

## Implementation of environmental accounting to waste management operational costs of PKU Muhammadiyah Gamping hospital

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### Abstract

*This research is a qualitative descriptive study conducted at the PKU Muhammadiyah Gamping Hospital. This study aims to overview the application of environmental accounting at PKU Muhammadiyah Gamping Hospital and to find out whether the financial reports at PKU Muhammadiyah Gamping Hospital are following the application of PSAK No.1. This study indicates that the PKU Muhammadiyah Gamping Hospital has implemented environmental accounting, which is quite perfect in undergoing these stages. Since there are already some elements related to waste management costs that have separate accounts, it is just that the recording in the financial statements has not been made separately, as in the environmental cost report recording by Hansen and Mowen (2009). PKU Muhammadiyah Gamping Hospital is quite perfect in implementing environmental accounting, although there is no specific report on environmental cost and conservation benefits. Furthermore, for the financial report presentation, PKU Muhammadiyah Gamping Hospital has not fully implemented PSAK No. 1. Nevertheless, in compile financial reports, PKU Muhammadiyah Gamping hospital has used PSAK in general as the guideline for compiling financial reports.*

*Keywords: Environmental Accounting, PSAK No.1, Waste Management, Hospital Waste.*

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### INTRUDUCTION

In the current era of globalization, the issue of environmental damage is a serious concern. Environmental damage has impacted such as abnormal and regular weather conditions, natural disasters in various places, and the like. Hospitals that should be able to provide guarantees to the community should control their waste, which will impact the spread of disease outbreaks.

Environmental accounting is an accounting science that shows the real costs of business inputs and processes and ensures cost efficiency. Still, it can also be used to measure the cost of quality and services.

PSAK No. 1 (2014), paragraph 9 states: companies can present additional reports such as reports on the environment and additional reports (value added statements), especially for industries where environmental factors play an important role in the organization's survival. PSAP No. 1 of 2010 explained that companies could also present additional reports, such as environmental reports, including waste management costs.

Environmental costs need to be reported separately based on the cost classification. It is intended that environmental cost reports can be used as information to evaluate the company's operational performance, especially those that have an environmental impact, so that users of financial statements, both internal and external, believe that the company has managed its waste properly (Elyafei, 2012).

The purpose of choosing PKU Muhammadiyah Gamping Hospital is because the hospital is in a location close to densely populated settlements and markets, so the purpose of this research was to find out how the implementation of environmental accounting at PKU Muhammadiyah Gamping Hospital and to find out whether the financial reports at PKU Hospital Muhammadiyah Gamping following the implementation of PSAK No. 1 (2014).

## LITERATURE REVIEW

### Environmental Accounting

Environmental accounting is a term related to the inclusion of environmental costs into the accounting practices of companies or government agencies.

### Purpose of Environmental Accounting

According to Ikhsan (2009), the objectives and purposes of developing environmental accounting are:

1. As an environmental management tool, environmental accounting is used to assess the effectiveness of environmental conservation activities.
2. As a communication tool with the public, as a public communication tool, and used to convey negative environmental impacts, environmental conservation activities, and their results to the general public.

### Function of Environmental Accounting

The function and role of environmental accounting are divided into two forms. The first function is called the internal function, and the second is called the external function (Ikhsan, 2009).

1. Internal Function  
The internal function is a function related to the internal company.
2. External Functions  
The external function is a function related to aspects of financial reporting. The external function gives authority to the company to influence stakeholder decision-making.

### Environment Cost

The company incurs environmental costs in connection with the environmental damage caused and the protection carried out. Environmental costs include both internal and external costs (Susenohaji, 2002). Reflect on the (in) ability of corporations and policymakers to address the environmental crises (Rodrigue & Romi, 2022).

### Framework

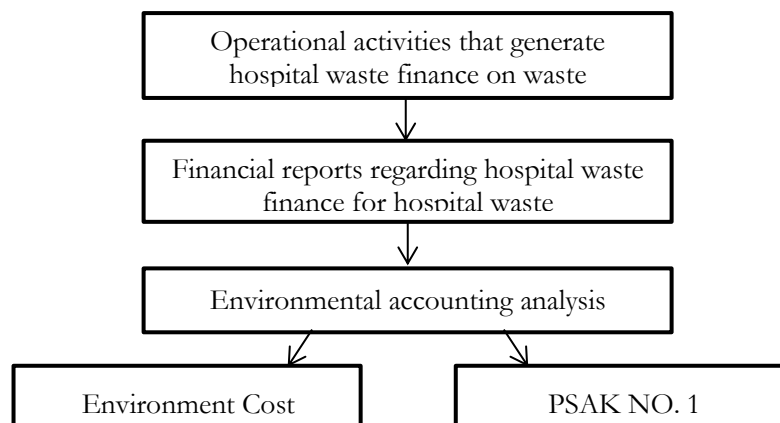


Figure 1. Framework

Hospital operational activities always generate waste, both liquid waste, and solid waste. Hospitals certainly have financial information about waste management, so the hospital knows the information from these financial reports. In this regard, it is necessary to carry out an environmental accounting analysis of the waste management information. After analyzing the application of environmental accounting is following applicable regulations and whether the financial statements are by PSAK No. 1 (2014).

## RESEARCH METHODS

### Types of Research

This research is a case study research because this research only focuses on the application of

environmental accounting in one of the hospitals in the city of Jogja, namely the PKU Muhammadiyah Gamping Hospital. Researchers in this study used a qualitative descriptive method.

### **Object of Research**

This research was conducted at PKU Muhammadiyah Gamping Hospital, located at Jalan Wates Km. 5.5, Ambarketawang, Gamping, Sleman Regency, Special Region of Yogyakarta 55294.

### **Data Source**

Sources of data used in this study are:

- a. Primary data, namely data obtained directly from the source. This study's primary data was obtained through direct observation and interviews with parties related to this research.
- b. Secondary data, namely data obtained indirectly through third parties. In this study, secondary data can be obtained through hospital financial reports, hospital accountability reports, and documents regarding hospital waste management

### **Data Collection Technique**

In this research, data collection is done by:

- a. Observation  
Observations in this study were conducted at PKU Muhammadiyah Gamping Hospital. Statements were made to the authorized waste management department and the finance department.
- b. Interview  
An interview is used to obtain primary data through question and answer with informants. Interviews were conducted in the finance department, the department responsible for waste management, and the community.
- c. Documentation  
Collecting data with Documentation is conducting research sourced from documents or written items (Sugiyono, 2011). Researchers used several documents from the research site, namely the PKU Muhammadiyah Gamping Hospital. The paper is in the form of a hospital profile, an overview of the hospital, and data related to the costs incurred by the hospital in environmental management. This research documentation is taken from the 2018 and 2019 financial reports.

### **Data Validity Testing**

The data validity in this study was carried out using the triangulation method, namely asking the same questions with different respondents to obtain more accurate data.

### **Data Analysis Techniques**

Researchers in this study used qualitative data. The qualitative data used in this study is in the form of an overview of the research object and data on the Analysis of the Application of Environmental Accounting for Operational Costs of Waste Management at the PKU Muhammadiyah Gamping Hospital.

The steps taken by researchers include:

- a. Collecting hospital data.
- b. Identify any environmental costs that refer to Hansen and Mowen (2009), namely prevention, environmental detection, internal failure, and ecological external failure costs.
- c. Classifying each item - an item of environmental costs that have been identified into four types of costs that refer to Hansen and Mowen (2009).
- d. Analyze the recognition of environmental costs that are entered into a predetermined account.
- e. Analyze the presentation and disclosure of environmental costs that occur in hospitals.
- f. Conduct final interviews with related parties so that the data obtained is more accurate.
- g. Concluding the application of cost accounting at the PKU Muhammadiyah Gamping hospital.

## **RESULTS AND DISCUSSION**

### **Identification Of Environmental Costs**

According to Hansen and Mowen (2009), separation of environmental costs from other cost elements

by classifying them into four categories: prevention activities, detection activities, internal failure activities, and external failure activities. Based on the results of interviews conducted with financial managers at the PKU Muhammadiyah Gamping Hospital, the PKU Muhammadiyah Gamping Hospital obtained the following results:

**Table 1.** Annual Environmental Cost Report 2018

PKU Muhammadiyah Gamping Hospital Environmental Cost Report For the Year Ended December 31, 2018		
Environmental Cost	IDR	Presentation
<b>Prevention costs</b>		
Cost of cleaning materials and cleaning equipment	1.774.157.554	
<b>Total Prevention Costs</b>	<b>1.774.157.554</b>	30,90%
<b>Detection cost</b>		
Garbage and clean water costs	19.981.850	
Environmental inspection costs	58.373.448	
Waste water inspection costs	597.271.400	
<b>Total Detection Cost</b>	<b>675.626.698</b>	11,77%
<b>Internal Failure Costs</b>		
Maintenance costs for non-medical facilities and infrastructure	3.268.168.819	
Medical device maintenance costs	23.650.850	
<b>Total Internal Failure Cost</b>	<b>3.291.819.669</b>	57,33%
<b>External Failure Costs</b>	0	
<b>Total External Failure Costs</b>	0	
<b>Total Environmental Cost</b>	<b>5.741.603.921</b>	100%

Source: Internal data of PKU Muhammadiyah Gamping Hospital, processed based on environmental cost reports according to Hansen and Mowen (2009).

**Table 2.** Annual Environmental Cost Report 2019

PKU Muhammadiyah Gamping Hospital Environmental Cost Report For the Year Ended December 31, 2019		
Environmental Cost	IDR	Presentation
<b>Prevention costs</b>		
Cost of cleaning materials and cleaning equipment	2.427.897.760	
<b>Total Prevention Costs</b>	<b>2.427.897.760</b>	34,88%
<b>Detection cost</b>		
Garbage and clean water costs	30.877.600	
Environmental inspection costs	59.439.452	
Waste water inspection costs	859.455.865	
<b>Total Detection Cost</b>	<b>949.772.917</b>	13,64%
<b>Internal Failure Costs</b>		
Maintenance costs for non-medical facilities and infrastructure	3.562.812.648	
Medical device maintenance costs	21.035.500	
<b>Total Internal Failure Cost</b>	<b>3.583.848.148</b>	51,48%
<b>External Failure Costs</b>	0	
<b>Total External Failure Costs</b>	0	
<b>Total Environmental Cost</b>	<b>6.961.518.825</b>	100%

Source: Internal data of PKU Muhammadiyah Gamping Hospital, processed based on environmental cost reports according to Hansen and Mowen (2009).

**Table 3.** Comparison of Environmental Cost Percentage Between 2018 And 2019

Cost Activity	% On Environmental Costs		
	2018	2019	Up/Down
Prevention	30,90 %	34,88 %	3,98 %
Detection	11,77 %	13,64 %	1,87 %
Internal Failure	57,33 %	51,48 %	-5,85 %
Eksternal Failure	0	0	0
<b>Total</b>	<b>100 %</b>	<b>100 %</b>	<b>0 %</b>

Source: Internal hospital data after processing.

The percentage data is obtained from each environmental cost divided by the total environmental costs that have been added up. The two ecological cost reports made in 2018 are IDR 5,741,603,921, and in 2019, IDR 6,961,518,825. In both ecological cost reports, there are no external failure costs.

The data on the percentage of environmental costs to the total costs that occurred in 2018 and 2019 can be seen in the table above. Every year the PKU Muhammadiyah Gamping hospital experiences an increase in environmental costs.

### Analysis of the treatment stage of environmental cost allocation

Environmental accounting is a method for disclosing and presenting costs related to environmental management. These accounting stages include Identification, Recognition, Presentation, Disclosure, and Reporting.

#### Identification

**Table 4.** Environmental Cost Identification Comparison

No	Environmental Costs According to Susenohaji	Environmental Costs According to PKU Muhammadiyah Gamping Hospital
1.	Cost of maintenance and replacement of impacts due to waste and exhaust gases	1. The cost of maintaining non-medical facilities 2. Medical device maintenance costs
2.	Waste prevention and management costs	1. Garbage and clean water retribution fees 2. Wastewater inspection fee 3. Environmental inspection fee
3.	The cost of purchasing materials is not the result of production.	1. Cost of cleaning materials and cleaning equipment

Source: processed based on hospital data.

From the results of the comparison above, it can be concluded that the Hospital has carried out a classification of environmental costs that Susenohaji has identified.

#### Rekognition

PKU Muhammadiyah Gamping Hospital recognizes environmental costs as costs when these costs have been used for ecological management operations.

#### Presentation

PKU Muhammadiyah Gamping Hospital in measuring the value and amount of costs incurred by referring to the realization of the previous year's budget.

#### Disclosure

PKU Muhammadiyah Gamping Hospital presented the environmental cost allocation separately

according to environmental costs according to Susenohaji. In making financial reports, the hospital is guided by PSAK because, according to the hospital, the cost of waste management is crucial, considering that hospital waste has a different treatment.

### Reporting

PKU Muhammadiyah Gamping Hospital revealed that the environmental accounting financing in the financial statements reported that some of the environmental costs had specifically had separate accounts related to environmental management so that the amount and value for cost management can be seen and identified in the hospital's Operational Report.

**Table 5.** Summary of Cost Allocation Stages Conducted by  
PKU Muhammadiyah Gamping Hospital

Tahap	Keterangan	Koreksi
Identification	Allocate costs for the management of possible negative impacts from operational activities	<input type="checkbox"/>
Rekognition	Recognize environmental cost elements as costs when they are used	<input type="checkbox"/>
Disclosure	Disclose the value and amount of costs concerning the realization of the previous period's budget	<input type="checkbox"/>
Presentation and Reporting	Perform a special presentation of the environment, and environmental costs are explicitly included in the hospital's Operational Report	<input type="checkbox"/>

### CONCLUSION

1. PKU Muhammadiyah Gamping Hospital is quite perfect in implementing environmental accounting, although there needs to be a specific report regarding the environmental costs and benefits of environmental conservation.
2. In waste management, PKU Muhammadiyah Gamping Hospital is good enough, as evidenced by the absence of external failures in the hospital environment. This is also clarified by environmental inspections that are carried out every month by the hospital.

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