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THE ROLE OF BANGLADESH AS A COASTAL STATE IN PREVENTING MARINE  
PLASTIC POLLUTION FROM LAND-BASED SOURCES.

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# CHAPTER I

## INTRODUCTION: SETTING THE SCENE

### 1. Introduction

Plastic pollution is one of the most pressing environmental concerns which are most visible in developing Asian and African nations, where garbage collection systems are often inefficient or nonexistent.<sup>1</sup> Developing economies with limited industrialization recycle very little of their plastic and, thus a major portion of waste ends up in the ocean, often swept out to the sea via informal dumps and rivers.<sup>2</sup> Against this background, the effects of plastic pollution are becoming destructive for the marine environment, with at least 8 million tons of plastic ending up in our oceans every year.<sup>3</sup>

Plastic pollution is an ever-increasing phenomenon in the Bay of Bengal region.<sup>4</sup> The Bay of Bengal is located in the northeastern part of the Indian Ocean, bounded on the west and northwest by India, on the north by Bangladesh, and on the east by Myanmar and the Andaman and Nicobar Islands of India. The Bay is heavily littered with plastics and huge amounts of plastic waste are found on the shorelines, on the seabed, or suspended in the water column.<sup>5</sup> The plastic pollution problem is getting worse day by day affecting both the life of people and the marine environment of the Bay of Bengal.

Bangladesh is one of the topmost plastic polluted countries. Around 73000 tons of plastic waste end up in the sea through different rivers and some 14 million pieces of

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<sup>1</sup> Laura Parker, 'The world's plastic pollution crisis explained' (*National Geographic*, 07/06/2019) <<https://www.nationalgeographic.com/environment/article/plastic-pollution>> accessed 23/03/2021

<sup>2</sup> Woldemar d'Ambrières, 'Plastics recycling worldwide: current overview and desirable changes' *Field Actions Science Reports* *The journal of field actions* 12

<sup>3</sup> IUCN, 'Marine plastics' <<https://www.iucn.org/resources/issues-briefs/marine-plastics>> accessed 23/03/2021

<sup>4</sup> Mahmudul Islam, 'Bangladesh drowns in 8 lakh tonnes of plastic waste a year' *The Business Standard* (07/09/2019) <<https://www.tbsnews.net/environment/bangladesh-drowns-8-lakh-tones-plastic-waste-year>> accessed 23/03/21

<sup>5</sup> MM Majedul islam, 'Alarming plastic pollution in the Bay of Bengal' *The Daily Star* (10/08/2019) <<https://www.thedailystar.net/opinion/environment/news/alarming-plastic-pollution-the-bay-bengal-1784278>> accessed 23/03/2021

polythene bags are used every day only in the capital Dhaka, which often end up through rivers in the Bay of Bengal, posing serious threats to the marine environment and sea life within it.<sup>6</sup> Because of the poor management system, it is estimated that every year about 2 lakh tons of plastics enter the Bay of Bengal from Bangladesh.<sup>7</sup>

In this context, the rivers in both Bangladesh and India in the Gangetic Delta region receive and emit a considerable amount of plastic in the Bay of Bengal. The Gangetic delta region is formed mainly by the large, sediment-laden waters of the Ganges (also known as Padma)<sup>8</sup> and Brahmaputra (figure 1) rivers covering both Bangladesh and the West Bengal of India.<sup>9</sup> The three rivers of the Gangetic delta region, Ganges, Brahmaputra, and Meghan, are among the world's sixth-largest polluting rivers.<sup>10</sup> The three rivers collect plastics in their course, ended in the Bay of Bengal.<sup>11</sup> If we only consider Ganges, which flows through both Bangladesh and India, it is responsible for 0,10 – 0,17 million tons of plastic discharge per year into the ocean.<sup>12</sup> The amount is rather significant if we consider that the total amount of plastic discharge ending up into the world's oceans through rivers accounts for an estimate between 1.15 and 2.41 million tons annually.<sup>13</sup> Although the exact amount of plastic in the bay of Bengal is yet to be determined,<sup>14</sup> the Ganga-Brahmaputra region is considered a major contributor to the global marine plastic waste issue.<sup>15</sup>

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<sup>6</sup> Bangladesh drowns in 8 lakhs tones of plastic waste a year, (2019)

<sup>7</sup> Ibid

<sup>8</sup> In Bangladesh, the Ganges in known as Padma.

<sup>9</sup> The Gangetic delta region covers the coastal area of both India and Bangladesh.

<sup>10</sup> Utpal Kumar Raha, B Ramesh Kumar and Santosh Kumar Sarkar, 'Policy framework for mitigating land-based marine plastic pollution in the Gangetic Delta region of bay of Bengal-a review' 278 *Journal of Cleaner Production* 123409

<sup>11</sup> Laurent CM Lebreton and others, 'River plastic emissions to the world's oceans' 8 *Nature communications* 1

<sup>12</sup> Laurent C. M. Lebreton and others, 'River plastic emissions to the world's oceans' 8 *Nature Communications* 15611

<sup>13</sup> Ibid

<sup>14</sup> Raha, Kumar and Sarkar

<sup>15</sup> Christian Schmidt, Tobias Krauth and Stephan Wagner, 'Export of Plastic Debris by Rivers into the Sea' [*American Chemical Society*] 51 *Environmental Science & Technology* 12246

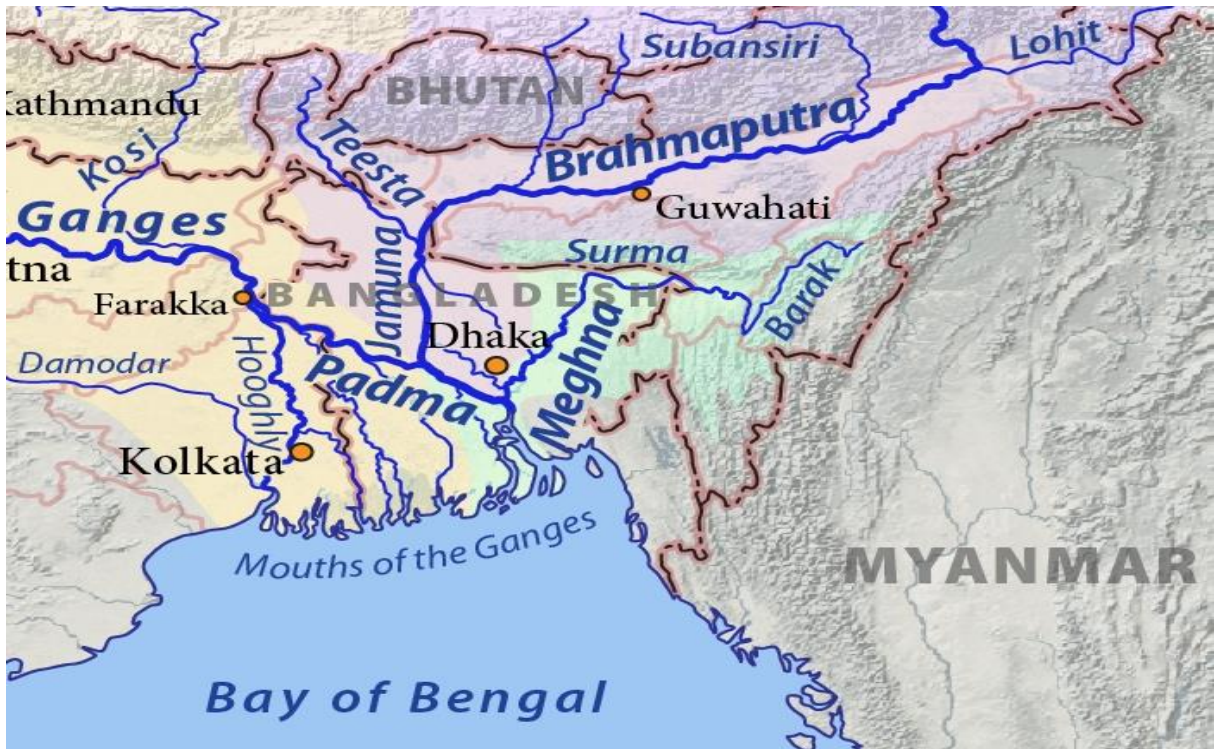


Figure 1: Bay of Bengal and Gangetic Delta Rivers<sup>16</sup>

To date, Bangladesh has adopted several domestic laws and regulations for preventing plastic pollution, and has, to a great extent, ratified international law frameworks pertinent to marine plastic pollution. As a coastal state Bangladesh thus has some rights and duties for protecting the Bay of Bengal and its marine environment. The United Nations Convention on the Law of the Sea (UNCLOS)<sup>17</sup> provides a broad framework for preventing plastic pollution in the ocean. Yet, with marine plastic pollution in the region remaining a dominant issue, the effectiveness and implementation of these laws seem to be in question.

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<sup>16</sup> <https://shortwavearchive.com/archive/4i221qbai2u3z3e6zawd8as0on8ppp>

<sup>17</sup> The United Nations Convention on the Law of the Sea (UNCLOS) is also known as UNCLOS

## **2. Research Objectives**

The effects of plastic pollution are needed to be reduced to protect the marine environment and ensure a better future for the region's communities and biodiversity. Given that about 80% of marine pollution nowadays originates from land-based sources<sup>18</sup>, this thesis mainly aims to discuss the role of Bangladesh as a coastal state in the protection of the marine environment of the Bay of Bengal and the prevention of plastic pollution from land-based sources. For addressing the main objective, this thesis will examine how international regional and domestic laws apply to Bangladesh regarding marine plastic pollution from land-based sources. Consequently, the focus will be placed both on the implementation of international law and the adoption of domestic provisions for addressing the issue of marine plastic pollution. On these premises, this thesis will seek to identify existing legal gaps in tackling the marine plastic pollution problem.

## **3. Research Questions**

Aiming to reach the goal of this project, the main research question will be addressed:

- What is the role of Bangladesh as a coastal state in the protection of the marine environment of the Bay of Bengal and the prevention of plastic pollution from land-based sources?

In answering this main question, the project will further explore the following subsequent questions:

- How international law is addressing plastic pollution from land-based sources?
- To what extent, are the regulations of UNCLOS and other international frameworks applicable to lessen the effects of plastic pollution from land-based sources and protect the marine environment in Bangladesh?

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<sup>18</sup> Golam Kibria, 'Plastic waste, plastic pollution—a threat to all nations' Project Report

- What are the existing domestic laws and regulations for protecting the Bay of Bengal from the land-based source of plastic pollution in Bangladesh?
- Is there any need for new regulation in Bangladesh to tackle the current marine plastic pollution problem?

#### **4. Methodology and Delimitation of Scope**

To reach its primary goal, this thesis will mainly use the doctrinal legal method. Accordingly, relevant materials will be collected from normative sources such as statutory texts, treaties, and general principles of international environmental law,<sup>19</sup> supported by academic literature. Focus will be placed on how international frameworks such as the United Nations Convention of the Law of the Sea, the London Dumping Convention, the Basel Convention, and others may address plastic pollution from land-based sources, and how such instruments are endorsed within Bangladeshi jurisdiction, regional agreements, and existing national laws of Bangladesh.

Addressing an environmental issue such as plastic pollution will necessitate, in addition to the analysis of the legal doctrine, the consideration of other sources presenting the factual background of plastic pollution from land-based sources. In that regard, sources describing the background of plastic pollution (environmental reports, scientific data, and other documents) will also be considered.

Yet, focusing on land-based plastic pollution, this thesis will not analyze other sources of marine plastic pollution such as pollution by ships from operations and accidental purposes, as regulated by the International Convention for the Prevention of Pollution from Ships, 1973 / 1978 (MARPOL 73 / 78). This thesis will thus exclude discussions on marine plastic pollution from sea-based sources, focusing only on the land-based marine pollution issue.

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<sup>19</sup> Mark Van Hoecke, 'Legal doctrine: Which method (s) for what kind of discipline?' in *Methodologies of legal research: Which kind of method for what kind of discipline?* (Hart Publishing 2011)



## **5. Tentative Structure of the Thesis**

Accordingly, this thesis will be organized into four chapters. The first chapter introduced the reader to the issue of marine plastic pollution in the Bay of Bengal, setting the scene for this thesis. Chapter 2 will articulate the international law framework for preventing marine plastic pollution from land-based sources, shedding also light on regional agreements and collaboration. Chapter 3 examines how international law is implemented in Bangladesh, as well as how Bangladeshi national laws may be relevant to the prevention of marine plastic pollution from land-based sources. Chapter 4 will summarize the main conclusions distilled through this study, providing recommendations for future research.

## CHAPTER II

# INTERNATIONAL LAWS FOR PREVENTING MARINE POLLUTION FROM LAND-BASED SOURCES

### 1. Introduction:

The amount of plastic in the ocean is increasing substantially. It is predicted that by the year 2025 the leakage rate will be more than doubled compared to 2010 rates.<sup>20</sup> Several steps have been adopted to prevent the plastic pollution, but these efforts have not yet been sufficient to reduce the leakage rate of plastic to the oceans.<sup>21</sup> To date several international conventions address the protection of the marine environment from various kinds of pollution, yet there is not yet a uniform or specific international legally binding agreement to tackle marine plastic pollution from land-based sources.<sup>22</sup> Although there are instruments which directly or indirectly require states to take steps for protecting the ocean from marine plastic pollution, this issue does not underlie the primary objective of the conventions.<sup>23</sup> Against this backdrop, this chapter will provide an overview of the existing international law framework applicable to plastic pollution from land-based sources. Both hard laws and soft laws instruments which are used at globally to prevent plastic pollution will be discussed below

### 2. Existing International Frameworks

#### 2.1 United Nations Convention on the Law of the Sea (UNCLOS)

UNCLOS, a framework convention, relevant to the use of the world's ocean, mentions marine pollution in different articles. The definition of marine pollution given in article 1 (4) of UNCLOS states that “pollution of the marine environment means the introduction by man,

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<sup>20</sup>Jenna R Jambeck and others, ‘Plastic waste inputs from land into the ocean’ 347 *Science* 768

<sup>21</sup> *ibid*

<sup>22</sup>UNEP, *Annual Report* (2017)

<sup>23</sup> *ibid*

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, a 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>24</sup> More precisely, UNCLOS which is also known as the constitution of the ocean<sup>25</sup> deals with the protection and preservation of the marine environment in Part XII (Articles 192 – 232). According to article 192 of UNCLOS, states have a general obligation to protect and preserve the marine environment.<sup>26</sup> Article 194 requires states to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities.<sup>27</sup> States have thus responsibilities to control the spread of pollution. States shall take measures necessary to ensure that activities under their jurisdiction or control should not the cause any damage by pollution to other states.<sup>28</sup> The reasons for taking measures can be the release of toxic, harmful, or noxious substances, especially those which are persistent, from land-based sources.<sup>29</sup>

UNCLOS also mentions about protection and preservation of marine environment from land-based sources. UNCLOS is the only treaty that provides general obligations to prevent land-based pollution globally.<sup>30</sup> For preventing pollution from the land-based sources, states shall adopt laws and regulations and here the sources include river, estuaries, pipelines and out fall structures<sup>31</sup> It is also important to mention that a state shall not adopt new rules if it is not internationally agreed and inconsistent with the recommended practice.<sup>32</sup> Article 207(4) also adds that states “shall endeavor to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources”. Overall, although UNCLOS is a comprehensive and

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<sup>24</sup> Article 1 (4) UNLCOS

<sup>25</sup> Rothwell, Donald R and Tim Stephens. *The International Law of the Sea*. Oxford: Hart Publishing, 2010.

<sup>26</sup> Article 192 UNCLOS

<sup>27</sup> Article 194 UNCLOS

<sup>28</sup> Article 194 (2)

<sup>29</sup> Article 194 (3a)

<sup>30</sup> Yoshifumi Tanaka, *The International Law of the Sea* (2 edn, Cambridge University Press 2015)

<sup>31</sup> Article 207 (1)

<sup>32</sup> Ibid

complex convention. and covers all the matter related to management and of the oceans, it does not provide any specific details on how the pollution of the oceans can be prevented. This matter depends thus on how states pursue separate or supplementary arrangements.<sup>33</sup> Therefore, under PART XIII monitoring of compliance with the obligations can be difficult.<sup>34</sup>

## **2.2 London Convention**

The 1972 Convention on the Prevention of Marine Pollution by Dumping Wastes and other Matter and its 1996 Protocol prohibits the dumping of wastes at sea. The 1972 Convention is also known as London Convention. The main aim of the London Convention is to prevent the intentional dumping of wastes at sea. However, the 1996 protocol of the convention can be interpreted broadly. Article 1 paragraph 10 of the Convention defines as ‘pollution’ “the introduction, directly or indirectly, by human activity, of wastes or other matter into the sea which results or is likely to result in such deleterious effects as harm to living resources and marine ecosystems, 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>35</sup> Moreover, article 2 describes that “Contracting Parties shall individually and collectively protect and preserve the marine environment from all sources of pollution and take effective measures, according to their scientific, technical and economic capabilities, to prevent, reduce and where practicable eliminate pollution caused by dumping or incineration at sea of wastes or other matter. Where appropriate, they shall harmonize their policies in this regard.”<sup>36</sup> With a wide interpretation of the provision, it can be understood that states are prohibited from polluting the marine environment from both marine and land-based sources. Therefore, states are required to protect and preserve the marine environment from “all sources of pollution.” Therefore, the waste washed into the sea from land by the action of wind, streams, rivers, is also included in “all sources”.

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<sup>33</sup> UNEP (n 5)

<sup>34</sup> Jeffrey S Dehner, ‘Vessel-Source Pollution and Public Vessels: Sovereign Immunity v. Compliance Implications for International Environmental Law’ 9 Emory Int’l L Rev 507

<sup>35</sup> Article 1, London Convention

<sup>36</sup> Article 2, London Convention

## 2.3 Basel Convention

The 1989 Basel Convention is an international treaty designed to reduce the movements of hazardous waste between nations, and specifically to prevent transfer of hazardous waste from developed to less developed countries. The convention aims to “protect, by strict control, human health and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes.”<sup>37</sup> All trade of hazardous wastes and other wastes with non-parties is prohibited according to article 4 of the Convention. Previously in Annex I, II and III where there is the list for materials considered hazardous or other waste, plastic was not included. Most recently plastic waste is presumed to be non-hazardous and is also included after the amendment of annex IX. If the plastic waste is found hazardous, it would fall under the A3210 category and if not then it would fall under the B3011 in accordance with the new amendment of annex II.<sup>38</sup> The Basel convention adopted the Technical Guidelines for the Identification and Environmentally Sound Management of Plastic Wastes and for their Disposal regarding plastic.<sup>39</sup> All polymer and plastic types are included in the guidelines. In plastics, several elements can be found like carbon, hydrogen, nitrogen, oxygen, chlorine, fluorine, and bromine and those which have been found hazardous can be incorporated into an organic polymer. It can overall be deduced that The Basel Convention establishes a wider duty for countries to reduce to a minimum their generation of plastic waste.<sup>40</sup> For preventing the leakage of plastic waste, article 4 of the Basel convention states that, “each Party shall take the appropriate measures to:

(a) Ensure that the generation of hazardous wastes and other wastes within it is reduced to a minimum

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<sup>37</sup> Oliver Tickell, ‘International Law and Marine Plastic Pollution-Holding Offenders Accountable’ Project Earth

<sup>38</sup> ‘Basel Convention Plastic Waste Amendments’

<<http://www.basel.int/Implementation/Plasticwaste/PlasticWasteAmendments/Overview/tabid/8426/Default.aspx>> accessed 26 July 2021

<sup>39</sup> K Raubenheimer, A McIlgorm and N Oral, ‘Combating marine plastic litter and microplastics: An assessment of the effectiveness of relevant international, regional and subregional governance strategies and approaches’

<sup>40</sup> Karen Raubenheimer and Alistair McIlgorm, ‘Can the Basel and Stockholm Conventions provide a global framework to reduce the impact of marine plastic litter?’ 96 Marine Policy 285

(b) Ensure the availability of adequate disposal facilities, for the environmentally sound management of hazardous wastes and other wastes.”

Article 4 can thus be related to marine plastic pollution from land-based sources.<sup>41</sup> These obligations are widely comparable with the provisions found under UNCLOS.<sup>42</sup> General obligations can be established but the effectiveness is in question as there are no specific details provided. Regarding any specific problem pertinent to plastic pollution, the state parties shall initiate steps through voluntary and collaborative measures as there is a limited direction given in the Basel Convention to tackle marine plastic pollution.<sup>43</sup>

## 2.4 UN Watercourses Convention

The 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses (UN Watercourses Convention) is a legally binding international agreement which provides directives for the protection of the marine environment from land-based sources of pollution. The geographical scope of the UN Watercourses convention is limited “surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus ... parts of which are situated in different States.”<sup>44</sup> Watercourse States are obligated to take all appropriate measures to prevent the causing of significant harm to other watercourses states.<sup>45</sup> Marine plastic litter and microplastics are not expressly mentioned in the convention.<sup>46</sup> But in the article 21 it is stated that the parties are required to prevent, control and reduce pollution.<sup>47</sup> This wider mandate would include marine plastic pollution.<sup>48</sup>

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<sup>41</sup> WWF Policy Paper, *Tackling Marine Plastic Pollution : It is time to begin negotiations on a new legally binding agreement* (2019)

<sup>42</sup> *ibid*

<sup>43</sup> Paper

<sup>44</sup> 1997 UN Watercourses Convention Article 2

<sup>45</sup> Article 1, UN Watercourses Convention

<sup>46</sup> Raubenheimer, McIlgorm and Oral

<sup>47</sup> Article 21, Un Watercourse Convention

<sup>48</sup> Raubenheimer, McIlgorm and Oral

## 2.5 The Convention on Biological Diversity

The Convention on Biological Diversity (CBD) applies to the conservation of biological diversity and is not a pollution-oriented instrument but can be indirectly linked to marine plastic litter and microplastics.<sup>49</sup>The parties of the Convention adopted the Aichi Biodiversity Targets to reduce the pressure on biodiversity and promote sustainable use.<sup>50</sup> In light of the Convention and the Biodiversity Targets, the state parties have also taken some decisions to minimize the threats posed by marine litter to various marine species.<sup>51</sup> The 13<sup>th</sup> Conference of the CBD parties (COP XIII/) provided voluntary practical guidance on prevention and mitigation the effect of marine plastic pollution.<sup>52</sup> The government and other international organizations are encouraged to develop and implement measures, policies and instruments to prevent the discard, disposal, loss or abandonment of any persistent, manufactured or processed solid material in the marine and coastal environment.<sup>53</sup> The parties have also taken priority actions to assess the source of microplastics and different products.<sup>54</sup>They also assess whether primary and secondary microplastics are covered by legislation and strengthen the existing legal framework, so that necessary measures can be applied, including regulatory and/or incentive measures to eliminate the production of microplastics that have adverse impacts on marine biodiversity.<sup>55</sup>

## 2.6 The Stockholm Convention

The 2001 Stockholm Convention on Persistent Organic Pollutants (Stockholm Convention) aims to protect human health and environment from persistent organic pollutants (POP). The chemicals listed under the Stockholm Conventions relevant to plastic include:

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<sup>49</sup> Ibid

<sup>50</sup> Ibid

<sup>51</sup> Ibid

<sup>52</sup> Ibid

<sup>53</sup> Ibid

<sup>54</sup> Ibid

<sup>55</sup> CBD, *Addressing impacts of marine debris and anthropogenic underwater noise on marine and coastal biodiversity* (2016), Para. 8 (f)

- i) polychlorinated biphenyls (PCBs)<sup>56</sup>, which are often detected in marine plastic litter at a high concentration due to the adhesive property of plastics,<sup>57</sup>
- ii) brominated diphenyl ethers (commercial pentaBDE and commercial octaBDE)<sup>58</sup> used as flame retardant in plastics,<sup>59</sup>
- iii) perfluorooctane sulfonic acid (PFOS),<sup>60</sup> used as an additive in plastics.<sup>61</sup>

Article 6 of the convention states that recovery, recycling, reclamation, direct reuse, or alternative uses of POPs are not permitted.

### **3. Existing Regional Instruments**

Different intergovernmental agreements as well as voluntary measures, guidelines, strategies and partnerships related to marine plastic pollution have been adopted at national, regional and global level.<sup>62</sup> It is also true that the level of implementation of policies, programmes, action plans and projects relevant to marine plastic pollution differs significantly among regions.<sup>63</sup> Moreover, not all marine states have adopted regional instruments to deal with the marine plastic problem.<sup>64</sup> This section will analyze different kinds of regional instruments in relation to Bangladesh and other regions related to marine plastic pollution.

#### **3.1 South Asian Sea Programme**

When tackling issues, such as marine plastic pollution in the Bay of Bengal, regional cooperation among states is profoundly important. In that regard, the Regional Seas

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<sup>56</sup> Listed in Annex A to the Stockholm Convention with specific exemptions and in Annex C.

<sup>57</sup> Raubenheimer, McIlgorm and Oral

<sup>58</sup> Listed in Annex A to the Stockholm Convention with specific exemptions.

<sup>59</sup> Raubenheimer, McIlgorm and Oral

<sup>60</sup> Listed in Annex B to the Stockholm Convention with acceptable purposes and specific exemptions.

<sup>61</sup> Raubenheimer, McIlgorm and Oral

<sup>62</sup> Nicole Wienrich, Laura Weiland and Sebastian Unger, 'Stronger together: The role of regional instruments in strengthening global governance of marine plastic pollution'

<sup>63</sup> Ibid

<sup>64</sup> Ibid



Conventions and Action Plans provide inter-governmental frameworks to address the degradation of the oceans and seas at a regional level.<sup>65</sup> The UN Environment Regional Seas Programme is one of the most important regional mechanisms for the conservation of the marine and coastal environment from land-based sources pollution. There are 18 Regional Sea Programmes within the UN Environment Regional Seas Programme.<sup>66</sup> Bangladesh is a member country of the South Asian Co-operative Environment Programme. (SACEP).<sup>67</sup> Moreover, it is also a member of the South Asian Sea Programme. These kinds of regional sea programmes start with an action plan outlining the strategy and the coordinated programme for the seas.<sup>68</sup> The action plan is based on regions environmental challenges as well as political and socio-economic situations.<sup>69</sup> It is supported by a strong legal framework in the form of regional conventions Although The member countries of the South Asian Sea Programme unconditionally support the programme, they have not yet adopted any Regional Convention.

### **3.2 South Asian Seas Action Plan**

The South Asian Seas Action Plan was adopted by five South Asian countries including Bangladesh, India, Maldives, Pakistan and Sri Lanka.<sup>70</sup> This initiative was taken by the Governing Council of United Nations Environment Program.<sup>71</sup> This action plan was designed to develop financial and institutional mechanisms for the protection of the marine environment from different activities which also include land-based sources of marine pollution.<sup>72</sup> The South Asian Seas Action Plan is one of the most effective regional developments for the control of land-based activities. However, the regime formation process has been very slow because of

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<sup>65</sup> Paper

<sup>66</sup> Ibid

<sup>67</sup> South Asia Co-operative Environment Programme - <http://www.sacep.org/>

<sup>68</sup> Ibid

<sup>69</sup> Ibid

<sup>70</sup> 'South Asian Seas Programme (SASP)' <<http://www.sacep.org/programmes/south-asian-seas>>

<sup>71</sup> SM Hassan, 'Land-based sources of marine pollution control in Bangladesh: a legal analysis' 7 Asia Pac J Env'tl L 69

<sup>72</sup> Ibid

the lack of political will to facilitate the construction process of the action plan.<sup>73</sup> The regional plan was also supported by some global programs and among them the most influential one was the Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities in 1995.<sup>74</sup>

### **3.3 Colombo Workshop on Land-based sources of Marine Pollution**

The Colombo Workshop on land-based sources of Marine Pollution was held in Colombo to give the effect to the GPA. In the workshop, it was suggested that the Draft Overview on the land-based sources, and the Draft regional Program of Action did not reflect the root causes of the problems regarding the Land-based sources marine pollution. For controlling the pollution very little research has been done in the South Asian Seas Region.<sup>75</sup> Land-based sources pollution have been considered as a major threat to the marine environment. In the workshop, the participants gave special attention to the land-based sources of marine pollution. They planned an integrated approach to the development of national action programs. For implementing GPA, the workshop concentrated on legal and institutional development.

### **3.4 Bamako Convention**

The African Union's 1994 Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa which is also known as Bamako Convention is modelled on the Basel convention.<sup>76</sup> The Bamako Convention adopts a broader definition of hazardous waste than the Basel Convention.<sup>77</sup> This convention characterized hazardous waste with some specific qualities

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<sup>73</sup>This action plan intends to control marine pollution from the land-based sources, but the nation actors of the plan considered it as their low priority.

<sup>74</sup> Some regional workshop was organized for facilitating the implementation of the GPA

<sup>75</sup> Hassan

<sup>76</sup> Tickell

<sup>77</sup> Ibid

which includes 9 H12 Ecotoxic Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and/or toxic effects upon biotic systems.<sup>78</sup> In relation to marine plastic pollution, it is known to be bioaccumulate both at a microscopic level, with microplastic particles being ingested by small fish and barnacles.<sup>79</sup> In the Convention the prevention of marine plastic pollution is therefore mandated at a precautionary basis.<sup>80</sup> Each party of the Convention should adopt and implement prevention and precautionary approach to pollution problem coming from the hazardous substances which may cause harm to human and environment.<sup>81</sup>

### **3.5 OSPAR Convention**

The Convention for the protection of the Marine Environment of the North-East Atlantic Ocean (OSPAR) ensures the general obligation for the contracting parties under article 2 to take all possible steps and necessary measures for preventing the marine pollution against the adverse effect of human activities.<sup>82</sup> This article forms a strong argument from a marine plastic pollution perspective, as the state parties are allowed to take any measures to prevent marine plastic pollution.<sup>83</sup> It also applies the precautionary principle, setting a low standard of proof that marine plastic pollution is damaging the ecosystem, and the polluter pays principle, forcing the polluter to pay full cost for the damage and pollution.<sup>84</sup> Moreover, the contracting parties shall take, individually and jointly, all possible steps to prevent and eliminate pollution from land-based sources.<sup>85</sup> Article 21 of OSPAR also provides for the Transboundary Pollution. Plastic has been found in the beaches of OSPAR maritime areas which amounts to 90 % of the total items found<sup>86</sup>. The plastics can be broken down into tiny plastic fragments which are

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<sup>78</sup> Article 2, Bamako Convention

<sup>79</sup> Tickell

<sup>80</sup> Ibid

<sup>81</sup> Ibid

<sup>82</sup> Article 2, OSPAR Convention

<sup>83</sup> Tickell

<sup>84</sup> Ibid

<sup>85</sup> Article 3, OSPAR Convention

<sup>86</sup> 'Marine Litter' <<https://www.ospar.org/work-areas/eiha/marine-litter>> accessed 26 July 2021

smaller than 5 mm.<sup>87</sup> OSPAR currently assesses these plastic particles along with beach litter and seabed litter as part of its monitoring and assessment programme.<sup>88</sup>

### **3.6 Cartagena Conventions**

The Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region or Cartagena Convention is a legally binding treaty which aims to govern the marine debris. The contracting parties shall take appropriate measures to prevent, reduce and control pollution of the Convention area caused by coastal disposal from the land-based source.<sup>89</sup>

### **3.7 Helsinki Convention**

The Convention on the Protection of the Marine Environment of the Baltic Sea Area or Helsinki Convention also focuses on the responsibilities of the state parties, and it also gives instruction to implement specific principles to protect the marine environment of the Baltic Sea area.<sup>90</sup> Article 1 of the convention makes it clear that the convention can be applied to land-based sources marine plastic pollution.<sup>91</sup> Pollution is defined as the “introduction by man, directly or indirectly, of substances or energy into the sea, including estuaries, which are liable to create hazards to human health, to harm living resources and marine ecosystems, to cause hindrance to legitimate uses of the sea including fishing, to impair the quality for use of sea water, and to lead to a reduction of amenities.”<sup>92</sup> Hazardous substance means “any harmful substance which due to its intrinsic properties is persistent, toxic or liable to bio-accumulate.”<sup>93</sup> Moreover, the parties to the convention can also prevent and eliminate the pollution caused by

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<sup>87</sup> Marine Litter - <https://www.ospar.org/work-areas/eiha/marine-litter>

<sup>88</sup> Ibid

<sup>89</sup> Article 7, Cartagena Convention

<sup>90</sup> Tickell

<sup>91</sup> Ibid

<sup>92</sup> Article I, Helsinki Convention

<sup>93</sup> Ibid

harmful substances from any kinds of sources.<sup>94</sup> This convention also mentions about controlling marine pollution from the land-based sources specifically from the land-based sources in article 6 of the convention. The parties can apply precautionary principle and polluter-pays principle.<sup>95</sup> The Helsinki convention is considered a strong legal instrument, consisting legal definitions, imposing specific and demanding legal obligations on its contracting parties.

The Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) previously aimed to prevent pollution of the Mediterranean Sea by dumping from ships and aircraft, but its mandate was broadened in 1995 to include the integrated management of the coastal region.<sup>96</sup> It consists of several protocols including

- i) Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources.<sup>97</sup>
- ii) Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and their Disposal (Hazardous Wastes Protocol) which is modeled on the Basel convention and works in the same way.<sup>98</sup>
- iii) The Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean which protects vulnerable wildlife and habitats were under threat from marine plastic pollution.<sup>99</sup>

For preventing marine plastic pollution, the most important protocol is the Regional Plan on Marine Litter Management in the Mediterranean of the Land-Based Sources Protocol of article

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<sup>94</sup> Article 5, Helsinki

<sup>95</sup> Article 3

<sup>96</sup> Tickell

<sup>97</sup> Ibid

<sup>98</sup> Ibid

<sup>99</sup> Ibid

15.<sup>100</sup> Barcelona is thus the only binding legal instrument that specifically targets marine plastic pollution from land-based sources.<sup>101</sup>

### **3.8 Kuwait Protocol**

The 1990 Protocol for the Protection of the Marine Environment Against Pollution from land-based sources is applicable only in the region shared by Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates for protecting the marine environment. The preamble of the protocol clearly indicates that this covers not only the prevention of marine plastic pollution but also pollution from land-based sources.<sup>102</sup> The definition of pollution given in the Kuwait Convention clearly includes plastic waste.<sup>103</sup> Marine pollution is defined as “ the introduction by man, directly or indirectly, of substances or energy into the marine environment resulting or likely to result in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea and reduction of amenities;”<sup>104</sup> In the Protocol, the most important element is article XIII,<sup>105</sup> which empowers the member states to enforce laws for prompt and adequate compensation or other relief of damage caused by pollution of the marine environment.

### **3.9 Bucharest Convention**

The Convention on the Protection of the Black Sea Against Pollution obliges the contracting parties to prevent, reduce, and control pollution in the Black Sea aiming to protect and preserve the marine environment, marine biodiversity, and living resources. This Convention prohibits the marine plastic pollution from land-based sources in article II that makes clear that “any substances or energy which results or is likely to result deleterious effect to living resources and marine life, hazard to human health” will be considered as pollution of the marine environment. The parties of this Convention are also having the power to take

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<sup>100</sup> Ibid

<sup>101</sup> Ibid

<sup>102</sup> Ibid

<sup>103</sup> Ibid

<sup>104</sup> Article I (a), Kuwait Convention

<sup>105</sup> Tickell

necessary steps to prevent pollution in the Black Sea from land-based sources<sup>106</sup> by hazardous substances and matter.<sup>107</sup>

### **3.10 Tehran Convention**

The Framework Convention for the Protection of the Marine Environment of the Caspian Sea or Tehran convention aims to protect The Framework Convention for the Protection of the Marine Environment of the Caspian Sea.<sup>108</sup> In the convention both precautionary principle and polluter pays principle are mentioned.<sup>109</sup> Article 7 of the convention specifically deals with the pollution from the land-based sources. The state parties shall take all appropriate measures to prevent, reduce and control pollution of the Caspian Sea from land-based source and shall also co-operate in the development of protocols to this Convention prescribing additional measures for prevention, reduction, and control of pollution of the Caspian Sea from land-based sources.<sup>110</sup>

The Protocol of the Protection of the Caspian Sea Against Pollution from the Land-based sources and Activities to The Framework Convention for the Protection of the Marine Environment of the Caspian Sea, which is also known as Moscow Protocol contains many useful provisions in the fight against marine plastic pollution.<sup>111</sup> However, two states parties has not ratified it so it is not in force yet.<sup>112</sup>

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<sup>106</sup> Article 4, the Protocol on Protection of the Black Sea Marine Environment against Pollution from Land Based Source

<sup>107</sup> Listed in Annex I of the Protocol on Protection of the Black Sea Marine Environment against Pollution from Land Based Source

<sup>108</sup> Article 2, Tehran Convention

<sup>109</sup> Article 5, Tehran Convention

<sup>110</sup> Article 7, Tehran Convention

<sup>111</sup> Paper

<sup>112</sup> Ibid

### **3.11 Abidjan Convention**

The Convention for the Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention) covers the marine environment, coastal zones, and related inland waters falling under the jurisdiction of the States of the West and Central African Region which have become Contracting Parties to the Convention. The convention lists several sources of marine pollution which require control: pollution from ships, dumping, land-based sources, exploration, and exploitation of the seabed, and pollution from or through the atmosphere.

Article 7 of the convention specifically discusses land-based sources. Article 7 states that The Contracting Parties shall take all appropriate measures to prevent, reduce, combat, and control pollution in the Convention area caused by discharges from rivers, estuaries, coastal establishments and outfalls, coastal dumping, or emanating from any other sources on their territories.<sup>113</sup>

## **4 Global strategies and partnerships**

### **4.1 The GPA and the Global Partnership on Marine Litter (GPML)**

The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was set up in 1995 and aims at fostering collaboration and coordination among states on the prevention of marine pollution from land-based sources.<sup>114</sup> At present, it is the only intergovernmental mechanism completely dedicated to this issue.<sup>115</sup> The GPA should be able to give action plan for preventing marine pollution from land-based sources.<sup>116</sup> Plastic waste is included in both the “litter” and “sewage” category by GPA.<sup>117</sup> In 2012, at the third intergovernmental review meeting, the delegates adopted the Manila Declaration on the Implementation of the Global Programme of Action for the Protection of the

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<sup>113</sup> Article 7, Abidjan Convention

<sup>114</sup> Paper

<sup>115</sup> UNEP

<sup>116</sup> Paper

<sup>117</sup> The GPA lists nine categories of marine degradation.



Marine Environment from Land-based Activities.<sup>118</sup> The Manila declaration recommended the initiation of a Global Partnership on Marine Litter (GPML).<sup>119</sup> As the GPA especially focus on the land-based sources of marine litter, so it can play an efficacious role in implementing targeted action to tackle the issue of marine plastic pollution.<sup>120</sup> But two decades have been passed after its establishment but nothing considerable is yet to be done.<sup>121</sup>

#### **4.2 The Honolulu Strategy**

The Honolulu Strategy is a framework for a comprehensive and global collaborative effort to minimize the ecological, human health, and economic impact of marine debris.<sup>122</sup> The goals and strategies are taken by this framework apply to the whole world. The Honolulu commitment was adopted at the Fifth International Marine Debris Conference in 2011.<sup>123</sup> The Honolulu Strategy aims to connect marine litter programs and to foster collaboration among stakeholders by sharing lessons learned and best practices.<sup>124</sup>

#### **4.3 G7 and G20 action plans**

In 2015, the group agreed on the “Action Plan to Combat Marine Litter” under the German presidency of G7.<sup>125</sup> The action plan includes nine overarching principles and various actions to address land-based sources of marine litter.<sup>126</sup> In 2017, the G20 also concurred which adopted an Action Plan on Marine litter with a commitment to take action to prevent and reduce

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<sup>118</sup> Paper

<sup>119</sup> It was launched at the UN Conference on Sustainable Development in Rio de Janeiro in June 2012.

<sup>120</sup> Paper

<sup>121</sup> Ibid

<sup>122</sup> Seba Shevealy, Kitty Courtney and John E Parks, ‘The Honolulu Strategy: A global framework for prevention and management of marine debris’

<sup>123</sup> See <https://5imdc.wordpress.com/about/commitment/>.

<sup>124</sup> Shevealy, Courtney and Parks

<sup>125</sup> Paper

<sup>126</sup> Ibid

marine litter of all kinds (including single-use plastics and micro-plastics).<sup>127</sup> In this Action Plan, particular attention was given to land-based sources.

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<sup>127</sup> Ibid

## CHAPTER III

### EXISTING BANGLADESHI LAWS TO PREVENT MARINE PLASTIC POLLUTION FROM THE LAND-BASED SOURCES

#### 1. Introduction:

Plastic pollution is one of the main causes of environmental degradation in Bangladesh. Bangladesh, as a coastal state, has been long now trying to deal with environmental pollution issues both on land and sea, however, the increase of plastic waste in the state has been an ongoing reality. In 1988 Bangladesh faced an unprecedented situation of a high flood where more than 50% of the country`s area was submerged affecting around 45 million people and snatching away over 2000 deaths.<sup>128</sup> The reason behind this incident was the clog of plastic bag litter in the city area. The flood had a devastating effect on the environment, destroying homes and posed a serious risk to human health.<sup>129</sup> The government took strict actions against plastic pollution in response to the flood. The Department of Environment of the Ministry of Environment and Forests in Bangladesh, together with non-governmental organizations (NGOs) started campaigns against single-use of plastics.<sup>130</sup> During that period, only an insubstantial amount of plastic waste was thrown into dustbins which amount to only 10-15% of the 9.3 million plastics, and the rest was dumped into drainage and sewage lines, causing blockages.<sup>131</sup> In response to this issue, in 2002 the government of Bangladesh introduced a ban on single-use plastics.<sup>132</sup>

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<sup>128</sup> Hugh Brammer, ‘Floods in Bangladesh: geographical background to the 1987 and 1988 floods’ Geographical journal 12

<sup>129</sup> Chrispin Petro Kapinga and Shing Hin Chung, ‘Marine plastic pollution in South Asia’ Development Papers 20

<sup>130</sup> Ibid

<sup>131</sup> ECOSPEAR., ‘ “Bangladesh: World Leader in Banning Plastic Bags” ’ (2018) <<https://ecospearbd.com/bangladesh-world-leader-in-banning-plastic-bags/>>

<sup>132</sup> Kapinga and Chung

In a densely populated area like Bangladesh the main reasons for plastic pollution are littering, waste disposal, and plastic bag usage.<sup>133</sup> Bangladesh has ratified various international conventions and adopted some laws and regulations to stop plastic pollution from different sources. In this chapter, I will describe those laws and articulate the framework specifically devoted to preventing pollution from land-based sources.

## **2. Land-based marine plastic pollution in the Bay of Bengal Region**

Land-based sources are the primary sources of marine pollution in the Bay of Bengal.<sup>134</sup> The Bay of Bengal region comprises 450 million people<sup>135</sup> and it is a rich source of marine organisms. The South Asian region has a considerable contribution to marine pollution, with 90% of the world's marine plastics originating from eight rivers in Asia.<sup>136</sup> The rivers in Bangladesh and India in the Gangetic delta region receive and emit a large amount of plastic to the Bay of Bengal.<sup>137</sup> The Gangetic delta region is formed mainly by the large, sediment-laden waters of the Ganges (also known as Padma)<sup>138</sup> and Brahmaputra rivers covering both Bangladesh and the West Bengal of India.<sup>139</sup> A huge amount of plastic waste reaches the Bay of Bengal through the three main rivers, Ganges, Brahmaputra, and Meghna.<sup>140</sup> In Bangladesh, most rivers are filled with pollutants which are affecting the balance to the marine and human environment, while the Ganges-Brahmaputra-Meghna of the Gangetic delta region discharges approximately 3017170 tons of plastic every year.<sup>141</sup> Consequently, there are nowadays various pollutants originating from land-based sources in the Bay of Bengal region such as arsenic

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<sup>133</sup> *ibid*

<sup>134</sup> Raha, Kumar and Sarkar

<sup>135</sup> Elayaperumal Vivekanandan, Rudolf Hermes and Chris O'Brien, 'Climate change effects in the Bay of Bengal Large Marine Ecosystem' 17 *Environmental Development* 46

<sup>136</sup> Schmidt, Krauth and Wagner

<sup>137</sup> Priscilla Jebaraj, '70% towns along Ganga let out garbage directly into the river: study' *The Hindu* (12 January) <<https://www.thehindu.com/sci-tech/energy-and-environment/70-towns-along-ganga-let-out-garbage-directly-into-the-river/article25981284.ece>> accessed 18/08/21

<sup>138</sup> In Bangladesh, the Ganges is known as Padma.

<sup>139</sup> The Gangetic delta region covers the coastal area of both India and Bangladesh.

<sup>140</sup> Lebreton and others

<sup>141</sup> Schmidt, Krauth and Wagner

contamination in groundwater, toxic pollutants in shrimp and fish flesh and untreated sewage, etc.<sup>142</sup> For preventing plastic pollution in the Gangetic delta region, the government of Bangladesh has enforced waste management mechanisms, yet plastic pollution is still an issue seriously affecting the Bay of Bengal.

### **3. Implementation of International Law in Bangladesh**

Bangladesh has ratified some important international conventions. Agenda 21 was signed by Bangladesh in 1994, whereas the Stockholm Declaration of 1972 was signed in 2007. Bangladesh is also earnestly involved in United Nations Conference on Environment and Development (UNCED) and Rio Declaration.<sup>143</sup> International cooperation plays thus a pivotal role in effective control of land-based sources of plastic pollution. There are some instruments like the 1995 Montreal Guidelines, and the Global Programme of Action 1995, which were adopted for the specific implementation of land-based sources of pollution tools because of the available requirement to control it as mentioned in the UNCLOS.<sup>144</sup> As for Bangladesh, the state has not directly implemented any convention in its national laws for controlling pollution from land-based sources.

Bangladesh is a signatory state of the Basel Convention which was ratified on April 01, 1993.<sup>145</sup> The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal is the most comprehensive global environmental agreement on Hazardous Wastes and their disposals. Plastic is being classified under the “other wastes” category of coverage of the Basel Convention. Bangladesh has taken some steps in Hazardous wastes under Basel Convention. Hazardous waste is defined in the Bangladesh Environment

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<sup>142</sup> Raha, Kumar and Sarkar

<sup>143</sup> MZ Ashraful, ‘Application of the Principles of International Environmental Law in the domestic legal System of Bangladesh: A Critical Study on the legal framework and the position of judiciary’ 19 IOSR Journal Of Humanities And Social Science 18

<sup>144</sup> Md Wahidul Alam, Xu Xiangmin and Raiyan Ahamed, ‘Protecting the marine and coastal water from land-based sources of pollution in the northern Bay of Bengal: a legal analysis for implement comprehensive act’ Environmental Challenges 100154

<sup>145</sup> Ministry of Environment and Forest Government of the People’s Republic of Bangladesh, *Bangladesh Country Position on Basel Convention* (2007)

Conservation Act, 1997.<sup>146</sup> It have also banned import of all sorts of waste in the Import Policy Order.<sup>147</sup>

#### 4. UNCLOS and Bangladesh

The oceans can be regarded as the most important resource on this planet as the coastal states can get benefits from the oceans in various ways.<sup>148</sup> As a coastal state, Bangladesh has a 720-kilometer coastline.<sup>149</sup> The coastal zone of Bangladesh covers an area of 47,201 sq km<sup>2</sup> which covers 32% of the country, being the landmass of 19 districts and around 35 million people live in the coastal zone amounting to 29% of the whole population.<sup>150</sup>

Bangladesh first enacted laws for establishing its maritime zones in the Bay of Bengal Region in 1974.<sup>151</sup> This act is known as Territorial Waters & Maritime Zones Act 1974 and was adopted pursuant to Article 143(3) of the Constitution.<sup>152</sup> Bangladesh ratified UNCLOS in 2001.<sup>153</sup> According to UNCLOS, the sovereignty of a coastal state extends to the area beyond its land territory and internal waters which are known as territorial sea, measured from baseline, the low water line of a low tide elevation.<sup>154</sup> The limit of the territorial sea should be not more than 12 nautical miles.<sup>155</sup> In the territorial sea, a state can exercise exclusive sovereignty. Littoral states are entitled to enjoy sovereign rights within 200 nautical miles of Exclusive Economic Zone (EEZ), from the baseline from which the territorial sea is measured.<sup>156</sup> Beyond that, there is continental shelf which includes the seabed and subsoil of the submarine areas that

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<sup>146</sup> Ibid

<sup>147</sup> Ibid

<sup>148</sup> Abu Syed Muhammad Belal, 'Maritime Boundary of Bangladesh: Is Our Sea Lost' Bangladesh Institute of Peace and Security Studies

<sup>149</sup> Ibid

<sup>150</sup> Hafez Ahmad, 'Bangladesh coastal zone management status and future trends' 22 Journal of Coastal Zone Management 1

<sup>151</sup> Belal

<sup>152</sup> Ibid

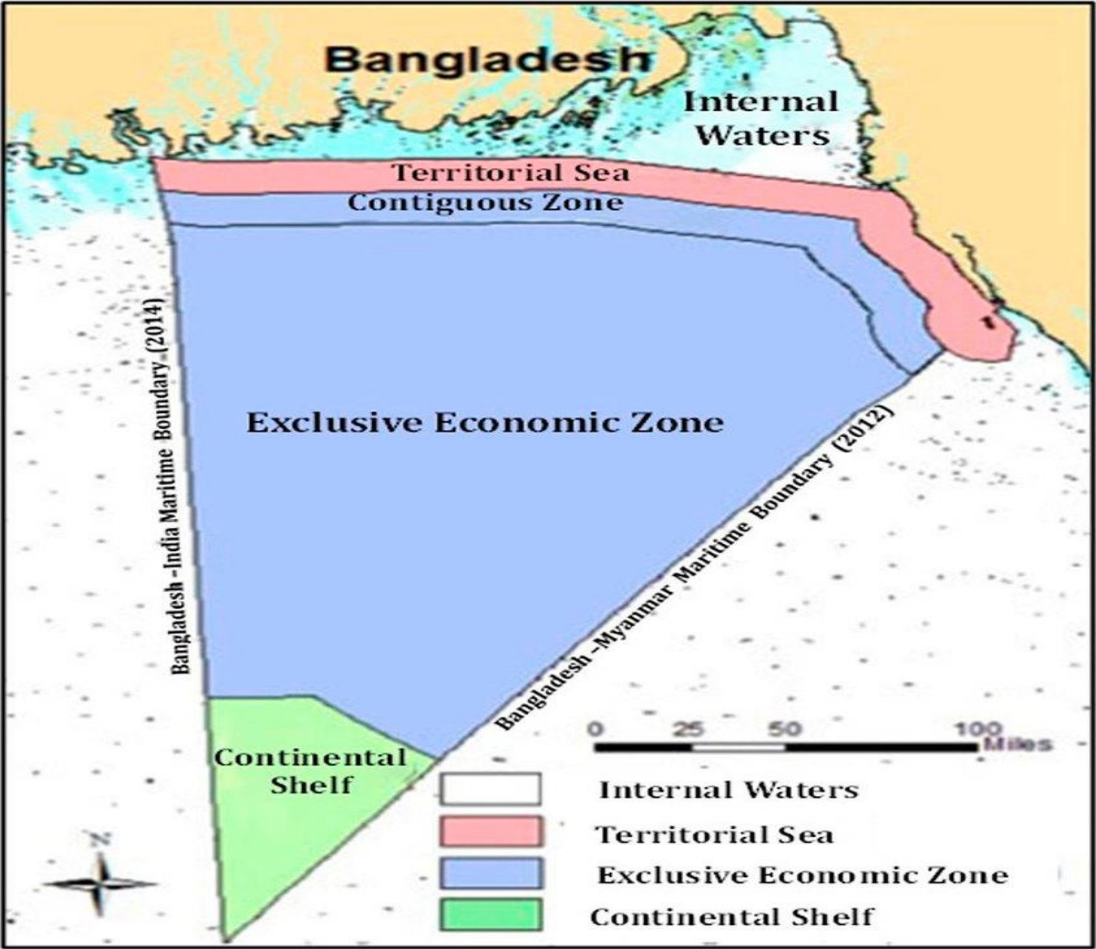
<sup>153</sup> [https://www.un.org/depts/los/reference\\_files/chronological\\_lists\\_of\\_ratifications.htm](https://www.un.org/depts/los/reference_files/chronological_lists_of_ratifications.htm)

<sup>154</sup> Article 2(1), UNCLOS

<sup>155</sup> Article 3, UNCLOS

<sup>156</sup> Belal

extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.<sup>157</sup> The coastal marine areas of Bangladesh in the Bay of Bengal are divided into three zones territorial waters of 12 nautical miles, another 200nm of EEZ and 350 nm of sea bed, continental shelf from Bangladesh baseline.<sup>158</sup>



**Figure:** Maritime area of Bangladesh (MoFA, 2014c).<sup>159</sup>

<sup>157</sup> Article 76(1), UNCLOS

<sup>158</sup> Belal

<sup>159</sup> Major opportunities of blue economy development in Bangladesh - Scientific Figure on ResearchGate. Available from: [https://www.researchgate.net/figure/Maritime-area-of-Bangladesh-MoFA-2014c\\_fig1\\_319857406](https://www.researchgate.net/figure/Maritime-area-of-Bangladesh-MoFA-2014c_fig1_319857406) [accessed 31 Aug, 2021]

According to UNCLOS, Bangladesh as a coastal state has obligations to protect the marine environment that stem both from the provisions referring to its maritime zones and the general obligation to protect the environment according to part XII of the UNCLOS. Thus, a coastal state has the strongest control to legislate environment protection in the territorial sea.<sup>160</sup> Within its EEZ Bangladesh has sovereign rights to conserve and manage of living and non-living resources according to article 56.<sup>161</sup> It can also determine the allowable catch of the marine living resources.<sup>162</sup> So for protecting the marine resources and environment, a state can take necessary steps in EEZ. In the high seas Bangladesh or other coastal states may not pass laws for conservation.<sup>163</sup> In the high seas area, the freedom of fishing is the most essential thing for conservation.<sup>164</sup> To solve the ambiguity, article 116 declares that freedom fishing to be subject to states' other treaty obligations. Consequently, if a state is a member of one or more regional fishery treaties as well of UNCLOS, then the state should follow the obligations to protect the marine environment adopted by the organizations while exercising freedom of fishing. Moreover, a state has duty to cooperate in the conservation and management resources in the high seas. Plastic pollution can seriously affect the fishing resources so the coastal state can adopt rules for protecting and conserving the marine environment.

According to UNCLOS, Bangladesh has also the general obligation to protect the marine environment in accordance with Part XII.<sup>165</sup> According to article 193, Bangladesh can exercise sovereign rights to exploit its natural resources but in accordance with its duty to protect and preserve the marine environment.<sup>166</sup> Furthermore, for preventing pollution from land-based sources Bangladesh can adopt laws and regulations by considering internationally agreed rules, standard and recommended practices, and procedures.<sup>167</sup> However, till now Bangladesh has no efficacious policy regarding marine pollution control from land-based sources.<sup>168</sup> Bangladesh is

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<sup>160</sup> Howard S Schiffman, 'International Law and the Protection of the Marine Environment' 1 Int Sustain Dev Law 306

<sup>161</sup> Article 56, UNCLOS

<sup>162</sup> Article 61, UNCLOS

<sup>163</sup> Schiffman

<sup>164</sup> Ibid

<sup>165</sup> Article 192, UNCLOS

<sup>166</sup> Article 193, UNCLOS

<sup>167</sup> Article 207, UNCLOS

<sup>168</sup> Alam, Xiangmin and Ahamed



also empowered to adopt laws and regulations to prevent, control, and reduce the pollution of marine plastic pollution from land-based sources.<sup>169</sup>

## **5. Analyzing National Laws of Bangladesh**

Bangladesh has ratified most of the international conventions, but they are yet to adopt laws to comply with the international commitments.<sup>170</sup> Therefore Bangladesh has no comprehensive rules or laws to prevent the marine pollution.<sup>171</sup> Concerning the marine pollution Bangladesh adopted 1974 Territorial Waters and Maritime Zones Act (TWMZ) to maintain ecological balance in the Bay of Bengal region and section eight of the act implies that the government may initiate to make comprehensive rules.<sup>172</sup> Many authors also suggest that Bangladesh should enact a comprehensive rule for controlling the land-based sources pollution. In this section I will analyze national laws of Bangladesh and try to find out if they can be implemented for preventing land-based sources plastic pollution.

### **5.1 Territorial Waters and Maritime Zones Act 1974**

This act provides for the adoption of comprehensive rules for preventing pollution. Yet, there are some drawbacks in its provisions: although it empowers government to take steps to prevent marine pollution, there is no specific definition for what marine pollution encompasses.<sup>173</sup> For maintaining the productivity of living resources, the government can establish conservation zones and it take conservation measures to protect the living resources of the sea from indiscriminate exploitation, depletion, or destruction.<sup>174</sup> Another crucial downside of the act is that the punishment for willful marine pollution lasts only for one year.<sup>175</sup>

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<sup>169</sup> Article 207, UNCLOS

<sup>170</sup> Alam, Xiangmin and Ahamed

<sup>171</sup> Ibid

<sup>172</sup> Ibid

<sup>173</sup> Ibid

<sup>174</sup> Section 6 Territorial Waters and Maritime Zones Act 1974

<sup>175</sup> Alam, Xiangmin and Ahamed

It may be enough to prevent only small-scale marine pollution but not sufficient for the major offence.<sup>176</sup>

## **5.2 The 1995 Environment Conservation Act and the 1997 Bangladesh Environment Conservation Rules**

The first specific law to prevent pollution of the environment in Bangladesh was the Environment Pollution Control Ordinance, adopted in 1977. However, in that law the focus was more on control rather than conservation so that a new law was adopted in 1995 which is known as the Environment Conservation Act 1995. The rules of the act can be implemented by the subsequent act known as the Bangladesh Environment Conservation Rules 1997. There are two agencies which are liable for different purposes for the conservation of the environment: The Department of Environment (DoE) which is responsible for implementing legal compliments, and the Ministry of Environment and Forests (MoEF) which oversees overall management of the country's environment and ecosystems. As provided by the 1995 Environment Conservation Act, environment conservation is defined as “the quantitative and qualitative improvement of different components of environment and prevention of degradation of their standard in this act”.<sup>177</sup> This act also gives power to the Director of General (DG) who is the head of the Department of Environment. The Director-General has general powers to deal with environmental issues and management of resources for implementing the 1995 act.

This act also empowers the government to declare any area as ecologically critical area if there is evidence that the area is in environmentally critical situation or threatened to be in such situation.<sup>178</sup> Currently 13 places are declared as ecologically critical areas in Bangladesh namely the Sundarbans, Cox's Bazar, Saint Martin's Island and Sonadia Island, Tanguar Haor, Hakaluki Haor, Marjat Baor, Gulshan-Baridhara Lake and Dhaka's four rivers – Buriganga, Shitalakkhya, Turag and Balu.<sup>179</sup> Therefore, the government has the power to save the

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<sup>176</sup> Ibid

<sup>177</sup> Article 2(f), The Bangladesh Environment Conservation Act 1995

<sup>178</sup> Article 5

<sup>179</sup> UA Oikya, 'Bangladesh Environment Conservation Act 1995: An Analysis & Review' Bangladesh Journal of Legal Studies

ecosystem in this areas from degradation. There is no area limitation for selecting the designated area as ecologically critical, and it can even be applied in a specific area? where the plastics are contributing to marine environmental pollution.

Moreover, ban can be imposed also on certain activities in the ecologically critical areas such as, felling or extracting trees; hunting and poaching of wild animals; catching or collection of snails, coral, turtles, and other creatures; any activities that may pollute soil, water, air and or create noise pollution; and any other activity that may be harmful for fish and aquatic life.<sup>180</sup> The Director General (DG) is also empowered to provide the Environmental Clearance Certificate (ECA).<sup>181</sup> No industrial establishment can be set up without obtaining the ECA from the DG.<sup>182</sup> In general, the industrial units and projects are divided into four categories such as Green, Orange A, Orange B and Red. Environmental Clearance can be given to the industrial units and projects which are in the green category.<sup>183</sup> For the other categories, at first the clearance may be given for the location and then the environmental clearance.<sup>184</sup> The polluter pays principle (PPP) is also incorporated in the act. According to article 7, if any person causes harm to any individual or group, he/she may be directed to pay fine by the DG. However, the only drawback of the provision is that there is no detailed procedure given for calculating the environmental damage in the act of 1995 or rules of 1997.

This act has also provided operational definitions of ecosystem. If the Director-General is convinced that any activities are causing damage to the ecosystems either directly or indirectly, he may order or direct the concerned person to take corrective measures for it.<sup>185</sup> There has been an amendment of this act in 2002 where ban on production, use and marketing of all kinds of polythene shopping bags was incorporated in the act.<sup>186</sup> The government already banned single use plastic throughout the country before, but with the 1995 amendment of the act, it was officially incorporated within its provisions.

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<sup>180</sup> Ibid

<sup>181</sup> Section 12, The Environment Conservation Act 1995

<sup>182</sup> Ibid

<sup>183</sup> Rule 7, The Environment Conservation Rules, 1997

<sup>184</sup> Ibid

<sup>185</sup> Oikya

<sup>186</sup> Ibid

The 1995 Environment Conservation Act does not specifically mention about marine plastic pollution. It does not also mention anything on how to prevent pollution from the land-based sources. This law gives us a general view on how to protect the environment. For preventing the marine pollution from the land-based sources, this law can be viewed on a broader scale. There are certain provisions of the law which provide enormous power to the DG of the Department of the Environment. Therefore, the DG can take steps against any activities which are contributing to plastic pollution.

### **5.3 The Environment Court Act 2000**

The act of 1995 has potentials to control pollution from different sources, however the ambiguity of its text/provisions made it unimplemented for a long time.<sup>187</sup> Therefore to make this law judicially enforceable, a new law was adopted by the Parliament of Bangladesh known as The Environment Court Act 2000. Below, I am going to examine some notable provisions of the act.

One of the main purposes of this law is to implement the Environment Conservation Act of 1995. There are several crimes / related to environment pollution already mentioned in the Environment Conservation Act 1995 but there is no procedure, or nothing mentioned about in which court, the cases should be tried. Therefore, the adoption of the act paved the way to solve several issues related to procedural matter. According to the act, the government shall establish one or more environmental courts in each division<sup>188</sup> of Bangladesh.<sup>189</sup> The act has conferred more powers on the courts which is very important to overrule any decision that has been taken without following any proper procedure.<sup>190</sup> The court may allow for filing an application by one of the parties related to the specific case if it finds that the Department of Environment has failed to take actions within 60 days from the receipt of the complaint.<sup>191</sup> The Environment Court possesses various powers which also includes imposing fine for those

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<sup>187</sup> Syed Rizwana Hasan, 'Application and Reform Needs of the Environmental Laws in Bangladesh' 9 Bangladesh Journal of Law 85

<sup>188</sup> Currently there are nine divisions in Bangladesh.

<sup>189</sup> Section 4, The Environment Court Act 2000

<sup>190</sup> Hasan

<sup>191</sup> Section 5 (3) The Environment Court Act 2000

affected by the specific offence.<sup>192</sup> The environment court seems to have some limitations also. Moreover, if any individual wants to file a suit in the specific court, he / she can only do it after getting a written report from the person who oversees the inquiry of the specific project, and this person would be authorized by Director General of the Department of Environment.<sup>193</sup>

It is profoundly important not to forget the spirit of creating of such court. The environment court system would need more support wide activism to fulfilling the purpose it has been created. For ensuring the environmental legal activism, these issues need to be considered.<sup>194</sup> As in most cases the victims of environmental degradation are poor and deprived, it is our duty to ensure a proper implementation of all the procedures.

#### **5.4 The Marine Fisheries Ordinance 1983**

Marine plastic pollution is not only affecting the environment but also the fishing resources in the sea. For conserving the living resources the marine environment should also be taken care of from the pollution caused by plastic litter. The government may declare any specific fishing area reserved with a view to preserving the aquatic flora and fauna and to protect and preserve the natural breeding grounds and habitats of aquatic life.

#### **6. Conclusory Remarks:**

Plastic pollution is impacting seriously the Bay of Bengal. Land-based sources of plastic pollution have a disastrous effect on the marine and coastal area. In addition, it is also destroying the balance of the ecosystem in the Bay of Bengal. From the discussion, it is very much clear that Bangladesh has not adopted any specific rules to prevent marine pollution from the land-based sources in the Bay of Bengal Region. Therefore, it is time to adopt specific and comprehensive laws to prevent plastic pollution from land-based sources.

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<sup>192</sup> Section 9 The Environment Court Act 2000

<sup>193</sup> Hasan

<sup>194</sup> Ibid

## **CHAPTER IV**

### **CONCLUSIONS: CURRENT GAPS AND FUTURE TRAJECTORIES**

This thesis sought to cover two phases of discussion on plastic pollution governance in the Bay of Bengal: the implementation of UNCLOS and other international frameworks to lessen the effects of plastic pollution from land-based sources and protect the marine environment in Bangladesh, ii) existing domestic laws and regulations for protecting the Bay of Bengal from the land-based source of plastic pollution in Bangladesh,

As regard to the first issue, there are indeed several international frameworks like UNCLOS, the London Dumping Convention, the Basel Convention, and others for addressing marine plastic pollution from land-based sources. The UNCLOS which is known as a constitution for the oceans addressed the issue in article 207, 210 and PART XII and there are some general obligations for the states to prevent the pollution from land-based sources. However, the UNCLOS and other international agreements does not provide detailed and direct provisions for curving out the plastic pollution especially from the land-based source.

There are few regional agreements which try to address this issue in a more direct example. However, regional agreements do not include all countries. There is no specific global framework for addressing marine plastic pollution from land-based sources. As a result, it is becoming profoundly difficult for the states to coordinate among themselves for identifying the issues related to the source of the problem. So time has come for the initiation of a global agreement for addressing the problem. Cooperation among the countries is also important for solving this issue. This is such an issue which cannot be controlled without the efforts of every concerned state.

Furthermore, as to the implementation of UNCLOS and other international frameworks by Bangladesh, it has ratified major international conventions/agreements regarding plastic pollution. However, till now it has not enforced any specific legislation in implementation of

relevant international law. Bangladesh is also part of the South Asian Seas Programme, a part of the United Nations Environment Programme, and acknowledges the marine plastic pollution problem from land-based sources. Plastic pollution is not only affecting the marine environment of the Bay of Bengal but also creating impediments for developing Bangladesh. Therefore, Bangladesh needs to implement international instruments by adopting specific laws which can prevent marine plastic pollution.

As for the question regarding existing domestic laws on marine plastic pollution prevention from land-based sources, Bangladesh has adopted some laws like the Environment Conservation Act of 1995, the Environment Conservation Rules of 1997, and others. No expressive direction though can be found in these laws for preventing the growth of plastic in the marine environment. In relation to the regional agreement, Bangladesh is a part of the South Asian Seas Action Plan. The action plan has not played an effective role due to various reasons.

Currently, there are no comprehensive laws for the prevention of marine plastic pollution from land-based sources in Bangladesh. The present laws cannot provide total protection against pollution. Bangladesh has taken some initiatives rather than controlling the land-based sources of marine pollution directly. The Bay of Bengal itself is a source full of natural resources, on which the life and survival of many communities depend. Therefore, it is our duty to keep the Bay of Bengal safe from any kind of danger. Plastic is posing a great threat to the balance of the Bay of Bengal ecosystem. The living resources of the Bay of Bengal are also suffering from this problem. It is time to formulate a new structure to implement specific laws or fighting the problem.

In conclusion, Bangladesh needs to adopt laws and regulations which can be used to prevent the plastic pollution from land-based sources because the existing laws are not enough to fight the problem. The laws which are now in force in Bangladesh regarding the environment protection gives only general obligation to protect and preserve the environment. The government should take action plans and policy guidelines for the implementation of the new national legislation for the prevention of marine plastic pollution from the land-based sources. In this case the Department of Environment can play crucial role. It can create a specific institution which will specifically deals with the marine pollution. Bangladesh has signed several international conventions or agreements but nothing has been implemented yet.

Therefore, Bangladesh can use those international conventions or agreements as a guide for enacting and implementing new law for the prevention of the marine plastic pollution from the land-based sources. Bangladesh may also adopt regional agreements with the neighboring countries to tackle the problem.



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