

Research Article

Implementation Of Environmental Accounting And Environmental Management Strategies At Puskesmas To Improve Financial Performance

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ORCIDAde Eko Setiawan: <https://orcid.org/0009-0006-2951-5528>**Abstract.**

The increasing development of health organizations in Indonesia is currently one of the main causes of environmental problems. Environmental accounting and environmental management strategies are needed to identify environmental impacts and their effects on financial performance. This study aims to find out and analyze the application of environmental accounting and environmental management strategies in improving financial performance from an Islamic perspective at the Buay Nyerupa Health Center, West Lampung Regency. This study uses a qualitative research method that emphasizes the in-depth understanding of a problem. The results of the study show that the management and minimization of environmental damage at the Buay Nyerupa Health Center has been implemented quite well in accordance with the Statement of Financial Accounting Standards (PSAK) No.5. Although it is not yet detailed for the budget at the Puskesmas, there are already some, namely the general activity plan cost, operational cost, as well as planning cost and expenditure budget. However, because the Buay Nyerupa Health Center has not yet become a BLUD (Regional Public Service Agency), its performance cannot be implemented optimally, so its financial performance cannot be measured. In addition, in terms of managing financial reports, the Puskesmas have implemented the appropriate Sharia principles, namely fairness and trustworthiness.

Keywords: environmental accounting, environmental management strategy, financial performance

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1. Introduction

Much environmental damage occurs because of human activities in the context of meeting the needs of their lives, attitudes that despise the quality of the environment, and lack of attention and lack of good management systems in fulfilling needs are the main reasons why the environment is damaged. The application of the concept of environmental accounting or environmental accounting is a good choice in minimizing costs arising from these environmental problems. In corporate accounting practices,

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environmental accounting relates to the recognition of environmental costs into company accounting practices. This can increase efficiency in environmental management by using a cost and benefit perspective, so that leakage of costs can be minimized and can be utilized even better.[1]

The application of the concept of environmental accounting or environmental accounting can also be applied to Community Health Centers (PUSKESMAS), which are health service facilities that carry out public health efforts and individual health efforts at the first level, by prioritizing promotive and preventive efforts in their working areas.[2]

The existence of the Community Health Center (Puskesmas Kesehatan) has so far provided many benefits to the community. In addition, the puskesmas also has a negative impact, namely it can produce waste that has the potential to pollute the environment and transmit disease. Puskesmas waste is all waste generated from puskesmas activities in the form of solid, liquid, paste or gas which can contain toxic and dangerous chemicals (B3), and the most worrying thing is that it can pollute the environment as a result of the waste production.[3]

Considering the many impacts that arise from puskesmas waste on the environment, it is necessary to have follow-up actions from the puskesmas which carry out the management process, be it human resource management, finance, tools and facilities in order to create puskesmas that are clean and meet environmental health requirements. Therefore, the puskesmas should be expected to have its own waste treatment facility, namely the Wastewater Treatment Plant (WWTP) to facilitate and optimize efforts to improve the health of the puskesmas from waste pollution. In addition, with the existence of a Wastewater Management Installation (WWTP), costs related to waste treatment will arise. With these costs, the puskesmas can apply environmental accounting with the aim that the costs from the waste treatment can be properly recorded and posted in the financial reports.[4]

In previous research related to environmental accounting by Irianti, Farida and Sumadi (2014) showed that environmental accounting can be used in hospital operating activities. The benefit of implementing environmental accounting is to assist the management accounting function in making decisions such as budgeting costs related to the environment,[5] but until now the quality of financial reports is still not good enough to provide information in the form of reports on environmental maintenance activities and enactment of environmental accounting is a way of linking environmental preservation and corporate interests.[6]

Regarding Strategy Environmental management is required to measure and identify the impact of environmental costs generated in all relevant processes (potential environmental impacts) such as air emissions, waste disposal, and waste water. The Puskesmas needs to identify potential environmental impacts and their effects in each process and evaluate the managerial resources appropriately allocated to environmental impacts.[7]

The object of research in this study is the Buay Nyerupah Health Center which is a public health service unit that is still included in the BLUD (Regional Public Service Agency), of course, has medical waste generated as a result of the resulting operational activities so that this research is expected to be a source of information and reference for the Buay Health Center. Nyerupah and other health agencies, and can be used as a reference to improve the performance and image of a health center that is healthy and environmentally friendly.

2. Methods

This research uses a qualitative approach, qualitative research is a multiple method in focus , which involves an interpretive and mandatory approach on each of its subject matter, qualitative research works in a natural *setting that seeks to understand, interpret phenomena in terms of meaning, and qualitative research involves the use and collection of various empirical materials such as case studies, personal experiences, introspection, biographies, interviews, observational, interactional and visual historical texts, which describe problems and their meanings in individual and collective life* [8]. In this study the qualitative method is descriptive or included in the type or type of case study qualitative research. Case study research is research that uses a variety of methods and a variety of data sources. The purpose of case study research is a description of the context and occurrence of a case. In addition, the main focus can also be directed at discussing themes, issues and implications that exist in a case [9].

3. Results and Discussion

In minimizing the occurrence of environmental damage caused by the operational activities of the Buay Nyerupa Health Center, it shows that the Community Health Center has implemented environmental accounting and environmental management strategies properly. In accordance with the Statement of Financial Accounting Standards (PSAK) No. 64 regarding mineral exploration, and PSAK No. 5 regarding the operating segments of both large and small companies and other business activities related

to the environment and resources, it is very important and recommended to apply environmental accounting, because it is a corporate social responsibility towards the surrounding community. According to IAI (Indonesian Accounting Association) 2007, financial performance is the company's ability to manage and control the resources they have towards the application of environmental accounting and environmental management strategies at the puskesmas.

According to the puskesmas, environmental accounting is the costs arising from the operational activities of the puskesmas which aim to manage and prevent damage to the puskesmas' environment, both waste and yards around the puskesmas. This fee is incurred if damage occurs or to prevent waste generated from the activities of the puskesmas. For example, the cost of *cleaning services*, which cleans the puskesmas area at any time to maintain the comfort of visitors and patients. The concept of environmental accounting for health centers is to encourage the ability to minimize the environmental problems they face.

The Buay Nyerupa Health Center has not fully implemented environmental accounting because it is still in the licensing process for environmental waste management, because managing the environment is considered quite difficult because environmental management is not easy. However, in the management of waste generated from puskesmas activities it has been managed well with the separation of types of waste, but for solid waste, especially medical waste, it requires different treatment. Meanwhile, liquid waste is disposed of in the Wastewater Management Installation (WWTP) at the Health Center. Furthermore, regarding the impact of implementing environmental accounting in the puskesmas environment, the results can be seen directly, namely with the management of good waste management so that it does not cause problems in the environment around the puskesmas which is indeed located between residential areas and traditional markets.

For a series of waste management at the Buay Nyerupa Health Center, the health center has several stages, namely, first the health center collects the waste generated from operational activities, second, separates medical and non-medical waste, then third, stores it according to the waste category used. generated, for medical waste storage, located right behind the Buay Nyerup Health Center building, for non-medical waste the Health Center is still managing it by burning it because the results of non-medical waste are still relatively small. Then for the collection of medical waste itself it takes about once every three months, this is because the Buay Nyerupa Health Center has not processed the medical waste itself with various considerations, one of the reasons is that the Health Center takes into account from an economic perspective and

the costs to be incurred, because it sees the waste that is produced is still relatively small, so it is felt that the results will be less effective and efficient in waste management.

In waste management, the puskesmas also still has several obstacles in waste management because the waste in the puskesmas itself is still managed by burning it. In addition to other inhibiting factors i.e. the inefficiency of monitoring midwives in Sukau sub-district despite the existence of an MOU (*Memorandum of Understanding*).

In addition, there is waste management originating from the operational activities of the puskesmas, such as the different treatment of medical waste and non-medical waste. The puskesmas also cooperates with two companies, namely PT. JAT Teknik Medika Group and PT. Calm Jaya Sejahtera because the Buay Nyerupa Health Center does not yet have a permit to use *an incinerator*. One of the negative impacts of using *an incinerator* that is not in accordance with existing requirements is air pollution which will pollute the surrounding air, and of course it will harm the surrounding community. In addition, the installation of *incinerators* requires substantial capital costs. By knowing the characteristics of the waste in the puskesmas, the waste management process must also be in accordance with the needs. Waste handling can be done physically, chemically, and microbiologically or in combination.

3.1. Waste Management in the Puskesmas Environment

Puskesmas waste is generated from various puskesmas activities, both medical and non-medical. The waste generated from the operational activities of the Puskesmas is liquid waste and solid waste. The way to manage this waste is different, especially medical waste which must be considered, because it is infectious. The waste management process at the West Lampung Buay Nyerupa Health Center includes:

3.1.1. Liquid waste

Waste disposed of in the Wastewater Management Installation (WWTP) in the Puskesmas includes waste that is the result of: kitchens, treatment rooms/polyclinics, toilets/bathrooms, ER in the puskesmas.

The waste water management process at the Buay Nyerupa Health Center uses *an anaerobic-aerobic biofilter*. Waste water flows through a *fiber filter* (bar screen) to filter out solid waste. After going through the *screen process*, the wastewater then flows into the initial settling tank, which functions to precipitate particles such as mud, sand and other impurities. In addition to the settling basin, it also has a function as a basin

to control flow, as well as a basin for decomposing organic compounds in the form of solid *sludge digestion* (sludge decomposition) and sludge storage.

The decomposition of substances present in wastewater is carried out by *anaerobic* or facultative aerobic bacteria. After a few days, a layer of micro-organisms will grow on the surface of the filter media . These microorganisms will decompose organic substances that have not yet had time to decompose in the settling tub. The layer water that comes from the aerobic contactor tub is then filled with *honeycomb media*, along with aeration or blown with air so that the existing micro-organisms will decompose the organic matter contained in the wastewater and grow and stick to the surface of the media. From the aeration tank process, water flows into the final settling tank

3.1.2. Solid waste

Solid waste management is a process carried out on waste or solid waste starting from the collection stage from the source, transportation, storage, management, to the final stage, namely destruction. Solid waste in the Buay Nyerup Health Center is divided into two types of solid waste, namely medical solid waste and non-medical solid waste.

3.2. Medical Solid Waste

All types of solid waste are collected first into one container. In every room in the puskesmas where it is possible to produce waste, a container has been provided which has been labeled for medical waste so that it does not mix with other types of waste. In selecting the type of medical waste starting from the source which consists of infectious waste, pathological waste, sharps waste, pharmaceutical waste, *cytotoxic waste*, chemical waste.

Furthermore, in the process of transporting medical solid waste, the costs incurred by the puskesmas are Rp. 20,000 per kg of waste which will be transported by a third party. In a month the puskesmas produces 40-50 kg of waste because during the pandemic the puskesmas held vaccinations, but before this pandemic the puskesmas only produced 6 kg of waste per month. So it can be concluded that since the pandemic indirectly costs the puskesmas to transport waste to increase compared to usual.

3.3. Non-Medical Solid Waste

The waste management process at the Buay Nyerupa Health Center consists of several stages, namely the stages of waste management including the hoarding, temporary storage, transportation to TPS, collection and final transportation. Medical waste landfill already has a separate place from non-medical waste.

The management of medical and non-medical solid waste at the puskesmas is urgently needed for the comfort and cleanliness of the puskesmas environment, and can also prevent health problems from arising. The success or failure of the solid waste management system is closely related to the procedures still owned by the puskesmas as a reference for waste management that is guided by regulations set by the government.

The purpose of waste management is to reduce the volume or hazard of waste through physical or chemical processes. The first effort that will be carried out is to reduce the volume of hazardous waste that will be released into the environment, including efforts to reduce waste at its source. The Buay Nyepa Health Center is a form of waste reduction at the source, namely by using an WWTP machine to prevent or reduce the occurrence of waste coming out of the production process which can potentially escape into the surrounding environment.

In The Al-qur'an surah *Al-Baqarah 2/151* Allah SWT tells us as Muslims there is to purify ourselves. Therefore we as human beings need to remember that to purify ourselves means we need to maintain cleanliness, not only personal hygiene but the cleanliness of our surroundings as well.

In practice, environmental accounting at the Buay Nyerupa Health Center, West Lampung, has carried out a series of waste management and several environmental management strategies to prevent damage or pollution of the environment around the health center and also minimize waste products originating from the operational activities of the health center and are also promoting clean water facilities and access to quality drinking water for the community. The financial performance of Buay Nyerupa Public Health Center in West Lampung is currently unable to calculate the impact of the application of Environmental Accounting and the existing Environmental Management strategy due to the absence of specific identification of the costs incurred during waste management.

With the application of environmental accounting at the Buay Nyerupa Health Center, there will be additional costs for producing relevant and important information. As a form of the responsibility of the puskesmas in overcoming the problem of waste resulting

from operational activities, a systematic management of operational waste is carried out which requires a special fee so that there will be an allocation of costs or a new account in the recording of the puskesmas' financial reports. Where the environmental costs in question are the costs incurred by the health center related to environmental damage, waste management, and applied protection. However, at the Buay Nyerupa Health Center, it was found that there was no special treatment for environmental costs incurred in its financial reports, this was due to the status of the Community Health Center which was still in the process of becoming a BLUD (Regional Public Service Agency).

Where for the general plan for the activities of the Buay Nyerupa Health Center in 2020, it consists of 72 volumes of Garbage Retribution Service Expenditures with a unit price of IDR 23,000 totaling IDR 1,56,000. For Operational Costs in 2020, namely 12 volumes of PLN Electricity Account Service Expenditure with a unit price of IDR 2,000,000 as much as IDR. 24,00,000, then in 2021 the operational costs for the Buay Nyerupa Health Center will still be the same as the previous year. Then for the cost of a business plan and budget in 2022 for shopping for waste processing services as much as 1 volume with a unit price of Rp. 4,600,000 as much as Rp. 4,600,000, but there is no unit price for electricity bill service fees for PLN.

However, even though there is no specific identification of costs arising from waste management activities, the puskesmas has the following details of payment for medical waste treatment:

TABLE 1: Details of Payment for Waste Management at Buay Nyerupa Health Center, West Lampung.

No.	Month	2020	2021
1	January	-	Rp. 460,000
2	March	-	Rp. 300,000
3	July	-	IDR 1,880,000
4	September	-	Rp. 960,000
5	November	-	IDR 2,000,000
6	December	Rp. 360,000	IDR 1,760,000
TOTAL		Rp. 360.00 0	Rp. 7,360,000

Source : *Buay Nyerupa Health Center*

Based on the table above, the level of payment for medical waste processing in 2020 is only a few that the Buay Nyerupal Health Center, West Lampung, has issued, but in 2021 it has increased. , this is the reason for the increase in the number of payments for medical waste treatment in 2021.

4. Conclusion

Based on the the descriptions that have been presented in previous chapters The Implementation Of Environmental Accounting And Environmental Management Strategies At Puskesmas To Improve Financial Performance, several conclusions can be drawn :

1. Implementation of Environmental Accounting and Environmental Management Strategy in Improving Financial Performance carried out at the Buay Nyerup Health Center, to manage and minimize environmental damage caused by the operational activities of the Public Health Center has been implemented quite well in accordance with Statement of Financial Accounting Standards (PSAK) No. 5 regarding the operating segments of both large and small companies and other business activities related to the environment and resources, it is very important and recommended to apply environmental accounting because it is a corporate social responsibility towards the surrounding community. However, the implementation of financial performance has not been maximized due to the status of the puskesmas which has not yet become a BLUD (Regional Public Service Agency) so that in the process of identifying costs incurred due to the waste management process there is still no specific detailed account in the financial statements. Although it has not been specifically detailed for environmental costs at the puskesmas, there are several costs, namely the General Activity Plan Cost, Operational Cost, and Business Plan and Expenditure Budget Costs. Therefore, the health center has not been able to measure financial performance at the Buay Nyerupa health center;
2. Based on an Islamic Perspective, the Implementation of Environmental Accounting and Environmental Management Strategies in Improving Financial Performance has been carried out in accordance with sharia principles and does not conflict with existing Islamic accounting principles. which has been used because the puskesmas prioritizes fairness, trustworthiness (honesty/transparency)

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