

## **THE ARRANGEMENTS OF COMPENSATION FOR MARINE POLLUTION BY PLASTIC WASTE IN INDONESIA**

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### **ABSTRACT**

One of the environmental damages currently quite disturbing is the ecological damage caused by plastic waste. Plastic waste is difficult to decompose so that it can disrupt the ecosystem of the land and the sea. One of the impacts of plastic waste is on the health of marine animals, where some of these animals, such as turtles, eat debris or plastic fragments. As a country with a large sea area, Indonesia must ensure its marine environment is not polluted by plastic waste. One way to prevent environmental damage is through regulation, where in addition to prevention, we must also look at what sanctions can be applied to those who violate the law by dumping rubbish in the sea. These can be criminal sanctions, such as fines and imprisonment, and sanctions to pay compensation, especially if victims are harmed. This research uses a normative legal method to answer the problem of how the rules in Indonesia regulate compensation in the event of pollution due to plastic waste. The current regulations are sufficient, but implementing compensation payments for plastic waste victims is still challenging.

**Keywords:** Regulations, Compensation, Marine Environment, Plastic Waste

## A. INTRODUCTION

Indonesia is a country that has a more expansive ocean than its land area, as the Indonesian Ocean or sea territory, which consists of territorial waters and the Exclusive Economic Zone (EEZ), with the EEZ waters reaching around 2.7 million km<sup>2</sup> and territorial waters reaching 3.1 million km<sup>2</sup>. Apart from that, Indonesia is also a country that has the widest coral reefs in the world.<sup>1</sup> This sea territory covers more than 70% of Indonesia's total territory; thus, Indonesia has a variety of marine biodiversity, including fish, coral reefs, algae, and other aquatic plants.

One of the problems of Indonesia's marine environment is sea pollution, which comes from some sources such as land-based sources, activity in the area, and garbage, especially plastic waste. Given the vastness of Indonesia's seas, it is necessary to regulate and supervise these sea areas so that there is no dumping of waste that violates the rules. For the last several decades, the marine environment has been polluted by waste from human activities, both from sea-based sources themselves and land-based. Since the massive production of plastics, the waste volume has been increasing significantly. A survey has shown that around 80% of the solid waste entering marine environments is contributed by plastic waste. The Study estimated that pieces of Plastic bigger than 25 millimeters make up over 95 percent of Plastic floating on the Ocean. We know that Plastic has helped humanity progress, made homes more energy efficient, and reduced pressure on the extraction of natural resources, such as wood and cotton, but that was a decade ago when people needed Plastic as an alternative to make human life easier.

However, in reality, the large amount of plastic use poses dangers, especially for the environment, with much plastic waste that is difficult to decompose, both in the sea and on land. Plastic pollution has rapidly become one of the most urgent environmental challenges. Regulations on marine environmental protection can be divided into national and international regulations. This regulation is not only to prevent marine pollution but also to regulate the imposition of sanctions, especially compensation payments for those who commit violations. Plastic waste hurts the marine environment, adversely impacting ecosystems, some economically active sectors such as tourism and fishing, and possibly public health, for instance, consuming contaminated fish. However, some form of Liability could be imposed on

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<sup>1</sup> Ministry of Tourism and Creative Economy, "Interesting Facts About Indonesian Seas, Having the Widest Coral Reef in the World", <https://kemenparekraf.go.id/ragam-parekraf/fakta-menarik-laut-indonesia-memiliki-terumbu-karang-terluas-di-dunia>. Accessed 5 February 2025.

corporations that produce plastic or on states that fail to regulate them. Such a liability regime, even without financial compensation, could prevent further marine plastic pollution.<sup>2</sup> The Liability for environmental pollution from plastic waste can be attributed to the state (responsibility) and the people who throw the plastic waste. Unlike state responsibility, Liability requires compensation based on risk rather than fault.<sup>3</sup> Connecting to the Liability from environmental pollution, Indonesian Law Number 32 of 2009 on Environmental Protection and Management has regulated the payment of compensation for people who pollute the environment. Indonesia also has Law No. 18 of 2008 concerning Waste Management.

Apart from national laws, Indonesia has also ratified various international regulations. Namely, the United Nations Convention on The Law of The Sea (UNCLOS), the UN Fish Stocks Agreement (UNFSA), the Agreement on Port State Measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (PSMA IUU), and the International Convention for the Prevention of Pollution from Ships 1973 (Marine Pollution-MARPOL).

This paper will discuss how Indonesian regulations regulate the compensation for marine pollution from plastic waste. This research method is normative legal, which analyzes the various rules that apply in Indonesia.

## **B. RESULTS AND DISCUSSIONS**

### **1. The Impact of Plastic Waste on the Marine Environment**

Plastic waste can significantly impact marine life, such as fish, coral reefs, and other marine biota, through ingestion, entanglement, and chemical contamination, leading to injuries, starvation, and even death for many species. Plastic is a product of modernization. Plastic materials are used for household and industrial processes and products. Some fish and other marine biota, like turtles, often mistake the plastic debris for food, which can cause blockages in their digestive systems and lead to starvation. In another form, entanglement in plastic waste can cause injuries, impaired movement, and even drowning, and plastics can leach toxic chemicals into the water, harming marine organisms.<sup>4</sup> Plastic exposed to sunlight can also change or release toxins, ultimately harming marine life. Plastic devastates nature, and plastic

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<sup>2</sup> Sandrine Maljean-Dubois and Benoît Mayer, “Liability and Compensation for Marine Plastic Pollution: Conceptual Issues and Possible Ways Forward”, *American Journal of International Law*, Vol 114, 2020. <https://www.cambridge.org/core/journals/american-journal-of-international-law/article/liability-and-compensation-for-marine-plastic-pollution-conceptual-issues-and-possible-ways-forward/A84CB7AEBAC4E98E2DE98C3E1144A3F3>. Accessed 2 February 2025.

<sup>3</sup> Id.

<sup>4</sup> Fauna and Flora, “How does Plastic Pollution Affect Marine Life?”, <https://www.fauna-flora.org/explained/how-does-plastic-pollution-affect-marine-life/>. Accessed 2 February 2025.

waste is the most difficult to decompose. If the decomposing plastic waste becomes a fraction, it can even become microplastic, which cannot be seen.<sup>5</sup> We know that natural ecosystems operate on a cycle of renewal: plants and animals grow, die, and become food for the next generation.<sup>6</sup> These ecosystems have no place for substances that do not degrade. Once plastic enters the sea, it has no boundaries – waves and storms can carry plastics to even the furthest reaches of the ocean, where they accumulate into large gyres on the high seas or become embedded in shorelines and delicate coastal ecosystems; they have even been found on uninhabited islands. It also happened in Bali, which is an international tourist destination. In 2024, Pantai Kuta, a famous beach in Bali, was filled with plastic waste or garbage sent from other areas. Plastic waste. This can result from household waste, namely from hotels, restaurants, and housing, as well as fishing equipment or fishing nets that are not used and thrown into the sea. The net from fisheries will also be a problem for the sea animals. A Trawl net is a cone-shaped net that opens wide like a mouth at one end and can open and close like a small bag at the other. The Pukat Trawl will sweep to the bottom of the sea so that it takes all kinds of fish and can damage coral reefs.<sup>7</sup> These fishing activities only benefit fishermen and impact the degradation of coral ecosystems.

Nets thrown into the sea can also entangle fish and turtles so that the net binds them and cannot escape. Turtles, especially leatherbacks, often mistake plastic for jellyfish, which are part of their diet. Fish can also consume microplastics that resemble plankton. Dr Joseph Pfaller of the University of Florida, Gainesville, said the odor emanating from submerged or floating plastic is a "deceptive scent" for turtles.<sup>8</sup> As is known, some plastic waste is bags containing food, both snacks and leftover human food, so the turtles are interested in smelling it.

In 2018, a whale in Wakatobi Sulawesi was found dead, and Scientists studied the whale's stomach contents and found lots of plastic waste.<sup>9</sup> This proves that plastic waste is dangerous not only for humans but also for marine animals. In a study of various types of fish

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<sup>5</sup> Andreas Pramudianto, "THE ROLE OF INTERNATIONAL LAW AND NATIONAL LAW IN HANDLING MARINE PLASTIC LITTER", *Journal of Lampung International LAW (LAJIL)*, Vol 1, Issue 2, 2019.

<sup>6</sup> Id.

<sup>7</sup> Emiel Salim Siregar, et.all, "Dampak Kerusakan Lingkungan Laut Akibat Penggunaan Jaring Trawl", *Jurnal Keadilan*, Vol 3 No 2, 2023.

<sup>8</sup> BBC News Indonesia, "Ilmuwan ungkap mengapa penyu menyantap sampah plastik di laut" <https://www.bbc.com/indonesia/majalah-51812316>, Accessed 5 February 2025.

<sup>9</sup> BBC News Indonesia, "Paus di Wakatobi Telan '115 Gelas Plastik' dan Sandal Jepit", <https://www.bbc.com/indonesia/indonesia-46284830>, Accessed 5 Februari 2025.



and marine mammals, various plastic parts have been found in the digestive tracts of their body.<sup>10</sup> This situation not only occurs in Indonesia but also in several other countries.



*Picture 01. Garbage shipments on Kuta Beach, Bali<sup>11</sup>*



*Picture 02. Plastic Waste Effect to the Turtle<sup>12</sup>*

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<sup>10</sup> Andreas Pramudianto, Loc.cit.

<sup>11</sup> Bali Post, "Sampah Kiriman Kembali Muncul di Panta Kuta", <https://www.balipost.com/news/2024/02/23/389118/Sampah-Kiriman-Kembali-Muncul-di...html#:~:text=MANGUPURA%2C%20BALIPOST.com%20%E2%80%93%20Sampah%20kiriman%20kem bali%20muncul%20di,meningkat%20belakangan%20ini%2C%20meski%20volume%20sampah%20kiriman%20turun>, Accessed 2 Februari 2025.

<sup>12</sup> Ocean Works, "Bagaimana Plastik di Laut Berdampak pada Penyu?" <https://id.oceanworks.co/blogs/ocean-plastic-news/how-is-ocean-plastic-impacting-sea-turtles>, Accessed 24 February 2025

## **2. Regulation on Plastic Waste**

Although there are no specific regulations for plastic waste, some regulations could apply regarding marine pollution from plastic waste.

### **1) Law Number 18 of 2008 on Waste Management**

This law regulates all types of waste and how to manage waste, including the role of producers and the government. Article 15 mentioned that Producers are required to manage packaging and/or goods they produce that cannot or are difficult to decompose by natural processes.

On the other side, Article 20 mentions the duties of the government, such as the central government and regional governments are required to carry out waste reduction and waste recycling activities as follows:

- a. Set waste reduction targets gradually over a specific period;
- b. facilitate the application of environmentally

Furthermore, Article 29 paragraph (1) letter e states that everyone is prohibited from throwing rubbish in places other than those designated. The sanctions can vary depending on the local government. Sanctions can be imprisonment for a maximum of 6 months and/or a fine of up to IDR 50 million. For example, West Java Provincial Regulation Number 12 of 2010 stipulates a maximum imprisonment of 3 months or a maximum fine of IDR 50 million.

Compensation can be applied if littering occurs in several situations, especially if the act causes environmental loss or damage. The injured party can file a claim for compensation through legal channels, and the compensation depends on the damage and loss caused. For example, the injured party can sue for compensation if littering causes flooding, building damage, or disease. Throwing rubbish carelessly in rivers, waterways, or public areas that cause water or land pollution can be the basis for a compensation claim. Environmental pollution can also occur due to industrial waste being disposed of improperly or without permission. The injured party can file for compensation. In addition, the company may also be subject to sanctions in the form of compensation for environmental restoration and/or medical costs for victims of pollution. This will also apply to all waste, as well as plastic waste.



2) Law Number 32 of 2009 on Environmental Protection and Management Government

To protect the environment, the government has to establish environmental quality standards. Article 20 (3) mentioned that Everyone can dispose of waste in the environmental media with the following requirements: a. meet environmental quality standards; and b. Please obtain permission from the Minister, governor, regent/mayor, according to their authority. Those who pollute the environment must pay compensation for victims and environmental restoration. Articles 53 and 54 states that every person who pollutes and/or damages the environment is obliged to carry out environmental pollution and/or damage control.

Furthermore, every person who pollutes and/or damages the environment is obliged to restore the function of the environment. This is for the restoration of the environment

Article 69 mentioned that every person is prohibited from:

- a. committing acts that result in environmental pollution and/or destruction;

The person polluting the environment has to pay compensation, and based on Article 87, the person responsible for a business that pollutes or damages the environment must pay compensation or take specific actions if it causes harm to other people or the environment. This person who causes loss to others or the environment must pay compensation. The person polluting the environment has to pay compensation, and based on Article 87, the person responsible for a business that pollutes or damages the environment must pay compensation or take specific actions if it causes harm to other people or the environment. This action that causes loss to other people or the environment is obliged to pay compensation. Furthermore, the government can sue the person or company who pollutes the environment based on Article 90 paragraph (1): Government agencies and regional governments responsible for the environment have the authority to file lawsuits for compensation and take specific actions against businesses and/or activities that cause environmental pollution and/or damage that results in environmental losses. Environmental loss, mentioned in this article, is a loss arising from environmental pollution and/or damage that is not a private property right. So, the government has the right to take specific actions.

3) Regulation Number 81 of 2012 concerning the Management of Household Waste and Similar Household Trash

One of the aims of this waste management regulation is to maintain the sustainability of environmental functions and public health. Restrictions on the use of plastic and also

Styrofoam that are difficult to decompose by natural processes are contained in Article

12: Producers are required to limit waste accumulation by:

- a. preparing plans and/or programs to limit waste generation as part of their business and/or activities; and/or
- b. producing products using packaging that is easily decomposed by natural processes and that produces as little waste as possible.

Article 11 regulates waste reduction, where waste reduction is carried out by:

- a. using materials that can be reused or recycled and/or easily decomposed by natural processes.
- b. Collecting and returning waste from products and/or packaging that have been used.

#### 4) Presidential Regulation of the Republic of Indonesia Number 83 of 2018 concerning Handling of Marine Debris

This regulation mentions the definition of Marine debris as waste, including plastic waste (containing polymer compounds) originating from land, water bodies, and coasts that flow into the sea or waste originating from activities at sea.

In order to handle marine waste, it is necessary to establish strategies, programs, and activities that are synergistic, measurable, and targeted to reduce the amount of waste in the sea, especially plastic waste, in the form of a National Action Plan for Handling Marine Waste.

### 3. Principles of Reducing Plastic Waste

Regarding the compensation for plastic waste, some principles can be applied:

#### 1. Polluter Pays Principle

The "Polluter Pays Principle," or PPP, is a fundamental concept in environmental law and economics, stating that those who cause environmental harm should bear the costs of pollution prevention, control, and remediation. It is not a principle of compensation for damages, but rather a mechanism to internalize pollution costs and incentivize responsible behavior. The Polluter Pays Principle (PPP) directs environmental law regulation related to pollution events. This principle refers to an obligation or burden on the polluter to pay for the losses suffered by the victim. Indonesian Law No. 32 in 2009 stated this principle in Article 34. The ambiguity of these principles is that their explanation in this article mentions that the meaning of polluter pays principle even has



many meanings, such as paying to pollute or can be interpreted as a license to pollute.<sup>13</sup>

This explanation will confuse the Judge or the Company with questions, so we can pollute the environment if we pay for that.

Rio Declaration 1992, also mentioned the PPP Principles: National authorities should endeavor to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution, with due regard to the public interests and, without distorting international trade and investment.

The practical implications of the polluter pays principle is its allocation of economic obligations about environmentally damaging activities, particularly about liability, the use of economic instruments, and the application of rules relating to competition and subsidy.<sup>14</sup> This book of Sands is the basic literature for personal study in environmental law.

## 2. Precautionary Principles

The meaning of precautionary principles is a concept in environmental and public health decision-making, advocating for proactive measures when scientific evidence is uncertain about potential harm. It means taking preventative action before a complete understanding of a potential hazard is achieved, especially when the potential harm is severe. The article shows the formulations of the precautionary principle in various documents. It analyzes the elements of the principle derived from such formulations, concluding that many critics have not only oversimplified the term 'uncertainty' as 'risk', but have also confused the precautionary principle with the principle of prevention.<sup>15</sup> This is in line with the principle of the Rio Declaration.

Rio Declaration principle 15 mentioned that in order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage, a lack of complete scientific certainty shall not be used to postpone cost-effective measures to prevent environmental degradation.

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<sup>13</sup> Muhamad Muhdar, “The meaning of the polluter pays principle, even has many meanings such as paying to pollute or can be interpreted as a license to pollute.”, *Jurnal Mimbar Hukum*, Vol 21 No 1, 2019.

<sup>14</sup> Philippe Sands, *Principles of International Environmental Law*, Second Edition, Cambridge University Press, United Kingdom, 2003, hlm. 281,

<sup>15</sup> Andri Wibisono, “The development of the precautionary principle in international and Indonesian environmental law”, *Asia Pacific Journal of Environmental law*”, Vol 14 Issue1-2, 2011.

This principle is of rational choice under uncertainty and/or ignorance. Typically, rational decision theory is well suited for situations where we know the possible outcomes of our actions and can assign probabilities to them (a situation of "risk" in the decision-theoretic sense). Furthermore, the most rational way to decide is unclear when we lack important information and the stakes are high. The Precautionary Principle is one proposal to fill this gap.

### 3. Sustainable Development

Sustainable development offers a framework to address pollution by integrating environmental protection with economic growth and social equity. These principles prioritize preventing pollution at the source through energy efficiency, waste reduction, and cleaner production technologies.

Connecting to Sustainable development, this principle encourages responsible consumption patterns, promoting less polluting goods and services and encouraging industries to adopt more sustainable production methods.

Implementing effective waste management systems, including recycling, composting, and waste-to-energy technologies, can reduce the amount of waste sent to landfills and minimize associated pollution risks.

Addressing pollution is crucial for achieving several Sustainable Development Goals (SDGs), particularly those related to health, well-being, and the environment. Strategies include promoting sustainable consumption and production, transitioning to cleaner energy sources, and implementing effective waste management systems.<sup>16</sup>

### 4. Compensation for Plastic waste in Indonesia

One of the ways to protect the environment from plastic is by applying regulations. Effective policies and regulations must address the entire lifecycle of plastics and engage all sectors of society to drive systemic change across five key areas.<sup>17</sup>

Some keys to promoting sustainable development include restricting harmful chemicals in plastics, promoting circular solutions through reuse, refill, and eco-design, and improving waste management systems.

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<sup>16</sup> UNDP, "COMBATTING PLASTIC POLLUTION FOR SUSTAINABLE DEVELOPMENT", 2024. [https://www.undp.org/sites/g/files/zskgke326/files/2024-11/undp\\_combatting\\_plastic\\_pollution\\_for\\_sustainable\\_development.pdf](https://www.undp.org/sites/g/files/zskgke326/files/2024-11/undp_combatting_plastic_pollution_for_sustainable_development.pdf). Accessed 5 March 2025.

<sup>17</sup> UNDP, COMBATTING PLASTIC POLLUTION FOR SUSTAINABLE DEVELOPMENT, A snapshot of UNDP's work in 12 countries. New York: UNDP, 2024

Indonesia is a country where people use plastic for daily life, such as carrying shopping items, and must manage their plastic waste. Marine plastic pollution is one of the significant threats to Indonesia. Over 60 percent of Indonesia's 275 million population lives on the coastline.<sup>18</sup> Plastic pollution threatens Indonesia's fisheries and tourism industries, damaging the nation's rich marine biodiversity, mangroves, seagrass, and coral reef habitats and negatively impacting marine communities. Indonesia is developing the National Action Plan for Circular Economy 2025-2045. The implementation of the circular economy in Indonesia focuses on five priority sectors: plastic packaging, food, textiles, construction, and electronics.<sup>19</sup> Currently, not many lawsuits are filed for compensation for plastic waste by individuals, but the government plans to file lawsuits against producers who do not manage plastic waste. The Ministry of Environment plans to sue manufacturers who do not handle plastic waste by preparing concrete data and involving experts. The potential economic loss due to plastic waste in the sea is estimated to reach Rp 250 trillion.<sup>20</sup>

This figure is quite significant considering the amount of plastic waste in Indonesia. Steps to control plastic waste are:

- Improve waste management systems, including plastic waste management, and reduce the use of single-use plastics.
- Increase public awareness:
- Research and innovation:

### C. CONCLUSION

Steps need to be taken to address the increase in plastic waste in Indonesia, especially that which pollutes the sea. The government has made legal regulations to prevent marine pollution by plastic, but what has been done is to provide criminal sanctions for those who violate the rules. Meanwhile, lawsuits for damages are still rarely filed. This is likely due to a lack of public knowledge or perhaps the fact that claiming compensation from producers who cause plastic waste is difficult. In addition to filing lawsuits for environmental crimes, the public can be provided with compensation claims information.

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<sup>18</sup> Id.

<sup>19</sup> WRI, "Indonesia National Plastic Action Partnership (NPAP)", <https://wri-indonesia.org/id/inisiatif/indonesia-national-plastic-action-partnership-npap>, Accessed 20 February 2025.

<sup>20</sup> Danur Lambang Priandaru, "Kebocoran Sampah Plastik di Laut Bikin Rugi Negara Rp 225 Triliun", <https://lestari.kompas.com/read/2024/09/12/150000686/kebocoran-sampah-plastik-di-laut-bikin-rugi-negara-rp-225-triliun>, Accessed 7 Februari 2025.

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