

## Evaluation of Legal Policy Implementation in Addressing Environmental Crisis: A Case Study on Plastic Waste Management

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### ABSTRACT

The environmental crisis caused by the escalating issue of plastic waste has garnered significant attention globally, including in Indonesia. Jambi, a region profoundly impacted, grapples with the challenge of managing plastic waste, which accounts for 50 percent of the annual waste production from 2022 to 2023. This study aims to evaluate the implementation of legal policies in addressing this environmental crisis, focusing on plastic waste management in Jambi. Additionally, it examines efforts to prevent further environmental deterioration through legal enforcement. Utilizing a qualitative approach with a case study methodology, data were gathered through interviews with various stakeholders, including governmental bodies, non-governmental organizations, and industrial sectors. Document reviews and literature surveys were also conducted to gain insights into the current state of plastic waste management in Jambi. Findings indicate that despite the existence of legal frameworks aimed at mitigating plastic waste issues, implementation remains limited, failing to significantly reduce plastic waste accumulation in Jambi. Critical factors such as inadequate inter-agency coordination, resource scarcity, and insufficient public awareness hinder effective environmental crisis management efforts. In conclusion, this research underscores the pressing need for more robust implementation of legal policies to combat the environmental crisis, particularly in plastic waste management in Jambi. Additionally, proactive measures through stringent legal enforcement are imperative to prevent further environmental degradation and safeguard the ecological integrity of Jambi's landscape.

## **INTRODUCTION**

The environmental crisis currently facing the world is one of the greatest challenges threatening the sustainability of our planet. Among various pressing environmental issues, the plastic waste crisis has garnered deep global concern (Fachrudin, 2023). Our dependence on plastic as a primary raw material in various consumer products has resulted in detrimental impacts on the environment, human health, and economic sustainability (Dewata Indang dan Hendri Danhas Yun, 2018).

The management of plastic waste has become a primary focus in efforts to address this environmental crisis. However, efforts to implement legal policies in managing plastic waste do not always meet expectations (Fachrudin, 2023). Many countries and regions face challenges in implementing effective legal regulations and consistently enforcing those rules.

Plastic waste management in the city of Jambi is an issue that requires serious attention due to the increasing population growth and economic activities in the city. Plastic waste is a major problem in maintaining environmental cleanliness and public health. Therefore, a case study on plastic waste management in the city of Jambi aims to analyze the approaches, policies, and practices used in addressing this issue.

As the capital of Jambi Province, the city of Jambi faces unique challenges in plastic waste management. The growing population and rapid industrial and commercial development contribute to the increasing volume of plastic waste generated daily. In this context, this case study aims to provide deep insights into how the city of Jambi manages its plastic waste.

Based on the introduction above, a research problem statement focusing on the Evaluation of Legal Policy Implementation in Addressing Environmental Crisis, specifically through a Case Study on Plastic Waste Management, is formulated. The research problem statement is as follows:

1. What legal policies are implemented to address the environmental crisis regarding waste disposal in Jambi?
2. What is the effectiveness of law enforcement related to plastic waste management in Jambi, and what obstacles are encountered in the enforcement process?

## **LITERATURE REVIEW**

Literature Review Policy implementation theory examines how public policies are realized or put into practice. In the context of environmental crisis management, such as plastic waste management, policy implementation theory can help understand how environmental policies are executed by governments, private institutions, and the public.

Interactional Model: This theory highlights the importance of interaction among the actors involved in policy implementation, including government, private institutions, and civil society. In the context of plastic waste management, this model can emphasize collaboration among government, corporations, and non-profit organizations in developing effective solutions.

Evaluation is a process or activity conducted to assess or measure something against certain standards or criteria. It applies in various contexts,

ranging from education, business, governance, to everyday life. Its main purpose is to understand the extent to which an activity, program, or policy has successfully achieved its objectives, and to identify areas that require improvement or change. Evaluation often involves data collection, analysis, and feedback provision, and can be used to make better decisions in the future.

Evaluation of legal policy implementation in addressing environmental crises is a comprehensive assessment of how legal policies established by the government or relevant institutions are applied in practice to address environmental issues. It involves analysis of the effectiveness, efficiency, relevance, and impact of those policies. In the context of environmental crises, such evaluation may involve aspects such as:

1. Law Enforcement: How well legal policies are implemented by law enforcement agencies and whether they are able to consistently and fairly enforce the rules.
2. Environmental Impact: To what extent the policies succeed in reducing or preventing environmental damage and whether their implementation has yielded the expected positive impact on environmental sustainability.
3. Stakeholder Involvement: The extent to which stakeholders involved in the policy, including civil society and the private sector, participate in the implementation process and how their involvement influences the outcomes.
4. Compliance with International Standards: Evaluation can also consider the extent to which the policies align with international standards in environmental management and human rights protection.
5. Efficiency of Resource Use: Whether the resources allocated for policy implementation are used efficiently and whether the implementation costs are proportionate to the benefits obtained.

Such evaluations can provide valuable insights for policymakers to assess the success and shortcomings of legal approaches taken in addressing environmental crises, as well as to improve and enhance policies in the future.

Previous research conducted by Miranda (2019) has successfully applied Law No. 5 of 2015 concerning waste management and its policies in Bandar Lampung city. Waskita Aji et al. (2022) explained that the Environmental Agency has a significant influence on plastic waste management on the coast of Drini, Gunung Kidul Regency. The Gunung Kidul government was greatly assisted, although it has not been able to fully address the issue and still needs solutions to reduce plastic waste and its environmental impacts. Tania et al. (2023) affirmed their research findings that village governments have not fully implemented waste management regulations in their areas, with no penalties for improper disposal of various waste materials, such as baby diapers, plastics, used clothing, foliage, food remnants, scattered around causing air pollution. Pita et al. (2023) elaborated on the implementation of waste management policies through local regulation No. 07 of 2021 on waste management in Malang city, emphasizing the need for human resources supporting adequate waste collection points with different waste characteristics; human resources supporting waste management

policies and enforcement; sufficient allocation of waste management funds; and public knowledge about waste management.

## **METHODOLOGY**

The researcher employs a case study research method as an in-depth research approach to the environment in Jambi, related to Legal Policy in Addressing Environmental Crisis. The case of waste management and the increasing amount of waste accumulating daily in waste collection areas can be effectively managed by groups/organizations and the Jambi government. The researcher conducts detailed and in-depth data collection through various techniques such as observation, interviews, document analysis, or archival studies.

Through a case study on plastic waste management, this research aims to evaluate the implementation of existing legal policies in addressing this environmental crisis. Case studies are chosen as the appropriate approach because they allow researchers to analyze in-depth how legal policies are applied and practiced in the field, as well as identify barriers and opportunities in the implementation process.

## **RESEARCH RESULT AND DISCUSSION**

The evaluation of legal policy implementation in addressing the environmental crisis related to plastic waste is important due to its extensive and profound impacts (Andi, 2016). With a better understanding of the effectiveness of existing legal policies in addressing this issue, we can identify areas where improvements are needed, both in policy formulation and implementation in the field.

Thus, this research not only aims to describe the success or failure of legal policy implementation but also to provide valuable insights for policymakers, legal practitioners, and other stakeholders in their efforts to address this ongoing environmental crisis.

Environmental Crisis Due to Plastic Waste is a phenomenon where plastic waste has become one of the biggest environmental crises facing the world today. Plastic waste not only damages marine and terrestrial ecosystems but also has serious health and economic impacts on humans and animals (Jambeck, 2015).

Data and research have revealed that the production, distribution, and disposal of plastic waste are not well managed, causing dangerous accumulation in the natural environment (Surono, 2013).

Therefore, there needs to be a Role of Legal Policy in Addressing Environmental Crisis. Because legal policy plays a crucial role in responding to environmental crises, including plastic waste management. Legal regulations can create a strong foundation for the prevention, reduction, and handling of plastic waste.

However, the implementation of these legal policies often faces challenges in practice. Starting from weak law enforcement to the lack of coordination between various government agencies and the private sector.

A. Case Study on Plastic Waste Management is chosen by the author, with the hope that researchers can deeply understand the implementation of existing

legal policies, evaluate their effectiveness, and identify barriers and opportunities in plastic waste management.

This case study can cover the analysis of various aspects, ranging from existing legal regulations to real efforts in implementing these policies in the field, including cooperation between the government, industry, and civil society.

**Causes of Environmental Crisis** There are three factors causing environmental crises according to Ahmad Cholil Zuhdi (2012):

1. Issues of public interest at the microcosmic level (lithosphere, hydrosphere, atmosphere, and biosphere) even on a macrocosmic scale.
2. These issues have multidimensional impacts on the entire environmental spectrum.
3. Any method of environmental crisis management, regardless of its source, can assist in environmental mechanisms and salvation. According to Tahir (2017), there are two factors contributing to environmental destruction, which are humans and nature itself. Humans are the primary source of deforestation, declining environmental quality, increasing natural disasters, and decreasing biodiversity. This is evidenced by the disappearance of 21% of Indonesia's 133 million hectares of forests. Additionally, 2.5 hectares of coral reefs are damaged by 30%, leading to the decline of marine ecosystems, posing threats to coastal disasters, decreasing biodiversity, and consequently reducing fish production.

### **Waste Condition in the Jambi**

Environment Based on data from Imam Santoso (2017), sedimentation and waste clog river waterways. Waste poses a significant problem that requires resolution efforts. According to Tera (2022), complete waste condition data is recorded at 423.45 tons. However, only 78% (330.58) of the waste can be transported to the Talang Gulo landfill. The remaining 22% is either burned or discarded in gardens, vacant land owned by the community, utilized by waste banks, waste collectors, and others. In 2023, according to the Head of Administration at the Talang Gulo Landfill Waste Management Technical Implementation Unit (UPTD), approximately 350-400 tons of waste accumulate per day. The waste originates from markets, meaning approximately 50% of it is organic waste, with the remainder being a mixture of various types of non-organic waste. Over the span of two years, from 2022 to 2023, the amount of waste has significantly increased and accumulated, disrupting environmental beauty, polluting the air, and causing health issues.

### **How is Waste Managed in Jambi?**

Waste management is a series of efforts undertaken by the government, society, and other stakeholders to reduce, manage, and address waste issues generated within the environment. This includes various activities ranging from waste reduction at its source, waste collection, processing, recycling, to safe and sustainable final disposal. The primary goal is to maintain environmental cleanliness, protect ecosystems, and minimize the negative impacts of waste on human health and the environment. a. **Implementation of Legal Policy in Addressing Waste** The increasing waste problem is addressed by the government

through the enforcement of Environmental Law Enforcement efforts aimed at preventing environmental pollution. Government actions taken include:

1. Law enforcement: The government strengthens law enforcement related to plastic waste management, including enforcing bans on single-use plastics and imposing sanctions on violators. This is done to ensure compliance with existing environmental regulations.
2. Green Economic Development: The government promotes green economic development by providing incentives to companies investing in recycling technology and environmentally friendly production. This creates new business opportunities and reduces dependence on new plastics. Based on the above descriptions, it is assumed that through a holistic approach involving various parties, plastic waste management can become more effective. This case study indicates that with collaboration between the government, industry, NGOs, and civil society, as well as the implementation of strict policies, technological innovations, and public education, environmental crises related to plastic waste can be significantly reduced. This provides hope for a more sustainable and environmentally friendly future for future generations. In this regard, the implementation of Environmental Law is necessary, which is the process of applying and enforcing laws related to the protection, management, and preservation of the environment. The purpose of implementing environmental laws is to achieve the goals of these regulations, which fundamentally aim to ensure the sustainability of natural ecosystems, human well-being, and the preservation of natural resources. The laws implemented by the Jambi government in managing waste include:
  3. Government Regulation of the Republic of Indonesia Number 27 of 2020 Concerning Specific Waste Management.
  4. Government Regulation of the Republic of Indonesia Number 81 of 2012 Concerning Household Waste Management and Similar Household Waste.
  5. Ministerial Regulation No. 13 of 2012 concerning Guidelines for the implementation of reduce, reuse and recycle through waste banks.
  6. Jambi City Regulation No. 5 of 2020 concerning Waste Management.
  7. Jambi Governor Regulation No. 24 of 2019 concerning Policies and Strategies of Jambi Province in household waste management and similar household waste. The implementation of environmental law aims to create conditions where economic development can proceed in harmony with environmental preservation, so that future generations can enjoy abundant natural resources and a clean and healthy environment. This aligns with Republic of Indonesia Law Number 23 of 1997 concerning Environmental Management, article (1), which broadly outlines: "Environmental management is an effort to regulate, control, utilize, preserve, maintain, and restore the environment and efforts to control pollution and/or damage to the environment in an integrated manner in order to ensure sustainable development."

Efforts of Jambi Society in Combating Waste The efforts of Jambi society in combating waste can encompass various initiatives and activities. In addition to the Jambi government, the community also participates in addressing waste issues. Their activities include waste banks. These waste banks are government initiatives. Waste bank activists transform waste into new usable items. This activity gives economic value to waste. There are fourteen waste banks in Jambi, based on the principles of the three Rs (Reuse, Recycle, and Reduce). Additionally, they continue to raise awareness among the local community to be environmentally conscious. The implementation of legal policy in addressing environmental crises is crucial for protecting natural resources, ecosystems, and human health. The implementation of legal policy in addressing environmental crises involves a series of concrete steps designed to protect and restore threatened ecosystems and natural resources. These steps include the creation, application, enforcement, and evaluation of relevant legal policies. The following is a more detailed description: Firstly, the implementation of legal policy begins with the creation of laws and regulations governing various aspects of the environment, such as waste management, natural resource conservation, protection of wildlife habitats, and pollution control. The policy-making process involves consultations with environmental experts, civil society, and other stakeholders to ensure that the resulting policies reflect appropriate needs and aspirations. Next, the application of legal policy involves concrete steps to enforce the provisions contained in the laws and regulations. This includes the establishment of institutions or government bodies responsible for environmental policy implementation, as well as the allocation of adequate resources to support implementation efforts, such as personnel, budgets, and necessary infrastructure. Furthermore, law enforcement is key to ensuring compliance with environmental policies. This includes active monitoring of activities that have the potential to harm the environment, investigation of violations, and enforcement of sanctions or penalties against environmental law violators. An effective environmental justice system is also needed to ensure that cases of environmental law violations are handled fairly and efficiently. Additionally, periodic evaluations of environmental legal policies are essential to assess their effectiveness in achieving environmental protection goals. This evaluation involves the collection and analysis of data on the impacts of policies, both positive and negative, as well as consultations with experts and stakeholders to identify areas where improvements or adjustments may be needed. Collaboration between the government, private sector, civil society organizations, and the general public is also a crucial factor in the implementation of environmental legal policies. By building strong partnerships, various parties can support and complement

### **Case Study Results**

Based on the data analysis from 2022-2023 in Jambi, regarding the issue of waste accumulation and its problems, alongside the implementation of environmental management laws, strategic policies can be formulated to address them. The forms of these policies are as follows:

1. **Formation of Policies and Regulations:** The government collaborates with environmental experts and other stakeholders to design strict policies and regulations related to plastic waste management. This includes bans or restrictions on single-use plastics, limitations on the use of microplastics in consumer products, and promotion of eco-friendly plastic usage.
2. **Technological Innovation:** Industry and research institutions collaborate to develop innovative technologies for recycling and managing plastic waste. Technologies such as chemical recycling, environmentally friendly bioplastics, and plastic waste reduction technologies can help alleviate the plastic waste problem.
3. **Education and Public Awareness Campaigns:** Civil society, NGOs, and non-profit organizations conduct advocacy campaigns and public education on the negative impacts of plastic waste and ways to reduce its usage. These programs may involve beach cleanup campaigns, single-use plastic reduction programs, and promotion of sustainable lifestyles. This includes efforts by UIN Jambi students to raise environmental awareness and waste consciousness among the public, encouraging them to maintain cleanliness in their surroundings.
4. **Inter-Sectoral Partnerships:** The government, industry, NGOs, and civil society collaborate in partnerships to address the plastic waste problem. This includes partnership programs between the government and industry to enhance waste management infrastructure, as well as cooperation between NGOs and companies to develop plastic reduction initiatives. Waste management cooperation with Sri Lanka was carried out through a virtual Memorandum of Understanding (MoU) between the Jambi City government and Sri Lanka. This Mutual Agreement cooperation significantly initiates change makers and pioneers in Indonesia in terms of modern waste management.

## **CONCLUSIONS AND RECOMMENDATIONS**

The conclusion from the evaluation of the implementation of legal policies in addressing environmental crises through a case study on plastic waste management is as follows:

1. **The Importance of Legal Policies:** The evaluation indicates that legal policies play a crucial role in addressing environmental crises, particularly regarding plastic waste management. These policies serve as a legal framework governing the actions and obligations of relevant parties in handling plastic waste.
2. **Implementation Gaps:** There are gaps in the implementation of legal policies. Although there are existing regulations, their implementation is not fully effective. This can be attributed to various factors such as lack of resources, weak coordination between agencies, and low awareness among the public and stakeholders.
3. **Need for Multi-Stakeholder Collaboration:** The evaluation emphasizes the importance of collaboration between the government, private sector, non-governmental organizations, and the public in addressing environmental crises. This collaboration is necessary to enhance the effectiveness of legal

policy implementation and generate more holistic and sustainable solutions.

4. Oversight and Law Enforcement: The evaluation also highlights the need for increased oversight and law enforcement in plastic waste management. Consistent law enforcement against environmental violations is necessary to promote compliance with existing regulations.
5. Education and Public Awareness: Furthermore, the evaluation indicates the need for increased education and public awareness about the importance of plastic waste management. By enhancing public understanding of the negative impacts of plastic waste on the environment, it is hoped that sustainable behavior changes will occur.
6. It is concluded that to address environmental crises related to plastic waste management, comprehensive efforts are needed through effective legal policy implementation, multi-stakeholder collaboration, consistent law enforcement, and increased education and public awareness.

### **ADVANCED RESEARCH**

This research still has limitations as it has not deeply explored the efforts of waste management law enforcement in the Jambi city environment. Further research is needed on the implementation and legal sanctions for violations committed by the community in disposing of waste. Whether the rule of law truly exists or is merely nominal also requires investigation.

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