

# Marine Plastic Pollution Handling Based on International and Indonesian Law to Support Sustainable Development Goals

Aryuni Yuliantiningsih, Ade Maman Suherman, Baginda Khalid Hidayat Jati

Faculty of Law, Universitas Jenderal Soedirman, Indonesia

Email: aryuni.yuliantiningsih@unsoed.ac.id



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## ABSTRACT

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Due to the increasing level of marine plastic pollution, the handling to preserve and protect the sea is urgently needed. Accordingly, this study discusses about the handling of marine plastic pollution based on international and Indonesian law. The normative juridical research method with a statute and analytical approach was used to analyze the secondary data descriptively. Based on the analysis, it was known that the prevention and handling of marine plastic pollution have not been specifically regulated in international law, both in hard law and soft law. Yet, there was a UNEA Resolution 4/15 of 2022 promoting the formation of international agreements to handle plastic pollution. Meanwhile, in Indonesian law, the handling of marine plastic pollution is generally regulated in the Law of the Sea. Specifically, it was regulated in Presidential Regulation No. 2018 on Marine Debris Management which is complemented by a National Plan of Action from 2018-2025 to reduce up to 70% of plastic debris in the sea. Efforts to prevent and handle marine plastic pollution at international and national levels are in line with the 14<sup>th</sup> SDGs target to protect the sea from pollution.

## Introduction

Marine pollution is a global issue that is of concern to the international community. Sources of marine pollution are varied, including dumping, exploration and exploitation, pollution from ships (Sea-Based Sources of Pollution), and pollution from land (Land-Based Sources of Pollution/LBSP). In this case, plastic waste makes up 80% of all marine pollution.<sup>1</sup> Plastic waste is a major environmental problem both at national and international levels and has become a major threat to marine and coastal biodiversity. Each year, around 8 million metric tons of plastic waste end up in the sea causing disruption of marine ecosystems. Plastic waste can decompose in hundreds of years and decompose into micro plastics particles even longer. Without a significant action, plastic will likely outweigh all fish in the sea. By 2025, it is estimated that the ratio of plastic waste to fish in the sea is 1:3. According to Jambeck, there are around 275 million metric tons of plastic waste in 192 coastal countries. Of the 275 million metric tons of plastic waste, 2.7 to 4.8 million metric tons of plastic waste enter the sea resulting on threat to more than 800 species.<sup>2</sup>

Marine plastic pollution also has a negative impact on the country's economy, especially in the fields of fisheries, tourism, etc. As stated previously, plastic waste makes

<sup>1</sup> Daniela Pantusa, Alessandra Saponieri, Giuseppe Roberto Tomasicchio. "Assessment of coastal vulnerability to land-based sources of pollution and its application in Apulia, Italy". *Science of The Total Environment*. Vol. 886 (2023): 163754

<sup>2</sup> Chanidia A Rahmayani, Chanidia A., and Aminah Aminah. "Efektivitas Pengendalian Sampah Plastik Untuk Mendukung Kelestarian Lingkungan Hidup Di Kota Semarang." *Jurnal Pembangunan Hukum Indonesia*. Vol.3, no. 1 (2021): 18-33

up 80% of all marine pollution, but it cannot be proven as the mass of plastic waste ended in the sea is not clearly stated.<sup>3</sup> Marine plastic pollution is a widespread problem threatening various aspects, including marine species health, human health, food safety and quality as well as coastal tourism, and contributing to climate change.<sup>4</sup>

Accordingly, in order to protect their territory, States need to work together to prevent and deal with pollution. One of the ways that can be done is by creating international agreements. Basically, there is an international agreement named the United Nations Convention on the Law of the Sea (UNCLOS) adopted in 1982. Chapter XII of UNCLOS describes the protection and preservation of the marine environment. Then, Article 193 states that “countries have the sovereign right to exploit their natural resources pursuant to their national environmental policies and in accordance with their duty to protect and preserve the marine environment.” The threat of marine plastic pollution is felt in the East Asian Seas (EAS). The EAS region itself consists of sixteen countries, namely ten ASEAN countries, Australia, China, India, Japan, Republic of Korea, and New Zealand. In recent decades, these sixteen countries have experienced significant economic growth, but have not cared about the impact of the growth on their marine environment. As results, the marine environment in the EAS region have become the most polluted marine by plastic waste<sup>5</sup>. In 2010, six countries of the EAS region are even included in the ten countries contributing the most marine plastic debris in the world, namely China 1.32 to 3.53 mmt, Indonesia 0.48 to 1.29 mmt, Philippines 0.28 to 0.75 mmt, Vietnam 0.28 to 0.73 mmt, Thailand 0.15 to 0.41 mmt, and Malaysia 0.14 to 0.37 mmt.<sup>6</sup>

Indonesia is an archipelagic country in which its oceans are wider than the mainland. According to the United Nations, there are around eight million metric tons of plastic waste end in the sea each year. Indonesia itself produces around 3.2 million metric tons of plastic waste and nearly 1.3 million metric tons of plastic waste end in the sea. Hence, Indonesia is ranked the second country contributing the most marine plastic debris in the world.<sup>7</sup> According to the data published by the Ministry of Environment and Forestry (KLHK), in 2020, Indonesia’s oceans have been polluted by around 1.772.7 g/m<sup>2</sup> with the most common type of waste found was plastic waste (627.80 g/m<sup>2</sup>). It means that 35.4% of the total waste in the Indonesian seas are plastic waste.<sup>8</sup>

The plastic waste contains a number of pollutants which can then affect the coastal and marine ecosystems. Some of these waste mixes in seawater, some sinks to the seabed and concentrates in sediments, and some penetrates into the body tissues of marine biota organisms, including squid, phytoplankton, fish, shrimp, seaweed, shellfish, etc.<sup>9</sup> The real

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<sup>3</sup> Gledys Deyana Wahyudin, Arie Afriansyah. “Penanggulangan Pencemaran Sampah Plastik Di Laut Berdasarkan Hukum Internasional”. *Jurnal Ius Kajian Hukum dan Keadilan*. Vol.8 Issue 3 (Desember 2020): p. 531

<sup>4</sup> Maine B. Tekman, et al, “Impacts of Plastic Pollution in the Oceans on Marine Species”, WWF Germany, Berlin, 221 pp. ISBN 978-3-946211-46-4

<sup>5</sup> Sapto Hermawan, Wida Astuti. “Analysing several ASEAN countries’ policy for combating marine plastic litter”. *Environmental Law Review*, Vol. 23.1.(2021): 9-22

<sup>6</sup> Jenns.R. Jambeck. ”Plastic Waste Inputs from Land into the Ocean”. *Science Journal*, Vol. 347, 6223.(2015): 768-771.

<sup>7</sup> Maskun, Hanim Kamaruddin, Farida Pattitingi, Hasbi Assidiq, Siti Nurhaliza Bachril, and Nurul Habaib Al Mukarramah. “Plastic Waste Management in Indonesia: Current Legal Approaches and Future Perspectives.” *Hasanuddin Law Review* 9, no. 1 (2023): 106-125

<sup>8</sup> Sapto Hermawan, Winarno Budyatmojo. “Implementasi Demokrasi Lingkungan Hidup sebagai Upaya Mengurangi Timbulan Sampah Plastik di Lautan Indonesia”. *Undang: Jurnal Hukum*. Vol. 5 No. 1 (2022): 181-206

<sup>9</sup> Ni Made Nia Bunga Surya Dewi. “Studi Literatur Dampak Mikroplastik Terhadap Lingkungan”. *Jurnal Sosial Sains dan Teknologi*. Vol. 2 , No. 2, (2022): 239-250.

impacts of this marine plastic pollution include damage to coral reefs, seagrass beds, mangrove ecosystems, and the lives of other marine biota.<sup>10</sup> Protecting the marine environment is one of the goals in the Sustainable Development Goals (SDGs). The SDGs is a global action plan agreed upon by world leaders, including Indonesia, to end poverty, to reduce inequality, and to protect the environment. The SDGs consist of 17 Goals and 169 targets expected to be achieved by 2030.<sup>11</sup> Goal 14 target 14.1 of the SDGs states that by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution. The problem of plastic waste in the sea has become the responsibility of the State at the regional, national, and international levels. Hence, this paper aims to describe the handling of marine plastic pollution based on international and Indonesian law to support sustainable development goals.

## Research Methods

This study applied a normative juridical research method with a statute and analytical approach. The statute approach was used to review all laws and regulations related to marine pollution and handling. The secondary data consisting of primary legal materials, i.e. conventions, declarations and legislation, and secondary legal materials, i.e. books and journals, were used in this study. The data obtained were then analyzed with descriptive qualitative method and presented systematically.<sup>12</sup>

## Results and Discussion

### 1. *Marine Pollution and Marine Plastic Debris*

Pollution of the marine environment is generally defined in UNCLOS 1982 stating that “pollution of the marine environment 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 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.”

Moreover, UNCLOS 1982 has described the limits of the territorial sea as well as the sources of pollution, including pollution from land-based activities, pollution from seabed activities, pollution from activities in the Area, pollution by dumping, pollution from vessels, and pollution from or through the atmosphere.<sup>13</sup> One of pollution from land-based activities is plastic waste. Plastic waste has spread to pollute water sources, such as rivers and lakes. Globally, no less than 1.000 rivers serve as plastic waste containers, and are a major contributor to marine pollution. It is estimated that around 0.8 to 2.7 million metric tons of plastic waste in inland waters enter the sea. According to the UNEP Report, plastic waste has become the largest, most dangerous, and most persistent piece of marine debris, and makes 85% of the total waste in the sea. Marine debris is waste

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<sup>10</sup> United Nations Environment Programme. 2011. *UNEP Year Book 2011: Emerging Issues in Our Global Environment*. Nairobi (KE): UNEP. p.79.

<sup>11</sup> Michaela Dina Stanescu, “Goals for a Sustainable Development and the Environmental Protection”, *Romanian Journal of Ecology & Environmental Chemistry*, Vol. 4 No.2, (2022): 49-59

<sup>12</sup> Faizal Kurniawan, Peter Mahmud Marzuki, Erni Agustin, Rizky Amalia. “Unsur Kerugian Dalam Unjustified Enrichment Untuk Mewujudkan Keadilan Korektif (Corrective Justice)”. *Yuridika: Volume 33 No.1.(2018)*: 19-40

<sup>13</sup> Dewa Gede Sudika Mangku, “Perlindungan Dan Pelestarian Lingkungan Laut Menurut Hukum Internasional”. *Tanjungpura Law Journal*, Vol. 4, Issue 2, (2020): 150-161

originating from land and coasts flowing into the sea or waste originating from sea-based activities. Meanwhile, plastic waste is waste containing polymer compounds. The plastic waste has become the largest component of marine debris. Marine debris is found in all marine habitats, from densely populated areas to remote locations and from coasts and shallow water areas to deep ocean trenches. The density of marine debris varies from location to location, influenced by human activities, water or weather conditions, structure of the earth's surface, entry points, and physical characteristics of the debris.

Plastic waste in the oceans is known as marine plastic debris. Marine plastic debris can originate from land-based activities or sea-based activities, but land-based activities makes 80% of it.<sup>14</sup> Marine plastic debris is the most dominant type of pollutant in the sea where 60% to 90% of marine debris consists of different plastic polymers.<sup>15</sup> The reason for the large amount of plastic debris in the sea is because the photo degradation process occurs very slowly in the cold sea.<sup>16</sup>

Plastic waste can have far-reaching ecological and economic impacts in freshwater and marine environment. One of the negative impacts of the large amounts of plastic on marine organisms is that the marine organisms can be entangled by plastic or, if they accidentally eat it, the plastic can create blockages in their digestive. Marine plastic pollution can be divided into two categories, namely: 1) debris from land-based activities which are the most significant source of marine plastic debris. Such marine plastic waste generally comes from waterfront areas, including riverbanks, docks, beaches, marinas, harbors, and piers. Moreover, the sources of marine plastic debris itself include storm water dumping, combined sewer overflow, littering, solid waste disposal, landfilling, and industrial activities; and 2) debris from sea-based activities which can flow into the marine environment from a variety of sources, including commercial fishing, trading, researching, military vessels, offshore oil and gas platforms, as well as exploration.<sup>17</sup>

## **2. Marine Plastic Debris Handling Based on International Law**

International law is a set of rules and norms governing the relations between States with each other, States with non-State international law subjects, and non-State international law subjects with each other. One of international law is international agreements. International agreements itself can be in the form of soft law and hard law. Soft law means that international agreements do not have binding legal force, while hard law means that international agreements have binding legal force (or legally binding).<sup>18</sup> The handling of marine plastic debris is also regulated in both soft law and hard law. The soft law includes the followings.

### **a. The Stockholm Declaration on the Human Environment 1972**

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<sup>14</sup> Giuseppe Bonanno , Martina Orlando-Bonaca. "Marine plastics: What risks and policies exist for seagrass ecosystems in the Plasticene?". *Marine Pollution Bulletin* 158 (2020) 111425.1-7

<sup>15</sup> Giulia Carlini, Konstantin Kleine. "Advancing the international regulation of plastic pollution beyond the United Nations Environment Assembly resolution on marine litter and microplastics". *RECIEL*. 27(2018): 234-244

<sup>16</sup> Tayler S. Hebner, Melissa A. Maurer-Jones. "Characterizing microplastic size and morphology of photodegraded polymers placed in simulated moving water conditions". *Environmental Science: Processes & Impacts*. 22 (2020): 398-407

<sup>17</sup> Zhen Jing and Sutikno. "Legal Issues On Indonesian Marine Plastic Debrislegal Issues On Indonesian Marine Plastic Debris Pollution". *Indonesian Law Review*, Vol. 10.1, (2020): 80-92

<sup>18</sup> Anggi Anggraeni Kusumoningtyas. "Nexus Pengawasan Siber Sebagai Instrumen Keamanan Nasional Dan Relevansinya Dengan Demokrasi: Perbandingan Beberapa Negara". *Jurnal Adhikari* 2, no. 3 (January 29, 2023): 416-433

In general, environmental protection has been regulated since 1972 with the issuance of the Stockholm Declaration on the Human Environment in 1972. This declaration is not a direct source of international law, but is a soft law to be obeyed by the international community to form the future law.<sup>19</sup> The Declaration consists of 26 principles in which the 7<sup>th</sup> principle of the Declaration regulates marine pollution, including plastic waste in the sea. It states that “States should take all possible steps to prevent pollution of the seas by substances that are 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.” Moreover, in 1981, the East Asian countries agreed on an Action Plan called “The Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the East Asian Seas Region.” At the same time, the Food and Agriculture Organization (FAO) countries have agreed on the FAO Code of Conduct for Responsible Fisheries that also regulates the handling of plastic waste, particularly in relation to fishing ports which must provide waste management and a ban on plastic disposal at the sea.<sup>20</sup>

b. Rio de Janeiro Declaration 1992

This declaration was made as a controller of disputes between developed and developing countries regarding the duties and responsibilities on environmental management. This declaration is important for environmental management as it contains the principle of sustainable development.<sup>21</sup> The principle of sustainable development refers to the development that meets the needs of the present without compromising the ability of future generations to meet their own needs.<sup>22</sup> This concept was then confirmed as a principle of international law. The Rio de Janeiro Declaration stipulates 10 other principles of international law to implement the principle of sustainable development, namely sovereignty and state responsibility, intergenerational equity, intra-generational equity, integral development process, common but differentiated principle, preventive action, good neighborliness, precautionary principle, cost internalization, and democracy and public participation.<sup>23</sup>

c. Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources 1985

In 1985, the United Nations Environment Program (UNEP) has developed a legal framework to provide guidelines for the protection of the marine environment against pollution from land-based sources called the “Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources.” The guidelines describe appropriate actions to “prevent, reduce and control” pollution from land-based sources that each country should take. The actions include

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<sup>19</sup> Peter Lawrence, Daryl Wong. “Soft law in the Paris Climate Agreement: Strength or weakness?”. *RECIEL*. 26 (2017): 276–286.

<sup>20</sup> Andreas Pramudianto, “The Role of International Law and National Law in Handling Marine Plastic Litter”. *Lampung Journal of International Law*, Vol 1, Issue 2, (2020): 41-49

<sup>21</sup> Yen Dan Tong , Thi Dan Xuan Huynh, Tien Dung Khong. “Understanding the role of informal sector for sustainable development of municipal solid waste management system: A case study in Vietnam”. *Waste Management* 124 (2021): 118–127

<sup>22</sup> Bakti, M. Saleh Sjafei. “Paradigma Penerapan Prinsip Pembangunan Berkelanjutan Di Indonesia”. *Syah Kuala Law Journal* : Vol.4.2 (2020): 173-184

<sup>23</sup> Athya. “Harmonisasi Hukum Internasional Pada Prinsip Common But Differentiated Responsibility Dalam Hukum Nasional”. *Jurnal Kosmik Hukum* Vol. 19 No. 1 (2019): 62-75.

environmental assessment, monitoring and data management, notification, information exchange and consultation, scientific and technical cooperation, assistance to developing countries, development of control strategies, etc. The urgency of preventing the degradation of the marine environment from land-based activities is emphasized in Agenda 21 of 1992 Chapter 17 which highlights the precautionary approach as a comprehensive approach in protecting the marine environment.<sup>24</sup>

In order to protect the sea from pollution, including plastic waste pollution, UNEP has developed the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities in 1995. Furthermore, after changing the UNEP Governing Council (UNEP GC) to the United Nations Environmental Assembly (UNEA), it has issued several resolutions including Resolution UNEP/EA.1/Res.6 on marine plastic debris and micro plastics; Resolution UNEP/EA.2/Res.11 on marine plastic litter and micro plastics; Resolution UNEP/EA.3/Res.7 on marine litter and micro plastics; Resolution UNEP/EA.4/RES.6 on marine plastic litter and micro plastics; and Resolution UNEP/EA.4/RES.9 on addressing single-use plastic products pollution.

Regarding the implementation of the principles of sustainable development, in 2015, UN Member States agreed on an agenda to continue the Millennium Development Goals (MDGs) called the Sustainable Development Goals (SDGs). The SDGs is a new development framework that accommodates all changes occurred after the 2015-MDGs. It is a reference document for countries all around the world in development sector for the next 15 years until 2030. In contrast to the MDGs which were more bureaucratic and technocratic in nature, the preparation of SDGs was more inclusive involving many parties including Civil Society Organizations (CSOs).<sup>25</sup> The 2030 Agenda and SDGs have been confirmed through Goal 11, Goal 12, and Goal 14 which are relevant to plastic pollution issue. The SDGs targets related to plastic waste in the sea include, by 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.<sup>26</sup> International agreements in the form of soft law do not have binding legal force, but countries comply with these regulations through moral strength and good faith. Soft law does not create any legal obligations, but puts pressure on the State in such a way so that the State cannot ignore it.<sup>27</sup>

Next, in terms of hard law, the protection of the marine environment is regulated in UNCLOS. The United Nations Convention on the Law of the Sea III was signed in Montego Bay Jamaica on December 10, 1982, and has been in force since November 16, 1994. The UNCLOS and its additional rules contained in 9 annexes and several supporting resolutions are the result of the efforts of the international

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<sup>24</sup> Ruby Moynihan, Bjørn-Oliver Magsig. "The role of international regimes and courts in clarifying prevention of harm in freshwater and marine environmental protection". *Int Environ Agreements* 20, (2020): 649-666

<sup>25</sup> Wahyuningsih, Millenium Development Goals (MDGS) dan Sustainable Development Goals (SDGS) Dalam Kesejahteraan Sosial". *Jurnal Bisnis dan Manajemen*, Vol. 11, No. 3 (2017): 380-392

<sup>26</sup> Ibrahim Issifu, U. Rashid Sumaila. "A Review of the Production, Recycling and Management of Marine Plastic Pollution". *J. Mar. Sci. Eng.* 8.11.945 (2020): 1-16.

<sup>27</sup> Junaiding. "Soft Law Sebagai Sumber Hukum K Gai Sumber Hukum Kontrak Dalam Perdagangan In Gangan Internasional". *Dharmasisya* Vol. I No. 3 (2021): 1287-1300

community to formulate regulations for various activities at sea.<sup>28</sup> The UNCLOS gives each State the rights to explore and exploit its natural wealth, as well as the obligations to protect and preserve its marine environment from pollution. Article 194 (1) UNCLOS gives an obligation to the State to take the necessary actions to prevent, reduce and control pollution of the marine environment from any sources. Further, Article 194 (2) UNCLOS gives an obligation to the State to take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas of the State. Meanwhile, Article 207 (1) UNCLOS declares that States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from any sources.

Basically, the United Nations Convention on the Law of the Sea discusses pollution in general. Other important instruments that specifically describe plastic pollution are; (a) the International Convention for the Prevention of Pollution from Ships (MARPOL); (b) the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and the 1996 Protocol (London Protocol); and (c) the Convention on Biological Diversity (CBD).<sup>29</sup>

a. London Convention 1972 and London Protocol 1996

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, or commonly called the London Convention, is an international agreement that specifically limits the disposal of certain types of material into the sea. The London Convention is an international convention signed on December 29, 1972 and entered into force on August 30, 1975. The London Convention is the elaboration of the “polluter pays” principle in the Stockholm Declaration 1972.

The main objective of the London Convention is to promote the effective control of all sources of marine pollution. Contracting Parties shall take effective measures to prevent pollution of the marine environment caused by waste disposal as well as to protect and preserve the marine environment from all forms of pollution that give obligations for the Parties to take effective measures individually, according to their scientific, technical, and economic capabilities, and collectively, to prevent marine pollution caused by dumping that 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.

In 1996, an amendment to the London Convention was made through the London Protocol 1996. This protocol incorporates the precautionary principle<sup>30</sup> and the “polluter pays” principle. The London Protocol is more restrictive as all dumping is prohibited unless explicitly permitted, incineration of wastes at sea is prohibited, and export of wastes for the purpose of dumping or incineration at sea is prohibited. One

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<sup>28</sup>Bernhard Enrico Torano. “Tinjauan Yuridis Perlindungan Dan Pengelolaan Terumbu Karang di Indonesia Menurut Hukum Laut Internasional”. *Lex Administratum*, Vol. 9, No. 7(2021): 112-121.

<sup>29</sup> Linda Yanti Sulistiawati, Marine Plastic Pollution Regulation in Indonesia, in book Marine Plastic Pollution and the Rule of Law, Asia Pacific Centre for Environmental Law, National University of Singapore, 2021, p.90

<sup>30</sup>Iris Goldner Lang. “Laws of Fear’ in the EU: The Precautionary Principle and Public Health Restrictions to Free Movement of Persons in the Time of COVID-19.” *European Journal of Risk Regulation* 14, no. 1 (2023): 141-164.

of the differences between the London Protocol and the London Convention is the abolition of the list of material substances that can be dumped into the sea.

- b. International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978

The International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978 is an international convention covering prevention of pollution of the marine environment by ships. Shipping tankers poses a threat of pollution of the marine environment which can be detrimental to coastal countries. To achieve a balance of conflict between coastal countries, on the one hand, that want to protect the marine environment, and ship owners/operators, on the other, where the sea is a means for them to carry out transportation, the international community issued an international agreement called the International Convention for the Prevention of Pollution from Ships, hereinafter referred to as MARPOL.<sup>31</sup>

The International Convention for the Prevention of Pollution from Ships 1973/1978 has six technical annexes intended for all ships, except small ships. The ships' structures, equipment, fittings, materials, and other equipment comply with the standards required by the Convention. All of these are marked with a certificate. Annex I regulations for the prevention of pollution by oil. Annex II regulations for the control of pollution by noxious liquid substances in bulk, contains criteria and measures to control pollution caused by large quantities of noxious liquid substances. Annex III prevention of pollution by harmful substances carried by sea in packaged form, or in freight containers, portable tanks, as well as road and rail tank wagons. Annex IV prevention of pollution by sewage from ships. Annex V prevention of pollution by garbage from ships. Annex VI prevention of air pollution from ships. Annex V which entered into force on December 31, 1988 completely prohibits dumping into the marine environment of all forms of plastics, including "synthetic ropes and fishing nets". Based on the results of previous research, it was known that, in 1970, there was 6.4 million metric tons of wastes in the form of paper, plastic, metal, glass and other materials were dumped into the sea. Of the amount, 1 million metric ton was in the form of plastic which includes 639.000 in the form of "plastic containers"<sup>32</sup>.

Yet, this convention is still inadequate to protect coastal countries from the threat of pollution. Hence, the international community held an International Conference on Tanker Safety and Pollution Prevention in 1978 to anticipate this threat. The conference produced provisions that were effective in 1983. MARPOL provisions do not only apply to ships from flag countries that are convention participants, but also apply to ships sailing from flag countries that are not convention participants, but are operated by convention participant.<sup>33</sup>

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<sup>31</sup> Muhammad Ivandri, Arlina Permanasari. "Prinsip Polluter Pays Pada Pencemaran Laut Akibat Tumpahan Minyak: Hukum Lingkungan Internasional". *Reformasi Hukum Trisakti* Vol. 5 No. 1 (2023) : 21-34

<sup>32</sup>Rifda Ayu Akmalia, Ida Ayu Rosida, Ega Permatadani, Sonia Amelia, Anang Dony Irawan. "Implementasi Perjanjian Internasional Dalam Penyelesaian Sengketa Batas Laut Zona Ekonomi Eksklusif Antara Indonesia Dan Vietnam". *Yustisia Tirtayasa* Vol. 3 No. 1, (April 2023): 1-17.

<sup>33</sup> Aldy Nofansya, Deasy Silvy Sari, Dina Yulianti. "Implementasi Perjanjian Paris dalam Kebijakan Luar Negeri Indonesia". *Padjadjaran Journal of International Relations* Vol. 5 No.1, (2023): 75-90



c. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal 1989

The Basel Convention is under the United Nations Environment Program (UNEP) which was adopted on March 22, 1989 in Switzerland. This convention also stipulates regulations on a complete ban on the import of wastes containing B3 wastes (hazardous and toxic materials) and wastes declared illegal to import. Indonesia is taking preventive action in reducing the flow of waste imports from developed countries to developing countries by becoming a member of the international regime.<sup>34</sup> The Basel Convention has two general obligations, namely:

1) Minimizing the production and transboundary movements of hazardous wastes

Each Party which has ratified the Basel Convention is required to take the appropriate measures to: 1) ensure that the generation of hazardous wastes and other wastes within it is reduced to a minimum, taking into account social, technological and economic aspects (Article 4 paragraph 2 (a)); 2) cooperate in the development and implementation of new environmentally sound low-waste technologies to reduce the production of hazardous waste (Article 10 paragraph 2 (c)); 3) ensure the availability of adequate disposal facilities in their countries and minimize the transboundary movement of hazardous wastes (Article 4 paragraph 2 (b) and (d)); and 4) ensure that the transboundary movement of hazardous wastes can only be done if the State of export does not have environmentally sound waste management facilities (Article 4 paragraph 9 (a)), or if the wastes in question are required as a raw material for recycling or recovery industries in the State of import (Article 4 paragraph 9 (b)), or the transboundary movement in question is in accordance with other criteria to be decided by Parties, provided those criteria do not differ from the objectives of the Basel Convention (Article 4 paragraph 9 (c)). In Article 4 paragraph 13, the Basel Convention requires all parties to review periodically the possibilities of the reduction of the amount and/or the pollution potential of hazardous wastes and other wastes which are exported to other States, in particular to developing countries.<sup>35</sup>

2) Environmentally Sound Management of Wastes

Each Party which has ratified the Basel Convention; 1) shall require that hazardous wastes or other wastes, to be exported, are managed in an environmentally sound manner in the State of import or elsewhere (Article 4 paragraph 8); 2) has an obligation to manage wastes in an environmentally sound manner may not under any circumstances be transferred to the State of import or transit (Article 4 paragraph 10); 3) is prohibited from exporting hazardous waste if there is no guarantee that the wastes will be managed in an environmentally sound manner in the receiving country (Article 4 paragraph 2 (e)); and 4) prevent the import of hazardous wastes to their country if the wastes will not be managed in an environmentally sound manner (Article 4 paragraph 2 (g)). The core objective of the Basel Convention is to ensure that hazardous waste or other waste is managed

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<sup>34</sup> Istiaque Ahmed, "The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal: A Legal Misfit in Global Ship Recycling Jurisprudence", *Washington International Law Journal*, Vol. 29 No. 2, (2020): 401-412

<sup>35</sup> Ibid

in an environmentally sound manner so as to protect human health and the environment.<sup>36</sup>

In 2019, the Basel Convention States Parties adopted an amendment to the Basel Convention with the aim of protecting human health and environment from the negative effects of the global plastic waste trade. As a result, the applicable PIC notifications and mechanisms to international transfers of hazardous waste will now apply to a wide range of plastic waste streams, that were previously traded as low-risk or no-risk waste commodities, subject only to the normal cross-border controls applied to regular commercial transactions.<sup>37</sup>

d. Convention on Biological Diversity (CBD)

The Convention on Biological Diversity does not directly address pollution of the marine environment, but there are records related to plastic pollution. CBD generally applies to biodiversity conservation. The biodiversity target was adopted as a global target under the Strategic Plan for Biodiversity 2011-2020. To support the goal, CBD Parties have adopted several relevant decisions, including decisions XIII/10 which provide practical guidance for preventing and mitigating the impact of marine debris on marine and coastal biodiversity. Pursuant to this decision, Parties, Governments and International Organizations are expected to develop and implement measures, policies and instruments to prevent the disposal, destruction, or neglect of any persistent, produced or processed solid material in marine and coastal habitats. In particular, the decision urges Parties to assess whether the different sources of micro plastics and the different products and processes, both primary and secondary micro plastics, are covered by law, and to strengthen the existing legal framework so that the necessary measures are implemented.

Since 2017, UNEP has stated that the framework for dealing with marine plastic waste and micro plastics is still not coordinated. Hence, UNEP recommends to revise and strengthen the framework, or develop a new framework. After five years, on March 2, 2022, States finally committed to develop a legally binding agreement to end plastic pollution. Representatives from 175 nations in Nairobi supported United Nations Environment Assembly (UNEA) Resolution 5/14 entitled "End Plastic Pollution: Towards an Internationally Legally Binding Instrument" which was adopted at the UNEA-5.2 meeting. The meeting was attended by more than 3,400 in-person and 1,500 online participants from 175 UN Member States, including 79 ministers and 17 high-level officials. The resolution also addresses the full life cycle of plastics, including its production, design, and disposal. Plastic production and pollution contribute to the three causes of the earth's crisis (triple planetary crisis), namely climate change, nature loss, and pollution.<sup>38</sup>

### **3. Marine Plastic Debris Handling Based on Indonesian Law**

Indonesia has ratified UNCLOS 1982 through Law No. 17 of 1985 so that it is bound by the obligations regulated in UNCLOS on the protection and preservation of the marine

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<sup>36</sup> Ibid.

<sup>37</sup> Sabaa Ahmad Khan, *Clearly Hazardous, Obscurely Regulated: Lessons From The Basel Convention On Waste Trade*, AJIL Unbound; Washington, Cambridge University Press, Vol. 114, 2020, p. 203

<sup>38</sup> Sen Wang. "International Law-Making Process Of Combating Plastic Pollution: Status Quo, Debates And Prospects". *Marine Policy*. Vol. 147. (January 2023): 105376

environment. In general, the environmental protection is regulated in Law No. 32 of 2009 on Protection and Management of Environment. The Law describes the sources of pollution, the sanctions, as well as the duties and authorities of the government and the community. The marine environment is only mentioned in Article 63 (1) stating that the government's duties and authorities include developing and implementing policies on the protection of the marine environment, but it does not specifically regulate plastic waste pollution.

The issuance of Government Regulation No. 19 of 1999 on Control Over Marine Contamination and/or Damage is one of the government's efforts to handle marine pollution. Marine pollution itself is defined as the entry or inclusion of living creatures, substances, energy and/or other components into the marine environment by human activities so that its quality deteriorates to a certain level which shall make the marine environment incompatible to the quality standards and/or functions. Marine pollution cannot be seen only as a problem occurring in the oceans, because the oceans and lands are an ecosystem unit that cannot be separated and are affected by one another. Human activities, which are mostly carried out on the lands, directly or indirectly, have an impact on the marine ecosystems. Government Regulation No. 19 of 1999 on Control Over Marine Contamination and/or Damage regulates restrictions on human activities, including industries, that can cause pollution and/or damage to the marine environment. Article 7 has outlined that seawater with standardized quality must be declared as seawater with the quality status is at a good level. As for seawater with unstandardized quality, it must be declared as seawater with the quality status is at the polluted level. Moreover, Article 13 stipulates that the person in charge of a business and/or activity is not allowed to commit an act which may cause damage to the sea. Then, Article 14 states that the person in charge of a business and/or activity that can cause damage to the sea is required to make efforts to prevent damage on marine environment.

Furthermore, the Indonesian government issued Law No. 32 of 2014 on the Sea. The definition of marine pollution is stated in Article 1 paragraph 11 of Law No. 32 of 2014 on the Sea. Marine pollution is defined as the entry or inclusion of living creatures, substances, energy and/or other components into the marine environment by human activities that exceed the established quality standards for the marine environment. This Law does not specifically regulate marine plastic pollution, but regulates the sources of marine pollution. In Article 52 of Law No. 32 of 2014, it is stated that marine pollution includes: a. pollution from land; b. pollution from activities in the sea; and c. pollution from activities of the air.

Presidential Regulation No. 83 of 2018 on Marine Debris Management, The issuance of Presidential Regulation No. 83 of 2018 on Marine Debris Management is one of the government's efforts to handle marine debris. In this regulation, the government describes the mechanism for reducing marine pollution, including the establishment of a National Coordinating Team to handle marine debris. This action aims at realizing the government's commitment to reduce plastic and other marine waste by 70% by 2025. Specifically, the government has launched a National Plan of Action to combat marine debris from 2018 to 2025. The action plan is expected to become a strategic direction in accelerating the handling of marine debris for a period of 9 years.

The government has setup five strategies for handling marine debris. The five strategies to be implemented in the National Plan of Action on combating marine plastic debris include: (1) Regional governments level, strengthening human and financial resources, financial resources, infrastructure management and change of behavior, and developing an integrated coastal waste management projects; (2) national level, enhancing stakeholder awareness through education curriculum and campaign, encouraging the Waste to Energy (WTE) program, implementing paid plastic bag policy, utilizing plastic debris as an asphalt mixture, and strengthening regulation on plastic debris management at seaport, shipping, and fishing lines; (3) International level, endorsing joint commitments to reduce marine plastic debris through bilateral and regional cooperation; (4) Industry, increasing the use of bio-degradable plastic, increasing investment for bio-degradable plastic industry, and introducing the concept of circular economy; and (5) Academics and community service organization (CSO), conducting campaigns, research and development, and building waste banks.<sup>39</sup>

Moreover, the major principles for controlling marine debris based on the National Plan of Action on combating marine plastic debris are improving the awareness of all stakeholders, waste plastic managements from land to the coastal area, enhancing institutional strength and funding supports as well as conducting research and development.<sup>40</sup> The Indonesian government's policy in the National Plan of Action on combating marine plastic debris involves 16 ministries and agencies to reduce 70% of plastic and other marine waste by 2025. The National Plan of Action on combating marine plastic debris consists of five main pillars, namely improving behavioral change, reducing land-based leakage, reducing sea-based leakage, reducing plastic production and use, and enhancing funding mechanisms, policy reform, and law enforcement as well as research and development. In brief, the Indonesian government's efforts based on the National Plan of Action on combating marine plastic debris 2018-2025 include reducing plastic production and use, enhancing funding for monitoring and management, recycling plastic waste, enhancing society's awareness to reduce plastic use, and conducting research and development on marine plastic debris in collaboration with other countries. At regional level, Indonesia was the initiator for the preparation of the Regional Plan of Action on combating marine plastic debris through the East Asia Summit (EAS) held in Bali on September 2017. This action has succeeded in encouraging ASEAN to start compiling the ASEAN Framework of Action on marine debris which began to be developed after the ASEAN Conference held in Phuket on November 2017. On May 2021, ASEAN officially launched the ASEAN Regional Action Plan for Combating Marine Debris in the ASEAN Member States (2021-2025).<sup>41</sup>

## **Conclusion**

The protection of the marine environment from pollution, in general, is regulated in international agreements both in soft law and hard law. The soft law international

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<sup>39</sup> Gallo, F., Fossi, et.al. "Marine litter plastics and microplastics and their toxic chemicals components: The need for urgent preventive measures". *Environmental Sciences Europe*, 30 (2018): 1-13

<sup>40</sup> Fiona Fiona, Winda Fitri. "Efektivitas Hukum Lingkungan Dalam Mengurangi Sampah Plastik Di Lautan Indonesia Pada Era Globalisasi". *Gorontalo Law Review*. Volume 6 No. 1 (April 2023): 155-164

<sup>41</sup>Hendar, HendarRezasyah, Teuku Sari, Deasy Silvy. "Diplomasi Lingkungan Indonesia Melalui ASEAN dalam Menanggulangi Marine Plastic Debris". *Padjadjaran Journal of International Relations*, 4.2(2022):p.201

agreements include the Principle 21 of The Stockholm Declaration 1972, and the principles of sustainable development contained in the Rio de Janeiro Declaration 1992. Meanwhile, the hard law international agreements include the London Convention 1972 and the London Protocol 1996, the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973/1978, the UNCLOS 1982 Chapter XII Articles 193, 194, 207, and 208 on the protection and preservation of the marine environment which gives an obligation to the State to take the necessary actions to prevent, reduce and control pollution of the marine environment from any sources, and The Basel Convention 1989 Article 4 (2) (a), Article 6(3) and (4) on the control of hazardous waste and their disposal. Specifically, for controlling plastic waste trade, in 2019, the Basel Convention States parties have adopted amendments to the Basel Convention. Then, as a commitment to realize the SDGs, on March 2022, the United Nations Environment Program (UNEP) has adopted the United Nations Environment Assembly (UNEA) Resolution 5/14 entitled “End Plastic Pollution: Towards an Internationally Legally Binding Instrument” aiming at forming an international agreement that specifically regulates plastic pollution.

Furthermore, Indonesian Law on marine plastic waste pollution includes Law No. 32 of 2009 on Protection and Management of Environment, Law No. 32 of 2014 on the Sea, and Government Regulation No. 19 of 1999 on Control Over Marine Contamination and/or Damage supplemented by Government Regulation No. 38 of 2018 on Marine Waste Management. Then, the Indonesian government’s efforts based on the National Plan of Action on combating marine plastic debris 2018-2025 include reducing plastic production and use, enhancing funding for monitoring and management, recycling plastic waste, enhancing society’s awareness to reduce plastic use, and conducting research and development on marine plastic debris in collaboration with other countries.

### **Suggestion**

The government shall conduct outreach to the public regarding the National Plan of Action on combating marine plastic debris 2018-2025 so that the action plan can be well implemented and the final goal for reducing marine plastic debris by 70% can be achieved.

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