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| RESEARCH ARTICLE

Stakeholders' Perceptions of Environmental Management System in Managing Domestic Waste in the Gasing Industrial Area in Banyuasin Regency

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| ABSTRACT
The Gasing Industrial Area is one of the largest industrial areas and is experiencing faster development compared to other industrial areas in South Sumatra. The attractions of this area include its area of around 2,000 ha and its strategic location close to the city center. However, this attraction is not matched by environmental conditions in industrial areas, including the frequent generation of inappropriate domestic waste and low awareness of waste management. Complexity can be seen from the many stakeholders involved with various environmental management system perspectives. The aim of this research is to understand the environmental management system carried out by stakeholders regarding the waste management system in the Gasing Industrial Area. The data collection method was carried out using in-depth interviews. The results of the research show that the environmental management system relating to domestic waste (garbage) in industrial areas is that the management system carried out by the community mostly uses a direct waste system, the environmental management system by industrial actors partly uses government regulatory instruments, and the environmental management system by the government by means of environmental guidance and supervision. The environmental management system is not yet effective. This can be seen from the criteria for the effectiveness of the management system, namely organizational structure, work programs, mechanisms, and management practices, and the main indicator is the performance of industrial area governance, which is not yet optimal.

| KEYWORDS

Perception; waste managing; Gasing Industry, perspective.

| ARTICLE INFORMATION

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1. Introduction

Aspects that play a major role in achieving environmental sustainability are the government, industry players, and the general public (Silvia, 2017). The government, especially local governments, has an important role in formulating and implementing environmental policies and regulations. This includes laws on air and water quality, waste management, emission standards, and conservation efforts. The government is also keeping the industry accountable for its environmental impact. On the other hand, industry is a major consumer of natural resources and energy that converts a small percentage of these resources into pollutants. Internal company regulations or procedures, such as plastic waste recycling programs, organic waste, and wastewater, are also important helpers for the industry to fulfill its social responsibility (Gabzdylova B, 2009). The community also has a very important role in acting as consumers as well as supporters of the implementation of the regulation because the community is the most affected by the environment (Sheth, 2011). Environmental sustainability cannot be achieved if one party does not carry out its role properly.

Gasing Industrial Estate is the largest industrial area in South Sumatra Province, with an area of about 2,000 hectares, and it has faster development compared to other industrial estates. Administratively, the top industrial area is included in the Gasing Village,

Talang Kelapa District, Banyuasin Regency, and South Sumatra Province. The designation as a top industrial area refers to Banyuasin Regional Regulation Number 06 of 2019 concerning the Regional Spatial Plan of Banyuasin Regency for 2019-2039. The rapid growth in the top industrial area is supported by the attractiveness of a strategic location, including because it is close to the city center, easy access to the location, crowded road infrastructure, the availability of supporting facilities and infrastructure, the existence of river channels as a means of transportation, the adequacy of labor and several other attractive factors.

The industrial sector plays an important role in increasing the economic growth of a region. The contribution of the industrial sector to the GDP value of Banyuasin Regency currently reaches 26.27%. Meanwhile, *Water Supply, Sewage Production, Waste Management, and Remediation* activities are the sectors that contribute the least by only contributing 0.01% to the GDP of Banyuasin Regency. Low revenues from Water Supply, Sewerage, Waste Management, and Remediation businesses and/or activities indicate that the company underinvests in environmental sustainability. The increase in the number of business actors in the top industrial area is certainly followed by an increase in the number of workers, which will have an impact on increasing the amount of waste produced. Based on the reference to SNI 3242 of 2008, each person can potentially produce an average waste of 0.5-0.75 kg per day. If it is assumed that each business actor and/or activity in the top industrial area uses a workforce of 100 people, then the potential waste generated from industrial activities is approximately 3,700-5,550 kg (3.7-5.5 tons) of waste per day and is only managed properly around 55%.

Besides, there is a spatial problem, namely the allocation of industrial estates mixed with land use for residential areas. The lack of awareness of managing waste independently and still often found landfills out of place is caused by behavioral factors and various other environmental issues that can affect the performance of the governance system in an industrial estate. This, if allowed to continue, will threaten the sustainability of an industrial area. According to Hamdiani et al., 2018 one solution for waste generation management is by processing waste into compost or as material for making local microorganisms (MOL) and eco enzymes. Integrated waste management by reusing organic and inorganic materials can reduce waste pollution in industrial estates and surrounding areas (Marliani, 2014).

Complexity, change, potential conflict, and environmental uncertainty must be managed in an integrated manner; for that, it is necessary to understand the environmental management system in the top industrial area in depth. The complexity can be seen from the many stakeholders involved in environmental problems, which include business actors, communities and governments. This is the background of the importance of a study related to stakeholders' perspectives on environmental management systems, especially in managing waste. The purpose of this study is to identify the environmental management system and its effectiveness related to waste handling by stakeholders (business actors, community and government) within the Gasing Industrial Estate of Banyuasin Regency.

2. Method

The method used in this study is a survey method with sampling techniques represented by stakeholders, including business actors, the community and the government. Data collection was obtained by conducting in-depth interviews to determine the environmental management system carried out by stakeholders in the top industrial area. The sampling method to obtain primary data is the *snowball sampling method, which is used to* determine the informant to be interviewed in depth. Meanwhile, secondary data are collected through various literature at related institutions at the village level, which includes village monographs, related institution data leaflets, and report documents that are considered important in accordance with the research objectives. The data analysis method used is a qualitative analysis method, namely by describing information and interpreting in-depth interview results and observations by making a matrix of environmental management systems in the top industrial area by stakeholders. Furthermore, it measures how much the effectiveness of the environmental management system is based on productivity criteria that are influenced by organizational structure, human resource character, environmental character, and management practices.

3. Results and Discussion

3.1 Environmental Management System by Business Actors

Some business actors in the Gasing Industrial Estate carry out waste management by providing temporary waste storage facilities (TPS). This is in accordance with the directives in the previously prepared environmental document. This is done because it has become a commitment in the environmental management and monitoring matrix to manage the impacts arising from businesses and/or activities. There are several business actors who do not yet have or provide TPS facilities at the location of activities and do not have environmental documents, especially for small-scale business activities. Meanwhile, based on Law Number 18 of 2008 concerning Waste, there are obligations and responsibilities for business actors in carrying out waste management. However, the management is still not effective, which can be measured through organizational criteria, work programs, instruments, and management implementation.

3.2 Environmental Management System by the Community

Waste produced by people living around the top industrial area is generally directly disposed of into the environment without shelter or management first. This is done because of the low awareness of throwing garbage in its place. In addition, there is no binding regulation for people living in settlements, and it is influenced by environmental conditions in the form of swampland that allows people to dispose of garbage without being seen conspicuously. Judging from the technical instruments, in community settlements, there are no garbage collection facilities provided in a crowded manner.

3.3 Environmental Management System by the Government

Environmental management activities in carrying out waste management by the government, in this case, the Banyuasin Regency Environmental Office, among others, appeals to all business actors to provide temporary waste storage facilities (TPS) at each activity location and carry out 3R waste processing (reduce, reuse and recycle) and encourage them to always maintain/care for the environment, especially waste problems in accordance with Law Number 18 2008 on Garbage. However, what the government has done has not been effective. This can be shown from field data that some companies have not provided TPS facilities, and there are some who do not have environmental documents.

Furthermore, the matrix of the environmental management system in waste processing carried out by stakeholders, which includes organizational factors, work programs, instruments and implementation, can be seen in the following table:

Table 1. Environmental Management System in Waste Management in the Area Industri Gasing.

Factor	Business actors	Community	Government (DLH)
Organisasi	In the organizational structure, there is an environmental division.	There is no clear organization.	There is a supervision subdivision (Prevention Field)
Work Program	In the environmental document, it is committed to providing TPS facilities and conducting regular monitoring.	There is no work program.	Require all business actors to provide TPS and, conduct regular monitoring and carry out coaching.
Waste Management Instruments and Mechanisms	Provide TPS facilities and cooperate with waste officials.	Throw directly into the environment or burned, landfilled.	Regulation of the obligation of every business actor to prepare environmental documents as the basis for issuing environmental approvals (environmental permits)
Implementation and control of environmental management systems related to domestic waste (garbage).	Some who still have not built a TPS then, the waste is allowed to accumulate and decompose naturally at the activity site. The supervision aspect is still lacking.	Supervision to the community is still lacking because there is no instrument as a legal basis/permit for the obligation to carry out waste management.	The implementation of monitoring is carried out by the Environmental Management Sector. The construction of

			integrated waste processing facilities has not been carried out due to various obstacles faced. Of all existing business actors, only about 55% already have TPS.

3.4 Effectiveness of Environmental Management in Managing Waste

The effectiveness of business actors in carrying out environmental management, especially in processing waste, has not been included in the effective category. This is reflected in the amount of waste that is transported/processed properly, which has only reached around 55%. Furthermore, there are still some business actors who do not have TPS as temporary garbage shelters. This can also be seen from the generation of garbage that can be seen on the roadside and the availability of integrated waste collection facilities and unused waste with a 3R pattern.

Environmental management related to waste management carried out by the community is ineffective. This can cause environmental problems, including floods, diseases caused by garbage, damaged aesthetics, and several other impacts caused by the behavior of littering.

The environmental management sector at the Banyuasin Regency Environmental Office, which is in charge of coaching and supervising environmental governance in the Gasing Industrial Estate, cannot run optimally if it is not supported by public awareness and participation as well as law enforcement for business actors who do not comply with applicable regulations.

4. Conclusion and Advice

The results showed that the environmental management system related to the management of domestic waste (waste) in industrial estates, namely the management system carried out by the community, mostly uses a direct disposal system, an environmental management system by industry players, some of which have used government regulatory instruments, and an environmental management system by the government by means of environmental guidance and supervision. The environmental management system has not been effective. This can be seen from the criteria for the effectiveness of the management system, namely organizational structure, work programs, mechanisms, and management practices, and the main indicator is the performance of industrial estate governance, which has not been optimal. The inputs that can be poured from the results of this research include the need to build an integrated waste management infrastructure and the existence of a waste utilization program (3R) that can be used for the community around the top industrial area of Banyuasin Regency.

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