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Evaluating the Accountability of Provincial Government in Achieving SDGs Through Green Accounting: A Case Study of NTB Province

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ABSTRACT

The Provincial Government of Nusa Tenggara Barat (NTB) has made significant efforts toward achieving Sustainable Development Goals (SDGs) by implementing green projects such as renewable energy initiatives, waste management, and carbon emission reduction programs. However, transparency in non-financial reporting, particularly regarding environmental and social impacts, remains insufficient. This study evaluates NTB's accountability in achieving SDG targets through green accounting and assesses the transparency and effectiveness of related financial and non-financial reporting. Using data from 2020 to 2023, analyzed through a quantitative descriptive approach, findings highlight substantial progress in waste reduction, renewable energy, and carbon emissions. Nevertheless, transparency in non-financial reporting is inadequate, limiting accountability. Adopting standards such as the Global Reporting Initiative (GRI) is recommended to enhance sustainability reporting.

Keywords: *Green Accounting, Sustainable Development Goals, Accountability, NTB Province.*

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INTRODUCTION

Governments play a pivotal role in advancing the Sustainable Development Goals (SDGs), particularly in developing regions where effective resource management is critical. The Provincial Government of Nusa Tenggara Barat (NTB) in Indonesia has adopted a Green Economy approach to enhance social equity and environmental sustainability. This strategy aligns with global efforts to localize SDGs, enabling regional governments to define, implement, and monitor sustainable development strategies (Jonga, 2022). The Green Economy approach, which considers environmental, social, and economic dimensions, aims to ensure that development does not harm the environment while meeting future needs (Saputra et al., 2022).

NTB's Green Economy initiatives, as part of Indonesia's Blue-Green economic framework, leverage natural resources to address legislative, governance, and economic challenges sustainably (Sungkawati, 2024). Key efforts include the Zero Waste program, renewable energy initiatives, and forest conservation. However, challenges persist, such as inadequate accountability mechanisms that hinder effective implementation and scaling of solutions (Ruhana et al., 2024). Urban waste management exemplifies these challenges, with ambitious programs requiring stronger regulatory frameworks and greater public engagement to achieve meaningful impact (Sutisna, 2024).

Accountability tracking for SDGs at the local government level involves monitoring and assessing achievements, including the use of monitoring frameworks that provide data to evaluate whether environmental policies effectively address social and environmental pressures (Fairbrass et al., 2023). However, evidence demonstrating positive social impacts of environmental improvements remains limited (Mestdagh et al., 2023). Governments must understand why existing policies are insufficient to reverse environmental degradation and consider complementing SDG monitoring frameworks with additional indicators to address conflicts between SDG disclosure and their actual environmental and social impacts (Guo et al., 2020).

Technological and policy innovations are essential to bridge these gaps and integrate economic growth with environmental and social sustainability (Ruhana et al., 2024). Strengthening accountability mechanisms within NTB's Green Economy initiatives is crucial for achieving ambitious targets, such as waste reduction and renewable energy adoption, while ensuring the successful localization of SDGs (Jonga, 2022; Sungkawati, 2024). This requires robust accountability frameworks that enhance transparency in financial and non-financial reporting, ensuring development aligns with sustainability objectives (Rangkuti, 2023; Gonzalez et al., 2023).

This study evaluates NTB's progress toward SDG targets through key green initiatives. Specifically, it assesses the Zero Waste program, which aimed to reduce waste by 30% by 2023 but achieved only 4.2% (Dinas Lingkungan Hidup dan Kehutanan Provinsi NTB, 2023). Similarly, renewable energy projects increased the renewable energy share in the energy mix to 12.5%, falling short of the 15% target (Rangkuti, 2023). Forest conservation efforts restored 4000 hectares of degraded land, against a target of 5000 hectares by 2023 (Anggraeni et al., 2023). These outcomes underscore the importance of effective resource management and robust accountability frameworks.

The study aims to evaluate the relationship between NTB's financial allocations and the effectiveness of its green economy projects. Using green accounting principles, it analyzes pre- and post-implementation performance data from 2019 to 2023 to measure financial transparency and SDG achievements, identifying critical areas for improvement. This research is expected to provide new insights into the relevance of the Green Economy approach in supporting sustainable development achievements at the local level.

Literature Review

2.1 Sustainable Development Goals (SDGs)

The localization of Sustainable Development Goals (SDGs) is crucial for achieving sustainable development at the regional level. Governments and local institutions play a key role in implementing and adopting SDGs (Valeria et al., 2022). However, challenges such as institutional incapacity, resource constraints, limited

autonomy, and incomplete flows of information and data on SDGs hinder effective implementation at the local level (Coowen & Itai, 2021). To address these challenges, institutional capacity-building and resource allocation are essential to understand and effectively localize SDGs (Dianty et al., 2022). Additionally, the availability of reliable resources, supportive planning and policymaking practices, competent local actors, and trust among local actors are critical drivers of sustainability processes (Nafila & Siswantoro, 2020).

Furthermore, SDG localization requires integrating sustainability into economic plannig, aligning with frameworks such as the Green Economy, which promotes sustainable growth and reduces environmental risks. The United Nations Environment Programme (UNEP) defines a Green Economy as one that leads to improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities (UNEP, 2015). This approach aligns directly with SDG targets, such as responsible consumption and production (SDG 12) and climate action (SDG 13), by encouraging efficient resource use, reduced carbon emissions, and a shift toward clean energy. Providing guidance and recommendations for designing environmental evaluation systems that target SDGs can assist governments and local planners in implementing policies, plans, and projects aimed at sustainable development (Hickmann, 2021).

2.2 Green Economy

The Green Economy has emerged as a crucial framework for achieving SDGs, particularly in developing regions where resource management is vital for sustainable growth. The literature on the Green Economy approach, particularly its relation to sustainable economic growth, has been extensively reviewed by Masdar et al. (2022), Kumar (2023), Vargas-Hernandez et al. (2023), Mondal et al. (2023), and Sutadji (2022). This review highlights the potential of integrating Green Economy practices into local government policies to support the achievement of SDGs. Green technologies, renewable energy sources, and sustainable practices hold promise for driving economic growth while minimizing environmental impacts (Kataeva et al., 2023).

Green accounting plays a pivotal role within this framework, providing governments with tools to track how public funds are used to support green projects and ensuring that spending aligns with SDG targets (Rangkuti, 2023). By adopting

green accounting, governments can enhance transparency, demonstrate accountability, and measure progress toward sustainability indicators. The use of Green Finance (GF) and Circular Economy (CE) principles has also been explored, highlighting their potential to support the transition toward a Green Economy (Kataeva et al., 2023). Additionally, green entrepreneurship has been identified as a critical driver within the Circular Economy, offering insights for businesses and policymakers to advance sustainability.

2.3 Accountability

Methods and indicators for measuring local government accountability in achieving SDGs and evaluating the scope and impact of government policies are critical. Stakeholder Theory (Freeman, 1984) highlights the need for governments to consider the interests of various stakeholders, including citizens, businesses, and environmental organizations, in the decision-making process. By involving stakeholders, governments can ensure transparency and inclusivity, fostering trust and improving accountability in green economy initiatives.

Transparency in local government budgeting processes is essential for accountability and public participation. Budget transparency evaluations have been conducted using tools to measure the availability and accessibility of budget-related documents at the local government level (Kanie, 2020). Furthermore, composite indicators such as WeGIX have been developed to measure quality of life at the local level, assessing progress on multiple SDGs (Oliveira et al., 2022). However, there remains a lack of standardized methods and specific indicators to assess local government accountability and the effectiveness of policies in achieving SDGs (Ciambra, 2021).

Legitimacy Theory (Suchman, 1995) further underscores the importance of maintaining public trust through transparent and accountable actions. Governments must justify their spending and demonstrate alignment with public expectations and environmental objectives. This is particularly important in the context of green economy projects, where poor project management or underutilization of funds can undermine public trust (Shahib et al., 2020). Previous studies suggest that robust accountability frameworks, improved budget realization processes, and effective stakeholder engagement are essential to ensure public resources are effectively used to meet SDG targets.

RESEARCH METHOD

This study adopts a quantitative descriptive approach to analyze financial and environmental data from the NTB Provincial Government's green economy projects between 2019 and 2023. The research is centered on the evaluation of budget allocations, budget realization rates, and corresponding environmental outcomes to assess the extent to which NTB's investments in waste management, renewable energy, and forest conservation align with the Sustainable Development Goals (SDGs).

Data Collection and Processing

Primary data were obtained from NTB's official financial and environmental reports. The study focuses on two key data categories:

1. **Financial Data**: This includes information on budget allocations and realization rates for critical green economy projects, specifically waste management, renewable energy initiatives, and forest conservation efforts.
2. **Environmental Data**: This includes key performance indicators (KPIs) for areas such as waste reduction, renewable energy production, and forest conservation. These KPIs help measure the environmental outcomes of NTB's green economy projects in alignment with specific SDG targets.

Analytical Approach

The data analysis was conducted using the following methods:

1. **Descriptive Statistics**: The financial allocations and environmental outcomes were summarized using descriptive statistics to provide an overview of NTB's investments and their corresponding results. This approach allows for a clear comparison of allocated versus realized budgets and the effectiveness of these investments in achieving environmental targets.
2. **Pre- and Post-Implementation Comparison**: The performance of NTB's green projects was assessed through a comparison of pre-implementation and post-implementation data. This comparison focuses on evaluating the progress made in relation to the SDG targets, particularly in the areas of waste management, renewable energy integration, and forest conservation.

This quantitative descriptive method provides a structured approach to measure the effectiveness of NTB's financial commitments in relation to its environmental goals and SDG targets, offering insights

RESULT AND DISCUSSION

1. Financial Allocations and Budget Realization

The financial allocations and budget realization analysis reveals a consistent gap between NTB's planned investments and actual expenditures for its green economy projects between 2019 and 2023. Although the government increased its financial commitments to projects such as waste management, renewable energy, and forest conservation, the realization of these budgets remained below expectations, with actual spending only reaching 60%-70% of allocated funds. This underutilization has limited the effectiveness of these projects and hindered progress towards achieving SDG targets.

Waste Management (SDG 12 - Responsible Consumption and Production)

The Zero Waste Program was aimed at reducing waste generation by 30% by 2023 through prevention, recycling, and reuse strategies. However, the waste reduction rate only reached 4.2% by 2023, far below the targeted 30%. The table below shows the financial performance of the waste management program over the period, highlighting the discrepancy between budget allocations and actual outcomes.

Table 1: Waste Management Financial Performance (2019–2023)

Year	Waste Management Budget (Billion IDR)	Budget Realization (%)	Waste Reduced (%)	SDG Target 2023 (%)
2019	45	60%	2.5%	30%
2020	50	55%	1.07%	30%
2021	52	65%	2.1%	30%
2022	60	67%	3.5%	30%
2023	65	70%	4.2%	30%

This underperformance aligns with Stakeholder Theory (Freeman, 1984), which suggests that insufficient engagement with stakeholders, including local communities and waste management companies, could hinder effective policy implementation. Green accounting, as discussed by Rangkuti (2023), emphasizes the importance of aligning financial transparency with environmental outcomes. In this case, the lack of full budget realization indicates a failure to maximize the potential of allocated funds, reflecting inefficiencies in NTB's financial management processes.

Renewable Energy (SDG 7 - Affordable and Clean Energy)

The NTB government aimed to increase the share of renewable energy in the total energy mix to 15% by 2023. Despite investments in solar and biogas plants, the share only reached 12.5% by the target year. The following table shows the financial performance of renewable energy projects during the study period.

Table 2: Renewable Energy Financial Performance (2020–2023)

Year	Renewable Energy Budget (Billion IDR)	Budget Realization (%)	Renewable Energy Share (%)	SDG Target 2023 (%)
2020	30	55%	8%	15%
2021	35	60%	9%	15%
2022	40	65%	11%	15%
2023	42	67%	12.5%	15%

The consistent underutilization of budgets (55%-67%) prevented NTB from reaching its renewable energy goals. According to Legitimacy Theory (Suchman, 1995), a government must maintain legitimacy by demonstrating that its policies and actions align with societal and environmental expectations. In this case, the failure to meet the 15% renewable energy target undermines public confidence in NTB’s ability to achieve SDG 7. Additionally, studies by Shahib et al. (2020) argue that inefficient budget management and project delays frequently occur in developing regions due to weak governance structures, further explaining NTB’s underperformance.

Forest Conservation (SDG 15 - Life on Land)

NTB's forest conservation programs aimed to restore 5000 hectares of degraded forest land by 2023, but only 4000 hectares were restored. The table below summarizes the financial performance of forest conservation projects during the period.

Table 3: Forest Conservation Financial Performance (2019–2023)

Year	Forest Conservation Budget (Billion IDR)	Budget Realization (%)	Hectares Restored	SDG Target 2023 (ha)
2019	20	60%	2500	5000
2020	25	55%	2700	5000
2021	28	65%	3200	5000
2022	35	67%	3500	5000
2023	38	70%	4000	5000

The delays in funding and project implementation resulted in a failure to meet the 5000-hectare restoration target. This shortfall can be linked to the findings of Anggraeni et al. (2023), who highlight that forest conservation projects in developing regions often face financial and logistical barriers that delay their progress. This aligns with Green Economy Theory (UNEP, 2015), which emphasizes that effective conservation efforts require adequate financial resources and timely implementation to ensure sustainability.

Pre- and Post-Implementation Comparison of SDG Achievement

Comparing the pre- and post-implementation performance of NTB's green economy projects reveals that while there has been measurable progress, none of the initiatives fully met their 2023 SDG targets. This underperformance is consistent with prior research by Shahib et al. (2020), which found that budget underutilization and project delays are common in developing regions, affecting the achievement of environmental goals.

The findings underscore the importance of improving financial transparency and project management in NTB's sustainability initiatives. According to Rangkuti (2023), adopting green accounting practices can help track the allocation of public

funds to green projects and ensure that spending aligns with environmental outcomes. Strengthening NTB's budget realization processes and enhancing stakeholder engagement could address these shortfalls and enable the province to better achieve its future SDG targets.

CONCLUSION AND SUGGESTION

A. Conclusion

This study directly addressed the issue of government accountability in achieving Sustainable Development Goals (SDGs) through a green economy approach, using the case of the NTB Provincial Government. The analysis of NTB's financial allocations and budget realization from 2019 to 2023 reveals significant gaps between the funds allocated to green projects and their actual outcomes. Specifically, the findings show that underutilization of budgets, ranging from 55% to 70%, significantly hindered NTB's ability to meet its 2023 SDG targets in waste management, renewable energy, and forest conservation. Despite some progress in each area, none of the projects fully achieved the intended environmental goals, demonstrating a need for improved financial management and project execution.

B. Suggestion

NTB's efforts to achieve Sustainable Development Goals (SDGs) through green projects reveal both progress and challenges. Improving budget realization processes is crucial to ensuring timely and effective use of allocated funds, which can maximize environmental and social outcomes. Robust project management practices, including clear timelines and regular performance reviews, are essential to addressing delays and inefficiencies in green economy initiatives. Additionally, adopting green accounting frameworks can enhance financial transparency, linking expenditures directly to measurable sustainability outcomes, thus addressing issues of fund underutilization.

Stakeholder engagement plays a pivotal role in improving project accountability and success. Actively involving local communities, businesses, and environmental organizations in planning and implementation can ensure alignment

with local needs and priorities while fostering trust and collaboration. To support long-term progress, further research is recommended in three key areas: longitudinal studies to evaluate the sustained impact of budget improvements on SDG achievement, the potential of public-private partnerships (PPPs) in enhancing project efficiency, and the broader social impacts of green economy projects, including contributions to poverty alleviation, job creation, and community development. By addressing these aspects, NTB can strengthen its commitment to sustainable development and enhance its capacity to meet future SDG targets.

REFERENCE

Anggraeni, V., et al. (2023). Measuring opportunities: Transforming Indonesia's economy through utilizing natural resources for sustainable development through green economy indicators. IOP Conference Series: Earth and Environmental Science.

Darmadi, D., Hamsina., R., Muhammad., I. N. (2022). Akuntabilitas Belanja Daerah di Pemerintah Kabupaten Luwu Utara. Journal Publicuho, 5(3):746-762. doi: 10.35817/publicuho.v5i3.25

Dinas Lingkungan Hidup dan Kehutanan Provinsi NTB. (2023). Laporan realisasi anggaran 2023. Nusa Tenggara Barat.

Esterlin, G., Himber, M. Ilat,Ventje., P. (2023). Evaluasi akuntabilitas kinerja instansi pemerintah pada dinas koperasi dan ukm daerah provinsi sulawesi utara. Jurnal EMBA : Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi, 11(02):476-482. doi: 10.35794/emba.v11i02.47944

Fairbrass, A. O'Sullivan, A. Campbell, J & Ekin, P. (2023). The SDG monitoring framework provides limited evidence that environmental policies are delivering multiple ecological and social benefits. doi:10.22541/essoar.167898497.73662267/v1

Frinaldi, A. (2023). Akuntabilitas Pemerintah Daerah Kabupaten Tanah Datar Dalam Penyajian Informasi Laporan Penyelenggaraan Pemerintah Daerah (LPPD). Tanah Pilih, 3(1):11-18. doi: 10.30631/tpj.v3i1.1369

Gonzalez, A. M., Mc Guinness, S. Murphy, E., Kelliher,., Hagin- Meade, L. (2023).

Priorities, Scale and Insights: Opportunities and Challenges for Community Involvement in SDG Implementation and Monitoring. Sustainability, 15(6):4971-4971. doi: 10.3390/su15064971

Guo, M., Nowakowska-Grunt, J., Gorbanyov,., Egorova, M. (2020). Measuring the Implementation of Sustainable Development Goals at a Local Level: The WeGIx Index. 215-245. doi: 10.1007/978-3-030-30306-8_13

Jonga, M. (2022). The Roles Of Local And Regional Governments In Achieving The Sustainable Development Goals. International Social Sciences and Humanities, 1(1):130-132. doi: 10.32528/issh.v1i1.20

Masdar, R., Husna., Jurana., R., Amborowatie., Lucyani, Meldawaty., Tenripada., M., I., Mursali., N., E., Naida. (2022). Implementation of a Sustainable green economy in

Mestdagh, B., Sempiga, O., and Liedekerke, L. V. (2023). The Impact of External Shocks on the Sustainable Development Goals (SDGs): Linking the COVID-19 Pandemic to SDG Implementation at the Local Government Level. Sustainability, 15(7):6234-6234. doi: 10.3390/su15076234

Rangkuti, M. B. (2023). Green accounting in enhancing sustainability report disclosure. Advances in Environmental Accounting.

Ruhana, F., Suwartiningsih, S., Mulyandari, E., Handoyo, S., & Afrilia, U. A. (2024). Innovative Strategies for Achieving Sustainable Development Goals Amidst Escalating Global Environmental and Social Challenges. *International Journal of Science and Society*, *6*(1), 662-677. https://doi.org/10.54783/ijsoc.v6i1.1054

Saputra, A. D. Nurhakim. A, S. (2022). Pemanfaatan foto udara untuk penyusunan peta desa dan pemetaan potensi desa berbasis sistem informasi geografis. Jurnal Himasapta, 7(3):137-137. doi: 10.20527/jhs.v7i3.7500

Shahib, et al. (2020). Legitimacy theory in financial transparency for SDGs. *International Journal of Public Sector Management*.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *20*(3), 571–610.

Sungkawati, E. (2024). Opportunities and Challenges: Adopting “Blue-Green Economy” Terms to Achieve SDGs. *Revenue Journal: Management and Entrepreneurship*, *2*(1), 01-13.

Sutisna, M. A. R. (2024). Strategi pengelolaan sampah kota terintegrasi menuju zero

waste. *Waste Handling and Environmental Monitoring*, *1*(1). https://doi.org/10.61511/whem.v1i1.2024.631

United Nations Environment Programme (UNEP). (2015). *Green economy and sustainable development*. UNEP Publishing

Usadi, Dani. (2021). SDGs desa dalam perencanaan pengembangan ekonomi. Seminar Nasional Inovasi Teknologi (SNITek Vol. 3 (2021). doi: 10.59134/prosidng.v3i.343