bangladesh has a variety of laws dealing to the coastal and marine environment, it has failed to implement them in consistent with international standards. Bangladesh has signed MARPOL 73/78 and all its annexes.<sup>ccxcii</sup> In the domestic arena, however, the country has not implemented any enabling legislation to give effect to the MARPOL Convention.<sup>ccxciii</sup> After signing and ratifying MARPOL and other IMO Conventions for a long time, Bangladesh has yet to establish the essential enabling domestic laws to give effect to these international legal instruments.<sup>ccxciv</sup>

The Bangladesh Environment Conservation Act 1995 allows for action to be taken against vessel-source pollution.<sup>ccxcv</sup> This regulation, however, cannot be used to implement MARPOL and other IMO marine environment conventions.<sup>ccxcvi</sup> More crucially, according to government agency responsibilities, the Department of Shipping, not the Department of Environment, is in charge of implementing IMO marine environmental treaties.<sup>ccxcvii</sup> The Bangladesh Environment Conservation Act 1995, as an umbrella law for overall environmental protection, is not ideal for including detailed rules for ship design, construction, certification, and surveying to ensure environmental compliance.<sup>ccxcviii</sup> Bangladesh, like many other countries, should have incorporated MARPOL into its marine and port-related legislation.

According to the Territorial Waters and Maritime Zones Rules 1977 (TWMZ Rules), a foreign ship's innocent passage through Bangladesh's territorial waters is considered prejudicial to the country's security or interests if it engages in willful or serious marine pollution.<sup>cccix</sup> The TWMZ Rules are primarily used to define the country's maritime zones; they are not an appropriate mechanism for implementing a highly technical convention such as MARPOL.<sup>ccc</sup> Under the authority provided by the TWMZ Rules, responsible agencies can make required regulations for MARPOL implementation.<sup>ccci</sup>

The Merchant Shipping Ordinance of 1983 is the overarching regulation that governs shipping in Bangladesh (MS Ordinance).<sup>cccii</sup> This law specifies the requirements for surveying and registering Bangladeshi ships, as well as standards for vessel seaworthiness.<sup>ccciii</sup> However, as its survey and certification methods do not reflect the relevant rules of MARPOL, the MS Ordinance is not suited to fulfill current needs.<sup>ccciv</sup>

The Coast Guard Act of 1994 authorizes the Coast Guard to intervene in Bangladesh's territorial seas, contiguous zone, conservation zone, economic zone, and continental shelf to combat pollution and illicit fishing.<sup>cccv</sup> Because Bangladesh lacks a national MARPOL implementing law, the Coast Guard is unable to take any action that would constitute MARPOL enforcement in the country.<sup>cccvi</sup>

Port-related legislation are also crucial for protecting the marine environment from pollution caused by ships.<sup>cccvii</sup> The punitive penalties of the Port Act of 1908 or the Port Ordinance, however, are insufficient. Pollution of the water or environment of the port region, according to the Chittagong Port Authority Ordinance 1976, is punishable by a fine of up to 100,000 Taka.<sup>cccviii</sup> An identical provision can be found in the Mongla Port Authority Ordinance of 1976.<sup>cccix</sup> This penalty may be effective to deter small-scale infractions, but it is insufficient to deter large-scale oil pollution.<sup>cccx</sup> The country's port-related legislations are not up to the mark of the MARPOL Convention.<sup>cccxi</sup> As some of these laws were enacted more than a century ago and have yet to be amended.<sup>cccxi</sup>

As a port and coastal state, Bangladesh's compliance and enforcement systems are relatively poor, fragmented, and uncoordinated.<sup>cccxiii</sup> At sea ports in Bangladesh, there are no reception facilities.<sup>cccxiv</sup> The authority for large-scale vessel-source pollution enforcement, legal, administrative, and judicial authorities is unclear.<sup>cccxv</sup> Despite the fact that there have been

several large-scale oil pollution accidents in Bangladesh's marine area, relevant authorities have failed to charge any foreign ships.<sup>cccxvi</sup> The Coast Guard, maritime administration, and port authorities do not work together. Even if the Coast Guard were to apprehend a ship for major oil pollution in territorial seas, it is unclear who would prosecute the ship or in which court.<sup>cccxvii</sup> The marine industry has long struggled with antiquated, unenforced laws that are inherently ambiguous.<sup>cccxviii</sup>

Bangladesh's existing rules are ambiguous, particularly in the areas of pollution prevention and civil liability for oil contamination.<sup>cccxix</sup> The means for enforcing existing environmental rules have largely failed.<sup>cccxx</sup> There is a lack of clarity and coordination across administrative and judicial agencies.<sup>cccxxi</sup> Even though Bangladesh ratified the MARPOL Convention and all of its annexes, national legislations have not been modified to reflect this international agreement.

### ***Conclusion***

When it comes to conserving Bangladesh's maritime ecosystem, there are numerous legal frameworks in place. Despite the existence of these rules and procedures, pollution of the maritime environment is a common occurrence in Bangladesh. Existing marine protection law frameworks have not been created in a uniform manner, and they are insufficient to satisfy current demand in the maritime environment. To put it another way, there is no extensive or specific domestic legislative framework in place to cover all issues of marine protection or to implement international maritime accords. Due to a lack of integrated and comprehensive marine environment laws and legislations, Bangladesh has made no major successes in terms of protecting and conserving the maritime environment, as well as avoiding and controlling marine pollution. It is high time to enact the draft Acts of 2004 and 2019 to safeguard the coastal and marine environment while also maintaining international legal standards.

## **EPILOGUE**

### ***Introduction***

The majority of this paper's discussion focused on the concept of coastal and marine environment pollution, as well as the mechanisms for preventing such contamination through

international and domestic legal regimes. The domestic legal framework for the protection of the coastal and marine environment is based on international conventions' commitments. It is critical to determine whether our domestic legislation on coastal and marine environment protection complies with international legal requirements. Using the comparative analysis mechanism, this paper will figure out the existing lacunas in domestic law compared to international standards of protection of coastal and marine pollution in this chapter. Finally, some possible recommendations will be made to improve the present national legislative framework in relation to the topic of this paper.

### ***Major Findings of this Research***

After comparing Bangladesh's existing legal framework with established international legal standards, we can come across with the following findings-

1. Bangladesh's legal framework for preventing marine pollution falls short of international standards.
2. Until to this date, Bangladesh is failing to comply with international legal obligation to protect coastal and marine environment.
3. The Draft Bangladesh Marine Environment Conservation Act 2004 and the Draft Maritime Zones Act of 2019 convey most of the international legal standards which are yet to be enacted.
4. A national scientific and technological organization for exchanging and integrating maritime biodiversity information among surrounding coastal states is missing in Bangladesh.
5. A marine database and information bank to detect any infractions of legal restrictions and to review exploratory activities is also missing in Bangladesh.
6. There is no practice of sending reports to international agencies to highlight state compliance with international legal duties relating to coastal and marine environment protection and preservation.
7. Bangladesh's collaboration with other governments on a global and regional level to protect the coastal and marine environment by developing international regulations is also insignificant.



8. Existing national legislations relating to the protection and preservation of the coastal and marine environment are not being properly implemented.
9. The institutional foundation for preventive surveillance and enforcement is inadequate.

### ***Probable Recommendation***

Bangladesh must raise public knowledge about maritime issues and encourage people to look south to the crucial maritime interests at stake. These interests encompass not only maritime security and law and order at sea, but also the exploration and exploitation of marine resources, foreign investment protection, marine scientific research, and a variety of other topics. Furthermore, Bangladesh now has a fresh opportunity for maritime jurisdiction, as well as rights and obligations, as a result of its victory over the delimitation of the maritime boundary. However, Bangladesh's marine interests and resources are now poorly managed, and its maritime efforts are poorly coordinated due lacunas of laws and absent of comprehensive legal framework. There is a lot of overlap across maritime agencies' operations, and a few sectors are completely disregarded. In the followings some probable recommendations have been made to enhance the current legal framework and acknowledge international obligations in the domestic level regarding the protection of coastal and marine environment.

1. As we discussed previously that The Draft Bangladesh Marine Environment Conservation Act 2004 and the Draft Maritime Zones Act of 2019 convey most of the international legal standards. It is high time for Bangladesh legislature to enact these acts officially and effectively.
2. Law removing the judicial immunity enjoyed by totally or partially state-owned corporations should be introduced to address this problem.<sup>cccxxii</sup> These companies could be sued by the Environment Public Authority or people under such legislation if they violate environmental laws. By removing such firms' judicial immunity, anyone will be able to sue them directly, including private persons and non-profit organizations.
3. To reduce the common sea-borne or human made marine pollution risks in the Bay of Bengal, a bilateral relationship between Bangladesh and India or Bangladesh and China can be created.<sup>cccxxiii</sup> By such action, implementation of Article 197 will be executed.
4. The primary goal of a national committee for the prevention and response to marine pollution incidents should be to supervise and implement the national contingency plan.

It should be led by the Minister of Shipping and include representatives from several key departments and organizations to guarantee a well-coordinated response effort.<sup>cccxxiv</sup> Through training courses and participation in environmental conferences, administrative and professional authorities connected to the prevention of coastal and marine pollution should be improved.<sup>cccxxv</sup>

5. Reduced coastal and marine pollution in the Bay of Bengal necessitates a concerted effort on the part of the government, NGOs, all citizens, and other state institutions to protect, secure, and maintain the marine environment.<sup>cccxxvi</sup> People should be made more aware of this issue through improved awareness efforts. Bangladesh's media and other institutions must be accelerated to educate and raise awareness about the marine environment among the country's citizens. Further law academy can play a vital role on this issue by adding course related coastal and marine environment protecting in academic curriculum and arranging seminars.

### ***Conclusion***

Acts and laws that are not widely recognized or understood by duty-bearers or concerned persons, as well as a lack of government monitoring, are all the major factors impacting maritime preservation. Furthermore, there are numerous loopholes and non-implementation of current regulations relating to marine preservation, as well as a lack of knowledge, obsolete legislation, insufficient policies, and so on. It is not an exaggeration to suggest that current laws are ineffective in providing enough support and care for the conservation of the maritime environment. Thus, existing laws and regulations must be modified immediately. In light of international responsibilities and SDGs, an integrated marine environment policy concentrating on preventing maritime pollution and conserving the marine environment should be enacted. Bangladesh's victories in a dispute settlement with Myanmar and India also provide an opportunity for Bangladesh to develop an integrated marine environment policy for sustainable coast management and the preservation of its marine resources. An integrated maritime policy is unavoidable for Bangladesh in order to conserve the marine environment, reap the benefits of the blue economy, and achieve sustainable development.

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