Analysis of The Application of Environmental Cost Accounting at PT. Buana Wiralestari Mas

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Abstract: PT Buana Wiralestari Mas is a private company engaged in the plantation and palm oil processing plant, which is a subsidiary of PT Sinar Mas, emphasizes its responsibility to the environment by managing environmental costs arising from its operational activities. Impairment or costing is how PT Buana Wiralestari Mas recognizes environmental costs and allocates that value to environmental stewardship. Environmental costs are calculated using rupiah values that are comparable to past value practices. Overhead costs, transportation, and auxiliary materials are examples of production costs included in the presentation of environmental costs. In practice, the company has not prepared a special report on environmental costs, but has included these costs in the general financial statements. The results show that PT Buana Wiralestari Mas faces several challenges related to environmental cost accounting, including the expansion of disclosure and improvement of the cost measurement system.

Keywords: Environmental Accounting Environmental Costs Cost Accounting Waste Application of Environmental Accounting

INTRODUCTION

People's lifestyle is associated with an increase in the volume and type of waste, including plastic waste (Apriyani A. P., 2020). Companies that are part of our society help by giving jobs to people, providing goods for us to buy, giving money to people. But sometimes, Companies are so focused on making money that they don't thinking about the impact on the environment, society, or their own employees. They try to use as many resources as possible to make money, which can have both good and bad effects on the environment.

Environmental issues are not new. As technology advances and the global economy expands, environmental challenges are becoming increasingly interesting to research. Therefore, environmental management accounting is necessary for both large and small organizations to address this. The goal is to produce more relevant information for people who need or can use it. The ability and accuracy of industrial companies in reducing the environmental impact generated by operational activities, as well as the accuracy of classifying all costs incurred by the entity, are crucial to the success of environmental...
management accounting (nurwani, 2023). The application of Environmental Management Accounting helps companies in environmental problems by recording all their production activities to be reported in the Company's environmental cost report (Nasution Y. S., 2023).

Environmental accounting is the development of social accounting as a form of social responsibility in the field of accounting science that serves to identify, recognize, measure, present, and disclose environmental accounting. In waste management, companies need to apply environmental accounting to support their operational activities so that this environmental accounting will control the Company's responsibility.

The main purpose of establishing a company is to get the maximum profit for the survival of the company, but besides that, the company must also pay attention to the environment. If not handled using focus, it will have a negative impact on the environment more or less. The environment is recognized or not recognized as significantly supporting the company's business activities, on the other hand, business often has an impact on environmental degradation. Pollution and waste production are models of the negative consequences of industrial activities. Environmental issues mean a crucial reality that requires special attention from governments, consumers and investors. Foreign investors are more likely to focus on obtaining raw materials and production processes that avoid environmental problems. Forms of government protection and concern for the environment No. 32 Year 2009.

The environment and natural resources are important to companies because they can affect the way they conduct business. When companies damage the environment or waste resources, this can lead to problems such as global warming and air pollution. Therefore, it is very important for businesses to be careful not to damage the environment. Humans are the main cause of such damage, especially when they perform actions such as buying and selling goods.

The waste environment refers to those aspects of the environment that are affected by the presence and activities of human waste. It includes solid, liquid, and gaseous wastes generated from various human activities, including industrial, agricultural, domestic, and other processes (Imsar, 2023).

In processing waste, each company must implement an environmental accounting system that is useful for overcoming various problems or impacts that will occur from the waste. Basically, environmental accounting is required to have full awareness for every company and other organizations that have taken some environmental benefits (Kusmilawati, 2023).

Waste is what remains after a company has made or done something. Sometimes this waste can have a negative impact on the environment so companies must handle it carefully. Pollution and production waste are examples of how companies damage the environment. To ensure that companies are accountable for their actions, they use special systems to track their impact on the environment.

Environmental management is a form of corporate responsibility for the surrounding environment. Activities arising from environmental management will result in environmental costs. Environmental costs are impacts, both monetary and non-monetary as a result of activities that affect environmental quality. Companies need an environmental accounting system as a control of corporate responsibility because waste management carried out by companies requires measurement, assessment, disclosure and reporting of waste management costs from the results of the company's operational activities. The calculation of costs in handling the waste requires the correct systematic accounting treatment. Environmental accounting has now become one of the means of recording environmental costs to be better organized. The role of environmental accounting is expected to be a solution for waste management in related companies, so that the source of disease in the community can be
overcome. Good waste management can be a solution in reducing the number of diseases caused by environmental pollution. The application of environmental accounting is expected to have an impact on improving the company's image so as to make the company more trusted by stakeholders to achieve long-term business continuity (Ashari & Anggoro, 2021).

Currently, there is no environmental accounting disclosure standard in PSAK, which means companies must proactively report environmental information reports. Accounting plays an important role in environmental protection efforts, in the form of voluntary disclosure of environmental costs in financial statements. In accounting science, this is relatively new. The function of environmental accounting is to identify, measure, compare, recognize, approve and display environmental costs. The generation of waste and environmental pollution is one of the most common impacts of existing environmental pollution.

This research is the subject of research PT. Buana Wiralestari Mas. This company is a subsidiary of the largest holding company in Indonesia PT. Sinar Mas Group operates oil palm plantations. In addition to the production of semi-finished oil, waste is also generated in the production process of PT Buana Wiralestari Mas. Industrial waste that is not properly managed and accounted for is known to be detrimental to the environment and surrounding communities. PT. Buana Wiralestari Mas also produces waste from its production and industrial waste.

Based on the description above, the authors are interested in examining the problem of environmental cost accounting at PT Buana Wiralestari Mas, which has the potential to produce production waste, with the title "Analysis of the Application of Environmental Cost Accounting at PT Buana Wiralestari Mas".

LITERATURE REVIEW

Definition of Accounting

(Surmayati, 2018) defines accounting as an accounting process that begins with recording, assessing, measuring, summarizing, reporting, and disclosing all financial and non-financial data related to financial transactions, social and environmental responsibilities throughout the accounting cycle that are relevant and useful for stakeholders making economic decisions.

According to (Hermain, 2019) there are many definitions and definitions of accounting written by experts and researchers who are experts in the field of accounting. However, accounting is generally a system for producing financial information that is used by users in the business decision-making process. The purpose of this information is to provide guidance in choosing the best course of action to allocate scarce resources to businesses and economic activities. The Accounting process will produce Financial Statement information which is very useful for users of financial information both for internal companies and parties outside the company including the government.

Environmental accounting is an accounting process that recognizes, seeks and then reduces the negative environmental effects of implementing conventional reporting practices, separately recognizes costs and income related to the environment in conventional reporting systems, takes active steps to develop initiatives to improve environmental effects arising from conventional reporting practices, plans new forms of financial and non-financial reporting systems information systems and monitoring systems to better support environmentally harmless management decisions (Susanti, 2021).

Definition of Environmental Accounting

According to (Rounaghi, 2019), environmental accounting is a process that improves the efficiency of the accounting system by identifying, recording, and reporting the impact of...
environmental degradation and pollution. The acceptance of environmental and economic accounting processes depends on the involvement of capital sources and environmental costs, which is one of the acceptable costs in economic and computing processes.

Based on the above position, environmental accounting is a service activity responsible for preparing accounting information that can be influenced by the company's response to issues that threaten the survival of humans and other living things, measuring the company's position in terms of the environment, developing and implementing policies and strategies to improve the company's position in changing the management system for continuous improvement, and measuring how the company acts on environmental issues.

The term environment is a unit of space with all objects, forces, conditions and living things, including humans and their behavior (Nurlaila, 2023).

Environmental accounting also covers various aspects, such as recording and reporting greenhouse gas emissions, natural resource use, waste, and other impacts generated by business activities (Kamilah, 2023).

**Objectives of Environmental Accounting**

Environmental accounting is intended to help environmental management and relate to society by providing reliable information that is more useful to those who need it. Companies and their surrounding communities benefit greatly from the implementation of environmental accounting.

According to (Indrawati, 2018), the objectives for environmental accounting are as follows:

a. Environmental accounting is used as an environmental management tool. Environmental balance helps illustrate the accuracy in environmental protection. Investment in environmental management uses environmental accounting data, which includes the cost of environmental management facilities and the total cost of environmental protection.

b. As a medium of communication with the public. Environmental accounting is useful in providing information on environmental impacts and consequences to the public. The response from the public is useful for changing the company's treatment of environmental management.

**Environmental Costs**

Environmental costs are costs incurred by companies related to environmental damage caused and protection carried out. Consists of internal costs (related to reducing production processes to reduce environmental impacts) and external costs related to the cost of repairing damage due to waste generated from business activities (Ikhsan, 2018).

Environmental Costs are costs incurred due to degraded environmental quality as a result of the institution's operating activities. Environmental costs must be presented separately from the financial statements, meaning that the company must make a special environmental cost report to provide relevant information for the company and outside parties as a guide in making decisions on existing environmental impacts.

In addition, it is explained (Wulaningrum & Kusrihandayani, 2020) that environmental costs are costs incurred by businesses as a result of poor environmental management systems and inefficient production processes that impact the environment. Environmental costs include costs associated with processes that impact the environment and costs to repair damage caused by waste generated in the environment. In the company's annual report or financial statements, you can see the allocation of funds for environmental development programs. Environmental costs can be calculated by comparing the funds for the program with the net profit generated by the company.
Environmental Cost Accounting

Environmental Cost Accounting is a planned cost accounting strategy that focuses on accounting for the cost of maintaining the environment, and minimizing the environmental impact that may occur.

Stages of Environmental Cost Accounting Treatment

Statement of Government Accounting Standards (PSAP) No. 1 of 2010 stipulates that environmental cost accounting consists of:

1. Identification
   (Sukirman & Suciati, 2019). This identification is important to determine the management costs associated with the environment. Once these economic events are discovered, they are classified as the company's financial activity line. Each company has different categories of environmental costs, which leads to different ways to calculate environmental accounting costs.

2. Recognition
   After identifying the costs incurred, they are recorded as expenditures when a certain amount of benefit and value is incurred.

3. Measurement
   "The determination of numbers or measuring units against an object to show a certain meaning of an object" is the definition of measurement (Sukirman & Suciati, 2019).

4. Presentation
   The general and management subsection displays environmental management costs, along with other similar unit costs. Expenses may be presented in the annual financial statements under different account names as there are no consistent regulations on environmental financial management. Paragraph 14 of Government Accounting Standard (PSAP) Number 1 on Presentation of Financial Statements states that the objective of financial statements is to meet the general needs of the majority of users of the statements.

5. Disclosure
   Since there are no regulations governing environmental financial reporting, environmental accounting information is a type of voluntary disclosure. According to Sukirman & suciati (2019), this phrase is intended to show the public that business activities contribute to social and environmental concerns.

Previous Research

Several previous studies on environmental calculations, specifically sewage treatment costs, have been conducted. Mega Norsita (2021) conducted qualitative research on how ABC Hospital found and analyzed liquid waste management measures. The ABC Hospital Liquid Waste Management Financial Report and Operational Report were used as data sources. This study revealed that ABC Hospital is capable of managing liquid waste environmental costs. However, the Hospital has not specifically measured and presented the costs incurred in the liquid waste treatment process in the ABC Hospital environmental cost report. This shows that ABC Hospital is able to have awareness and compliance with government regulations regarding the importance of efforts to detect the dangers of environmental damage in the hospital environment.

Further research was conducted by Franciska, RM, Sondakh, JJ, & Tirayoh, VZ (2019), which was conducted at pt. royal coconut airmadidi. The application of Environmental Cost Accounting at PT Royal Coconut Airmadidi in terms of Submission, Assessment, Submission, and Disclosure of Environmental Accounting is the same as the existing Financial Accounting Standards. However, the Company has not made a Financial Report
specifically regarding Environmental cost reports. Researchers tried to make an Environmental Report based on the data provided by the Company. Environmental costs that have been identified related to waste treatment at PT Royal Coconut Airmadidi are: WWTP Labor Costs, Wastewater Quality Testing Costs, Electricity Costs for water pump usage, Chlorine Purchase Costs, Air Quality Testing Costs, Investment Costs, and Soil Recovery Costs.

Research by Lalo, A, & Hamiddin, MIN (2021) with the title "The effect of environmental costs and environmental performance on profitability in manufacturing companies listed on the Indonesia stock exchange". The purpose of this study was to test and analyze the effect of environmental costs on profitability, and environmental performance on profitability in manufacturing companies. companies listed on the Indonesia Stock Exchange for the 2019-2020 period. Data collection using secondary data obtained from annual reports published by the Indonesia Stock Exchange. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange and PROPER participants for the 2019-2020 period. The sampling technique used was purposive sampling. The data analysis method is quantitative analysis using multiple linear analysis and hypothesis testing using E software.

Pratama, AS (2019) conducted another study on "Analysis of the application of environmental cost accounting to waste treatment operational costs at the lavalette general hospital in Malang City". This study aims to determine how the waste treatment process is carried out and how accounting for environmental costs is applied to a hospital. This research was conducted using a qualitative approach with a descriptive approach. Data analysis is carried out based on information related to environmental costs, identifying environmental costs, preparing a proposed environmental cost report, and analyzing the social responsibility of Lavalette General Hospital. Researchers identified, classified, and made proposals for cost reports. Environmental costs based on the environmental cost theory developed by Hansen and Mowen. The existence of a special report related to environmental costs is expected to facilitate the management of Lavalette General Hospital in making decisions related to environmental costs and can provide information for stakeholders that the hospital has taken responsibility for maintaining environmental health.

METHODS

This research is a qualitative research that uses a case study model. PT Buana Wiralestari Mas, a company engaged in the palm oil plantation and processing plant industry, is the subject of this research.

In this report, the data acquisition techniques used are documentation and interview techniques. The documentation technique is used to obtain information directly from the research site PT. Buana Wiralestari by looking at company documents and reports related to the research, as well as by collecting data and information from books, magazines, and the internet.

This research uses a descriptive method, an analytical approach. Descriptive method is a type of research that provides a description or description of the situation as clearly as possible without treating the object under study. The purpose of this descriptive research is to provide a systematic, factual, and accurate description, description, and analysis of the facts, properties, and relationships between phenomena. Furthermore, the analysis and findings of this research can provide suggestions for future purposes.

ANALYSIS AND DISCUSSION

PT Buana Wiralestari Mas, is a private company engaged in oil palm plantations and processing plants. The company is one of the subsidiaries of the largest holding company in
Indonesia, PT Sinar Mas operates oil palm plantations. In addition to the production of semi-finished oil, PT Buana Wiralestari Mas also produces waste from its production.

**Implementation of Environmental Management Accounting**

All hazardous waste generated is recorded, stored, and managed by a third party, labeled according to the characteristics of the hazardous waste generated, and has an official regulatory reference, according to information provided by management from interviews and documentary evidence collected by the company during the implementation of environmental monitoring.

In practice PT Buana Wiralestari Mas records environmental costs in its annual management report, in the administrative costs section (ISO 14001). Thus, since the company complies with ISO 14001, it is considered an environmentally sustainable company. ISO 14001 is a standard that sets out requirements and specifications for Environmental Management Systems. In Indonesia, this standard is used voluntarily (voluntarily) in environmental management regulations (SNI 1914001:2005), so there is no law prohibiting the application of ISO 14001 (Panggau 2017:421-428). Environmental costs include prevention, marketing, programming, regulating, transferring actions, and repairing damage that can occur to industries, governments, and many other people.

**Environmental Cost Recognition of PT Buana Wiralestari Mas**

A decrease in the price or cost of the amount of money that has been given by the company causes the value recognition process at Pt. Buana Wiralestari Mas is not in accordance with the previous year. Therefore, before the value or amount is incurred, it should not be considered a cost. Therefore, value recognition is carried out when an amount of money is given for the allocation of environmental maintenance.

**Environmental Cost Measurement of PT Buana Wiralestari Mas**

When calculating sewage treatment costs, PT Buana Wiralestari Mas uses a rupiah value that is proportional to the allocated costs and follows past value practices. According to the Company's Personnel Manager, "In measuring the cost of waste, the company uses rupiah. In accordance with what has been issued and referring to the average results of the previous period's budget realization, because it is more accurate, so it will not be much different from the realization of the current period."

PT Buana Wiralestari Mas calculates the budget and costs that must be incurred for the treatment of existing waste. The budget can be made by following the previous budget allocation.

**Presentation of Environmental Costs of PT Buana Wiralestari Mas**

Presentation correlates with the way financial data can be included in the financial statements. Costs incurred in terms of environmental treatment (waste management) at PT Buana Wiralestrai Mas are included together with similar values in production costs.

PT Buana Wiralestari Mas has included environmental costs in the sub-costs of overhead, transportation, and auxiliary materials. PT Buana Wiralestari Mas has not specifically reported these environmental costs in the financial statements. However, the company has fulfilled its responsibility to the environment by incurring costs for environmental impacts, which have just been included in the financial statements. The company can find out how much costs are incurred if there are costs.

**Environmental Cost Disclosure of PT Buana Wiralestari Mas**

The results show that the historical value concept is used in the company's financial
statements. Currently, BOP, BTKL, and BBP environmental costs are calculated as production costs, especially the value already allocated to waste management.

PT Buana Wiralestari has expressed the procedure regarding environmental costs to the CALK, regarding the reporting of environmental costs to the financial statements with the aim of providing information on a number of transactions in the company as a disclosure of waste treatment activities that have been carried out, which are temporarily running or will just be running in order to be a positive value to the Company.

Environmental Cost Report Issued by the Company

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Rupiah/month</th>
<th>Rupiah/Year</th>
<th>% of Environmental Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hazardous waste transportation costs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Freight Vendor Fee</td>
<td>428,000,000</td>
<td>5,136,000,000</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>Final Processing Cost of Hazardous Waste from the generator to the end user</td>
<td>513,583,333</td>
<td>6,163,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>941,583,333</td>
<td>11,299,000,000</td>
<td>42%</td>
</tr>
<tr>
<td>2</td>
<td>Liquid waste analysis fee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Cost of analyzing LCPKS</td>
<td>595,000,000</td>
<td>7,140,000,000</td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Domestic wastewater fee</td>
<td>830,000,000</td>
<td>9,960,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1,425,000,000</td>
<td>17,100,000,000</td>
<td>42%</td>
</tr>
<tr>
<td>3</td>
<td>Cost of water, soil and air quality tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Clean water</td>
<td>400,000,000</td>
<td>4,800,000,000</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td>Boiler emission analysis cost</td>
<td>500,000,000</td>
<td>6,000,000,000</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Generator set emission analysis cost</td>
<td>166,666,666</td>
<td>2,000,000,000</td>
<td></td>
</tr>
<tr>
<td>3.4</td>
<td>Ambient air charge</td>
<td>483,333,333</td>
<td>5,800,000,000</td>
<td></td>
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<tr>
<td>3.5</td>
<td>Vibration analyzer cost</td>
<td>50,000,000</td>
<td>600,000,000</td>
<td></td>
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<tr>
<td>3.6</td>
<td>Cost of odor analysis</td>
<td>200,000,000</td>
<td>2,400,000,000</td>
<td></td>
</tr>
<tr>
<td>3.7</td>
<td>Transportation costs for sampling personnel from the lab to the unit</td>
<td>125,583,333</td>
<td>1,507,000,000</td>
<td></td>
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<tr>
<td>3.8</td>
<td>Sampling officer mandays</td>
<td>466,666,666</td>
<td>5,600,000,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2,392,250,000</td>
<td>28,707,000,000</td>
<td>12%</td>
</tr>
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</table>

CONCLUSIONS AND SUGGESTIONS

Conclusion
The results of data analysis and discussion conducted by researchers regarding the application of environmental cost accounting at Pt. Buana Wiralestari Mas, it can be concluded as follows:

1. Pt. Buana Wiralestari Mas has recorded costs incurred related to the environment but there is no specific identification and report related to environmental costs. The report on environmental costs is entirely incorporated into the financial statements.

2. Displaying environmental costs in the company's financial statements. Thus, the analysis shows that PT Buana Wiralestari Mas uses a comprehensive approach to managing environmental costs. The company shows that it support sustainable and environmentally responsible business practices.

Advice
Based on the conclusion, the suggestions that can be given by the author are as follows:

1. Companies should consider developing a special report on environmental costs. This report can provide a more detailed and transparent picture related to the various components of environmental costs, providing stakeholders with more in-depth information about the company's efforts in managing environmental impacts.
2. Companies need to evaluate the effectiveness of environmental cost accounting practices implemented. This evaluation process can help companies to continuously improve and refine environmental cost management strategies in accordance with changes in the business environment and regulations that may occur.

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