MEASURING INDONESIA’S COMMITMENT TO REDUCING PLASTIC WASTE IN THE SEA THROUGH A LEGAL APPROACH

Muhammad Insan Tarigan

Faculty of Law University of Surabaya
Jl. Raya Rungkut, Kali Rungkut, Surabaya, Indonesia 60293
Email: insan.tarigan@staff.ubaya.ac.id

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Abstract: Indonesia is the second-largest producer of plastic pollution in the world after China. Based on the data in 2018, there were about 1.29 million tonnes plastic waste end up in the ocean per annum. With that regard, Indonesia needs to be responsible for the negligence in doing the international obligation to prevent, reduce, and manage the pollution that affect marine environment. The purpose of this research is to observe Indonesia’s commitment in reducing plastic pollution on marine environment by doing some legal approach. Therefore, this research conducted by normative juridical and using descriptive analysis. Data analysis that obtained is done through literature study. The conclusion of this research is that the commitment of Indonesian Government on preventing plastic waste in marine environment relatively needs to be improved. There are some of regulations which already targeted that has not established yet by Indonesian Government.

Keywords: Indonesia’s Commitment; Legal Approach; Ocean; Plastic Pollution

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INTRODUCTION

Plastic waste in the ocean is a global and transboundary problem at a very significant level. The pollution affects all countries in various ways and threatens each country’s marine natural wealth. It is estimated that at least 5.25 trillion plastic particles with a total weight of 268,940 tonnes are floating in the oceans.\(^1\) This plastic knows no boundaries between countries. Plastics can move carried by ocean currents, as well as winds throughout the ocean on this earth until they sink to the seabed, the bottom of a certain beach, are crushed into smaller pieces or eaten by fish in the sea.

Based on the study, there are two types of impacts of plastic waste on marine animals, first that plastic waste can be wrapped around it and second, it is consumed by marine creatures. It has been observed that more than 260

\(^1\) Marcus Eriksen et al., “Plastic Pollution in the World’s Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea,” PLOS ONE 9, no. 12 (2014): 1–15, https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0111913.
species, including invertebrates, turtles, fish, seabirds and marine mammals have ingested or become entangled in plastic waste, causing disturbed movement and food, as well as reduced reproduction and even increased mortality. Plastics can have a devastating effect on entire marine ecosystems. Plastics pose a serious and varied threat to the marine environment.

In the end, the plastic problem cannot be called a problem only for certain coastal countries. Fish that have consumed plastic can swim to the territorial waters of other countries or even the fish can be traded to any country, then the fish can endanger humans who consume them. Therefore, the impact can be detrimental to the international community. In fact, plastic and microplastic debris is found in all parts of the planet’s oceans, including in the Arctic and the bottom of the Mariana Trench, which is the deepest part of the ocean.

Plastic pollution in the ocean can be categorized as a global crisis. This will continue, unless solutions can be taken. Millions of tonnes of plastic waste end up in the ocean every year and the end is unknown. In fact, it is estimated that by 2050, there will be about 4 garbage trucks per minute, the majority of which will come from remaining activities on land.

Marine debris comes from three main sources, namely from land, rivers and from activities in the sea itself. Activities at sea that also have a role in contributing to plastic waste in the sea are fishing, ship transportation, tourism activities, and the oil industry.

The problem of plastic waste is increasingly difficult to contain, given that the total production and consumption of plastic globally has increased sharply in the past few years. Between 1989 and 2015, global plastic production more than tripled, from 114 million tonnes to 381 million tonnes. This increase in plastic production and consumption will not be a problem for the marine environment if managed properly. Most countries do not have the systems, structures and capacities to collect and manage waste effectively. Then, the community’s culture of waste is also a driving factor in increasing the problem of marine debris.

Dealing with the problem of plastic waste cannot rely solely on one party, but its character has become a global challenge, so all stakeholders at all levels must work hand in hand.

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2 Arie Trouwborst, “Managing Marine Litter: Exploring the Evolving Role of International and European Law in Confronting a Persistent Environmental Problem,” Utrecht Journal of International and European Law 27, no. 73 (2011): 4, https://utrechtjournal.org/articles/abstract/10.5334/ujiel.an/.

3 Sanae Chiba et al., “Human Footprint in the Abyss: 30 Year Records of Deep-Sea Plastic Debris,” Marine Policy 96 (2018): 204–212, https://www.sciencedirect.com/science/article/pii/S0308597X17305195?via%3Dihub.

4 Torbjørn Graff Hugo, The Case for a Treaty on Marine Plastic Pollution (Norway: Norwegian Academy of International Law, 2018), http://intlaw.no/wp-content/uploads/2018/11/The-case-for-a-TMPP-Nov-2018-WEB.pdf.

5 Chung-Ling Chen, “Regulation and Management of Marine Litter,” in Marine Anthropogenic Litter (Springer, Cham, 2015), 1–447, https://link.springer.com/chapter/10.1007/978-3-319-16510-3_15.

6 John Mouat, Rebeca Lopez Lozano, and Hannah Bateson, Economic Impacts of Marine Litter (Denmark: Kommunernes Internationale Miljøorganisation, 2010), http://www.kimointernational.org/wp/wp-content/uploads/2017/09/KIMO_Economic-Impacts-of-Marine-Litter.pdf.

7 Hugo, The Case for a Treaty on Marine Plastic Pollution.

8 Ibid
hand. All parties are obliged to then play a role in addressing the increase in plastic waste. However, there needs to be a regulation so that it is increasingly binding on the stakeholders to do something.

Laws can provide mandates, procedures and standards to prevent, reduce and manage marine plastic waste. In addition to making the public aware of the dangers and solubility of plastic waste, it is also important to emphasize it in legal regulations.

The People’s Coalition for Fisheries Justice (KIARA) recorded that in 2018 as much as 1.29 million tons of waste ended up in the sea through rivers and estuaries every year. In fact, this number puts Indonesia in the category of the second largest contributor of plastic waste in the sea after China.

Indonesia must show goodwill to carry out international obligations that have been agreed in international agreements. The legal frameworks that potentially apply to marine debris are many and complex and consist of global, regional, national and local regulations. Seeing the negative impact of plastic waste, it is considered important to see Indonesia’s efforts in handling the problem of plastic waste in the sea from a legal perspective. Based on the facts described above, this article is necessary to answer the following problems: what is the international law that can bind Indonesia in dealing with plastic waste pollution in the sea, and how is Indonesia’s commitment to tackling the problem of plastic waste in the sea through a legal approach?

Plastic waste in the sea has been studied in several existing literature related to the management and handling system in the short and long term, including involving the oversight function of the DPR. Then there are those who identify the problem of plastic waste in Indonesia’s oceans. Meanwhile, this paper will focus on discussing Indonesia’s involvement in international law to deal with marine plastic waste, as well as legal approaches in resolving plastic waste emergencies in Indonesia’s oceans.

METHOD

This research is a descriptive analysis by explaining the emergency condition of plastic waste in Indonesian and global seas, which is then analyzed based on the state’s efforts in making and implementing laws. This type of research is juridical normative, writing based on the relevance of applicable laws at the global and national levels, such as UNCLOS 1982, MARPOL 1973, London Convention 1972, Presidential Regulation No. 83 of 2018, and local regulations that specifically regulate restrictions on plastic waste. The approach method used is the statutory approach method because it emphasizes the making and implementation of laws, as well as a conceptual approach to finding concepts that can support the handling of plastic waste problems in Indonesia.

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9 M Ambari, “Ancaman Sampah Plastik Untuk Ekosistem Laut Harus Segera Dihentikan, Bagaimana Caranya?,” Mongabay Situs Berita Lingkungan, last modified 2018, accessed January 4, 2021, https://www.mongabay.co.id/2018/07/26/ancaman-sampah-plastik-untuk-ekosistem-laut-harus-segera-dihentikan-bagaimana-caranya/.

10 Teddy Prasetyawan, “Upaya Mengatasi Sampah Plastik Di Laut,” Bidang Kesejahteraan Sosial : Info Singkat: Kajian Singkat Terhadap Isu Aktual dan Strategis 10, no. 10 (2018): 13–18, https://berkas.dpr.go.id/puslit/files/info_singkat/Info Singkat-X-10-II-P3DI-Mei-2018-223.pdf.

11 Asshidiq Djaguna et al., “Identifikasi Sampah Laut Di Pantai Tongkaina Dan Talawaan Bajo,” Jurnal Pesisir Dan Laut Tropis 7, no. 3 (2019): 174–182, https://ejournal.unsrat.ac.id/index.php/jplt/article/view/24432.
donesia. Meanwhile, data is collected through library research to obtain primary legal materials, such as laws and regulations as well as secondary legal materials, such as books, journals and research reports as well as other relevant documents.

ANALYSIS AND DISCUSSION
The Obligation of Coastal States to Limit Plastic Pollution in the Sea based on International Law

The problem of marine debris, especially plastics, clearly has an international dimension. Plastic waste is not only a problem within the territory of a country, but also affects the open sea environment outside the jurisdiction of a country. Winds and ocean currents can transport plastic waste over long distances. Sources of plastic waste are pervasive around the world, and if there is no coordinated international response, efforts to limit production or reduce plastics in the oceans are disrupted. So that international law is expected to be able to bind all countries to work together to fight plastic pollution in the sea. Thus, the door for plastic waste to enter the ocean is getting narrower.

International law can regulate plastic waste in the ocean through several categories, multilateral and regional agreements, soft law, international customs and principles of international law. However, currently, countries rely more on multilateral agreements to serve as a reference in acting at the international level. Even so, international law in other forms is still relevant as a rule, even though its binding capacity is not like international treaties.

Multilateral agreements are binding international agreements. Plastic waste can be regulated through multilateral environmental agreements. Like other international treaties, multilateral agreements on the environment are binding only for countries that have committed to bind themselves through a process of ratification or accession. There are several multilateral agreements that are relevant to the problem of plastic waste.

United Nations Convention on the Law of the Sea (UNCLOS) 1982

The UNCLOS was adopted as a source of international law on December 10, 1982 in Montego Bay, Jamaica and entered into force on November 16, 1994. Member countries namely rights and obligations. This is a globally binding Convention on the protection of the marine environment, the right of the coastal state to defend jurisdictional interests, such as customs, fishing and access to minerals and other resources in the territorial and auxiliary zones and the Exclusive Economic Zone and the importance of protecting the marine environment of the various pollution and diversions.

There are several provisions in UNCLOS 1982 that are directly relevant to plastic pollution in the marine environment. This international agreement provides general obligations to protect and care for the marine environment, including the obligation to take all measures to prevent, reduce and control pollution to the marine environment from all sources.

Environmental Law Institute, Marine Litter Legislation: A Toolkit for Policymakers (Nairobi: United Nations Environment Programme, 2016), 98, https://wedocs.unep.org/handle/20.500.11822/8630?show=full.

Angela Carpenter, “International Protection of the Marine Environment,” in The Marine Environment, ed. Adam D.Nemeth (New York: Nova Science Publishers, 2011), 55, file:///C:/Users/HP/Downloads/International_Protection_of_the_Marine_E.pdf.

Ansje Löhr et al., “Solutions for Global Marine Litter Pollution,” Current Opinion in
Such obligations have also been emphasized in several articles in UNCLOS 1982, such as Articles 194, 207, 210 and 211.

UNCLOS 1982 regulates in general the possible sources of pollution, both from land and ships, and waste disposal (dumping). Article 207 affirms that UNCLOS 1982 is a global instrument that carries legally binding obligations on countries to prevent, reduce and manage pollution that can impact the marine environment by requiring countries to adopt laws and other regulations in an effort to prevent, reduce and manage land-sourced pollution to the environment by taking into account international agreements, standards and recommended practices and procedures.

Laws, regulations and recommended actions as well as standards and procedures are designed to minimize as far as possible bringing toxic, hazardous substances, especially persistent, into the marine environment. The provisions described above are contained in article 194 (3) and article 207 (95) UNCLOS 1982, this rule can of course cover plastic and microplastic waste. Meanwhile, Articles 210 and 211 UNCLOS 1982 also require countries to adopt laws and regulations to prevent, reduce and control pollution to the marine environment originating from ships. Countries are also expected to strive to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control the impact of possible pollution on the marine environment. The intended national and regional laws and regulations should not be less effective than global regulations or standards in the case of dumping, at a minimum they must have the same effect as generally accepted international regulations and standards in the case of pollution from ships.

**International Convention for the Prevention of Pollution from Ships (MARPOL), 1973**

MARPOL Convention was formed by the International Maritime Organization (IMO) which is intended to prevent pollution of the marine environment from ship activities, such as waste disposal, oil spills and air pollution. This convention entered into force as a source of international law on October 2, 1983. There are 154 countries that have committed themselves to the convention. This MARPOL Convention consists of 5 Annexes, each of which regulates certain types of pollutants. Annex I and II respectively regulate pollution from oil and hazardous liquids. Whereas Annex III, IV, and V of the MARPOL Convention regulate substances in containers, ship waste disposal, and ship waste, respectively. By the end of 1987, more than 15 countries had ratified Annex V of the MARPOL Convention, although country representation ratified at least 50 percent of the world’s sending countries was still less than expected. The conditions were finally met. On October 30, 1987, the United States completed its ratification process so that the treaty could be implemented.\(^\text{15}\)

The MARPOL Convention is an international legal instrument that is relevant as a reference in regulating the problem of marine plastic waste. It is Annex V of the MARPOL Convention that specifically regulates plastic

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\(^{15}\) Christopher C Joyner and Scot Frew, “Plastic Pollution in the Marine Environment,” *Ocean Development & International Law* 22, no. 1 (January 1, 1991): 33–69, https://doi.org/10.1080/00908329109545949.
waste. Annex V is a regulation to prevent pollution by garbage from this ship which came into effect in 1988. This regulation specifically regulates the prohibition of plastic waste after being revised in 2013, even the parties to this agreement must provide adequate waste collection facilities at port.\textsuperscript{16} Although the MARPOL Convention is considered effective in dealing with the problem of marine debris, it has not been able to completely eliminate it.

However, besides that, the MARPOL Convention has not regulated the problem of plastic waste originating from the mainland. It is important to remember that the MARPOL Convention only addresses the issue of pollution originating from ships. Each annex to the convention deals with various types of hazardous substances or waste which may be knowingly or unintentionally disposed of from ships. Disposal of ships should not be confused with disposal at sea, which concerns the disposal of waste originating on land.\textsuperscript{17}

Annex V strictly limits the disposal of other types of waste sourced from ships in specially designated areas, including Antarctica, the Mediterranean and the North Sea. The MARPOL Convention comes with the spirit to balance the interests of the coastal state, port state and ship state. This convention applies to ships bearing the flag of a party to this convention, and for ships originating from a country not party to the convention but operating under the authority of one of the states parties, this convention is still in force aboard said ship. This is in line with Article 211 UNCLOS which requires flag states to comply with coastal state regulations regarding pollution control in the EEZ in that country. Then it must be understood that the MARPOL Convention applies to all ships operating in the EEZ of the country party to the convention.

Enforcement of the provisions of the MARPOL Convention is returned to the coastal state, if any flag state of a ship is proven to have committed an offense on board a ship outside the jurisdiction of a country, the ship can be punished in accordance with the laws of the flag state. However, if the violation occurs within the territorial waters of the state party to the convention, the coastal State retains jurisdiction.

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), 1972

The London Convention, 1972 had an additional protocol that was passed in 1996. The Convention entered into force as positive law in 1975, until September 2016, the country which have been parties to the convention are 89 countries. Meanwhile, the main purpose of this agreement is to prevent the deliberate disposal of waste in the sea which can damage the marine environment. This instrument is designed to promote effective control of all sources of pollution that can affect the quality of the marine environment by removing waste and other hazardous substances. This is primarily aimed at pollution deemed harmful to human health, natural resources, or marine life that can damage or interfere with marine use.\textsuperscript{18}

This Convention requires States to take the most effective measures to prevent damage to

\textsuperscript{16} Oliver Tickell, \textit{International Law and Marine Plastic Pollution - Holding Offenders Accountable} (London, 2017), 10, http://apeuk.org/wp-content/uploads/2018/02/OPLI-online-final.pdf.

\textsuperscript{17} Ibid

\textsuperscript{18} Joyner and Frew, “Plastic Pollution in the Marine Environment.”
the sea. Article 2 of the London Convention states 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.” This article indicates that the state must not support or allow land-based pollution to damage the marine environment. Plastic waste, of course, is a land-based source of pollution that must be limited or suppressed by the coastal state.

Another thing that is quite relevant in the 1972 London Convention explicitly prohibits the disposal of plastics that are difficult to decompose and other hazardous synthetic materials, such as nets and ropes, which can float or may remain at sea forever. So that it can be dangerous for fishing, navigation and other legitimate marine uses. This statement can be seen in article IV (1) (a) and Annex I (4). Conceptually and the spirit contained in the London Convention 1972 and its Protocols can be called a positive achievement in efforts to protect the marine environment. However, if we pay special attention to the strength of this convention in dealing with plastic pollution in the ocean, the 1972 London Convention can still be said to be limited. That the London Convention 1972 may work on waste originating from ships, platforms and aircraft, but does not regulate land-based emissions or pollution. In fact, if we refer to the data which shows that 80% of plastic waste in the oceans comes from land. So that in fact the 1972 London Convention and its Protocol only regulate one part of the problem of plastic waste in the oceans, while the rest still need global-scale regulation and commitment.19

The results of observing the above conventions show that the three conventions fall into the hard law category. But none of these have direct implications for regulating plastic pollution in the oceans. The use of this convention can still be done to regulate plastic pollution, although it must be forced. Regulating the problem of plastic waste in the sea which is based on land can use UNCLOS 1982, while plastic problems in the sea originating from ships or from activities in the ocean can use MARPOL and the London Convention 1972 and its Protocols. It must be acknowledged that the above international legal instruments cannot work without regulations, regulations or standards that come from the subject of international law. Meanwhile, the state is the key determinant of the implementation of all legal instruments and standards at the international level.

Indonesia itself has ratified the 1982 UNCLOS through Law No. 17 of 1985 concerning Ratification of the United Nations Convention on the Law of the Sea. MARPOL has also been ratified through Presidential Decree Number 46 of 1986 concerning Ratification of the International Convention for the Prevention of Pollution from Ships, 1973, along with the Protocol (the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973). The two conventions above have become positive law in Indonesia, while the 1972 London Convention and its Protocols have not yet been rati-

19 Luisa Cortat Simonetti Goncalves and Michael G. Faure, “International Law Instruments To Address The Plastic Soup,” SSRN Electronic Journal 43, no. 3 (2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3405968.
fied by Indonesia into national law.

Indonesia’s Efforts in Handling Marine Plastic Waste Plastic consumption in Indonesia is relatively lower when compared to other Southeast Asian countries. Per capita consumption in Indonesia is around 17 kg, while in Malaysia it is around 35 kg, in Thailand and Singapore it is around 40 kg, and in Vietnam it is 41 kg. However, the title as the country with the fourth largest population, Indonesia produces 3.2 million tons of unmanaged plastic waste in a year, 1.29 million tons of which enter the marine environment. This condition also places Indonesia as the second largest contributor of plastic waste after China. This plastic waste has become a very serious problem in Indonesia, especially plastic pollution in the oceans.

Plastic pollution in the ocean not only pollutes the surface of the sea, beaches and rivers adjacent to the sea, but is also found in the deep sea. The Sunda Strait is the location of the most microplastics (14 particles) found at a depth of 88.5m. The location is a busy sea lane with about 2,200 ships sailing a year. Research focused on the waters of southwest Sumatra found a total of 41 microplastic particles in the form of granules (35) and fibers (6 particles). This shows that the problem of plastics in Indonesia originates from land and activities in the sea and ships also still occur.

Indonesia with its status as one of the countries that contributes greatly to plastic waste in the sea should show a high commitment to reducing plastic waste. This commitment has actually been demonstrated through the formation of national legal products, apart from Indonesia also participating in several international laws and international cooperation.

Regulation of the problem of plastic waste can be seen in several different laws and regulations. Meanwhile, the regulations specifically discussing marine plastic waste are formulated in Presidential Regulation Number 83 of 2018 concerning Handling of Marine Plastic Waste. Through this regulation, the government affirms its goal of reducing marine plastic waste by up to 70% by 2025. Real action by the government at the local, national and international levels, including the private sector and the community is needed to achieve the target by 2025.

Regulations regarding efforts to handle plastic waste in several regions have been authorized to support efforts to resolve the plastic pollution crisis in Indonesia. The city is declared as the first city to regulate in the Asia Pacific Region, which is one of the cities in Indonesia, the city of Banjarmasin. The ban

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20 Guilberto Borongan, “Managing Packaging Waste in the ASEAN Region from Linear to Circular Packaging,” in Circular Economy Briefing Series (Bonn, Eschborn: Bonn:Deutsche Gesellschaft für Internationale Zusammenarbeit, 2018), 3, https://www.giz.de/de/downloads/giz2018_ASEAN-Packaging-Waste_web.pdf.

21 Premakumara Jagath Dickella Gamarakalage and Kazunobu Onogawa, Strategies to Reduce Marine Plastic Pollution from Land-Based Sources in Low and Middle - Income Countries (Nairobi: United Nations Environment Programme (UN Environment), 2019).

22 Muhammad Reza Cordova and A’an J. Wahyudi, “Microplastic in the Deep-Sea Sediment of Southwestern Sumatran Waters,” Marine Research in Indonesia 41, no. 1 (2021): 27–35, https://mri.lipi.go.id/index.php/MRI/article/view/99.

23 Andi Muhammad Haswar, “Wali Kota: Banjarmasin, Kota Pertama Di Asia Pasifik Yang Larang Kantong Plastik,” Kompas.Com, last modified 2019, accessed November 20, 2020, https://regional.kompas.com/read/2019/08/28/20372001/wali-kota-banjarmasin-kota-pertama-di-asia-pasifik-yang-larang-kantong?page=all.
on the use of single-use plastics in Banjarmasin is regulated through Mayor Regulation Number 18 of 2016 concerning Reducing the Use of Plastic Bags. The capital city of South Kalimantan is estimated to produce around 600 tons of plastic waste / day. The evaluation results of the Ministry of Environment and Forestry of the Republic of Indonesia and the Municipal Government of Banjarmasin show that the ban on the use of plastic bags is quite effective in reducing the use of plastic in several retailers in Banjarmasin. The reduction in plastic bag use is estimated to be 40% to 80%. This means that it also has an impact on reducing the risk of plastic waste entering the ocean.

Banjarmasin city government initiative spread to a number of other areas, such as the city of Balikpapan. On April 3, 2018, the Balikpapan city government has enacted Mayor Regulation Number 18 of 2018 concerning Reducing the Use of Plastic Bags. The prohibition through Mayor Regulation (Perwali) is still limited to certain more modern places, such as shopping centers, department stores, hypermarkets, supermarkets, minimarkets and modern retails. The commitment of the Balikpapan city government to alleviate the problem of plastic waste in the sea is getting stronger through efforts to introduce new regulations on the use of plastic bags.

24 Ellisa Vikalista, “Implementasi Kebijakan Peraturan Walikota Banjarmasin Nomor 18 Tahun 2016 Tentang Pengurangan Penggunaan Kantong Plastik,” in Prosiding Seminar Nasional Lingkungan Lahan Basah (Banjarmasin: Lembaga Penelitian dan Pengabdian kepada Masyarakat, Universitas Lambung Mangkurat, 2018), 464–470, http://snllb.ulm.ac.id/prosiding/index.php/snllb-lit/article/view/101.

25 Article 3 (2) Mayoral Regulation No. 18 of 2018 concerning Reducing the use of plastic bags. Balikpapan City Regional News of 2019 Number 28.

The ban on the use of plastic bags in Balikpapan has expanded, which initially only applied to modern markets, but now includes traditional markets and small units such as bakeries and canteens. Even the Balikpapan City Regional Regulation Number 1 of 2019 concerning Reducing the Use of Single-Use Plastic Products / Packaging strengthens and extends the ban to tourist areas including public facilities. Balikpapan Mayor Regulation Number 28 of 2019 concerning Types of Single-Use Plastic Products / Packaging not only prohibits the use of plastic bags, but its scope is expanding to include a ban on the use of single-use polystyrene, single-use plastic straws and plastic packaging for single-use production.

A very good step has been taken by the local government of Balikpapan city, although it still has to struggle to convey a series of rules to be accepted and obeyed by the community. However, a positive result is a series of local regulations that have been issued to reduce plastic waste in Balikpapan. Based on the Balikpapan City Environmental Service, plastic waste produced is around 40 tons / day. But now it has decreased to 2 tons / day or around 56 tons / month. From the data claimed by the Balikpapan City Government, it can be said that the regulation can have a good impact on efforts to reduce plastic waste.

26 Article 3 (1) Mayoral Regulation No 28 of 2019 Concerning Product Type / Disposable Plastic Packaging, Balikpapan City Regional News of 2019 Number 28.

27 Article 2 (2) Mayoral Regulation No 28 of 2019 Concerning Product Type / Disposable Plastic Packaging, Balikpapan City Regional News of 2019 Number 28.

28 “Target Nasional Tahun 2025 Pengurangan Sampah Harus 30 Persen.,” Balikpapan, last modified 2019, accessed November 22, 2020, http://web.balikpapan.go.id/berita/read/8043#.
Several other local governments have seen proactive initiatives in dealing with plastic waste by making regulations prohibiting the use of single-use plastic bags in certain locations, such as Bogor\textsuperscript{29} City, Jambi City,\textsuperscript{30} Bali\textsuperscript{31} and DKI Jakarta.\textsuperscript{32} Of the several regions that have banned the use of single-use plastic bags through their respective regional regulations, the majority have regulated bans on shopping centers that are categorized as modern.

The prohibition of using single-use plastics needs to be emphasized in tourist areas, especially those close to the ocean. So far, only the Banjarmasin government has strictly banned single-use plastics in tourist areas. Especially in tourist areas, you can replace the use of single-use plastics with the work of local people who have the characteristics of local wisdom and are more environmentally friendly (local wisdom), for example in the Papua region there are noken. Because of the proactive initiatives that have been taken by some of these regions, it is hoped that other regions can adopt the same policies. It is also not enough for the government to only make regulations banning the use of plastic bags, but it must be more comprehensive. The rules in question should include plastic bags, plastic straws and Styrofoam. So that the smaller the gap for materials containing plastic to pollute Indonesian seas.

Apart from making legal products, actions that are considered effective to solve the problem of plastic waste can be implemented. For example, regional actions carried out by the City of Surabaya can also be taken to overcome the problem of plastic waste. The second largest city in Indonesia initiated an initiative in April 2018 by encouraging people to take advantage of plastic waste by offering free bus facilities in exchange for a number of plastic bottles. With this system, people can take a red city bus by depositing a few plastic bottles at the terminal or directly paying the fare with plastic bottles on the bus. Ten plastic cups or five plastic bottles (depending on size) can pay for up to two hours of use of the bus facilities. The scheme, which was first implemented in Indonesia, is expected to help realize the ambition of reducing the majority of plastic waste by 2025. The results of the collection of these bottles will then enter the process of separating the labels and caps from the bottles. After that, it will be auctioned off to recycling companies. The opinion obtained from the bottle sale will be used for bus operational costs and funds for green open spaces in the city of Surabaya.\textsuperscript{33} However, it is still deemed necessary for the City of Surabaya to immediately issue a more binding regulation regarding the ban on single-use plastics. Moreover, it is widely known that plastic waste does not only come from bottled mineral water. Surabaya with a total population of 2.8 million is estimated to produce up to 2,482 tons of waste per day.\textsuperscript{34} Until now, the

\textsuperscript{29} Article 11 Mayoral Regulation of Bogor no 61 of 2018 Concerning Reducing the use of plastic bags, Bogor City Regional News of 2018 Number 61 Series E.

\textsuperscript{30} Mayoral Regulation of Jambi No 54 of 2018 Concerning Household Waste Management.

\textsuperscript{31} Article 7 Governor Regulation of Bali No 97 of 2018 Concerning the limitation of single-use plastic waste, Regional News of Bali Province No. 97 of 2018.

\textsuperscript{32} Governor Regulation No. 142 of 2019 concerning eco-friendly bag usage.

\textsuperscript{33} Gamaralalage and Onogawa, Strategies to Reduce Marine Plastic Pollution from Land-Based Sources in Low and Middle - Income Countries, 9.

\textsuperscript{34} Bella Nathania, 4 Masalah dalam Larangan Penggunaan Kantong Plastik di Jakarta Yang Mulai Berlaku Juli, https://theconversation.com/4-masalah-
city government of Surabaya has only appealed to a ban on the use of single-use plastic bags through the Mayor of Surabaya Circular Number 660.1 / 7953 / 436.7.12 / 2019 concerning the Appeal to Ban the Use of Single-Use Plastic Bags. However, the appeal is not strong enough to bind stakeholders, so it is important to make legally binding mayor regulations. Whereas through Article 10A paragraph (1) of the Regional Regulation of the City of Surabaya Number 1 of 2019 concerning Amendments to the Regional Regulation of the City of Surabaya Number 5 of 2014 concerning Waste Management and Cleanliness in the City of Surabaya it has confirmed that further provisions regarding reducing the use of packaging and bags made of materials difficult to decompose from natural processes is further regulated by a Mayor Regulation. In addition, local governments have the authority to determine waste management policies.35

The commitment of the central government in reducing plastic waste in the sea is still questionable. If referring to Presidential Regulation Number 83 of 2018 concerning Handling of Marine Plastic Waste, there are several regulations that are still needed, namely:

| No. | Target of                                                                 | Person in Charge                        |
|-----|---------------------------------------------------------------------------|-----------------------------------------|
| 1.  | Establishment of Regulation on Plastic Excise                              | Ministry of Finance Republic of Indonesia |
| 2.  | Stipulation of Ministerial Regulation on Application of Plastic Waste Technology for Road Construction of the | Ministry of Public Works and Housing    |
| 3.  | Stipulation of Ministerial Regulation on Waste Reduction Roadmap by Producers of | Ministry of Environment and Forestry    |
| 4.  | Issuance of Regulations on SOP for waste management from activities in marine tourism destinations | The Ministry of Tourism and Creative Economy |
| 5.  | Regulations on SOP for environmentally friendly capture fishery activities | Ministry of Maritime Affairs and Fisheries |
| 6.  | Stipulation of Ministerial Regulation on SNI for plastic which is easily biodegradable and can be recycled compulsorily. | Ministry of Industry Indonesia          |

Source: Perpres No. 83 of 2018

Government is still postponing the debt of several regulations that have been targeted, 4 of which should have been completed in the 2018-2019 period, but in reality none of them have been realized. Meanwhile, the other 3 regulations are targeted for completion in the 2020-2021 period. This shows that the government’s commitment to implementing the Presidential Decree above is considered to still need improvement, so it must be optimized. One of the handling of plastic waste in the sea is through the enactment of local and central government regulations. Both local and national governments are expected to make regulations regarding plastic waste. In addition, the Indonesian people must also be encouraged to better understand the negative impacts of using single-use plastics on the en-

35 Article 8 (2) Law Number 12 of 2011 Concerning on Establishment of laws and regulations, State Gazette Number 82 of 2011, Supplement Of Official Gazette Number. 5234
The largest archipelagic country in the world. Biodiversity and non-biological properties, ranging from coral reefs, fish to petroleum and natural gas, of which natural resources are very important for Indonesia or even the world. However, the sustainability of natural resources which are very important in the oceans is being threatened, one of which is of greatest concern now is the emergency of plastic waste entering the sea. So that Indonesia has the burden to take an active role in making various efforts to overcome the problem marine plastic debris at the national, regional and global levels.

Indonesia’s participation at the global level in dealing with marine plastic waste can be seen at the first United Nation Environmental Assembly (UNEA) held by the United Nation Environmental Program (UNEP) in 2014 with the theme “Sustainable Development Goals and the Post-2015 Development Agenda, Including Sustainable Consumption and Production”. At UNEA-resulted1, a resolution on adopted which marine plastic debris and microplastics was from the proposal submitted by Norway and Indonesia, in this case being in a position as co-sponsor. This resolution was made by referring to the phrase “the Future We Want” which comes from a document from the United Nations Conference on Sustainable Development, which expresses concern about marine pollution, especially plastic waste.37 One of the advantages of the agenda UNEA is its membership global and openness to the participation of civil society (civil so-

36 Gamaralalage and Onogawa, Strategies to Reduce Marine Plastic Pollution from Land-Based Sources in Low and Middle - Income Countries, 6-7.

37 Giulia Carlini and Konstantin Kleine, “Advancing the International Regulation of Plastic Pollution beyond the United Nations Environment Assembly Resolution on Marine Litter and Microplastics,” Review of European, Comparative and International Environmental Law 27, no. 3 (2018): 234–244, https://onlinelibrary.wiley.com/doi/abs/10.1111/reel.12258.
ciety) and other stakeholders. So that UNEA becomes the key to influence and formulate a global environmental agenda and contribute to international environmental policy.

Indonesia at the regional level also has an important role in encouraging ASEAN member countries to fight and tackle the problem of plastic waste in the sea. The commitments of ASEAN countries have been recorded in the Bangkok Declaration on Combating Marine Debris in ASEAN Region which was adopted on 22 June 2019 in Bangkok, Thailand. The declaration encourages countries to prevent and reduce marine plastic waste originating from land by strengthening national laws and increasing regional and international cooperation including policy dialogue and information sharing.

Efforts to address the problem of plastic waste in the sea through a legal approach, both at the regional and global levels followed by Indonesia, still require instruments legally binding. The UNEA resolution and the Declaration in ASEAN regarding marine plastic waste are still not legally binding, so that Indonesia as a member country has not shown full seriousness towards the resolution or declaration. Yet in accordance with Presidential Decree No. 83 of 2018, the Indonesian government still has a burden to encourage and participate in issuing an international agreement on tackling plastic waste in the sea.

CONCLUSION

Indonesia has committed itself to a global instrument that carries an obligation to prevent, reduce and manage pollution that can have an impact on the marine environment. Indonesia also plays a role in the formation of a resolution on marine plastic debris and microplastics at the global level. As well as participating in the formation of the Bangkok Declaration on Combating Marine Debris in ASEAN Region at the regional level.

Indonesia has also issued Presidential Regulation No. 83/2018 and several regions have ratified regulations regarding the prohibition of single-use plastic materials. However, the Presidential Decree still leaves a debt for the formation of several Ministerial regulations which are targeted to be completed in 2018 to 2021. Therefore, Indonesia’s commitment in dealing with the problem of plastic waste in the sea still needs to be increased as optimally as possible. The central government needs to finalize the regulations that have been targeted in Perpres No. 83 of 2018. Then, local governments that do not yet have local regulations regarding the ban on single-use plastics should immediately follow regions that have made policies in advance.

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