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Empowering the Community and Promoting Environmental Sustainability in Pasir Panjang Village: Legal Awareness for Water Pollution

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ABSTRACT

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This community service initiative aims to enhance public awareness. Findings from the community service indicate that Pasir Panjang Village is facing serious issues related to water pollution, which adversely affects the environment and public health. One proposed solution is through socialization efforts aimed at raising public awareness about the importance of maintaining water cleanliness and the negative impacts of water pollution. Socialization is conducted through various methods such as counseling, presentations, and discussions involving knowledgeable speakers. This awareness is expected to bring about changes in the community's behavior and habits towards more environmentally friendly water management. Strengthening law enforcement against water pollution is crucial, involving various stakeholders and increasing public awareness.

Keywords: Environmental Pollution, Water Contamination, Socialization, Community Awareness

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INTRODUCTION

Pasir Panjang Village is situated in the Rempang Cate Subdistrict, Galang District, Batam, Kepri (Riau Villages). The majority of its inhabitants are native

Malays, resulting in a strong presence of Malay culture and language in the community. The village is endowed with breathtaking natural treasures, such as forests, seas, and other resources. Its location along the coastline means that a significant portion of the population engages in fishing as their primary livelihood (Destiana Safitri et al., 2023).

Water pollution is a condition where the water in the environment, including rivers, lakes, seas, or groundwater, is contaminated by substances that can pose a threat to environmental and human health (Widiyanto, Yuniarno & Kuswanto, 2015). Water pollution can occur due to various factors, such as industrial waste, household waste, the use of pesticides and fertilizers in agriculture, as well as mining and construction activities (Selajar & M. Djafar, 2019). The impact of water pollution is severe and can have negative effects on living organisms and humans in the vicinity of the polluted water. For instance, water pollution can lead to poisoning, infections, and skin diseases for individuals who use the water for cooking, bathing, and drinking (Liau, 2020).

Water pollution poses a significant threat to aquatic ecosystems and the organisms dependent on them, including fish, shrimp, and other marine life (Tan & Irawan, 2021). This paper explores the impact of water pollution on the survival of marine life and organisms and discusses various measures to prevent and address this environmental concern. These efforts encompass the implementation of effective waste treatment technologies, reduction of hazardous chemical usage, sustainable land use practices, and educational initiatives emphasizing the importance of environmental cleanliness and health (Magta & Lestari, 2022). Furthermore, the study examines relevant legal provisions aimed at protecting ecosystems from pollution (Mukhtar, 2022). Key legislations include: 1) Law Number 4/1982, which asserts the fundamental right of every individual to a healthy and good environment under Article 5(1); 2) Law Number 32/2009, particularly Article 69(1), emphasizing the responsibility of those causing environmental damage or pollution to restore the affected environment to its original state; 3) Minister of Environment and Forestry Decree Number 40/1996 on the Quality Standard of Wastewater, focusing on the supervision and guidance provided by the Minister and local governments to enforce domestic wastewater quality standards (Article 12(1)); and 4) Government Regulation Number 22/2021 on the Implementation of Environmental Management and Protection, defining preventive measures against environmental pollution and damage as processes or methods to address such issues (Article 1(31)).

These legal frameworks empower authorities to take legal action against entities responsible for water pollution, applying sanctions commensurate with the severity of the violation. The ultimate goal is to encourage industries and the public to assume greater responsibility in maintaining the cleanliness and quality

of the environment. This study contributes to the discourse on environmental protection, offering insights that are relevant for an international academic audience.

IMPLEMENTATION METHOD

A series of legal outreach activities were conducted to assist the residents of Pasir Panjang village in enhancing their understanding. Throughout the program, these activities were carried out in group settings. Following legal consultations, question-and-answer sessions were also held to discuss the steps related to the presented material. This aimed to help the residents of Pasir Panjang village understand the actions to be taken by the city government in preventing water pollution. The stages of implementing this community service initiative are as follows:

1. Initial Implementation Stage

The preparation stage marks the initial steps taken before conducting the awareness campaign in Pasir Panjang village. This stage commenced in the first week of March 2023. During this week, a survey of the village location was conducted to gather information that would serve as the basis for the material presented during the campaign. Information was gathered through direct observation at the location, involving interviews with village residents and seeking permission from the local Village RT officials to present the designed material. Upon obtaining approval from the RT officials, consultations with the faculty advisor were conducted to receive advice and input on the planned material. Once approval was granted by the faculty advisor, the implementation stage of the awareness campaign would commence.

2. Implementation Stage of Activities

The second stage involves the actual execution of the awareness campaign in Pasir Panjang village. The campaign is scheduled for the third week of April 2023. The focus of the campaign is the presentation of the designed material approved by the faculty advisor. The material concerns Environmental Law Enforcement Against Water Pollution in Pasir Panjang Village, Batam City. Documentation during the campaign will also be carried out for inclusion in the final report.

3. Final Stage

The final stage of the implementation in Pasir Panjang village is the compilation of the final report related to the progress of the conducted awareness campaign. In addition to the report, an academic article will be drafted during this stage. The scientific article, once prepared, will be published in a community service journal. The compilation of the final report and article writing will take place in the first week of May 2023. Subsequently, the compiled report and article

will be submitted to the faculty advisor for approval. The obtained approval will serve as evidence of the completion of the implementation in Pasir Panjang village.

IMPLEMENTATION RESULTS

The Urgency of Environmental Protection against Water Pollution: A Case Study of Pasir Panjang Village in Batam City

This community service initiative reveals the serious issue of water pollution on Pasir Panjang Village in Batam City. Uncontrolled industrial activities, indiscriminate waste disposal, and environmentally unfriendly fishing practices are the primary factors contributing to water pollution on the Village. The water quality around the Village indicates a level of contamination that poses a threat to marine life and ecosystem balance.

Figure 1. Pasir Panjang Village observation



Source: Personal Documentation, 2023

Water pollution on Pasir Panjang Village poses a significant challenge to the environment and the life of marine organisms. Poor water quality can disrupt marine ecosystems, jeopardize the sustainability of natural resources, and potentially harm the health of humans dependent on this water. Environmental law enforcement plays a crucial role in addressing water pollution issues on Pasir Panjang Village. Clear and stringent regulations are needed to govern industrial activities, waste disposal, and fishing practices in accordance with established environmental standards. Effective law enforcement will promote awareness and responsibility among business entities and ensure that water pollution actions receive strict sanctions (Rochmani et al., 2019).

In this presentation, the objectives of the community service related to the serious issue of water pollution will be outlined. The primary goal of this community service is to raise awareness among the public about the negative impacts of water pollution and support efforts for environmental protection.

Raising Public Awareness about the Serious Issue of Water Pollution: The main objective of this community service is to enhance public awareness of the importance of protecting water resources from pollution. This presentation will provide a detailed explanation of the adverse effects of water pollution on the environment, human health, and aquatic ecosystems. Community service aims to change the mindset and behavior of the public in water management and pollution prevention.

Challenges in Environmental Law Enforcement: Despite the importance of protecting against water pollution, environmental law enforcement on Pasir Panjang Village still faces several challenges. These challenges include a lack of awareness and compliance by industries with environmental regulations, limited resources and law enforcement facilities, and constraints in coordination among relevant agencies. To overcome these challenges, collaborative efforts between the government, the community, and industry stakeholders are necessary to strengthen environmental law enforcement.

Figure 2. Material Presentation Slide



Source: Personal Documentation, 2023

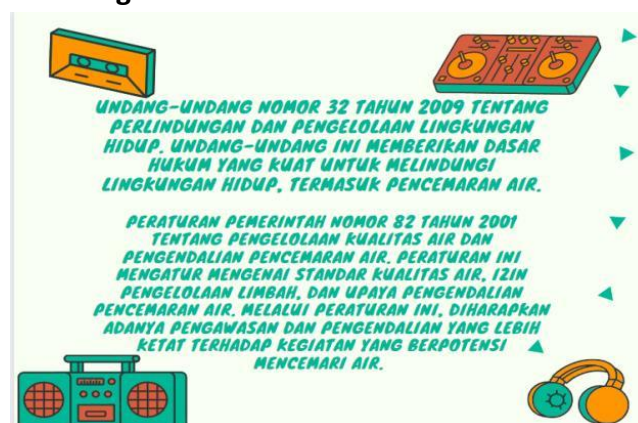
The image above depicts documentation from an interview session conducted at the residence of a local resident as part of this community service initiative. In the image, researchers or team members can be seen conducting an interview with a local resident regarding the importance of water pollution protection. The presentation material on the significance of water pollution protection includes several key points conveyed to the local residents. Firstly, an explanation is provided regarding the adverse impact of water pollution on human health and the environment. This encompasses a decline in the quality of drinking water, damage to aquatic ecosystems, and the spread of diseases. Additionally, the researchers also elaborate on the importance of awareness and active community participation in maintaining the cleanliness and sustainability of water sources. This involves the implementation of good waste management practices,

such as the use of appropriate sanitation systems, control of the use of hazardous chemicals, and the prevention of industrial waste spills into water bodies.

Water Pollution Regulation in Indonesia

Water pollution poses a significant challenge for Indonesia, necessitating efforts to protect water quality to ensure the sustainability of natural resources, safeguard public health, and maintain ecosystem balance. Consequently, Indonesia has implemented regulations aimed at controlling and preventing water pollution. One such regulation governing water pollution protection in Indonesia is Law Number 32 of 2009 concerning Environmental Protection and Management. This law provides a robust legal foundation for environmental protection, including provisions specifically addressing water pollution. The law outlines principles of sustainable environmental management, government responsibilities, and legal sanctions for water pollution violations (Kusumayanti et al., 2020).

Figure 3. Material Presentation Slide



Source: Personal Documentation, 2023

In addition to the aforementioned law, Indonesia has other regulations governing water pollution control, such as Government Regulation Number 82 of 2001 concerning Water Quality Management and Pollution Control. This regulation establishes standards for water quality, waste management permits, and efforts to control water pollution. Through these regulations, there is an expectation of stricter monitoring and control over activities with the potential to pollute water. Addressing this challenge requires further steps by the government, including increasing awareness and understanding of the importance of water pollution protection, enforcing stringent legal measures against violations, enhancing the capacity of law enforcement and oversight agencies, and fostering strong collaboration between the government, communities, and businesses in controlling water pollution.

This presentation delves into the intricacies of Law Number 32/2009, providing insights into its overarching objective to safeguard, preserve, and enhance the quality of the environment, encompassing air, water, and soil. A focal point of the discussion revolves around the specific provisions addressing the protection against water pollution, a significant threat to both the environment and human health. The researcher elucidates key articles within Law Number 32/2009 related to water pollution, including prohibitions on water pollution, the responsibilities of companies or individuals engaging in pollution, obligations concerning waste management and control, and the legal sanctions applicable to water pollution offenders. This presentation aims to contribute to the international academic discourse on environmental law and policy.

Implementation Process of Activities

The implementation of activities commenced with the initiation of observation and interviews with the Head of the Neighborhood Association (RT), Mr. Nasirin, in the village of Pasir Panjang. The purpose was to gather information regarding the partner's status and engage in discussions about the legal advisory organization. The observation and interviews took place on April 9, 2023. Upon obtaining legal advice approval through observation and interrogation, residents were then interviewed regarding the legal advice received. The subsequent steps involved drafting a proposal and producing legal advice materials in the form of key points and posters. On April 9, 2023, from 12:00 to 15:00 WIB (Western Indonesia Time), a legal consultation meeting was held at the community health center (Posyandu) in the Pasir Panjang village. The event was attended by local residents, sub-district communities, and RT administrators.

Figure 4. Implementation of Activities



Source: Personal Documentation, 2023

The image above depicts an interview session conducted at a local resident's home. This interview serves as one of the methods employed in community

engagement to directly gather information from the local populace. In the image, a researcher or team member is seen conducting an interview with a local resident. The purpose of this interview is to gain a more profound insight and understanding of the issues under investigation. This method is utilized to facilitate a direct exchange of perspectives and information, contributing to a more comprehensive comprehension of the research subject.

Figure 5. Implementation of Activities



Source: Personal Documentation, 2023

The image above depicts an interview session with the Head of the Neighborhood Association (RT). The Head of the Neighborhood Association plays a crucial role in the local community and can provide valuable perspectives on the issues under investigation. Interviewing the Head of the Neighborhood Association can offer a more comprehensive understanding of the existing problems and potential solutions. In the image, a researcher or team member is seen conducting an interview with the Head of the Neighborhood Association to gain deeper insights and information.

Figure 6. Implementation of Activities



Source: Personal Documentation, 2023

The image above illustrates a session of distributing informational sheets to the community. The distribution of informational sheets is one of the methods employed in community service to disseminate information and education to the public. In the picture, team members can be seen distributing informational sheets to a group of attendees. The sheets contain relevant information on the researched issue and aim to enhance awareness and knowledge within the community regarding that particular issue.

Figure 7. Implementation of Activities



Source: Personal Documentation, 2023

The image above serves as documentation of a presentation session to the community, as previously explained. Through this presentation, information regarding water pollution on Pasir Panjang Village is conveyed to the public with the aim of raising awareness and encouraging their participation in efforts to address water pollution.

Through socialization activities, communities can become more aware of the importance of water conservation. They will comprehend that water is a highly valuable and limited resource, and that water pollution poses a threat to the availability of clean water for daily life. This awareness will motivate communities to use water wisely, reduce wasteful practices, and maintain the cleanliness of water sources. One of the primary benefits of socialization activities addressing the negative impacts of water pollution is the protection of public health. With a better understanding of the health risks associated with consuming or using contaminated water, communities can take appropriate preventive measures. They will be more cautious in selecting safe water sources and practicing good sanitation to prevent water-related diseases.

CONCLUSION

This paper discusses the successful implementation of a legal awareness campaign in Pasir Panjang Village, Batam, Indonesia, aimed at educating the community and raising awareness about water pollution. The primary objective of

the campaign was to empower residents with legal knowledge to address and prevent water pollution issues. Through careful observation of existing problems, the legal awareness initiative was strategically designed to assist in resolving the challenges faced by the Pasir Panjang community. The campaign's effectiveness was assessed through thorough implementation and evaluation, revealing a significant improvement in the knowledge and understanding of the residents. Prior to the campaign, the community lacked adequate knowledge about various types of water pollution and preventive measures. However, post-campaign assessments indicated that the legal awareness initiative successfully enhanced the community's knowledge, providing them with a comprehensive understanding of water pollution types and prevention methods.

The impact of the legal awareness campaign extended beyond knowledge enhancement, playing a crucial role in community empowerment. With heightened awareness and understanding of water pollution issues, residents were equipped to take concrete steps to prevent water pollution in their surroundings. This signifies a positive shift towards a more conscientious and responsible Pasir Panjang community committed to preserving water environments. In conclusion, the implementation of the legal awareness campaign regarding water pollution in Pasir Panjang Village, Batam, has yielded positive outcomes. The community has gained improved knowledge and understanding of water pollution issues, actively engaging in efforts to maintain the cleanliness and sustainability of water environments. The success of this implementation serves as a fundamental cornerstone in environmental protection initiatives within the region.

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