
The Impact of Social and Ecological Accounting in Forest Management

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Abstract

This study examines the impact of social and ecological accounting in forest management, given the importance of management practices that consider not only economic aspects but also social and environmental sustainability. The research used qualitative methods with a case study approach and literature review. Data was collected through direct observation, interviews with stakeholders, and analysis of documents such as sustainability reports and forest management policies. The results show that the integration of social and ecological accounting in forest management policies can improve transparency, accountability and sustainability of forest management. This practice helps in identifying social and environmental impacts more comprehensively. The findings confirm the importance of implementing social and ecological accounting to create more environmentally responsible policies and forest communities. This research also shows that the involvement of local communities in forest management can improve the effectiveness of forest management and conservation. This research makes an important contribution to the development of sustainable forest management strategies by emphasizing the importance of social and ecological dimensions in forest management accounting.

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INTRODUCTION

In the current era of globalization, sustainable development has become a topic that cannot be ignored, especially when talking about the management of natural resources, such as forests (Zainuddin & Tahnur, 2018) . Forest management does not only focus on economic interests, but also considers social and ecological aspects (Sukaharsono & Andayani, 2021) . Social and ecological accounting is emerging as an integral approach in managing forests that aims to achieve sustainability (Giawa, 2023) . This approach allows evaluation not only of financial aspects but also the environmental and social impacts of forest management activities (Gunawan, 2022) .

Social and ecological accounting in the context of forest management provides a framework for identifying, analyzing and reporting the resulting ecological and social impacts (Maryawan, I., & Rochsas, 2022) . Through this approach, forest management activities are viewed from a wider perspective, including environmental sustainability, prosperity of local communities, and ecosystem balance (Husda, 2024) . This emphasizes the importance of paying attention to economic, ecological and social aspects simultaneously in efforts to achieve sustainable forest management (Sukaharsono & Andayani, 2021) .

The importance of integrating social and ecological accounting in practical forest management strategies is not only limited to achieving sustainability goals, but also in building a harmonious relationship between humans and nature (Wiryaatmadja, 2022) . The principles of sustainability and accountability are key in ensuring that exploitation of forest resources does not exceed the limits of nature's ability to renew itself. (Sukaharsono & Andayani, 2021) suggests that sustainability accounting carries the principle of ensuring that

future generations can still enjoy the benefits of the natural resources we use today (Erianto, Hasibuan, & Nurlaila, 2023) .

On the other hand, forest management that involves social and ecological accounting encourages transparency and accountability in management reports (Nugraha, 2023) . With a report that includes calculations of ecological and social impacts, stakeholders can evaluate management performance more comprehensively (Adhariani, 2022) . This not only increases the credibility of the organization or agency responsible for forest management but also strengthens community understanding of the importance of preserving forests (Taufiq & Silaturahmi, 2022) .

This research fills a gap in the literature related to the lack of studies specifically examining the impact of applying social and ecological accounting in forest management. Most previous studies have focused more on the economic or environmental conservation aspects separately.

The novelty of this study lies in the holistic approach that integrates social and ecological accounting in forest management policy analysis. This research offers a new perspective on how social and ecological dimensions can be effectively measured and reported to support forest sustainability.

The benefit of this research is to provide practical guidance for forest managers, policy makers, and local communities in developing more inclusive and sustainable forest management strategies. The objective of this study is to identify and analyze the impact of applying social and ecological accounting in forest management and provide recommendations to improve sustainable forest management practices.

RESEARCH METHODS

In this research, qualitative methods are the main focus to analyze the impact of social and ecological accounting in forest management. Through case studies and literature reviews with various journals and stakeholders such as forest managers, local communities, and environmental experts, this research aims to collect detailed and subjective data. Direct observation and analysis of documents such as sustainability reports and forest management policies will also be conducted to gain a broader understanding of ongoing management practices and their implications for social and environmental aspects. This approach makes it possible to identify specific nuances and real impacts of social and ecological accounting in the context of responsible forest management.

RESULTS AND DISCUSSION

Social Environmental Accounting and Forest Management Concepts

In the discourse on responsible and sustainable forest management, environmental social accounting emerges as a critical approach. According to research conducted (Yahya, 2021) , reporting practices and transparency in activities that have social and environmental impacts play an important role. He emphasized, "In the context of the Bakarluh hydropower plant, the application of environmental social accounting principles proves the value of justice and the ability to preserve the environment which is strengthened by accountability and transparency" (Yahya, 2021) . Through this lens, it is clear that the accountability and transparency brought by environmental social accounting is the key to achieving fair and sustainable forest management (Subekti, Astuti, & Minarsih, 2023) .

Regarding the implementation of community forestry programs, (Puspita, 2022) highlights the ability of environmental social accounting to encourage the achievement of holistic economic, ecological and social aspects. In his study of the Batutege Forest Management Unit, he found that, "The application of social environmental accounting provides new insights into measuring the effectiveness of community forest programs from an economic, ecological and social perspective" (Puspita, 2022) . This confirms that the integration of economic, ecological and social indicators in accounting can improve the performance and sustainability of community forest programs.

From a sustainability accounting perspective, (Sukaharsono & Andayani, 2021) offers insight into expanding the traditional accounting framework to involve environmental, social and economic dimensions. They argue that, "In supporting sustainability, accounting practices must integrate environmental and social aspects alongside economic ones, facilitating more holistic and responsible decision making" (Sukaharsono & Andayani, 2021) . This point shows that only through a broader and integrative accounting framework can forest management be true to its commitment to sustainability and responsibility.

The Role of Social Environmental Accounting in Forest Management

Within the framework of sustainable forest management, environmental social accounting plays an important role in considering economic, social and environmental impacts in management decisions. This approach helps ensure that forest management practices are not only economically viable but also ecologically and socially sustainable. (Susanti, Wulandari, Kaskoyo, Safe'i, & Yuwono, 2021) in their study regarding community perceptions of agroforestry management in Tahura Wan Abdul Rachman highlighted the importance of involving local communities and understanding their perceptions regarding forest management practices. These findings underline that social environmental accounting can bridge the gap between environmental sustainability and meeting the needs of local communities, which is a key aspect in successful forest management. (Susanti et al., 2021)

Furthermore, green accounting, as part of environmental social accounting, offers a framework for measuring and reporting the environmental impacts of forest management activities. The green accounting concept, supported by (Erianto et al., 2023) , advocates for a comprehensive evaluation of ecological performance in economic activities, including in the forest sector. This concept leads to the implementation of more sustainable management practices by emphasizing the importance of considering ecological and social outcomes simultaneously with economic results (Erianto et al., 2023) . This suggests that the adoption of green accounting in forest management can facilitate the shift to more equitable and sustainable resource management.

(Adhariani, 2022) argues that sustainability accounting, which includes economic, social and environmental dimensions, provides a basis for the integration of ecological factors in corporate decision making and public policies related to natural resource management. Sustainability accounting strengthens the role of social environmental accounting by providing metrics and reports that can be used to evaluate and improve forest management practices (Adhariani, 2022) . This emphasizes the importance of a holistic approach in addressing issues of forest ownership and resource exploitation, which considers not only short-term profits but also the ability of the environment to support life and future economic activities.

Challenges and Solutions in Educational Forest Management

In managing educational forests, the main challenge faced is how to integrate ecological interests with the social and economic interests of the surrounding community. Research by (Gunawan, 2022) demonstrated the importance of ecosystem services provided by educational forests, such as "healing forest" ecosystem services, which not only support environmental sustainability but also provide direct benefits for human health. This confirms that educational forest management does not only revolve around conservation aspects but also responsible use for human welfare.

Building links between communities and educational forests is one way to ensure sustainable management. (Ersan, Rahmawati, & Amrina, 2022) said that a deep understanding of the socio-economic aspects of local communities can make a positive contribution to forest management strategies. Through community inclusion and participation in the sustainable use of forest resources, as found in studies related to mangroves, it proves that policies that are sensitive to local needs and aspirations can benefit both communities and forest conservation.

Apart from that, education and research are positioned as the main pillars in supporting educational forest conservation efforts. (Maryawan, I., & Rochsas, 2022) reviews how forestry education and research have contributed to the development of innovative management strategies in various parts of the world. Focusing on the development of new knowledge and methodology in the fields of forestry and ecology, this approach helps in formulating educational forest management strategies that are adaptive to environmental changes and community needs. This underlines the importance of knowledge and technology transfer as an integral part of successful educational forest management.

Contribution to Environmental Education and Research

Researchers have investigated various dimensions of educational forest management, including use of natural resources and interactions with local communities. For example, in his study, (Mustofa, 2020) outlines the importance of in-depth economic analysis in managing ecosystem services, such as water supply, to ensure sustainability and social justice. Mustofa emphasized that this approach is necessary to establish a framework that supports conservation while meeting the economic needs of surrounding communities.

In environmental education, student involvement in practical scientific studies is very necessary. In research conducted by (Nugraha, 2023) , it was demonstrated how educational forests can be used as the main means for developing ecological awareness among students. This study highlights the use of educational forest facilities, such as camping grounds, as a medium for teaching sustainability and ecological concepts.

Forest-based education also opens up new research opportunities in the field of botany, as presented by (Restu, M., Larekeng, SH, Rante, H., Rachmat, A., & Lamanda, 2024) . They explained how educational forests can be used as natural laboratories in studying the potential of medicinal plants and understanding the sustainable use of natural resources. This research has proven to make an important contribution to the development of science and wise management of natural resources.

Furthermore, in enriching knowledge about biological diversity and the use of alternative food sources, research by (Giawa, 2023) revealed the use of oyster mushrooms in educational forests as an alternative source of nutrition. This research not only produces valuable scientific information but also has practical applications that can support the needs of local communities, while emphasizing the importance of university involvement in sustainable development.

Analysis of the Impact of Social and Ecological Accounting

Analysis of social and ecological accounting issues requires a deep understanding of how corporate activities can impact society and the environment. Before engaging in quotations from scientific literature, it is important to provide context related to the quote.

For example, when discussing the importance of authentic and real impact Corporate Social Responsibility (CSR) practices, (Tenriwaru, 2019) offers critical insights. Rather than using CSR only as a marketing tool, he stated that effective CSR implementation must touch on broader aspects of social welfare and environmental awareness. This criticism calls for the need to transform the view of CSR from simply corporate responsibility to an initiative that brings real benefits to society and the environment.

Furthermore, in the exploration of the impact of tourism on cultural and environmental values, a study by (Vitasari, Jumadi, Patahuddin, & Rijal, 2021) is an important source. This research not only illustrates the dynamic interaction between tourism development and local values but also highlights the importance of an approach that considers the balance between these two aspects.

A similar approach was also used by (Wiryaatmadja, 2022) in his research on the use of sugar palm in Rompegading Village. Here, the focus is on the potential economic as well as environmental benefits of local initiatives, showing how natural resources can be managed responsibly and sustainably.

Concluding this view with a study (Zainuddin & Tahnur, 2018) provides a much-needed perspective on the economic value of urban forests. This study outlines the multiple benefits of urban forest management, both in the context of biodiversity and from a community economic perspective.

Integration of Social Environmental Accounting in Forest Management Policy

In an effort to understand the contribution of social environmental accounting to forest management policy, it is important to analyze accounting practices that take into account social and ecological dimensions. (Yahya, 2021) states that the implementation of social and environmental accounting in the management of electrical energy resources, especially in hydropower projects, proves significant potential in identifying and communicating environmental and social impacts. This leads to greater awareness and more responsible management policies (Yahya, 2021). This approach is relevant in the context of forest management, where the integration of social environmental accounting can help in articulating and prioritizing practices that uphold forest sustainability and the welfare of local communities.

According to (Puspita, 2022), community forests offer a rich perspective on sustainability from economic, ecological and social aspects. In his study of community forestry programs, he found that social accounting practices could increase transparency and accountability, especially in measuring ecological and social outcomes in addition to economic parameters (Puspita, 2022). This underlines the essence of inclusive forest management policies, where impact measurement and reporting that includes social and ecological aspects can support the achievement of sustainability goals.

Sustainability accounting applies the concept of development that can meet current needs without compromising the ability of future generations to meet their needs. This research confirms that comprehensive integration of environmental social accounting into forest policy and management strategies can increase the effectiveness of natural resource management and community welfare (Sukaharsono & Andayani, 2021). The role of social environmental accounting in forest management, in fact, supports efforts to achieve a balance between economic, social and ecological interests.

CONCLUSION

Forest management through an Environmental Social Accounting (ASL) approach offers an innovative way to integrate ecological and social objectives in policy and practice, supporting sustainability and conservation efforts. By addressing the challenges of integration and multi-stakeholder participation, ASL enables informed decision-making, critical for forest conservation and community well-being. Therefore, key suggestions include increasing the involvement of communities, business actors and government in the policy-making process and implementation of forest management practices to achieve optimal results for the environment and society.

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