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Analysis of Environmental Accounting Application in Cattle Waste Management in Kabupaten Parigi Moutong

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ABSTRACT

This research aims to analyze the application of environmental accounting in the management of cattle waste at the Harapan Baru II Farmers Group in Kabupaten Parigi Moutong. This research uses a qualitative approach with an exploratory case study method through interviews, observations, and documentation, which are analyzed using the Miles and Huberman model. The research results show that the group has processed livestock waste into economically valuable compost fertilizer, even tho they still use manual equipment. From a cost perspective, routine expenses such as the purchase of chalk and sacks have been recorded, but have not yet been separated from other operational costs. The group has also kept simple records through cash and asset books, but these are not fully compliant with PSAK 69. Socially, waste management receives community support because it does not cause pollution and increases income, but regulatory support from the government is still limited. This finding indicates that the application of environmental accounting among smallholder farmers is already happening in practice, but it needs to be strengthened through more detailed cost separation and the implementation of appropriate accounting standards.
Keywords: Environmental Accounting, Livestock Waste, Compost Fertilizer, PSAK 69, Cattle Farmers

INTRODUCTION

Global environmental studies highlight the importance of harmony between economic activities and environmental conservation. The livestock sector, including cattle farming, often generates large amounts of organic waste that can pollute the soil, water, and air if not managed properly. Kabupaten Parigi Moutong, Sulawesi Tengah, has cattle farms that are an important source of income for the local community. Solid and liquid waste from these activities has not been optimally managed, which can lead to environmental pollution and public health risks. This condition makes it urgent to implement a systematic approach to recording environmental costs and benefits so that the sustainability of livestock businesses and the preservation of the environment can be maintained. Environmental accounting, or green accounting, is an accounting approach that integrates environmental costs and benefits into economic decision-making practices. According to Salavia et al. (2024), environmental accounting serves as an internal tool for identifying and managing environmental costs, as well as an external tool through the disclosure of environmental information to the public and financial stakeholders. According to (Putri & Sisdianto, 2024), green accounting and environmental accounting help identify, measure, and report the costs and impacts of economic activities on the environment, while also increasing transparency and accountability, which promotes sustainable decision-making.

Green accounting aims to improve the efficiency of environmental management by identifying, measuring, presenting, and disclosing the environmental costs and benefits of economic activities (kajianpustaka.com). For example, in the context of livestock farming, this

involves recording the costs of waste treatment investment, operational expenses, and the benefits in terms of organic fertilizer or biogas production. This information allows farm management to make decisions based on exact and transparent data, minimizing negative environmental impacts without neglecting economic aspects.

Research in West Lombok shows that the concept of green accounting has been applied to the management of poultry farm waste by farmers using a closed house system to reduce pollution, and to process waste into organic fertilizer that is sold as a value-added product (tema.ub.ac.id). This study is relevant because it shows that the application of environmental accounting is not just theory, but also a real practice that provides economic value while protecting the environment.

Cattle farmer groups in Parigi Moutong face constraints such as a lack of documentation for waste management costs, low utilization of waste as fertilizer or biogas, and limited access to processing techniques. Without an environmental accounting system, hidden costs and benefits often remain unseen, and the economic potential of waste is not fully realized. The application of green accounting allows waste treatment costs to be recorded, economic benefits to be measured, and investment decisions to be supported by measurable data.

Through environmental accounting, the group of farmers can see livestock waste as a source of value. For example, organic fertilizer can reduce the cost of purchasing chemical fertilizer, while biogas offers an alternative energy source while also reducing emissions. Request for Recording Systematically recording costs and revenues, waste management can become an additional business opportunity that supports business sustainability and environmental preservation.

Research conducted by (Leniwati et al., 2024) at CV Mandiri Berjamaah, a chicken farm in West Lombok, shows that the farm has successfully implemented the concept of green accounting in its waste management. The implementation is carried out by using a closed house system to minimize environmental pollution, as well as utilizing livestock waste to produce organic fertilizer that is sold to the public. The results of this study confirm that the application of environmental accounting is not limited to cost recording, but is also an environmental management strategy focused on the economic value of waste.

Research conducted by (Ramadhany, 2023) at Sinatria Farm Yogyakarta aims to determine the implementation and compliance of green accounting financial statement disclosure and presentation with PSAK No. 1. The research results indicate that the implementation of green accounting in waste management is already running well, but the presentation and disclosure aspects of the financial statements are still not in accordance with PSAK No. 1. The recording is still done simply according to the internal needs of the farm, using easy to understand language. Therefore, the researcher suggests that Sinatria Farm innovate in its contribution to the environment and begin to establish environmental costs that are recorded and reported according to applicable accounting standards.

Research related to the application of environmental accounting in livestock waste management in Parigi Moutong is urgently needed. This study can identify implementation barriers (such as knowledge and capital limitations), as well as the potential economic and environmental benefits that can be achieved. The recommendations from this research will be useful for farmer groups and local policymakers in designing data-driven strategies for mentoring, training, and policies to strengthen environmental accountability and improve farmer welfare.

Although previous studies have documented the practice of composting livestock waste and its benefits at the industrial/commercial level, empirical research combining environmental accounting analysis (specifically adjustments to PSAK 69) with microeconomic estimates for smallholder farmers in rural areas of Indonesia is still limited. Most research focuses on the technical aspects of composting or large corporate disclosures, while studies on how smallholder groups record, measure, and disclose environmental costs and economic benefits (including the valuation of compost products as a source of income) are still rare. Therefore, this study fills this gap by combining a qualitative analysis of recording practices, a comparison of compliance with PSAK 69, and a simple economic impact estimation of waste processing into compost at the farmer group level in Parigi Moutong Regency.

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LITERATURE REVIEW

Environmental Accounting

Environmental accounting is a system used to identify, measure, and report costs related to environmental activities, while also assessing the benefits derived from environmental management. According to (Mukti & Sisdianto, 2025), environmental accounting serves not only as a means of reporting corporate obligations but also as a management tool that can improve resource efficiency, reduce negative environmental impacts, and support sustainability oriented decision-making processes. Environmental accounting has become an important instrument in ensuring business sustainability, alongside the growing awareness of environmental issues.

Many companies are reluctant to record or disclose environmental damage costs in their financial statements, as it is considered to add to their operating expenses. Companies began implementing environmental cost accounting as pollution increased and pressure from both the government and the public grew. Identifying environmental costs arising from production activities is crucial because it can influence pricing, investment analysis, and long term sustainability strategies. Environmental accounting not only focuses on compliance, but also serves as a tool to create added value through resource efficiency for example, by reducing operational costs and more effective energy utilization as found in a study of eco friendly hotels in Yogyakarta (Aisyah & Sisdianto, 2024).

The application of environmental accounting is not only limited to regulatory compliance obligations, but also serves as an important instrument in supporting management effectiveness. (Nurvita & Priambodo, 2022) emphasize that separate disclosure of environmental costs provides more detailed information, enabling companies to control costs and continuously improve environmental performance. This is supported by research by (Toding et al., 2024), which shows that environmental accounting plays a dual role as a means of management communication and as a basis for strategic decision-making. Environmental accounting not only serves as a form of compliance but also promotes resource efficiency, cost transparency, and the operational sustainability of companies.

The application of environmental accounting is also closely related to the circular economy (CE) model, which emphasizes the reuse cycle of waste to provide economic added value. This aligns with the findings of (Scarpellini et al., 2024), who revealed that environmental accounting is a relevant tool to support CE planning, particularly in tracking the flow of materials, waste, and energy generated in the production process. Environmental accounting can be seen as a combination of accounting knowledge and environmental awareness, which simultaneously helps companies balance economic and ecological goals.

METHOD

This research uses a qualitative approach with an exploratory case study method, as explained by Yin (2009) in (Nur'aini, 2020), stating that case studies are relevant for examining complex and contextual phenomena in real life. The focus of this research is to analyze the application of environmental accounting in the management of cattle livestock waste among farmer groups in Kabupaten Parigi Moutong, Sulawesi Tengah. The research focused on identifying the extent to which the group of farmers had recorded, measured, and reported environmental costs and benefits in their activities of managing livestock waste into useful products. The research location was chosen purposively, specifically a group of cattle farmers who have actively managed waste. The research was conducted from August to September 2025.

Data collection techniques include participant observation, semi structured in depth interviews, and documentation. Observations were conducted to directly observe the recording and reporting processes related to waste management activities. Interviews were conducted with group leaders, treasurers, and members involved in environmental cost recording to gain insight into the understanding and practices already implemented. The collected documentation includes financial ledgers, organic fertilizer production reports, and transaction records related to waste management costs or revenue.

Data analysis refers to the qualitative method according to Miles and Huberman, which consists of three stages. The first stage is data reduction, which is the process of filtering and

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simplifying the raw data obtained from interviews with farmers. Researchers will select relevant information related to livestock waste management, environmental cost accounting, and environmental accounting practices implemented in the field. At this stage, the data reduction process continues throughout the research.

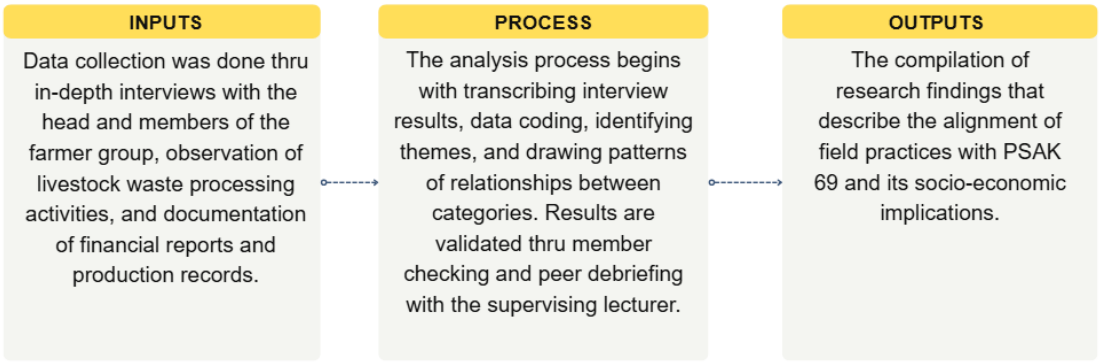

Figure 1. Qualitative Analysis Flowchart
Source: Research Data, 2025

The second stage is data presentation, where the filtered data is organized to make it easier to analyze and draw conclusions. Data from the interviews were then linked to environmental accounting concepts, including the identification, recognition, measurement, presentation, and disclosure of environmental costs. Data presentation is done through narration, tables, and simple diagrams to clarify the findings.

The third stage is drawing conclusions, which involves summarizing the findings from the analyzed data. The conclusion is written in clear and easy-to-understand language, allowing it to describe the application of environmental accounting in managing cattle waste, the effectiveness of environmental cost recording, and its contribution to environmental sustainability. This process also supports the validation of findings through data triangulation from various sources. The analysis results are expected to provide a clear picture of the level of environmental accounting implementation among cattle farmers in Kabupaten Parigi Moutong.

Table 1. Informant Data

No.	Name of Land Owner (Informant)	Profession	Description
1.	WR	Chairman	Key Information
2.	AB	Secretary	Supporting Information
3.	B D	Treasurer	Supporting Information
4.	AI	Business & Production	Supporting Information
5.	DD	Public Relations & Marketing	Supporting Information
6.	KT	Human Resource Development	Supporting Information

Source: Research Data, 2025

RESULTS

Technical Aspects of Waste Management

Based on the interview results, the Harapan Baru II Farmers Group, as stated by WR, the group chairman, reported that:

"Cattle waste, such as manure, urine, and feed residue, is usually processed into compost fertilizer. Processing is done every Wednesday, with each production run yielding about 75 sacks, which are then sold for Rp30,000 per sack. The tools are still manual, using hoes and shovels."

The results of this interview indicate that the group already has a routine habit of processing

livestock waste into economically valuable products. Although they haven't yet used modern equipment like choppers or biogas digesters, manual processing still manages to generate significant additional income. In my opinion, this condition highlights the limitations of technological capacity, but also demonstrates the significant potential that can be developed with government support for facilities and training. After managing cattle manure by processing it into compost fertilizer. The processing is done routinely every Wednesday, and each production run yields approximately 75 sacks of fertilizer. The fertilizer is then sold for Rp30,000 per sack, with sales made directly to people who come to the location. Waste generated from livestock activities can actually provide additional economic benefits. Waste treatment is still done simply without using modern equipment. The production process only utilizes manual tools such as hoes and shovels, and the effectiveness of processing is highly dependent on human labor. The waste management system of the farmer groups is still traditional and limited by the availability of facilities.

This condition reflects the limitations of technological capacity in supporting livestock waste management at the level of smallholder farmers. Nevertheless, the manual processing carried out remains effective in minimizing the environmental impact, especially odor and potential water pollution. This activity has already shown positive steps in protecting the environment while also creating economically valuable products. The ability to regularly produce compost fertilizer has enabled the farmer group to transform waste into a beneficial resource. If examined more closely, the use of modern equipment or simple technologies such as shredders or biogas digesters can increase productivity while expanding the benefits of waste treatment. The fact that this group is able to produce dozens of bags of fertilizer each week using a simple method demonstrates the significant potential that can be further developed through technological support and training.

Environmental Cost Aspect

AB explained:

"There are additional costs for waste management, for example, buying lime per sack costs Rp60,000, and about Rp300,000 per month for buying sacks. But for costs due to pollution, there are none, because the community is actually happy that the waste doesn't pollute."

Based on that explanation, it's clear that waste management costs are already part of the group's routine expenses. However, they are still combined with other operational costs, so they are not specifically visible. In my opinion, this shows the need for separate accounting so that environmental costs can be measured more clearly. Nevertheless, the absence of additional costs due to pollution is an advantage in itself, as it demonstrates the group's success in preventing the negative impacts of waste. For livestock waste management, the Harapan Baru II Farmers Group incurred additional costs. The expenses incurred include the purchase of lime at a price of Rp60,000 per 50 kg bag, which is used to help optimize the waste treatment process. Additionally, there is a cost of approximately Rp300,000 per month for purchasing the sacks used to package the processed compost fertilizer. The environmental costs that arise are routine and need to be budgeted for specifically. However, based on interview results, these costs have not been explicitly separated from other operational costs such as feed or medication. This indicates that environmental cost accounting is still not managed in a structured manner according to environmental accounting standards.

Farmer groups never incurred additional costs due to pollution, such as fines, environmental remediation, or compensation to the community. On the contrary, the community believes that the waste management being carried out has a positive impact because it does not cause environmental problems. This reduces the external cost burden that typically arises from pollution. Utilizing waste to create compost, the farmers' group successfully transformed potential losses into profits, both economically and in terms of social acceptance from the surrounding community. Overall, although environmental costs have already emerged in certain forms, their management is still simple and not fully separated, making it difficult for more detailed accounting processes.

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Accounting and Recording Aspects
BD stated:

"Waste management costs are combined with other expenses, such as medication. But we have a special book to record income and expenses, including the proceeds from compost fertilizer sales, which are recorded as group income."

The interview showed that the group already had a simple record-keeping system using a cash book. Environmental costs have not yet been separated from other operational costs. In my opinion, even tho this recording doesn't yet meet formal accounting standards (SAK EMKM), the awareness of recording income and expenses is already a positive step toward financial transparency for the group. The Harapan Baru II Farmers Group has kept simple financial records using a special book managed by the group's treasurer. This recording includes income from the sale of compost fertilizer as well as expenses related to operational costs and waste treatment. The interview results show that waste treatment costs are still combined with other expenses such as medication and livestock needs, meaning there is no clear separation between environmental costs and livestock operational costs. The recording done focuses more on maintaining the order of the group's administration than on meeting environmental accounting standards. The sales revenue from compost fertilizer is still recorded as group income, ensuring transparency in assessing the economic contribution of waste management.

The current financial records show an initial awareness of the importance of administration, although it is still limited in terms of cost classification. This simple record keeping has already helped the group prepare income reports every three months, and the results are reported to all members. The revenue sharing process is carried out annually based on the results of these records. This shows that environmental accounting already exists in practice, although it is not yet in accordance with PSAK 69 or more formal environmental accounting standards. With simple records in place, the group can still engage in financial planning, even tho transparency regarding environmental costs is not fully achieved.

Regulatory and Policy Aspects
AI stated:

"So far, we are not aware of any government regulations regarding livestock waste management. There has also been no specific government assistance for waste; we have only received aid for feed and barn construction, and that was only once."

Based on the interview results, members of the farmer group were unaware of any government regulations specifically addressing livestock waste management. Waste management is more driven by group awareness to utilize waste so that it is not wasted and provides added value. The farmer groups have never been asked to submit reports on waste management by the government or other institutions. This indicates that government regulations and policies regarding cattle waste management have not been well disseminated at the community level.

The farmer group also stated that there has been no specific assistance from the government regarding livestock waste management. The only assistance ever received was in the form of feed and barn buildings, and even that was a one time occurrence. There are no waste treatment facilities, environmental accounting training, or comprehensive regulatory support. The waste management activity is entirely a group initiative without formal support from external parties. This condition indicates a gap between the government's environmental policies and their implementation at the level of smallholder farmers.

Social and Economic Aspects
DD said:

"There's no problem with odor or water pollution, because the waste is processed into compost. In

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fact, the community is happy, and the waste can be an additional source of income."

The interview results show that the livestock waste management practices implemented do not cause environmental problems such as odor, water pollution, or protests from the surrounding community. On the contrary, the community is pleased with the processing of waste into compost fertilizer, because beside not polluting the environment, the waste is also used productively. This strengthens the relationship between farmer groups and the community, as their activities contribute positively to the surrounding environment. Social acceptance of waste management activities is very good, and the community supports these activities.

Waste processed into compost fertilizer provides an additional source of income for farming groups. Each production yields approximately 75 bags of fertilizer at a price of Rp30,000 per bag, so a single production run can generate over Rp2,000,000. This income is then recorded in the group's cash book and reported every three months, before the annual profit distribution is carried out. Livestock waste not only reduces environmental impact but also serves as a productive economic instrument that improves the well-being of group members. This shows that waste management provides dual benefits: preserving environmental sustainability while also supporting the farmers' group's economy.

Aspects of Accounting Standards
According to KT explanation:

"We have our own asset book, and the group's cash book is also separate, which is held by the treasurer. If there's any assistance, it's recorded as a group asset. If there's training on simple financial record-keeping, we're willing to participate."

This finding shows that the group is already keeping fairly neat internal financial records, although they are still simple. In my opinion, the existence of the group's asset and cash book indicates that the basis for applying accounting is already in place. If they receive training, the group can be guided to align with Simple Accounting Standards for Micro, Small, and Medium Enterprises (SAK EMKM), which are financial accounting standards specifically designed for micro, small, and medium-sized entities to simplify financial statement preparation. Financial statements are more accountable and beneficial in the long run. Any assistance in the form of equipment or capital from the government is recorded as a group asset, so there is awareness regarding the recording of asset values. This indicates that although they don't use a formal accounting system based on PSAK 69, the group still has an internal recording system that functions to maintain administrative order. The group treasurer is responsible for managing and separating financial records so that members can understand the group's financial condition.

Group members also expressed their willingness to participate in training related to simple financial record-keeping. This indicates the potential to enhance the group's capacity to formally implement environmental accounting in the future, although environmental accounting standards are not yet fully applied, the basic recording foundations are already in place and functioning well. With regulatory and training support, farmer groups can be guided to develop financial records in accordance with applicable accounting standards, ensuring that waste management not only provides socio economic benefits but is also transparently and accountably recorded.

DISCUSSION

Alignment with PSAK 69

This research contributes novelty by examining the application of environmental accounting to non corporate entities, specifically community based farmer groups (Kelompok Tani Harapan Baru II). This focus is rarely studied in previous literature, which generally highlights the application of environmental accounting to formal entities such as companies or large industries. Field observation results indicate that the record keeping practices of farmer groups still focus on simple cash flow and recording income from compost sales, without consistently applying the principles of recognition, measurement, and disclosure of biological assets and environmental costs

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as stipulated in PSAK 69 (Agriculture). The main obstacles to implementing this standard are due to limited human resource capacity, a lack of understanding of accounting standards, and the absence of formal policies and operational regulations at the farmer group level.

To identify implementation gaps and environmental-economic implications, a comparative analysis was conducted between field practices and the elements of PSAK 69, as presented below:

Table 1. Compliance with PSAK 69

PSAK 69 Element	Field Practice	Recommendations for Improvement	Impact of Non-Compliance
Identification of Biological Assets Animal Classification That Produces Output	The group records compost sales revenue and operating expenses, but cattle are not considered a separate biological asset.	It is necessary to conduct a livestock census (number, age, productivity) and classify it as a biological asset.	Asset values become inaccurate and financial statements less accurately reflect the true economic conditions.
Initial & Subsequent Measurement (Fair Value vs. Cost)	Cash/Cost-Based Accounting; No Measurement of Fair Value of Biological Assets or Biological Products.	You can use a simple approach like a cost model, provided the assumptions and methods are clear.	Comparisons between periods and the accuracy of asset valuations become limited.
Revenue Recognition from Biological Products	Compost revenue is recognized at the point of sale, without separating biological results from livestock growth.	Create clearer revenue recognition policies, including the treatment of biological growth if significant.	Revenue does not reflect the true economic performance of biological assets.
Information Disclosure	There have been no reports on environmental costs, valuation assumptions, or risks.	Add a simple attachment containing the assessment methodology, environmental cost estimates, production volume, and sales price assumptions.	Low transparency makes it difficult to evaluate business sustainability.
Environmental Costs & Externalities	Environmental costs haven't been separated yet; they're all mixed in with operational costs.	Create separate accounts for "Waste Management Costs" and "Revenue from Waste Processing" for clarity.	Unable to trace the economic impacts and benefits of waste management.
Frequency & Documentation	Manual Notes, No Evaluation SOP or Measurement Schedule.	Develop a simple SOP for recording, periodic evaluation (e.g., every 6 months), and storing supporting evidence.	Potential for data loss and weak consistency in financial reporting.

Source: Research Data, 2025

The comparison results show that the farming group's recording practices are not fully in accordance with the provisions of PSAK 69, particularly in terms of measuring biological assets and disclosing environmental costs. This finding supports the research by (Bai et al., 2023), which confirms that managing livestock waste through composting provides economic and environmental benefits when supported by an adequate record keeping system. Priority recommendations include:

(1) inventorying biological assets, (2) developing measurement policies (cost model if fair value is not available), and (3) adding disclosure appendices explaining economic and environmental assumptions and estimates. Given the still simple institutional structure of farmer groups, the opportunity to integrate PSAK 69 with SAK EMKM is important. PSAK 69 provides a conceptual framework for the recognition of biological assets, while SAK EMKM offers flexibility in application for small entities with limited administrative capacity. The integration of both could be a unique contribution of this research, potentially developing a community-based environmental accounting model applicable in the rural agricultural sector.

Socioeconomic Implications

The cattle manure management practices of the Harapan Baru II Farmers Group demonstrate that even non corporate entities are capable of generating economic, social, and ecological value through the simple application of environmental accounting principles. Processing cow manure into compost provides direct economic benefits based on field data, yielding 75 sacks per production with a selling price of Rp30,000 per sack, and also reduces harmful environmental externalities. This result aligns with Josiah (2021) findings, which show that environmental accounting principles can be applied through the stages of identifying, recognizing, measuring, and presenting waste management costs, and are relevant for application in smallholder farms. Yanthi & Dewi (2023) research also confirms that separating environmental costs from operational costs remains a major challenge, especially for small entities that do not yet have adequate accounting literacy.

In this farmer group, waste management costs are still combined with medication and other operational costs, which is not in line with PSAK No. 1 (2015) regarding the importance of clear and separate information presentation. This condition is similar to the findings of Maharani (2025), who explained that although government regulations have increased compliance with environmental reporting, limitations in understanding and resources have resulted in less than optimal implementation at the field level. Despite facing regulatory and capacity limitations, the implementation of environmental accounting by this farmer group was socially well-received. The surrounding community benefits from a cleaner and healthier environment, thus supporting social and ecological sustainability. This finding reinforces the results of Sartika & Sisdianto (2024), which showed that the integrated application of environmental accounting and social responsibility strengthens the entity's reputation and public trust, while also accelerating the adoption of sustainability strategies.

Currently, the farmer group uses simple bookkeeping methods such as cash books and asset books, but does not explicitly classify environmental costs. This aligns with the findings of Rosmiati et al. (2025) that at PDAM Muara Tirta, environmental costs such as waste management and the use of chemicals are still mixed with general operating costs due to the lack of a structured environmental accounting system and limited human resources. Thus, training and capacity building for farmer group members become essential needs to strengthen transparency, accountability, and sustainability reporting. The implementation of environmental accounting in this farmer group can be said to have been technically and socially successful, but it is not yet fully compliant with formal standards. Explicit efforts to develop a system for recording and separating environmental costs are a strategic step toward improving the quality of environmental governance in the smallholder livestock sector.

Overall, the findings from the technical, economic, social, and environmental analysis can be summarized in a conceptual model as shown in Figure 2. This model illustrates how resource inputs and environmental accounting processes lead to economic and ecological outcomes at the farmer group level.

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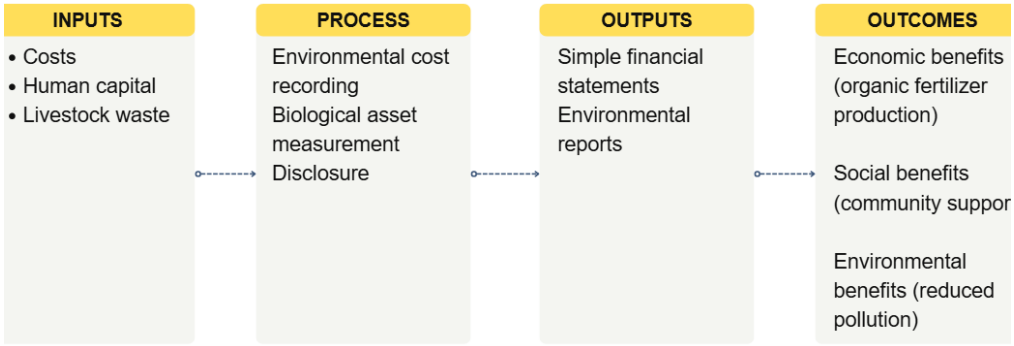

Figure 2. Environmental Accounting Implementation Framework in Farmer Groups
Source: Research Data, 2025

CONCLUSION

The research results indicate that the implementation of environmental accounting at the Harapan Baru II Farmers Group in Parigi Moutong Regency has been carried out, although still in its basic form. Technically, livestock waste was successfully processed into economically valuable and environmentally friendly compost fertilizer, even tho manual equipment was still used. The farmer group has incurred additional costs such as purchasing lime and sacks, but these costs have not been clearly separated from the farm's operational expenses. From a social aspect, waste management has a positive impact because it receives community support, does not cause pollution, and increases the income of group members. However, from a regulatory aspect, government support is still minimal, so waste management is carried out purely on the group's initiative. Simple financial records have been kept through cash and asset books, but they are not fully compliant with PSAK 69 regulations.

The implementation of environmental accounting at the Harapan Baru II Farmers Group has provided economic, social, and ecological benefits, although further strengthening is still needed in the separation of environmental costs, the application of accounting standards, and more adequate regulatory support. Theoretically, this research expands understanding of environmental accounting application in the context of smallholder farming in rural areas, while also reinforcing the view that environmental accounting serves not only as a cost recording tool, but also as an instrument of social accountability and sustainability. This finding opens up opportunities to develop community-based environmental accounting models as a new conceptual approach to assessing the economic value and ecological benefits of organic waste management. From a practical standpoint, the results of this study encourage farmer groups to separate environmental costs from operational costs and improve their financial record-keeping skills through simple training based on environmental accounting principles. Local governments are expected to provide support in the form of regulations, socialization, and technical assistance, including the implementation of appropriate technology such as shredders or biogas digesters to improve the efficiency of livestock waste management. Looking ahead, further research is recommended to develop a model for quantifying environmental costs and to design a community-based environmental accounting framework for the agricultural and livestock sectors in rural areas in order to strengthen environmental accountability and sustainability at the local level.

REFERENSI

Aisyah, A., & Sisdianto, E. (2024). Efisiensi Biaya Dan Keberlanjutan Melalui Green Accounting: Studi Kasus Hotel Ramah Lingkungan Di Yogyakarta. *Jurnal Ilmiah Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *2*(1), 132–143. https://doi.org/10.61722/jemba.v2i1.597

Bai, Y., Zhou, X., Li, Z., & Cheng, Z. (2023). Towards Sustainability: An Integrated Life Cycle Environmental-Economic Insight Into Cow Manure Management. *Waste Management*, 256–266. https://doi.org/10.1016/j.wasman.2023.10.038

Josiah, B. (2021). Penerapan Akuntansi Lingkungan Terhadap Pengelolaan Limbah Pabrik Pakan Ternak Pt Universal Agri Bisnisindo. *Perspektif Akuntansi*, *3*(3). https://doi.org/10.24246/persi.v

Leniwati, D., Prasetyo, A., Juanda, A., & Haryanti, A. D. (2024). Analisis Penerapan Green Accounting dalam Pengelolaan Limbah. *Tema (Jurnal Tera Ilmu Akuntansi)*, *25*(2), 105–116. https://doi.org/10.21776/tema.25.2.105-116

Maharani, A. N. (2025). Analisis Pengaruh Regulasi Pemerintah Terhadap Penerapan Akuntansi Lingkungan. *Jurnal Ilmiah Ekonomi Bisnis Dan Akuntansi*, *2*(1), 208–218. https://doi.org/10.61722/jemba

Mukti, S. S. Z., & Sisdianto, E. (2025). Akuntansi Lingkungan Sebagai Alat Untuk Pengambilan Keputusan Yang Berkelanjutan. *Jurnal Ilmiah Ekonomi Manajemen Bisnis Dan Akuntansi*, *2*(1). https://doi.org/10.61722/jemba.v2i1.640

Nur'aini, R. D. (2020). Penerapan Metode Studi Kasus Yin Dalam Penelitian Arsitektur Dan Perilaku. *INERSIA*, *16*(1). https://journal.uny.ac.id/index.php/inersia/article/download/31319/13436

Nurvita, T., & Priambodo, A. (2022). The Effect of Enviromental Performance, Company's Characteristics and Good Corporate Governance (GCG) on Environmental Disclosure (Empirical Study of Mining Companies Listed on The Indonesia Stock Exchange (IDX)2015-2019). *Baskara: Journal of Business and Entrepreneurship*, *4*(2). https://doi.org/10.54268/baskara.v4i2.12093

Putri, C. M. I., & Sisdianto, E. (2024). Mengintegrasikan Akuntansi Hijau Dan Lingkungan Dalam Analisis Ekonomi Untuk Mendorong Keberlanjutan. *JURNAL MEDIA AKADEMIK (JMA)*, *2*(12), 3031–5220. https://doi.org/10.62281

Ramadhany, Y. M. (2023). Penerapan Green Accounting untuk Pengelolaan Limbah pada Peternakan Sinatria Farm Yogyakarta Periode 2023. *Syntax Idea*, *5*(11), 2052–2066. https://doi.org/10.46799/syntax-idea.v5i11.2635

Rosmiati, R., Mahdalena, M., & Lukum, A. (2025). Analisis Pengungkapan Biaya Lingkungan Pada Perumdam Muara Tirta Kota Gorontalo. *KNOWLEDGE : Jurnal Inovasi Hasil Penelitian Dan Pengembangan*, *5*(2). https://doi.org/10.51878/knowledge.v5i2.5833

Salavia, T., Seftiana Fitri, P., & Noviany Rahmatika, D. (2024). Pengaruh Implementasi Akuntansi Lingkungan terhadap Kinerja Perusahaan: Systematic Literature Review. *AEPPG: Akuntansi Dan Ekonomi Pajak: Perspektif Global*, *3*. https://doi.org/10.61132/aeppg.v1i2.281

Sartika, B., & Sisdianto, E. (2024). Green Accounting dan Corporate Social Responsibility (CS): Konsep dan Implementasi dalam Bisnis Berkelanjutan. *Jurnal Riset Ilmu Akuntansi*, *3*(4), 128–135. https://doi.org/10.55606/akuntansi.v3i3.2642

Scarpellini, S., Aranda-Usón, A., & Moneva, J. M. (2024). Dynamic capabilities for a "circular accounting" and material flows in a circular economy. *Resources, Conservation and Recycling*, *209*. https://doi.org/10.1016/j.resconrec.2024.107756

Toding, F. G., Alexander, S. W., & Tirayoh, V. Z. (2024). Analisis penerapan akuntansi manajemen lingkungan pada UD. SUMU di Manado. *Manajemen Bisnis Dan Keuangan Korporat*, *2*(2), 91–102. https://doi.org/10.58784/mbkk.117

Yanthi, N. M. M. D., & Dewi, N. W. Y. (2023). Penerapan Akuntansi Biaya Lingkungan Pada PT. Jaya Baru Lestari. *Vokasi: Jurnal Riset Akuntansi*, *12*(1). https://doi.org/10.23887/vjra.v12i01.52914