

## The effect of GPA IGR-4 on Indonesian government policy on marine litter

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**Abstract.** Marine Litter has adversely affected the environment and marine ecosystems. This problem took as a concern for 108 countries as participants in the Fourth Intergovernmental Review on the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities (GPA IGR-4) to agree on joint steps between these countries to preserve the marine environment from negative impacts land-based activities. These agreements are stated in the Bali Declaration. Before this article, there are no studies that have already examined The Bali Declaration and the Indonesian Government's policies regarding marine litter. So, it is very important to be studied in this article about the influence of the Bali Declaration on the Indonesian Government's policy in preventing marine litter. The results of the study in this article are that the Government of Indonesia has targeted to reduce plastic waste by up to 70 percent. The Indonesian government issued several policies in preventing marine litter by issuing a Government Regulation after the Bali Declaration and planning to put this policy in the 2018-2025 Strategic Action Plan. The Indonesian government takes serious care in the implementation of the Bali Declaration to save the environment and marine ecosystems.

**Key Words:** Bali Declaration, IGR-4 of GPA 2018, Marine Litter Policy, waste.

**Introduction.** Water is essential for human life and almost 70.8% or approximately 361 million cubic kilometres of the earth is covered in water (Pidwirny 2006). In the other side, humans do various daily activities on land continually. Unwittingly these activities not only have an impact on the surrounding environment but also bring impact on the sea. One of the human activities on the land areas which is harmful to the sea ecosystem is the disposal of waste into rivers. Disposal of this waste is usually carried out by industry players (industrial waste) and households/domestics (domestic waste). Not only that but also emissions of carbon dioxide derived from the interface of forest and agriculture (Van Noordwijk et al 2013) can bring the impact on the sea. Water originating from the land area will disembogue in the ocean, so anything done by humans to the water in the land area (river) will accumulate in the sea area (Veiga et al 2016). Therefore, pollution that occurs in the sea area that we know as marine litter, one of its causes, is from land-based and riverine sources (Mannaart et al 2019). However, the most worrying land-based activities are activities that produce plastic debris waste (microplastic). Because plastic debris will accumulate in the sea and causing contamination in seawater, on the other side, these particles from plastic debris can harm the life and sustainability of marine fauna/biota too (Azzarello & Vleet 1987). The potential caused by this plastic debris becoming a crisis-environmental issue that is spotted as the attention of the international public (Morét-Ferguson et al 2010).

On 31 October and 1 November 2018, 60 countries and the European Union met in Bali, Indonesia at the Fourth Session of the Intergovernmental Review Meeting on The Implementation of the Global Program of Action (Hereinafter referred to as IGR-4 of GPA/Bali Declaration) for the Protection of the Marine Environment from Land-Based Activities. The GPA aims to design concepts and step-by-step measures to prevent, reduce, and control sea quality degradation from land-based activities (GPA IGR-4 2018). Indonesia, the host of the event, also acts as a member of the 2018 GPA IGR-4.

Therefore, Indonesia has the responsibility to adopt the result of GPA IGR-4 meeting and any other outcome documents of the session into the government policies and programs. Indonesia is also expected to continue efforts to combat marine litter and microplastics, nutrients, and wastewater from land-based sources. The IGR-4 GPA meeting resulted the Bali Declaration which was approved by the member countries of the IGR GPA (GPA IGR-4 2018).

According to the authors, based on the literature review that has been done, the effect of GPA IGR-4 on the Government of Indonesia's Policy on marine litter does not have a significant impact. The results of data collection conducted by the author found that the regulation of government policies and Indonesian programs after the 2018 GPA IGR-4 did not increase significantly. This study aims to search about how far goes the effect of the GPA IGR-4 on Indonesian Government Policy in marine litter.

**Material and Method.** This research uses Doctrinal methodology (Research in Law) with the type of Expository Research which generally addresses conventional treatments and articles.

This study analyzes the rule of law because a Doctrinal methodology study is a study of legal texts and sources of law such as legislation, case law, statutes (Chynoweth 2008). This doctrinal methodology research explains systematically how a legal doctrine applied to legal regulations in the social field.

Good legal research allows for an understanding of the identification of applicable rules and regulations for predicting future applications of legal rules (Bintliff 2009). To create good legal research, the authors collect expository materials and secondary data material. These materials are legislation, journals, textbooks, reports, conventions, and statutes related to Marine Litter and GPA IGR-4. These materials were collected and then analyzed to find the effect of the GPA IGR-4 on the Indonesian government's policy regarding marine litter.

**Results and Discussion.** The issue of marine litter in Indonesia became a global concern since the publication of UNESCO reports in marine science (Brown 1986). This publication was the result of a regional UNESCO (COMAR) workshop with advanced training at Diponegoro University and the National Institute of Oceanology in 1985. Since then, many studies have begun to research marine litter along with the increasing potential of marine litter to harm the life sustainability of marine fauna/biota in Indonesia. Willoughby et al (1997) researched in Thousand Islands, Jakarta Bay, Indonesia from 1985 to 1995 about beach litter/marine litter. From that research it was found that social changes had an impact in the strandline litter, this is due to the increasing use of bottled drinking water in Indonesia society, as illustrated in the numerical data in Figure 1.

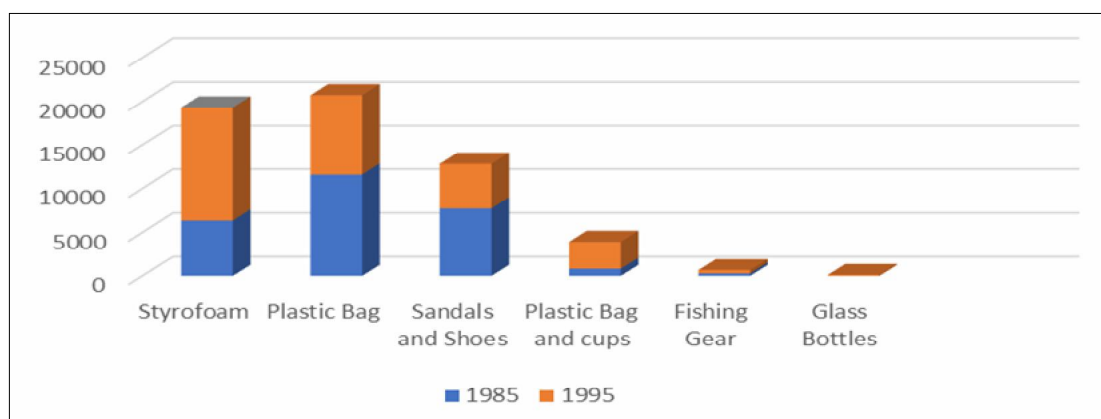


Figure 1. Number of different litter categories in Thousand Islands, Jakarta Bay, Indonesia from 1985-1995 (Willoughby et al 1997).

Pollution that occurred in Thousand Island, Jakarta Bay, Indonesia still occurs today. In 2012 a study conducted by Farhan & Lim (2012) found that the Thousand Island area was still a pollutant area. The high pollution in Jakarta Bay is caused by Ciliwung River in Jakarta Province and Cisadane River in Banten Province. In addition, other causes are the container vessels and oil vessels in the area of Jakarta Bay and the aquaculture area of Banten Province.

Based on the results of those two researches that took place in the same location in Thousand Island, Jakarta Bay, Indonesia, it can be concluded that starting from 1985 marine litters caused by land-based activities have emerged, and the potential for threats has increased to the present. If the Government of Indonesia does not take serious action to combat, this marine litter will harm the life sustainability of marine fauna/biota in the future.

Intergovernmental Review Meeting on The Implementation of the Global Program of Action for the Protection of the Marine Environment from Land-Based Activities is governed by two principles of customary international law, they are Article 207 of the United Nations Convention on the Law of the Sea (UNCLOS) and the Chapter 17 of Agenda 21 of the United Nations Conference on Environment and Development (UNCED). The GPA IGR was first held in 2001 which resulted in the Montreal Declaration. The primary purpose of GPA IGR is to protect and preserve the marine environment to become a healthy coastal and marine environment for human wellbeing, sustainable development, and economic security. Therefore the GPA IGR encourages States to take the necessary measures for the implementation of the Global Program of Action at national and international levels (GPA IGR-4 2018).

The GPA IGR-4 held in Bali in 2018 resulted in several points agreed by the member states of GPA IGR. This agreement has been declared on the Bali Declaration which is stated in Table 1.

Table 1

The Brief points that have been agreed on GPA IGR-4

<i>Last works of IGR GPA which are still continuing</i>	<i>Follow up work of GPA IGR-4</i>
Enhancing the mainstreaming of the protection of coastal and marine ecosystems.	Continuing efforts int three pollution streams (nutrients, wastewater, and marine litter).
Enhancing capacity building through collaboration and partnerships.	Strengthening the global partnership on marine litter, global partnership on nutrient management and global wastewater initiative. Improving the coordination, engagement, and support of the work with member states on land-based pollution. Continuing to advance efforts to combat marine litter and microplastics, nutrients and wastewater from land-based sources. Encouraging the exchange of information, practical experience and scientific and technical expertise cooperative and collaborative action and partnership.

This present research focuses on the effects caused by the GPA IGR-4 on the Government of Indonesia in making policies related to marine litter issues. The data taken is the legislation in force in Indonesia that was enacted before and after the GPA IGR-4. These data include laws, government regulations, presidential regulations, ministerial regulations. The criteria included in the author's research data are all those regulations and policies aimed at regulating how to deal with marine litter issues, including land-based activities. The authors aim to see how much effect the GPA IGR-4 has on Indonesian regulations and policies. The results of the literature research conducted by the authors are described in Table 2.

Lists of Indonesia Government's Policy on Marine litter

<i>Before IGR-4 GPA</i>	<i>After IGR-4 GPA</i>
Indonesia Government Regulation Number 19 of 1999 about Control of Marine Pollution and/or Destruction	Until this research was conducted, there was no regulation and policy issued by the Government that specifically regulates marine litter.
Law Number 18 of 2008 about Litter Management	
Law Number 32 of 2009 about Environmental Protection and Management	
Indonesia Government Regulation Number 81 of 2012 about Management of Domestic Waste and Domestic Litter	
Law Number 32 of 2014 about Maritime Affairs	
Minister of Transportation Regulation Number PM-29 of 2014 about Prevention of Maritime Environmental Pollution	
Presidential Regulation Number 16 of 2017 about Indonesian Maritime Policy	
Presidential Regulation Number 97 of 2017 about National Policies and Strategies for Managing Domestic Litter and Similar Domestic Litter	
Presidential Regulation Number 83 of 2018 about Marine Litter Management	

There are several laws issued by Indonesia relating to the preservation of coastal areas, but the authors did not include them in Table 2 because they do not specifically regulate not even mentioning marine litter, one of which is Law No. 27 of 2007 concerning Management of Coastal Areas and Small Islands.

**Discussion.** Based on the results of our research, it was found that the GPA IGR-4 did not have a major impact on Indonesian regulations and policies on marine litter. This is because, before GPA IGR-4 Indonesia had taken steps in dealing with marine litters. However, special regulations governing the handling of marine litter are only found in Presidential Regulation Number 83 of 2018 about Marine Litter Management. This Presidential Regulation came into force on September 21, 2018, which is one month before the holding of the GPA IGR-4.

Interestingly, the Presidential Regulation on Marine Litter Management mandated the Indonesian government and its staff to seriously follow up by establishing synergistic, measurable and directed strategies, programs and activities to reduce the amount of waste in the sea, especially waste plastic, in the form of the National Action Plan for Handling of Marine Waste in 2018-2025 (Article 2 Presidential Regulation on Marine Litter Management). In order to conduct this National Action Plan, the Indonesia Government will form a national coordinating team for handling marine litter, which is called the National Coordinating Team. This team will be under the supervision of the president. The national coordination team is lead by the Coordinating Minister for Maritime Affairs as the Chairman, and the Executive Chairman is the Minister of Environment and Forestry. The members of The National Coordinating Team consist of fourteen ministers, cabinet secretaries and the Head of the Sea Security Agency. This National Action Plan is integrated with the 2015-2019 National Medium-Term Development Plan so that it becomes a continuity and inseparable cohesiveness.

The National Action Plan for the Management of Sea Waste in 2018-2025 includes a strategic plan and program, as described in Table 3.

Based on Table 3, the authors found that the Indonesian Government's policies in the next seven years were in line with the mandate of the Bali Declaration. The National Action Plan for Marine Waste Management has programs and activities aimed at enhancing the mainstreaming of the protection of coastal and marine ecosystems, enhancing capacity building through collaboration and partnerships, making efforts in overcoming marine litter as one of the pollution threats from the three pollution streams.

Table 3

Strategies and Programs for the Indonesia National Action Plan for Handling Marine Litter in 2018-2025

<i>Strategy no. 1: National Movement for awareness of stakeholders</i>	
1	Increased public awareness about the negative impacts of marine litter (especially plastic).
2	The National Movement cares about marine litter through education for the civil servants, students, and educators.
<i>Strategy no. 2: Litter management sourced from land-based activities</i>	
1	Litter management in watersheds.
2	Control of plastic litter from the upstream industry sector.
3	Control of plastic litter from the downstream industry sector.
<i>Strategy no. 3: Litter management in coastal and sea area</i>	
1	Management of plastic litter from marine transportation activities.
2	Management of plastic litter from activities in the marine tourism area.
3	Management of plastic litter from marine and fisheries activities.
4	Management of plastic litter from activities on the coast and small islands area.
<i>Strategy no. 4: Funding mechanisms, institutional strengthening, supervision, and law enforcement</i>	
1	Diversification of funding schemes outside the state budget/regional budget.
2	Strengthening institutions.
3	Improving the effectiveness of supervision and implementation of law enforcement.
<i>Strategy no. 5: Research and development</i>	
1	Encouraging management innovation and overcoming waste pollution at sea through research and development.

**Conclusions.** The research has succeeded in proving the initial conclusions made by the authors that the GPA IGR-4 did not have a significant effect on Indonesia's regulation and policies on marine litter. This is not because Indonesia does not commit to the Bali Declaration of 2018 but rather because one month before the Bali Declaration, Indonesia has issued Presidential Regulation No. 83 of 2018 on Handling of Marine Waste whose contents are in line with the Bali Declaration. The positive impact of this Presidential Regulation on the case of marine litter in Indonesia still cannot be seen because it is still in the process of implementation.

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