

## The Effectiveness of Regulations on Waste Reduction Road Map by Manufacturers



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**ABSTRACT:** A good and healthy environment in a sustainable manner is part of human rights that need to be fought for, especially regarding plastic waste. Today, plastic waste has polluted land and water areas, due to limited management and the slow handling of waste management so that it affects climate change due to carbon gas emissions produced. Based on this awareness, the Government issued the Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Reducing Waste by Manufacturer. In fact, there are still very few Manufacturers who voluntarily create and implement a waste reduction roadmap. Therefore, this study examines the effectiveness of Minister of Environment and Forestry Regulation Number 75 of 2019 concerning Roadmaps for Reducing Waste by Manufacturer from the normative aspect (with a statute approach) and sociological (with a qualitative approach). This research used secondary data that obtained through literature study, and primary data obtained through observation. All the data analysed qualitatively with content analysis. The results of the study show that Regulation of Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Reducing Waste by Manufacturer has stipulated an obligation to manufacturers to create a roadmap for waste reduction. Problems occur in implementation due to lack of manufacturer participation which is influenced by 2 (two) factors, namely (1) economic factors because the transition to environmentally friendly materials will affect production costs; and (2) regulatory factors due to lack of socialization, lack of transparency in supervision, and the absence of sanctions for manufacturers who are negligent or intentionally not making and implementing a waste reduction roadmap.

**KEYWORDS:** Effectiveness of Regulation, Minister of Environment and Forestry Regulation, Producent and Manufacturer, Waste Reduction Roadmap, Human Rights Protection

### I. INTRODUCTION

The right to obtain a good and healthy living environment is one of the basic rights guaranteed to be protected in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states that "Everyone has the right to live in physical and spiritual prosperity, to have a place to live, and to have a safe environment. good and healthy and have the right to obtain health services. Thus, the use of the environment must pay attention to several things, including: [1]

- a) Future generations must still inherit an environment that still has a source of prosperity to give them life;
- b) There is a dynamic balance between elements found in nature;
- c) There is a guarantee for nature conservation; and
- d) Planning that still pays attention to the environment.

In line with this principle, the United Nations Conference on Environment and Development in Rio de Janeiro (Rio de Janeiro Conference) in 1992, agreed on 5 (five) n principles of environmental protection and development, that is:

- a. The principle of intergenerational justice, which implies that every generation has the right to accept environmental conditions that are not in a bad condition as a result of the actions of the previous generation.
- b. The principle of justice in one generation, namely the principle that places the burden of environmental problems must be shared by the community in one generation. According to Ben Boer, this principle refers that people in one generation have the right to use natural resources and enjoy a clean and healthy environment [2].
- c. The principle of early prevention, namely the principle that the threat of irreversible environmental damage and the absence of conclusive and definitive scientific findings or evidence, cannot be used as an excuse to prevent environmental damage [3].

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- d. The principle of protecting biodiversity, namely the principle to prove commitment and awareness to prevent premature extinction of biodiversity as a characteristic of sustainable development.
- e. The principle of internalizing environmental costs, environmental damage can be seen as an external cost of an economic activity suffered by parties who are not involved in the economic activity. So the cost of environmental damage must be integrated into the decision-making process related to the use of these natural resources [4].

The issue of sustainable environmental development is one of the important phenomena to be observed recently. The continuity of physical development must be balanced with environmentally sound development as entities that are mutually dependent to support quality community life. One of the thorny issues that is a latent problem for environmental sustainability is related to the production of waste, especially for the type of plastic waste. Based on data compiled from the Ministry of Environment and Forestry's National Waste Management Information System website (SIPSN Kemen LHK) in 2021 there will be 28.7 million tons of landfill, with details of 18.5 million tons (64.3%) of managed waste, and 10.2 million tons (35.7%) of unmanaged waste [5]. In composition based on the type of waste, the largest piles of waste are food waste (41%), plastic (17.3%), wood, twigs, and leaves (13.1%), paper or cardboard (11.7%), and other waste such as glass, cloth, metal, rubber. Meanwhile, the largest sources of waste came from household waste (40.9%), commercial centers (18.3%), traditional markets (17.1%), offices (8.2%), public facilities (6, 4%), and others [6]. The amount of plastic waste production occupies the second highest position after food waste. What exacerbates the problem of plastic waste is also related to the way plastic waste is managed, namely 48% is managed by burning, 13% is disposed of on abandoned land, and 9% is dumped into the sea.

The phenomenon of pollution and the accumulation of plastic waste that is not managed properly will eventually lead to several new problems, including: [7]

- a. Garbage can be a source of disease, the environment becomes dirty;
- b. Garbage burning can result in air pollution that interferes with public health and triggers global warming;
- c. Decomposition of garbage can cause unpleasant odors and is harmful to health. The liquid released by the garbage can seep into the ground and cause contamination of wells, ground water and if it is discharged into river bodies it can pollute the river; and
- d. Disposal of garbage into rivers or water bodies can cause silting of the river so that it triggers flooding.

Some of these feared problems have recently become a reality where according to data from the Ministry of Environment and Forestry, in 2020 the ocean area was polluted by 1,772.7 grams of waste per square meter (g/m<sup>2</sup>), of which the composition of plastic waste pollutes the area. the ocean by 627.8 g/m<sup>2</sup> or equivalent to 35.4% of the total weight of waste in the sea [8]. In addition to triggering environmental pollution, plastic waste also produces carbon emissions where in 2040 it is estimated that the amount of plastic waste produced by the Indonesian population will reach 6.8 million tons with 48% of plastic waste burned will produce carbon emissions reaching 7% of waste in Indonesia. In 2018 alone, from 37.91 million tons of organic waste produced 18.95 million tons of greenhouse gases equivalent to carbon dioxide, it is predicted that in 2050 waste production will reach 3.4 billion tons with 1.3 billion tons of plastic waste in 2040 [9].

According to a World Economic Forum report, plastic pollution in Indonesia will increase to 6.1 million tons by 2025 with the amount leaking into the oceans reaching 780 thousand tons. Meanwhile, carbon gas emissions due to plastic waste are expected to increase in 2050 with a projection in 2019 of 0.86 gigatons of CO<sub>2</sub>e (equivalent to 189 coal-fired power plants of 500 megawatts), in 2030 of 1.34 gigatonnes of CO<sub>2</sub>e (equivalent to 295 coal-fired power plants), and in 2030 2050 by 62 gigatons of CO<sub>2</sub>e (equivalent to 615 coal-fired power plants). The high carbon emission cannot be separated from the way plastic waste is managed, where 48% is managed by burning, 13% is disposed of on abandoned land, and 9% is dumped into the sea [10].

This condition puts Indonesia in a "waste emergency" because there is no holistic handling to reduce plastic waste production from upstream to downstream. Whereas Indonesia has a nationally determined contribution target burden (NDC) in terms of reducing greenhouse gas emissions by 29% with its own efforts, and 41% with adequate international assistance, while the target for reducing greenhouse gas emissions from the waste sector plastic by 0.38-1% in 2030 or equivalent to 296 tons of CO<sub>2</sub>e [11]. Various commitments to reduce the production and processing of plastic waste have been carried out by the government, both central and local governments, one of which is by promoting the 3R (Reuse, Reduce, recycle) movement, prohibiting the use of single-use plastic bags, Waste Banks, and including by issuing a Minister of Environment Regulation. Life and Forestry Number 75 of 2019 concerning Roadmap for Reducing Waste by Manufacturers in an effort to reduce plastic waste.

However, efforts to reduce the use of plastic waste are not enough just at the level of legislation. When referring to the concept of Lawrence M. Friedman's legal system, then the law (statutory regulations) functions when the substance, structure, and culture of society work simultaneously. In addition, to direct the community to reduce the use of plastic waste requires an integrated approach as stated by Mochtar Kusumaatmadja that an integrated or comprehensive approach system must be applied by law to be able to regulate the human environment properly and well [12]. However, in reality the disobedience and lack of human

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awareness to preserve the environment (especially reducing the production of plastic waste) which poses various threats to environmental sustainability, has been influenced by various factors including: convenience and flexibility, economic value, technology, development that is not environmentally friendly, industrialization, and human egoism who considers himself to be the center of the universe (anthropocentrism) which is very complex.

### II. RESEARCH PROBLEM

Based on the background, the legal issue in this research is "How is the effectiveness of the Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Reducing Waste by Manufacturers in an effort to reduce plastic waste in Indonesia?"

### III. HYPOTHESIS

As an introduction to this research, the following hypothesis is set:

"If producers create a roadmap and implement it consistently to reduce the use of plastic materials and innovate and switch to environmentally friendly materials, then the Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Waste Reduction by Manufacturers has effective force."

### IV. THEORETICAL BASIS

#### A. Environmental Management and Protection

Protection of the environment for human needs can be seen in the objective of the establishment of the Republic of Indonesia as stated in Paragraph IV of the Preamble to the 1945 Constitution of the Republic of Indonesia (UUD NRI 1945) which states that "... the Indonesian state which protects the entire Indonesian nation and all spilled the blood of Indonesia, and to promote the general welfare, ...". The provisions contained in Paragraph IV of the Preamble to the 1945 Constitution of the Republic of Indonesia affirm the obligations and duties of the state to protect the entire Indonesian nation in the Indonesian environment for the happiness of all Indonesian people [13].<sup>1</sup> The environment provides and produces various things needed by humans, both for clothing, food and shelter needs. With the dependence of humans on the environment, it is necessary for human awareness to maintain, care for, and ensure the continuity and sustainability of the environment.

According to I Made Arya Utama, there are 3 (three) basic things from the two formulations of the article, namely: (1) there are 7 (seven) activities in environmental management in the form of structuring, utilization, development, maintenance, supervision, and control activities; (2) environmental management is based on the principle of preserving environmental functions; and (3) environmental management is carried out through an integrated approach with the existence of spatial planning and protection of environmental elements [14].<sup>2</sup> The right to a good and healthy environment can be divided into 4 (four) rights, namely: [15]<sup>3</sup>

- a) The right to life, this right can be disturbed due to damage or contamination of the environment which results in disruption of human health;
- b) The right to a decent life;
- c) The right to health which includes physical and mental health; and
- d) The right to be free from any intervention on property, namely the right to be free from environmental disturbances such as pollution, flooding, and climate change.

According to positive law in force in Indonesia, environmental problems are divided into 2 (two), namely:

- a. Environmental destruction is the act of a person causing direct or indirect changes to the physical, chemical, and/or biological characteristics of the environment so that it exceeds the standard criteria for environmental damage.
- b. Environmental pollution is the entry or inclusion of living things, substances, energy, and/or other components into the environment by human activities so that they exceed the established environmental quality standards.

#### B. Legal System Theory

In carrying out its function to achieve a goal to be achieved effectively, the law must be seen as the substance of a large system, namely society or its environment. Sudikno Mertokusumo likened the legal system to a mosaic image, that is, an image that is cut into small parts and then reconnected, so that it looks as whole as the original image. Each part does not stand alone apart from the others, but the hooks hook with the other parts. Each part has no meaning outside the unity. There is no need for conflict or

<sup>1</sup> Kusnadi Hardjasoemantri, *Hukum Tata Lingkungan*, (Yogyakarta: Gajah Mada University Press, 2002), p.66.

<sup>2</sup> Mukhlis dan M. Lutfi, *Hukum Administrasi Lingkungan Kontemporer*, (Malang: Setara Press, 2010), p.29.

<sup>3</sup> Sodikin, "Gagasan Kedaulatan Lingkungan dalam Konstitusi dan Implementasinya dalam Pelestarian Lingkungan Hidup", *Jurnal Masalah-Masalah Hukum*, 48 (3), 2019, p. 301.

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contradiction in this unity. If there is a conflict, it will be immediately resolved by and within the system itself [16].<sup>4</sup> Mariam Darus Badruzaman said the same thing about the legal system. According to him, the legal system is "a unified set of principles, which is the foundation, upon which the rule of law is built" [17].<sup>5</sup>

According to Lawrence M. Friedman, the legal system can be interpreted as a legal entity consisting of various components, which include legal substance, legal structure, and legal culture. The three components of the legal system are interrelated with each other. By likening the legal structure to a machine. Substance is what the machine produces or does. The legal culture of society is anything or anyone who decides to turn on or turn off the machine and decides how the machine is used. Legal awareness is a determining factor for the effectiveness or ineffectiveness of a law because legal awareness concerns the factor of whether a legal provision is known, understood, appreciated, and obeyed by the community as users of the law. Awareness is born from the knowledge and understanding of the community towards the law. Therefore, providing information through legal counseling is not only aimed at making the public aware of legal regulations but also trying to make people obey and obey the law on the basis of the assumption that the law is in accordance with the values that exist in their social group.

### C. Effectivity of Law

The validity of the law consists in the fact that society adjusts its actions according to the norm so that it shows the quality of a norm, while the effectiveness of the law shows the actual human action that is in accordance with the rule of law so as to show the quality of actual human action. According to Soerjono Soekanto, in the context of the sociology of law, the problem of legal compliance or obedience to legal rules in general has become the main factor in measuring the effectiveness of something stipulated in this law [18].<sup>6</sup>

In addition, Soerjono Soekanto said that the effectiveness of the law is influenced by 5 (five) factors, namely: [19]<sup>7</sup>

- a) Legal Factors that the law as a means to realize justice and legal certainty sometimes contains conflicts in its implementation.
- b) Law Enforcement Factors that to ensure that the law can function is strongly influenced by the mentality and quality of law enforcement officers.
- c) Factors of law enforcement facilities or facilities that law enforcement officers in carrying out their duties and functions optimally need to be equipped with optimal and professional vehicles and tools.
- d) Community factors that the degree of community compliance with the law is an indicator of the effectiveness of the law.
- e) Cultural factors, that cultural values are the basis for the formation of laws and determine what is considered good so that it is followed and what is considered bad so that it is avoided.

Legal awareness is a determining factor for the effectiveness or ineffectiveness of a law because legal awareness concerns the factor of whether a legal provision is known, understood, appreciated, and obeyed by the community as users of the law. Therefore, providing information through legal counseling is not only intended to make the community aware of legal regulations but also to make people obey and obey the law on the basis of the assumption that the law is in accordance with the values that exist in their social group.

## V. RESEARCH METHOD

This research will use a normative-empirical legal research method that is prescriptive so that it can produce arguments, theories, and concepts as prescriptions for assessing phenomena that occur by providing solutions in solving legal problems. This study examines the effectiveness of the Regulation of the Minister of Environment and Forestry Number 75 of 2019 concerning Roadmaps for Reducing Waste by Producers based on 2 (two) approaches, namely: (1) normative-juridical research using a statute approach; and (2) empirical research using a qualitative approach. This research was conducted by using library research on written legal literature, as well as by observing and recording social and legal situations, conditions, and events that occur and develop in society, especially those that occur in several retail stores, coffee shops, mini market, supermarket, traditional market, and so on [20]. The data obtained from the results of this study are: (1) primary data as a result of observations on the implementation of plastic waste reduction and control policies by producers; and (2) secondary data in the form of primary, secondary, tertiary, and primary, secondary, and tertiary legal materials outside the field of law [21]. The data and legal materials will be compiled by selecting and sorting based on validity and reliability that can be scientifically justified to be analyzed qualitatively in a sequential, logical and effective manner so as to facilitate interpretation and understanding of the analysis results [22].

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<sup>4</sup> Sudikno Mertokusumo, *Mengenal Hukum (Suatu Pendahuluan)*, (Yogyakarta: Liberty, 2004), p.102-103.

<sup>5</sup> Mariam Darus Badruzaman, *Mencari Sistem Hukum Benda Nasional*, (Bandung: Alumni, 1983), p.15.

<sup>6</sup> Soerjono Soekanto, *Sosiologi: Suatu Pengantar*, (Jakarta: Rajawali Pers, 1996), p.20.

<sup>7</sup> Soerjono Soekanto, *Faktor-faktor yang Mempengaruhi Penegakan Hukum*, (Jakarta: Raja Grafindo Persada, 2007), p.5.

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### VI. RESULT AND DISCUSSION

As a legal state that puts forward the principle of legality which requires that every activity in the life of the state and its citizens be regulated through written legal instruments (laws and regulations), in relation to reducing plastic waste production, it has been regulated normatively in several laws and regulations that emphasize the importance of controlling and reducing waste. plastic for sustainability and environmental preservation through:

- a. Law Number 32 of 2009 concerning Environmental Protection and Management.
- b. Law Number 18 of 2008 concerning Waste Management.
- c. Law Number 36 Year 2009 concerning Health.
- d. Government Regulation Number 81 of 2012 concerning the Management of Household Waste and Waste Similar to Household Waste.
- e. Minister of Environment Regulation Number 13 of 2012 concerning Guidelines for the Implementation of Reduce, Reuse, and Recycle through Waste Banks.

In this case the law (statutory regulations) was formed to achieve legal objectives, which by Law Number 18 of 2008 concerning Waste Management (UU Waste Management) it is stated that waste management so far has not been in accordance with the techniques and methods of sound waste management. Environment, resulting in negative impacts on public health and the environment. Therefore, an integrated and comprehensive waste management is needed from upstream to downstream in order to provide economic benefits, be safe for the environment, and can change people's behavior. The presence of this law is needed to provide legal certainty, clarity of responsibilities and authorities of the government as well as the role of the community and the business world in proportional, effective and efficient waste management.

The obligation for waste management is not only borne by the government, but also to the community, especially producers as regulated in Articles 12, 13, and 14 of Government Regulation Number 81 of 2012 concerning Management of Household Waste and Types of Household Waste, which includes the obligation to:

1. Limiting waste generation by drawing up plans and/or programs to limit waste generation as part of its business and/or activities and/or producing products using packaging that is easily decomposed by natural processes and which generates as little waste as possible.
2. To recycle waste by: a. formulates a waste recycling program as part of its business and/or activity; b. using production raw materials that can be recycled; and/or c. Retrieve waste from product and product packaging for recycling.
3. Reuse waste by: (a). formulate a plan and/or program for the reuse of waste as part of its business and/or activity in accordance with waste management policies and strategies; (b). using production raw materials that can be reused; and/or (c). Retrieve waste from product and product packaging for reuse.

The use of raw materials and packaging that can be decomposed by natural processes, which can be recycled, and produce as little waste as possible is carried out in ten-year stages through a road map. The provisions regarding the roadmap were further followed up with the enactment of the Minister of Environment and Forestry Regulation Number 75 of 2019 concerning Roadmaps for Reducing Waste by Manufacturers (**Minister Regulation No. 75/2019**).

Article 3 of Minister Regulation No. 75/2019, states that the provisions for making a waste reduction roadmap apply to 3 (three) main manufacturer sectors, namely:

- a. Manufacturing manufacturers, which include the food and beverage industry, consumer goods industry, and the cosmetics and body care industry.
- b. Manufacturers of food and beverage services, which include restaurants, cafes, restaurants, catering services, and hotels.
- c. Retail manufacturers, which include shopping centers, modern stores, and people's markets.

Waste reduction is carried out on products, product packaging, and/or containers made of plastic, aluminum cans, glass, and paper which are difficult to decompose by natural processes, cannot be recycled, and/or cannot be reused.

In implementing the Waste Reduction Roadmap, Article 6 of Minister Regulation No. 75/2019, stipulates waste reduction procedures which include:

- a. Limitation of waste generation by: (1) using products, product packaging, and/or containers that are easily decomposed by natural processes and which generate as little waste as possible; and/or (2) do not use products, product packaging, and/or containers that are difficult to decompose by natural processes.
- b. Recycling of waste by: (1) using production raw materials that can be recycled; and/or (2) using recycled production raw materials.
- c. Reuse of waste by using raw materials that can be reused.

In this case, the existence of Minister Regulation No. 75/2019 is part of an integral effort taken to implement and achieve the functions and goals aspired to by law and the constitution in the context of realizing sustainable environmental protection. In legal



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science, the most common is stated regarding the purpose of Gustav Radbruch's law, which consists of 3 (three) values, namely: [23]

1. Justice: The purpose of law is to create justice in the sense that the same things must also be treated equally.
  2. Legal certainty, that the law aims to protect the interests of individuals and the community so that they know what actions are allowed and vice versa which actions are prohibited so that they are protected from arbitrary actions by the government.
  3. Benefit, that the law aims to produce pleasure, happiness, or benefit for as many people as possible.
- Meanwhile, Esmi Warassih also put forward 3 (three) theories related to legal objectives, as follows: [24]
- a. Ethical theory, which states that the purpose of the law is solely to achieve justice, the content of the law is determined by ethical beliefs or judgments about a treatment and action.
  - b. Utility Theory, which states that the purpose of law is to ensure the greatest happiness for the greatest number of people. This is similar to the utility theory proposed by Jeremy Bentham.
  - c. Mixed theory, which states that the main purpose of law is order, and therefore order is a condition for the existence of an orderly society.

By linking these objectives, a relationship can be obtained that when viewed based on its formation, Minister Regulation No. 75/2019 is intended to provide a sense of justice for the community to obtain a good and healthy living environment as well as equal treatment of all producers who produce plastic waste to make maps. Way of reducing waste (the theory of justice), providing legal certainty in the implementation plan of waste reduction efforts, and providing benefits not only for the environment, but also for humans for present and future generations to enjoy and utilize the environment and the resources contained therein.

To achieve this goal, the law, in this case Minister Regulation No. 75/2019, has certain objectives to be achieved for the community or legal subjects it addresses. Law as a tool to achieve goals in society also has various functions because it is influenced by various factors and community conditions. The rule of law that is formed from values and norms that live and develop in society, has a dual task and function, namely on the one hand it functions to maintain existing and developing values in society, and on the other hand it functions to form a new culture and develop human rights [25]. Abdul Manan suggested 4 (four) legal functions, namely: [26]

- a. The law functions as a standard of conduct which is a measure of behavior that must be obeyed by everyone in relation to others.
- b. Law functions as a tool of social engineering, becoming a tool or means to change society for the better.
- c. The law functions as a tool of social control that controls human behavior so as not to act against the norms of law, religion, and decency.
- d. Law functions as a facility of human interaction, which not only creates order but also facilitates the process of social interaction and is expected to cause changes in people's lives.

Minister Regulation No. 75/2019 has a function in providing behavioral guidelines (Standard of Conduct) as well as changing the community to raise awareness in reducing plastic waste production (a tool of social engineering). This can be seen based on the records of the Ministry of Environment and Forestry, that as of May 2022 there have been 33 producers who have submitted roadmap documents for waste reduction and the majority are dominated by large companies in the manufacturing industry, such as PT. Tirta Investama (Danone Aqua), PT. Protect & Gamble Home Products Indonesia, and PT. Unilever, while the retail industry that has sent its waste reduction roadmap is PT. Matahari Department Store and PT. Super Indo Lion [27]. This shows that Minister Regulation No. 75/2019 has binding power (validity) that can compel it to be obeyed by all stakeholders regulated in it.

However, according to the Zero Waste Indonesia Alliance, the number of producers making this roadmap is very far from the goal of reducing waste generation, because it refers to data from the Ministry of Industry that the number of large and medium-sized manufacturing companies in Indonesia until 2021 will reach 29.000 (twenty-nine thousand). Meanwhile, according to the Ministry of Industry, in 2019, Indonesia needs 7.2 million tons of pure plastic raw materials. If it is observed in the community, even though a roadmap for reducing waste has been made by the producer, this change does not necessarily shift to fully environmentally friendly packaging, for example, based on a report by the Center for Indonesia's Strategic Development Initiative, that the consumption rate of bottled drinking water is increased by about 15% in the last 20 years, the Director of Ecological Observatin and Wetlands Conservation (Ecoton) Report states that the amount of plastic packaging that can be recycled by the recycling industry is still around 14-15% [28]. In addition, the use of single-use plastics, especially in traditional markets, wrapping straws, beverage containers, and packaging for medicines, supplements, and vitamins, snacks and drink sachets, and so on. This shows that the reduction of waste, especially by producers, is still far from the expectation of achieving a 30% reduction in waste by 2029 as expected.

Fajri Fadhillah from the Indonesian Center for Environmental Law (ICEL) stated that the regulations regarding the Road Map established by the Ministry of Environment and Forestry still have many gaps and shortcomings, including: [29]

- a. This rule is only voluntary (voluntary) and not mandatory (obligation) to seriously design a waste reduction roadmap;

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- b. No sanctions are applied if the producer does not comply with or comply with these rules; and
- c. There is no clear limit or target regarding the amount of plastic packaging production that producers must reduce due to the lack of transparency.

Meanwhile, the Ministry of Industry also confirmed that no single manufacturer in Indonesia has committed to stop the use of sachet packaging to reduce plastic waste due to considerations of production costs and policies that do not regulate the prohibition of using single-use plastic packaging.

The low participation of manufacturers in complying with Minister Regulation No. 75/2019 shows that the existence of the law has not been effective enough to induce compliance by manufacturers. This shows that there has been a disparity between legal reality and legal ideals, specifically seen the level between law in action (law in action) and law in theory (law in theory) or in other words this activity will show the relationship between law in the book and law in action [30]. This disparity will greatly affect the effectiveness and compliance with the law, where according to Zainuddin Ali there are 4 (four) factors that greatly affect the effectiveness of the law, which include: (1) the rule of law/regulation itself; (2) officers/law enforcement officers; (3) the means or facilities used by law enforcers; and (4) public awareness [31]. Meanwhile Bustanul Arifin as quoted by Raida L Tobing et al provides simpler criteria for the effectiveness of a legal system by stating that in a country based on law, a law is effective if it is supported by three pillars, namely:

- a. Authoritative agencies or law enforcement can be relied on.
- b. Systematic clear legal regulations.
- c. High public legal awareness [32].

The degree of legal effectiveness, according to Soerjono Soekanto, is determined by the level of community compliance with the law, including law enforcers, so that the assumption is known that "a legal behavior is considered effective if the behavior leads to the goal desired by the law (obeying the law)". The functioning of the law is a sign that the law is achieving its legal goals, namely trying to achieve peace, order and tranquility [33].

With the low participation of producers in making, planning, and implementing a roadmap for waste reduction in the last 2 (two) years since the enactment of Minister Regulation No. 75/2019, the law is only enforced in a pseudo-formality. In the perspective of J.J. Bruggink as quoted by B. Arief Sidharta, the validity (validity) of a regulation or legal instrument can be divided into 3 (three) kinds, namely: [34]

- a. factual or empirical validity, namely the actual behavior of the community including law enforcement officers to comply with, enforce, and apply a law or not.
- b. Normative or formal enforcement, namely the validity of the law based on the existence of regulations in the rule system or hierarchy of laws and regulations.
- c. Applicability is evaluative, namely the validity of the law in terms of its content, is considered correct, valuable, or important to the social behavior of the community.

Meanwhile, in the context of the formation of law, there are 3 conditions for the validity of the law as a rule, namely: [35]

- a. The rule of law applies philosophically, namely in accordance with the ideals of law as the highest positive value.
- b. Legal rules apply juridically, if their determination is based on a higher-level rule or is formed on a predetermined basis.
- c. The rule of law applies sociologically, if the rule is effective. That is, the rules in question can be enforced by the authorities even though they are not accepted by the community (the theory of power) or the rules apply because of recognition from the community.

These three conditions must be met in order for the law to function, because: (1) if the rule only applies juridically, there is a possibility that the rule is a dead rule; (2) if it only applies sociologically in terms of the theory of power, then the rule becomes a coercive rule; (3) if it only applies philosophically then it is possible that the rule is only a law that is aspired to (*ius constituendum*). Thus, in the formation of legislation, it must pay attention to and must not conflict with the socio-cultural values that live in society. Law is a reflection of society, so it is not easy to force people to implement every rule in a way that is not rooted in the values and habits of society. There is always a tug-of-war relationship between applicable and enforced laws and the people. A law will be effective only if there is public awareness of the legislation. One of the things that must be done so that the community can actively participate in waste management, and realize environmental sustainability, the public must be awakened by their awareness that they also have a responsibility to carry out waste management to preserve the surrounding environment. Legal awareness will lead to legal compliance, and for the emergence of legal awareness, knowledge of the law is needed, which in this case is statutory regulations. Thus, it is possible for lawmakers to understand that the law does not only make legal instruments and enforce their implementation, but also requires participation and compliance for those who are related to the established norms.

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### V. CONCLUSIONS

The government's efforts to reduce plastic waste production through the Minister of Environment and Forestry Regulation No. 75 of 2019 concerning Waste Reduction Roadmaps by Manufacturers have yet to show compliance from producers to provide and implement a waste reduction roadmap. This is known based on a phenomenon in society in the form of very few producers who follow and comply with Minister Regulation No. 75/2019. The low participation is based on the difficulty in making the transition from plastic raw materials to environmentally friendly raw materials, both from the aspect of economic value, as well as from the aspect of flexibility, difficulties in innovating and being creative to find product substitutes. Meanwhile, from the regulatory aspect, the regulation regarding waste reduction through the manufacture of road maps by producers has become a pseudo-norm that has no effective value because it is not balanced with sociological applicability and lack of awareness and compliance with the address of the norm. This factor is actually also caused by the lack of ability to bind and force producers to obey it because of the absence of firm and clear sanctions if the norm is violated, causing the norm to be powerless in its application in society. Thus, Minister Regulation No. 75/2019 still cannot be said to be effective because it does not contain firm and clear juridical and sociological values.

To reduce the amount of plastic waste production by producers, there are several things that can be done, including changing the provisions in Minister Regulation No. 75/2019 which imposes obligations on producers and implementing a mechanism in the form of negative sanctions (administrative sanctions) for producers who do not comply with these regulations. In addition, it is necessary to provide confirmation in the form of a percentage or amount of plastic waste production that must be reduced and carry out socialization and supervision of producers on a regular basis to encourage the acceleration of reducing plastic waste production to carry out the transformation of environmentally friendly materials through the development of innovation and use of technology by manufacturers. Meanwhile, the Government needs to improve technology-based waste management facilities to reduce the increase in carbon emissions and environmental pollution on land and at sea.

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### REFERENCES

- 1) Rosana, M. (2018). Kebijakan Pembangunan Berkelanjutan yang Berwawasan Lingkungan Hidup di Indonesia. *Jurnal Kelola: Jurnal Ilmu Sosial*, 1 (1): 148-163. Doi: <http://doi.org/10.15575/jk.v1i1.4128>.
- 2) Siahaan, N.H.T. (2004). *Hukum Lingkungan dan Ekologi Pembangunan*. Jakarta: Erlangga.
- 3) Bethan, S. (2008). *Penerapan Prinsip-Prinsip Hukum Pelestarian Fungsi Lingkungan Hidup dan Kehidupan Antar Generasi*. Bandung: Alumni.
- 4) Siombo, M.R. (2012). *Hukum Lingkungan dan Pelaksanaan Pembangunan Berkelanjutan di Indonesia*. Jakarta: PT. Gramedia Pustaka Utama.
- 5) Dhini, V. A. (2022, May 18). Berapa Banyak Sampah di Laut Indonesia?. *Databoks*. Retrieved on 14<sup>th</sup> August 2022. <https://databoks.katadata.co.id/datapublish/2022/05/18/ada-berapa-banyak-sampah-di-laut-indonesia>.
- 6) Kementerian Lingkungan Hidup dan Kehutanan. "Capaian Kinerja Pengelolaan Sampah". Retrieved on 14<sup>th</sup> August 2022. <https://sipsn.menlhk.go.id/sipsn/>.
- 7) Suwerda, B. (2012). *Bank Sampah: Kajian Teori dan Penerapannya*. Yogyakarta: Pustaka Rihama.
- 8) Dhini, V. A. (2022, May 18). Berapa Banyak Sampah di Laut Indonesia?. *Databoks*. Retrieved on 14<sup>th</sup> August 2022. <https://databoks.katadata.co.id/datapublish/2022/05/18/ada-berapa-banyak-sampah-di-laut-indonesia>.
- 9) Hermawan, Erwan. (2022, February 27). Sampah: Angka. *Tempo* (Newspaper).
- 10) Pramita, D. (2022, February 8-14). Menanti Pengurangan Sampah Plastik dari Hulu. *Tempo* (Newspaper).
- 11) Pramita, D. (2022, February 8-14). Menanti Pengurangan Sampah Plastik dari Hulu. *Tempo* (Newspaper).
- 12) Rochmani. (2018). *Hukum Lingkungan dan Penegakan Hukum*. Semarang: Penerbit Pustaka Magister.
- 13) Hardjosoemantri, K. (2002). *Hukum Tata Lingkungan*. Yogyakarta: Gajah Mada University Press.
- 14) Mukhlis & Lutfi, M. (2010). *Hukum Administrasi Lingkungan Kontemporer*. Malang: Setara Press.
- 15) Sodikin. (2019). Gagasan Kedaulatan Lingkungan dalam Konstitusi dan Implementasinya dalam Pelestarian Lingkungan Hidup. *Jurnal Masalah-Masalah Hukum*, 48 (3): 294-305. Doi: <https://doi.org/10.14710/mmh.48.3.2019.294-305>.
- 16) Mertokusumo, S. (2004). *Mengenal Hukum (Suatu Pendahuluan)*. Yogyakarta: Liberty.
- 17) Badruzaman, M. D. (1983). *Mencari Sistem Hukum Benda Nasional*. Bandung: Alumni.
- 18) Soekanto, S. (1996). *Sosiologi: Suatu Pengantar*. Jakarta: Rajawali Pers.



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- 19) Soekanto, S. (2007). *Faktor-faktor yang Mempengaruhi Penegakan Hukum*. Jakarta: Raja Grafindo Persada.
- 20) Marzuki, P. M. (2019). *Penelitian Hukum (Edisi Revisi)*. 14<sup>th</sup> Printed. Jakarta: Prenada Media Group.
- 21) Sugiyono. (2012). *Memahami Penelitian Kualitatif*. Bandung: Alfabeta.
- 22) Ishaq, H. (2018). *Dasar-Dasar Ilmu Hukum*. 2<sup>nd</sup> Print. Jakarta: Sinar Grafika.
- 23) Notohamidjojo, O. (2011). *Soal-Soal pokok Filsafat Hukum*. Salatiga: Griya Media.
- 24) Wirassih, E. (2005). *Pranata Hukum Sebuah Telaah Sosiologis*. Semarang: PT. Suryandaru Utama.
- 25) Ali, Z. (2015). *Sosiologi Hukum*. 9<sup>th</sup> Print. Jakarta: Sinar Grafika.
- 26) Manan, A. (2006). *Aspek-Aspek Pengubah Hukum*. 3<sup>rd</sup> Print. Jakarta: Prenada Media.
- 27) Pramita, D. (2022, February 8-14). Menanti Pengurangan Sampah Plastik dari Hulu. *Tempo* (Newspaper).
- 28) Pramita, D. (2022, February 8-14). Menanti Pengurangan Sampah Plastik dari Hulu. *Tempo* (Newspaper).
- 29) Pramita, D. (2022, February 8-14). Menanti Pengurangan Sampah Plastik dari Hulu. *Tempo* (Newspaper).
- 30) Taneko, S. B. (1993). *Pokok-Pokok Studi Hukum dalam Masyarakat*. Jakarta: Rajawali Press.
- 31) Ali, Z. (2015). *Sosiologi Hukum*. 9<sup>th</sup> Print. Jakarta: Sinar Grafika.
- 32) Tobing, R. L. et.al. (2011). *Efektivitas Undang-Undang Monrey Loundering*. Jakarta: BPHN Kemenkumham RI.
- 33) Soekanto, Soerjono. (2019). *Efektivikasi Hukum dan Peranan Saksi*. Bandung: CV.Remaja Karya.
- 34) Sidharta, B.A. (2011). *Refleksi Tentang Hukum (Pengertian-Pengertian Dasar Tentang Teori Hukum)*. 3<sup>rd</sup> Print. Bandung: Citra Aditya Bakti.
- 35) Ali, Z. (2015). *Sosiologi Hukum*. 9<sup>th</sup> Print. Jakarta: Sinar Grafika.



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