

THE POLLUTION OF THE GREAT PACIFIC GARBAGE AND THE IMPACT FOR INDONESIA

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ABSTRACT

Indonesia in handling environmental conservation at sea is guided by international regulations such as the 1982 UNCLOS and the 1972 Stockholm Declaration. In addition to international regulations, Indonesia also has various national regulations starts from Ministerial Regulations, Government Regulations to Regional Regulations. In these regulations, the difference lies only in the liability imposed on preserving the marine environment. The point is if the liability for environmental preservation in international conventions about the marine sector is given to every country and international organization, but in national law, the liability imposed on every individual who violates or pollutes the environment at sea. Therefore, it is clear that Indonesia has harmonized regulations with international provisions so that Indonesia cannot be held in the international liability, or sued in the International Court of Justice. The impact of plastic garbage in the Pacific Ocean can cover several fields, such as the environment, ecosystem, health, economic, and socio-cultural fields.

Keywords: Pollution, The Great Pacific Garbage Patch, Indonesia.

INTRODUCTION

370 species of marine animals have been found entangled in or have ingested marine debris from around the world. Principle 1 of the 1972 Stockholm Declaration, humans have a fundamental right to a healthy and proper environment for life, and humans are responsible for protecting the environment for the benefit of present and future generations. This declaration was motivated to align the United Nations goal to overcome and solve current environmental destruction. The 1982 Law of the Sea Convention states that every country is obliged to protect and preserve the marine environment from the dangers of pollution. Based on the two principles contained in the 1972 Stockholm Conference and the 1982 Convention on the Law of the Sea, countries around the Pacific Ocean are liable for the pile of plastic garbage.

Following up on the two conventions, Indonesia, as one of the countries whose geographical location is on the circumference of the Pacific Ocean, has implemented rules related to preventing plastic garbage pollution in the sea through Presidential Decree Number 83 of 2018 concerning Handling of Marine Garbage which is an extension of Law No. 32 of 2014 concerning Marine Affairs or hereinafter referred to as the Marine Law. Indonesia is listed as the second-largest plastic garbage contributor in the world after China. It is recorded that more than 64,000,000 tons (sixty-four million tons) of plastic are dumped into the sea. Indonesia is one of the countries whose geographical location is in the Pacific circle and is the second largest plastic contributor in the Pacific Ocean, raising the issue that Indonesia will be sued at the International Court of Justice. The problems in this research will focus on two essential things; (1) Are Indonesian National Policies and Laws not in harmony with international provisions in the maritime sector so that Indonesia can be made a suspect in the International Court of Justice related to the Pacific Ocean Garbage case? (2) what is the impact of Pacific Ocean plastic garbage on the marine environment in Indonesia?

The Regulations about the Pollution in the Great Pacific Garbage Patch

The United Nations Convention of the Law of the Sea (UNCLOS) is one of the instrument that regulates on sea litters. In UNCLOS, each state is obligated to take necessary action in avoiding destructive activities occurring in the state's jurisdiction. Furthermore, UNCLOS contains the protection and preservation of the environment contained in Chapter XII with the general provision that states are required to immediately take action according to the convention to prevent, reduce, and control pollution of the marine environment from various sources. Then there is also another convention called the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter or the London Dumping Convention 1972. This convention regulates explicitly the dumping or intentional disposal of waste or non-waste by ships, vessels, or other manufactured structures.

The edge of the northern Pacific Ocean, such as East Asia, Southeast Asia, the Oceania region, and the United States. Almost all countries on the edge of the Pacific Ocean are also participants in the Stockholm Declaration, UNCLOS 1982 and the International Convention for the Prevention of Pollution from Ships or MARPOL 1978. Thus, regarding countries that dispose of plastic garbage, either from land or from ships, because it ultimately results in the formation of clusters of plastic garbage in the convergent zone of the Pacific Ocean, of course, all of them can be held liable. Liability that applies in environmental law is a liability that is followed by replacing a loss caused by the country, because there must be a material loss caused in this case. The compensation can be Strict Liability and Absolute Liability. Strict Liability is a liability that is imposed by providing a limited or partial compensation, while Absolute Liability with full compensation. Indonesia is indicated as one of the countries that contribute to the garbage patch in the Pacific Ocean. This is because Indonesia, as one of the countries in Southeast Asia, is not far from the garbage patch in the Pacific Ocean. This will raise the question of how is the legal regulation on the environment in Indonesia so that the garbage reaches the Pacific Ocean?

The Regulations About Marine Pollution in Indonesia

Indonesia, as a country with thousands of islands, has the right to make regulations on environmental conservation and the prevention, reduction and control of marine pollution. Indonesia its participation by signing the 1982 Law of the Sea Convention or UNCLOS in Jamaica. According to Article 192 of UNCLOS, states should protect and maintain the marine environment. Thus, as a form of Indonesia's efforts to protect and maintain the marine environment in Indonesia, UNCLOS is followed up with a ratification process into the national legal system through Law Number 17 of 1985. Law No. 17 of 1985 contains regulations for preserving the marine environment and the prevention of marine environment pollution. Besides ratifying UNCLOS 1982, Indonesia also has Law Number 32 of 2009 concerning Environmental Protection and Management or the Environmental Law, which regulates prohibitions in environmental protection and management. There are examples of articles containing strict liability in the Indonesian regulations, namely Article 21 of the 1982 Environmental Law. In addition to Law Number 17 of 1985 and the Law on the Environment, Indonesia has various regulations governing the prohibition of marine pollution. The regulations consist of:

1. Law Number 6 of 1996 concerning Waters (Waters Law);
2. Law Number 17 of 2008 concerning Shipping (Shipping Law);
3. Government Regulation of the Republic of Indonesia Number 19 of 1999 concerning Control of Marine Pollution and/or Destruction (Government Regulation of Marine Pollution);
4. Government Regulation of the Republic of Indonesia Number 21 of 2010 concerning Maritime Environment Protection (Government Regulation of Maritime);

5. Government Regulation Number 74 of 2001 concerning Management of Hazardous and Toxic Materials (PPPB3);
6. Regulation of the Minister of Environment and Forestry Number P.20/MENLHK/SETJEN/KUM.1/10/2020 concerning Amendments to the Regulation of the Minister of Environment and Forestry Number P.12/MENLHK/SETJEN/KUM.1/4/2018 concerning Requirements and Procedure for Dumping (Disposal) of garbage into the Sea (Ministry Regulations of Marine Waste);
7. Regulation of the Minister Transportation Number 29 of 2014 concerning Prevention of Maritime Environmental Pollution (Ministry Regulations of Maritime Pollution).

The Lampung Province, as one of the provinces in Indonesia with a large sea area, also has various regional regulations and district regulations to protect the marine area from various pollutions. The following are the regulations in Lampung Province that regulate environmental pollution in the sea, namely:

1. Lampung Regional Regulation Number 11 of 2012 concerning Water Quality Management and Water Pollution Control (Lampung Regulation of Water Pollution);
2. Lampung Regional Regulation Number 3 of 2006 concerning Management of Natural Resources and the Environment (Lampung Regulation of Environment);
3. Lampung Province Regional Regulation Number 12 of 2014 concerning Optimizing the Utilization of Marine and Fishery Resources (Lampung Regional of Marine Utilization);
4. West Lampung Regency Regulation Number 18 of 2004 concerning Community-Based Natural Resources and Environmental Management (Lam-Bar Regional Regulation on Natural Resources Management);
5. East Lampung Regulation Regency Number 07 of 2013 concerning Environmental Protection and Management (Lam-Tim Regulation Regency of Environmental);
6. Pesisir Barat Regulation Regency Number 2 of 2016 concerning Control of Environmental Pollution and Damage (Pesi-Ba Regulation Regency of Environment).

The legal provisions used by Indonesia in protecting Indonesian seas from marine pollution both from international and national sources and will explain the differences in these regulations can be grouped as follows:

TABLE 1 INTERNATIONAL PROVISIONS ON POLLUTION		
Indikator	UNCLOS 1982	STOCKHOLM 1972
Definition of the Marine Environment Pollution	Pollution of the marine environment: entered by humans, directly or indirectly, of materials or energy into the marine environment including the estuary, which causes or bring adverse effects such as damage to marine biological wealth and life in the sea, endangering human health, disturbance to the marine environment. Activities at sea include fishing and other legal uses of the sea, degradation of the sea water quality, and reduction of comfort. (Article 1 paragraph (4))	It does not explain the definition of environmental pollution but explains the causes of the pollution in Declaration No. 3.
Scope	The use of terms in	Focusing on the principles that each

	Article 1 such as the term area, authority, is activities in the area, pollution of the marine environment, dumping, participating countries.	country must carry out in order to create a protected environment. (all principles in the declaration
The Liability Subject in Marine Environment Preservation	All policies to preserve the environment are returned to the state (Article 194).	It is contained in Principle 4 and Article 7 that people and states have responsibilities.
The way to Preserve the Marine Environment	(a) prevention, reduction and control of pollution and other hazards	It is by taking attention to the principles contained in the declaration.
	(b) protection and conservation of the area natural resources and prevent damage to flora and fauna of the marine environment. (Article 145)	
Penalty or Sanctions	Returning to the state to impose sanctions that are quite harsh for violators and perpetrators of environmental pollution. (Article 217)	Returning to their respective countries and international organizations to regulate and supervise violations that cause marine pollution. (Principle 25)

Table 2 Indonesian Law Regulations on Pollution					
Regulations	Definitions	Scope	Responsibility Subject	Way to Preserve the Marine Environment	Sanctions
Environmental Law	Article 1 (14)	Article 4	Article 53	Article 57	Article 76 (2)
Marine Law	Article 1 (11)	Article 4 and Article 52	Not Regulated	Article 1 (10)	Article 52
Waters Law	Not Regulated	Not Regulated	Not Regulated	Article 23	Article 124
Shipping Law	Article 1 (57)	Article 123	Article 227, 230, and Article 231	Not Regulated	Article 324
Government Regulation of Marine Pollution	Article 1 (2)	Not Regulated	Article 15 and Article 16	Not Regulated	Article 24
Government Regulation of Maritime	Article 1 (2)	Article 3 (2)	Article 29, 30, and 31	Not Regulated	Article 137 and Article 38
PPPB3	Not	Article 5	Article 39	Not Regulated	Article

	Regulated				e 38 and Article 39
Ministry Regulations of Marine Waste	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Ministry Regulations of Maritime Pollution	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Lampung Regulation of Water Pollution	Article 1 (18)	Article 4	Article 27	Article 5	Article 35
Lampung Regulation of Environment	Article 1 (16)	Not Regulated	Not Regulated	Article 22	Article 32
Lampung Regional of Marine Utilization	Not Regulated	Not Regulated	Article 37	Article 25	Article 42
Lam-Bar Regional Regulation on Natural Resources Management	Not Regulated	Not Regulated	Not Regulated	Not Regulated	Not Regulated
Lam-Tim Regulation Regency of Environmental	Article 1 (11)	Article 4	Article 8	Article 23	Article 36, 37, 38.
Pesi-Ba Regulation Regency of Environment	Article 1 (19)	Article 4	Article 10	Article 79	Article 65, 68, 69, 70

After observing the table above, it is evident that Indonesia has harmonized regulations and complies with international regulations. The difference lies only in the liability imposed in the regulation. The point is if the liability for environmental preservation in international conventions about the marine sector is given to every country and international organisation, but in national law, the liability imposed on every individual who violates or pollutes the environment at sea. Therefore, it is clear that Indonesia cannot be held international liability, or sued in the International Court of Justice.

Garbages Regulations in Indonesia

Garbage is a product of human activity. Physically consists of the same materials as useful goods, only distinguished by a lack of value. Indonesia has a coastal population of 187.2 million, which annually produces 3.22 million tons of plastic garbage that is not managed properly. Around 0.48-1.29 million tons of plastic garbage is thought to pollute the oceans. The data also says that Indonesia is a country with the second-largest amount of plastic garbage pollution into the sea in the world.

International law also has various regulations related to garbage, namely UNCLOS 1982, Washington Declaration on the Protection of the Marine Environment from Land-based Activities 1995, Rio Declaration 1992, Stockholm Declaration 1972, London Dumping Convention, Convention for the Protection of the Marine Environment of the Northeast Atlantic 1992 (OSPAR), and the Basel Convention. Indonesia has made various efforts to tackle the garbage problem, starting from the establishment of the regulations until the form

of real movements as stated in the Indonesian constitution, namely Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, the state gives everyone the right to have a good and healthy environment. In other words, the state should provide public services in garbage management and responsible for garbage management.

In fact, in Indonesia, some several laws and regulations have a direct correlation with garbage management, namely the Environmental Law, Law Number 32 of 2004 concerning Regional Government was replaced with Law no. 23 of 2014 concerning Regional Government, Law no. 18 of 2008 concerning Garbage Management and several regional regulations that have been established by local governments both at the Regency or City level.

The based law that regulates garbage in Indonesia is Law no. 18 of 2008 concerning Garbage Management and Government Regulation Number 81 of 2012 concerning Management of Household Garbage and Similar Household Garbage. In addition, there are other regulations, namely: Government Regulation 27 of 2020 concerning Specific Waste Management, Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Waste Reduction by Producers, Presidential Regulation No. 97 of 2017 concerning National Policies and Strategies for Management Household Garbages and Types of Household Garbages, Government Regulation 81 of 2012 Management of Household Garbages and Types of Household Garbages, Government Regulation 74 of 2001 on Management of Hazardous and Toxic Materials, Government Regulation 101 of 2014 Management of B3 Garbages.

The Government of Indonesia has initiated to combat plastic garbage in the ocean by 70 per cent by 2025. In supporting the achievement of the marine garbage reduction target, the Government of Indonesia has prepared a National Action Plan (RAN) that includes strategies for changing habits, reducing land-based waste, reducing marine and coastal-based disposal, and improving law enforcement and technology research. In implementing the RAN, the Indonesian government involves producers of plastics and related products to manage plastic garbage. Based on the RAN, the Indonesian government encourages these companies to produce more environmentally friendly plastics that are easily recycled naturally and use recycled plastics. The success of the RAN program cannot be separated from the cooperation of non-government stakeholders and cross-sectoral national cooperation. The establishment of standards and procedures for the management of plastic garbage in the sea is another important matter for preventing further pollution of plastic garbage in the sea. If there is no movement and change in the management of plastic garbage, the amount of plastic in the ocean that contributes 45-70% of waste in the sea, will increase by 2025.

Local government efforts in handling marine garbage pollution strengthen human resource capacity, financing, infrastructure management, changing attitudes and developing integrated coastal waste management. Furthermore, together with the central government, handling plastic garbage pollution in the sea through education and campaigns on garbage changing. There has been a movement to reduce plastic garbage in some areas, for example, in Bali with the Governor's Regulation on the prohibition of plastic straws and single-use plastic bags. Even though there are still those who try to apply for a material test, the policy should be well appreciated. The garbage reduction has also been carried out by one of the private parties by reducing the use of plastic in their products, namely PT Bridgestone Tire Indonesia (Bridgestone Indonesia).

The Ministry of Environment has also prepared norms, standards, procedures and criteria (NSPK) and regulations. The NSPK and these regulations are the draftings of the Ministerial Regulation (Permen) of the Forestry Environment (LHK), which aims to change the behavior of plastic production by producers and consumers' behavior of plastic consumption. This behaviour change is carried out in stages with three target sectors: manufacturing, retailers, food and beverage service industry, hotels, restaurants, and cafes.

Then, the drafting of the LHK Ministerial Regulation on Reducing Plastic Bag Waste aims to change the behaviour of single-use by the community.

The Impacts of Great Pacific Garbage in Indonesia

The Impact Of Plastic Garbage In Environmental Field And Marine Ecosystem

Plastic garbage contains toxic chemicals, which can damage the ecosystem of marine life. In addition to marine biota, garbage pollution in the sea can also impact human health around the sea and not around the sea. In 1996 alone, this phenomenon affected at least 267 marine animal species worldwide. It includes 86% of sea turtles, 44% of all seabird species, 43% of all marine mammal species and a large number of fish and crustacean species. Plastic in the ocean causes many problems for underwater life, from zooplankton to cetaceans, seabirds and reptiles. When fish and other marine animals eat microplastics, it is possible that these animals already contain chemicals in their bodies and can carry toxic chemicals in the food chain. This can have an impact on human health, considering that underwater animals are one type of human food.

The impacts of plastic garbage in healthy organism field

Several types of garbage made of plastic can cause health problems such as tissue death and cancer in humans (carcinogenic), poisoning, skin pigmentation and lumps, stomach disorders, and limp hands and feet. While in pregnant women, it causes the baby's death in the womb, and the baby is born with disabilities. The effect of plastic waste on animals is to damage the breeding system and produce a deformed fetus, in addition to causing liver cancer.

The Impacts of Plastic Garbage in Social and Economic Field

Garbage and its negative impact would reduce attractiveness to local and foreign tourists. This can affect the association of the international community in viewing the Indonesian state. From the explanation above, it is clear that garbage has a very negative impact on all living things. Not only for marine animals and plants but it can also impact human life, the economy and even determine the profile of a country.

CONCLUSIONS

Indonesia in handling environmental conservation at sea is guided by international regulations such as the 1982 UNCLOS and the 1972 Stockholm Declaration. The point is if the liability for environmental preservation in international conventions about the marine sector is given to every country and international organisation, but in national law, the liability imposed on every individual who violates or pollutes the environment at sea. Therefore, it is clear that Indonesia has harmonized regulations with international provisions so that Indonesia cannot be held in the international liability, or sued in the International Court of Justice. The impact of plastic garbage in the Pacific Ocean concerns several aspect, including health, economic, and social fields.

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