E-ISSN: 2807 - 6311, P-ISSN: 2807 - 6494



# COULD ACCOUNTANT BE FACILITATOR TO ZERO NET EMISSION PROGRAMS?

Yanuar Ramadhan<sup>1</sup>
Achmad Rifai<sup>2</sup>
Dwi Septiani<sup>3</sup>
Fahri Hananto Yasin<sup>4</sup>
Lenny Widiawati<sup>5</sup>
Stefany Caroline<sup>6</sup>

Program studi Magister Akuntansi, Fakultas Ekonomi dan Bisnis, Universitas Esa Unggul, Jakarta, Indonesia

Email: yanuarramadhan@esaunggul.ac.id

\*Corespondence: <a href="mailto:yanuarramadhan@esaunggul.ac.id">yanuarramadhan@esaunggul.ac.id</a>

**Abstract:** The study aims to highlight the role of accountants in supporting and facilitating the implementation of the Net Zero Emission Programme in Indonesia with a focus on emission measurement and reporting, sustainable financial management, related audits and verification, as well as its impact on environmental sustainability and the achievement of climate change targets. The research is based on a qualitative approach of literature review using data in the form of annual reports and sustainability reports from mining companies in 2022 as well as from various related research journals. The results of this study show that accountants have a key role to play in helping companies and organizations achieve zero emission targets while ensuring compliance with relevant regulations. They can also help in measuring the financial impact of sustainability initiatives and make transparent reports to stakeholders.

**Keywords:** Zero Net Emission, Accounting, Accountant Role, Green Accounting

## **INTRODUCTION**

Climate change and its significant impact on the day-to-day make it a very serious issue to be discussed internationally. The adoption of the Paris Agreement on Earth Day, April 22, 2016 was proof of the seriousness of the world community to unite together to suppress the rate of global warming. A of 103 countries, including Indonesia, have adopted or ratified the Paris Agreement into law as a form of commitment to participate in limiting global temperature rises below 2°C from pre-industrialization levels and making efforts to limit them below 1.5°C.

Greenhouse gas emissions are one of the major causes of climate change and global temperature rise. The ratification of the Paris Agreement is in the good faith of the Indonesian government to begin to pay serious attention to the issue of greenhouse gas emissions in the country. The various strategic plans and derivative regulations then began to be formulated

at the government table so that the ratification of the Paris Agreement did not end on paper, without any real action. The presidential regulation on the Carbon Economic Value (CEF), which sets a national target of a 29 per cent reduction in greenhouse gas emissions by its own capacity and 41 per cent with international support by 2030, has been approved as a strategic plan.

The government has set targets and established various regulations, but all of this will be in vain if stakeholders do not work towards it. Response and participation of stakeholders at national, regional and individual scales is needed to effectively reduce greenhouse gas emissions.

Many industrial companies contribute to the greenhouse gas emissions that affect climate change. Some of the major industries that have a significant role in these emissions include the mining industry. The carbon emissions from the mining sector in Indonesia are derived from a variety of activities that potentially produce greenhouse gas emissions. These emissions can come from some of the main sources in mining industry, namely the use of fossil fuels for the operation of various heavy equipment, deforestation for the opening of mining land, mining processing, mine waste processing and other operational activities.

In order to achieve the net zero emission target, many companies in the mining sector have committed to reducing their emissions in a variety of ways, such as switching to renewable improving energy sources, energy efficiency, and adopting more environmentally friendly technologies. strategic The various plans programs planned by these mining companies require support from all departments to achieve carbon emission reduction targets. In the program to reduce carbon emissions in mining companies, various divisions/parts of the company have different, but interrelated roles in achieving sustainable goals. This includes the finance or accounting department which has an important role in carbon emission reduction programs.

According to (Mahardika, 2020) the role of an accountant may not be in the above-mentioned explicit emission reduction programmes, but the role of a accountant is more in the process of providing information, emission reporting, financial planning and budgeting for carbon reduction programs, audits and policy development for sustainability. In the context of the Net Zero Emission programme, accountants have a crucial role in ensuring that the financial and reporting aspects related to climate change are run well and in accordance with applicable accounting principles. It will help create a strong financial foundation to support climate change efforts and the Net Zero Emission target in Indonesia.

Stakeholders need information that is relevant, reliable, understandable and comparable, so they can evaluate, respond and make the right decisions regarding greenhouse gas emissions. This is what then encourages the accounting profession to transform into a greener one. Accountants and their conventional accounting practices are required to change in order to accommodate stakeholders' needs for information which is now more than just financial information. The scope of accounting today is no longer limited to financial matters alone, but also includes social and environmental matters. The integration of financial, social and environmental accounting is what is then given the name green accounting and produces various reports, one of which is a sustainability report.

A sustainability report benchmark for looking at programs, achievements and various obstacles faced by companies in their efforts to emissions. 01 found sustainability report to be a catalyst for enhancing company's sustainability efforts. The standards' adaptability and modular structure provided a flexible encouraged framework that company to engage with its stakeholders and improve its sustainability practices.

(Brunelli et al., 2020) found that the evolving landscape of corporate responsibility, particularly in relation to societal and environmental concerns, has led to a fundamental shift in the interplay between accounting and accountability. This transformation has given rise to the emergence of accountability-based accounting systems. The finding reveals that the

current discourse often adopts a "silo approach," where accountability for climate change is often fragmented and compartmentalized within organizations. This compartmentalization may be attributed, in part, to the deficiencies in the motivations that drive organizations to adopt climate-friendly practices.

The study conducted by (Lin et al., 2023) highlights the significant potential of green finance to drive substantial reduction of the emission. This, in turn, signifies a clear shift towards a lowcarbon transformation within the mining industry of the country. Notably, the results of the mechanism analysis shed light on how green finance contributes to this low-carbon transformation. It achieves this by reducing the secondary share. sectoral decreasing the production of export-oriented products, facilitating the adoption of green technologies, and expanding proportion of new installed capacity in renewable energy sources. This finding puts forward valuable recommendations to further promote the development of green finance and suggests policies that encourage lower interest rates for investments in renewable energy, which can not only bolster the nation's green finance initiatives but also accelerate the much-needed transition towards a more sustainable and environmentally friendly mining sector.

While research by (Liu & Wu, 2023) noted that the escalating public concern for environmental issues has led to a surge in the utilization of green finance

as a means to support environmentally sustainable projects. This, in turn, has amplified the demand for robust environmental disclosure practices. While the literature has chronicled remarkable growth in sustainability reporting worldwide over time, it has also underscored persistent concerns regarding the lack of consistency, comparability, and assurance in such reporting.

These one and other reasons spark curiosity to find out to what extent accountants play a role in reducing carbon emissions from mining companies and provide guidance for accounting practitioners as well as the management of mining firms in addressing carbon issues.

### **RESEARCH METHOD**

The research method in this article is qualitative research with an approach to the study of literature derived from articles and journals of previous research. Through the literature review, we take a holistic approach to understanding problems, views, and theories that exist in published literature. Qualitative methods in literature studies involve in-depth analysis of texts relevant to the research topic, with a focus on understanding the meanings, contexts, and interpretations that can be found in existing literatures. These methods allow researchers to identify patterns, themes, and frameworks of thought that emerge in published litterature.

In addition to conducting a literature study, the researchers analyzed the annual reports and sustainability reports of mining companies issued by the BEI in 2022 that were listed in the LQ45 index in 2023. These companies include Adaro Energy Indonesia, Harum Energy, Indika Energy, Bukit Asam, Indo Tambangraya Megah, Vale Indonesia, Aneka Tambang, Barito Pacifik, Timah (TINS), United Tractors. (UT). Out of ten annual reports and reports sustainability mining companies obtained then analyzed about the program of the company to support net zero emissions, and the role of accountants in it.

The review of libraries in this context aims to enrich researchers' understanding of the accountants in disclosure of information to carbon reduction programmes. Researchers will use this method by analyzing journals and annual reports as guidelines and sources for research analysis. Thus, a library review will help form a strong theoretical foundation for this research, providing in-depth insights into the topic of Net Zero Emission as well as enabling researchers to identify views, findings, and trends that exist in the literature. Analysis of annual reports and sustainability reports helps to inform about the implementation of net zero emission programmes in field practice. The results of this library review will be important foundation preparation of the expected research articles, as well as will support the

development of the arguments and findings of the research, while the results of the analysis of the annual report will be a source of information of the current state of affairs.

#### **RESULT AND DISCUSSION**

The government is increasingly campaigning to reduce greenhouse gas emissions, one of which is through the launch of a net zero carbon emissions target, in accordance with mandatory provisions of the Paris Agreement. As a coal producing and exporting country, this carbon emission free target is certainly a challenge for the government and also companies in the coal mining sector. A number of countries developed campaigning against coal, and are starting to abandon the use of coal for Steam Power Plants (PLTU). General Chair of the Indonesian Coal Mining Association (APBI) Pandu Patria Sjahrir admitted that one third of the total carbon of 1,263 tonnes came from power plants and the coal sector. However, with the downstreaming of coal products, combustion efficiency and carbon capture storage, he believes this can reduce carbon emissions in the coal sector.

The mining emissions decarbonization program is an initiative aimed at reducing greenhouse gas emissions from mining operations where mining industries often have significant environmental impacts and high emissions. A complex challenge, but also an opportunity to create a more

sustainable, efficient, and environmentally friendly mining sector.

The mining industry is one of the main causes of greenhouse emissions, which contribute to global climate change. The decarbonization program is an important part of global efforts to mitigate climate changes and limit global warming. The application of new technologies, such as electric trucks, low-power engines, and more efficient mining processes, are important components of the decarbonization effort. Experts highlighted the need for investment in research and development cleaner technologies. Minina industries that adopt decarbonization programs can face lower financial risks and have better access to capital markets. They also see business opportunities in renewable energy and green materials. The importance of the involvement of stakeholders, including local communities, NGOs. governments, in the decarbonization process. They stressed the need to build strong ties with local communities and understand their concerns.

Based on the annual reports of several mining companies, it is important to reduce carbon emissions and respond to risk properly by implementing the Green Energy & Greenhouse Gas Strategic Plan, to seize green business opportunities and support government efforts to boost power plants from renewable energy sources.

In the sustainability report, Adaro Energy (PT Adaro Energy Indonesia Tbk,

2023) , for example, established the Adaro Green pillar to be the center of renewable energy projects such as the Solar Power Plant and Battery Energy Storage System (BESS) in Kelanis, the Power Plant in Southern Kalimantan, the Mini PLTA in Lampunut, the PLTA Mentarang to supply clean energy for mineral and industrial processing activities in the green industrial area in Kaltara. In addition to the establishment of Adaro Green, the implementation of Good Mining Practices (GMP) for coal mining process efficiency and the application of the Energy Management System (EnMS) as well as the use of biodiesel (B30) made the entity's efforts to support the of decarbonization program emissions.

In Harum Energy (PT Harum Energy Tbk, 2023a), the decarbonization program involves the suspension of B30 biofuel to reduce the use of fossil fuels and emission-efficient equipment in a wise and economical way and to raise employee awareness to play a role in reducing emissions and using environmentally friendly equipment (PT Harum Energy Tbk, 2023b).

Emissions from engines and vehicles used in mining operations, such as mining trucks and heavy equipment, can pollute the air around them with fine particles and other pollutants. At Bukit Asam (PT Bukit Asam Tbk, 2023), the emission decarbonization program is carried out using electric shovels, hybrid dump trucks, tower lamps, towers dispatchers, e-mining reporting and the

latest is the electric bus used to transport and pick up employees around the Tanjung Enim mine site and in Tarahan Harbour. In addition, Bukit Asam is also developing an electric-based mining vehicle in synergy with PT Indonesia Railway Industry. (Persero). In addition, the company is building a 17hectare Botanical Garden that is expected to support the economy of the community around the tourism sector.

With sustainability as a core strategy as well as a good and responsible mining entrepreneur, Indo Tambangraya Megah Tambangraya Megah Tbk, 2023) plays its role in tackling the climate crisis. As a good miner, the Company is doing everything possible to improve its carbon profile. ITM recognizes that the mining world needs to adopt and promote the diffusion of technologies that can save carbon and reduce carbon emissions. In this regard, the Association promotes carbon-saving innovation and seriously pursues gasification. ITM is also one of the selected government companies in conducting co-firing trials, where coal-fired power plants are supported by biomass combustion. Management has also designed a strategy for transforming ITM into an energy company through renewable energy investments, including solar and hydroelectric power plants.

In 2022, Vale Indonesia (PT Vale Indonesia Tbk, 2023) succeeded in reducing GHG emissions by 330,688 tons of CO2 eq to 1,640,387 tons of CO2 eq, or 17% lower than in 2021, by

1.971,075 on CO2 eq. The low intensity of GRC emissions in Vale Indonesia is supported by three hydroelectric power plants (PLTAs), which are able to avoid additional carbon emissions of scope 1 equivalent to 1,118,231 tons of Co2 eq per year if calculated on the basis of the volume of fuel consumption for diesel (PLTD) plants; and the equivalent of 2,292,375 tons CO2q per year using coal for Steam Power Plants. (PLTU). Integrated nickel mining and processing projects in Morowali district, Central Sulawesi: The investment includes support for environmentally friendly operations, including using Liquified Natural Gas (LNG) as a power source for power plants to supply power to factories. In addition, the use of energy with RKEF technology in the Morowali Project is also more efficient because the primary energy needs for drying the nickel ore are obtained from the heat reuse of the off reduction melting gas. The measures taken will support the realization of a 33% reduction in greenhouse gas emissions (GHG) by 2030, and net zero carbon by 2050.

At PT Timah (PT Timah Tbk, 2023), the energy sector was managed through the replacement of electricity sources from diesel engines to PLN supplies to reduce greenhouse gas (GHG) emissions directly, the use of B-30 biodiesel as fuel for its production vessels, to reduce direct GHG emissions, the application of EBT energy use, i.e. solar panels to support production processes and reduce GHG, and energy efficiency and optimization programmes on mining

equipment. In the environmental sector implementing programs of greening and restoration of flora and fauna, including urban forests in Muntok and Kundur. mangrove ecosystems Muntack and kundur, shell water reclamation camps such as land forests protection, animal wildlife protection in Kundur and Integrated Agriculture Education Area/Sellinsing reclamation camp, Belitung implementing 3R (Reuse, Reduce, Recycle) concepts to reduce waste, preparation of the Roadmap of the Corporate Decarbonization Program until 2060, and implementation of ISO 14001 on the Operations Unit.

In the Annual and Sustainability Report of Aneka Tambang (PT Aneka Tambang Tbk, 2023), it was stated that programs to reduce GHG emissions through the use of B30 fuel for mining operational vehicles, use of solar panels for mine road lighting in several business units, as well as attempts to replace fuel in the production of nickel beans from Marine Fuel to Dual Emissions Fuel will be able to reduce the production process of GHG Feron. In addition to the signing memorandum of understanding (MoU) with PT PLN (Persero) for the supply of electricity at the Feronikel Plant ANTAM in Pomalaa, Southeast Sulawesi that uses the plant.

At Barito Pacific (PT Barito Pacific Tbk, 2023), the program of decarbonization of emissions is one of them through efforts beyond compliance in the management of

environmental aspects with the aim of improving environmental performance, providing benefits of economic growth and providing positive benefits for the environment and surrounding communities. Furthermore, the MPP project of the unit 3 power plant was registered with the UNFCCC on 11 December 2006 with a reduction in emissions of 753,136 metric tons of CO2 eg per year.

Unlike the previous company, Indika Karya (Indika Energy, 2023) has in three sectors, namely energy resources (field exploration for coal resources, production, and trade), energy services (such as coal mining and engineering contract services, procurement, and construction in oil and gas), and energy infrastructure (coal power generation), now Indika Energy transforms their business portfolio by concentrating on sustainable and environmentally friendly energy. One of the steps Indika Energy has taken is the sale of shares as one of the company's steps to reduce exposure in the coal business. Indika Energy has sold its majority stake in PT.Mitra Bahtera Segara Sejati (MBSS) Tbk to PT. Galley Adhika Arnawama (GAA). In addition, Indika has changed from an operating holding to an investment holding. Within the investment holding framework, there are now five non-coal sectors covered by Indika Energy: nature-based solutions, logistic supply chain, mineral. renewable energy, electric vehicles, and digital technology.

Based on the annual report and scope, United Tractors (PT United

Tractors Tbk, 2023) has undertaken carbon sequestration or forestation of critical land. The initiative is designed to drive more carbon absorption. Carbon reduction activities are one of the things that Pertiwi Nusantara Raya does. (PNR). In addition, the United Tractors building itself has been certified green building. The building has just received the net zero healthy building certificate because United tractors adopted the latest technology approach to be more environmentally friendly. At the end of 2022, PT United Tractors Tbk (UT) signed a Memorandum of Understanding (MoU) with the Bogor Agricultural Institute (IPB) at IPB Campus Forest Park, Bogor District, in connection with the implementation of a biodiversity program to curb carbon emissions (carbon set-off). In addition, PT United Tractors Tbk (UNTR) presents the new 20 Ton Class Electric Excavator heavy equipment product at the Mining Indonesia 2023 exhibition at Jakarta International Expo

As a form of commitment to support these ideals, the coal mining industry has utilized carbon capture, utilization and storage technology to reduce carbon dioxide emissions. Mining industry companies can adopt a number of strategic plans to reduce carbon emissions and contribute to climate change mitigation efforts. The following are several strategies that can implemented, namely Use Renewable Energy, Energy Efficiency, Sustainable Transportation, Land Reclamation, Better Waste

Management, Negative Carbon Technology, Environmental Policies and **Partnerships** Standards. Collaboration. Measurement and Reporting. These strategic plans not only help mining industry companies fulfill their environmental responsibilities, but can also help them save operational costs in the long term and improve their reputation in terms of sustainability and corporate social responsibility.

(Scarpellini et al., 2020) conducted an analysis through the lens of dynamic capabilities theory and unearthed a compelling link between the corporate strategy (CS) of firms. environmental accounting practices, and their commitment to corporate social responsibility (CSR) and accountability. Importantly, the research went further to role of stakeholder examine the pressure, revealing its mediating influence on a firm's CS. The findings underscore the intricate interplay between strategic choices. environmental responsibility, and CSR, suggesting that businesses with a welldeveloped CS are better equipped to achieve superior environmental and financial outcomes.

The role of an accountant in the Net Zero Emission Indonesia 2030 programs is crucial in various key aspects especially in ensuring transparency, accuracy accountability in managing financial and reporting aspects related to climate change initiatives. As stated in (Liu & Wu, 2023) green financing is now being frequently fund used more to

ecologically friendly initiatives as a result growing public concern environmental issues. As a result, there is now an even greater need for effective environmental disclosure procedures. Even while there has been a notable increase in sustainability reporting globally over time, it has highlighted ongoing issues about the lack of uniformity, comparability, and certainty in such reporting.

Not with standing these challenges, a consensus emerges within the literature, there is a positive association between firm's commitment to green practices and its financial performance. Simultaneously, green practices appear to have a favorable impact on a firm's cost of capital. Moreover, the adoption of green finance is shown to bolster risk management and stimulate economic development. This body of research collectively underscores multifaceted benefits of integrating environmental sustainability practices, reaffirming financial growing importance of green finance in the broader landscape of finance and sustainability.

However accounting can't go alone to face those challanges. (Di Giacomo et al., 2017) found that management practices can effectively mitigate the adverse sustainability impacts, particularly with regard to carbon emissions. Given the limited evidence available on the adoption of specific management practices and accounting tools in this context, the

research highlight the management practices and employee determination takes a significant step to reduce carbon emission.

Accountants can help organizations and companies measure and report their GHG emissions. They appropriate accounting can principles to identify, measure, and report emissions from various sources, such as production, transportation, and energy consumption. This will help companies to measure their progress towards Net Zero Emission targets. (Liu & Wu, 2023) explained that as a result of the growing public concern about environmental issues, there has been an increase in the use of green money to fund environmentally friendly projects. As a result, there is now an even greater for effective environmental disclosure procedures. Even while there has been a notable increase in sustainability reporting globally over time, the literature has also highlighted ongoing issues about the lack of uniformity, comparability, and certainty in such reporting. Despite these obstacles, a common theme in the literature is that a company's dedication to green practices and its financial performance are positively correlated. Green practices also seem to have a positive effect on a company's cost of capital. Additionally, it has been demonstrated that using green finance will improve risk management and boost the economy.

(Golubeva, 2022) has presented that a comprehensive data analysis

process can serve as a powerful enabler, facilitating sustainable practices, highlighted in this study, has the potential to significantly contribute to successful implementation sustainability initiatives. Moreover, it can foster alignment between the three essential pillars of sustainability economic, environmental, and social. By understanding the intricate relationship between data analysis and sustainability and implementing effective steering mechanisms, organizations policymakers can better navigate the landscape of sustainable evolving development, ultimately working towards a harmonious balance among these critical pillars. Accountants can organizations manage sustainability data related to GHG emissions. This includes collecting, storing and analyzing data to understand the impact of **GHG** emissions from various business activities. Accurate data will be the basis developing effective emission reduction strategies.

Accountants can also carry out independent audits and verification of company sustainability and GHG emissions reports. This is important to ensure that the report is accurate and can be trusted by external stakeholders, such as investors, regulators and the general public. ESG reporting that is accurate and can be trusted by various stakeholders is the strength of ESG which ultimately determines company value. In (Chouaibi et al., 2022) findings indicate that the business value is

increased by ESG strengths and decreased by ESG deficiencies. The discover authors also that association between ESG practices and financial performance in the UK and Germany is totally mediated by green innovation. The findings also give authorities and the board of director information on potential future chances for the company and the nation to thrive.

The study by (Jirakraisiri et al., 2021) conclude discusses the widespread issue that many businesses encounter when trying to successfully apply ways to improve environmental sustainability in their operations. The paper provides a thorough model explaining the complex process via which organizations can translate a green strategy into excellent green process innovation performance (GPIP), drawing on ideas of green intellectual capital and complementary assets. Accountants can serve as sustainability advisors to companies, helping them design effective emissions reduction strategies and policies. They can also provide advice on how to optimize operations to achieve Net Zero Emission targets.

According to the study, a company's green strategic intent has a beneficial impact on all three parts of green intellectual capital, including the relational, organizational, and human aspects. These factors consequently have a beneficial impact on GPIP. It is noteworthy that green organizational capital plays a moderating function,

strengthening the favorable effects of green relational capital on GPIP while having a negative influence on the association between green human capital and GPIP.

The results emphasize how critical it is to provide both tangible and intangible resources when attempting to successfully execute a green strategy, particularly in very contaminated industries like the chemical industry. A critical element in obtaining higher levels of GPIP emerges as investing in green organizational capital. The study also shows that, on average, green human capital is more important than organizational and relational capital, even though organizational capital helps to maximize the advantages of relational capital while potentially limiting the creative potential of human capital. Managers looking to tackle difficulties of implementing a green strategy in ecologically difficult businesses might benefit greatly from these ideas.

(Ogbonna & Olubusoye, 2022) concludes by showing that green investments demonstrate an impressive reactivity to diverse sources uncertainty. In particular, investments have a tendency to react favorably to own-market and oil-market uncertainty, suggesting a possible benefit from hedging in the setting of external market volatility. Additionally, including external uncertainties in the research helps to produce more precise out-of-sample forecasts and improves the predictability of green investments

in-sample. This shows that managing and understanding green investment portfolios is considerably improved by a thorough study of both internal and external elements, ultimately leading to favorable economic outcomes. This emphasizes the significance of a diverse strategy for green investment, taking into consideration a variety of risks for better performance and more informed decision-making.

Accountants can also help companies understand the impact of taxes and incentives associated with Net Zero Emission programs. They can help companies take advantage of available incentives for investment in green technologies and emissions reductions. (Lin et al., 2023) key finding is that green finance has a considerable potential to significantly lower the share of thermal power generation in China's overall electricity production. This, in turn, signals a definite tilt towards a lowcarbon transition within the nation's power generation sector. Urbanization and increased R&D spending have been recognized as the main drivers behind this transformation since they serve as catalysts for the promotion of lowcarbon practices. It is important to note that this shift may face some challenges due to the speed of economic expansion.

The report makes insightful recommendations to further advance the growth of green finance in light of these findings. These recommendations include measures that support lower interest rates for renewable energy

investments, which can not only support the country's green finance initiatives but also quicken the necessary transition to a more environmentally friendly and sustainable power generation sector in China. In the context of the Net Zero Emission Indonesia 2030 program, accountants have a key role in helping companies and organizations achieve zero emissions targets while ensuring compliance with relevant regulations. They can also assist in measuring the financial impact of sustainability initiatives and create transparent reports to stakeholders.

## **CONCLUSION**

In the context of the Net Zero Emission Indonesia 2030 program, accountants play a crucial role in helping companies and organizations navigate the complex landscape of sustainability emissions reduction. involvement is multifaceted and can make a significant impact in several key areas such as Emissions Measurement Reporting, Sustainability Data Management, Audit and Verification, Sustainability Consulting and Advisory, Understanding Taxes and Sustainability Incentives.

By applying appropriate accounting principles, they can identify, measure, and report emissions from various sources. This is essential for tracking progress toward Net Zero Emission targets, ensuring transparency, and meeting regulatory requirements. Accountants can help organizations accurately measure and report their

greenhouse gas (GHG) emissions. They can assist in collecting, storing, and analyzing sustainability data related to GHG emissions. Accurate data forms the foundation for developing effective emission reduction strategies, and it allows organizations to make informed decisions about their sustainability efforts.

Accountants can independently audit and verify company sustainability and GHG emissions reports. This verification process is vital to establish trust among external stakeholders, including investors, regulators, and the general public. Reliable ESG reporting enhances a company's reputation and ultimately its value. They can help design emissions reduction strategies, policies, and optimization plans to achieve Net Zero Emission targets. Their financial expertise can guide organizations in making sustainable investments and cost-effective decisions.

Accountants are well-positioned to help companies understand the financial implications of taxes and incentives related to sustainability initiatives. They can identify opportunities for tax benefits and incentives associated with investments in green technologies and emissions reductions, ultimately supporting costeffective sustainability efforts. They also play a vital role in ensuring the accuracy and transparency of environmental reporting, which is fundamental to building trust with stakeholders and demonstrating commitment а sustainable practices.

Additionally, research findings, such as those mentioned in the provided references. highlight the positive correlation between environmental responsibility, financial performance, and access to green finance. These insights emphasize the importance of integrating sustainability into financial practices and leveraging green finance to drive economic development while reducing environmental impacts. In summary, accountants are key partners in the journey towards achieving the Net Zero Emission Indonesia 2030 program's goals. Their expertise in financial management, data analysis. compliance ensures that organizations can effectively manage and report their sustainability efforts while contributing to climate change mitigation and environmental responsibility.

# **REFERENCE**

Brunelli, S., Falivena, C., Carlino, C., & Venuti, F. (2020). Accountability for climate change: a research synthesis through the lenses of the integrated thinking approach. *Meditari Accountancy Research*, 29(4), 1005–1038. <a href="https://doi.org/10.1108/MEDAR-01-2020-0682">https://doi.org/10.1108/MEDAR-01-2020-0682</a>

Chouaibi, S., Chouaibi, J., & Rossi, M. (2022). ESG and corporate financial performance: the mediating role of green innovation: UK common law versus Germany civil law. *EuroMed Journal of Business*, *17*(1), 46–71. <a href="https://doi.org/10.1108/EMJB-09-2020-0101">https://doi.org/10.1108/EMJB-09-2020-0101</a>

- Di Giacomo, N., Guthrie, J., & Farneti, F. (2017). Environmental management control systems for carbon emissions. *PSU Research Review*, 1(1), 39–50. <a href="https://doi.org/10.1108/PRR-10-2016-0004">https://doi.org/10.1108/PRR-10-2016-0004</a>
- Golubeva, O. (2022). Sustainability and technology: the contribution of "managerial talk" to the three pillars framework. *Accounting, Auditing and Accountability Journal, 35*(9), 412–441. https://doi.org/10.1108/AAAJ-09-2021-5462
- Indika Energy. (2023). *Annual Report* 2022 Accelerating Sustainability.
- Jirakraisiri, J., Badir, Y. F., & Frank, B. (2021). Translating green strategic intent into green process innovation performance: the role of green intellectual capital. *Journal of Intellectual Capital*, 22(7), 43–67. <a href="https://doi.org/10.1108/JIC-08-2020-0277">https://doi.org/10.1108/JIC-08-2020-0277</a>
- Lin, Z., Liao, X., & Jia, H. (2023). Could green finance facilitate low-carbon transformation of power generation? Some evidence from China. International Journal of Climate Change Strategies and Management, 15(2), 141–158. https://doi.org/10.1108/IJCCSM-03-2022-0039
- Liu, C., & Wu, S. S. (2023). Green finance, sustainability disclosure and economic implications. Fulbright Review of Economics and Policy, 3(1), 1–24.

- https://doi.org/10.1108/frep-03-2022-0021
- Mahardika, D. P. K. (2020). Meninjau Peran Akuntan Dalam Menanggulangi Isu Perubahan Iklim. *Jurnal Akuntansi Multiparadigma*, *III*, 581–599. <a href="https://doi.org/https://doi.org/10.2">https://doi.org/https://doi.org/10.2</a> 1776/ub.jamal.2020.11.3.33
- Ogbonna, A. E., & Olubusoye, O. E. (2022). Connectedness of green investments and uncertainties: new evidence from emerging markets. Fulbright Review of Economics and Policy, 2(2), 136–160. https://doi.org/10.1108/frep-04-2022-0028
- PT Adaro Energy Indonesia Tbk. (2023).

  AR BOOK ADARO ENERGY 2022

  Transforming Into A Bigger And

  Greener Adaro: Energy, Minerals,

  Green.
- PT Aneka Tambang Tbk. (2023). 2022

  Mencapai Hasil Terbaik dan

  Melampaui Ekspektasi Striving for

  Excellence and Go Beyond.

  www.antam.com
- PT Barito Pacific Tbk. (2023). Laporan Tahunan 2022 Green Consolidation for Stronger Stability.
- PT Bukit Asam Tbk. (2023). Maximizing
  Innovation for National Energy
  Security PT Bukit Asam Tbk.
  https://www.ptba.co.id/
- PT Harum Energy Tbk. (2023a). *Laporan Tahunan Annual Report 2022 Powering The Future Of Energy.*

- PT Harum Energy Tbk. (2023b).

  Sustainability Report 2022

  Empowering Communities And

  Environment.

  www.harumenergy.com
- PT Indo Tambangraya Megah Tbk. (2023). *Laporan Tahunan 2022* Seizing Supercycle, Reinforcing Transformation.
- PT Timah Tbk. (2023). AR 2022 Navigating Challenges Delivering Higher Values Pt Timah Tbk.
- PT United Tractors Tbk. (2023). AR

  United Tractors 2022 Striving

  Toward Sustainability.

  www.unitedtractors.com

- PT Vale Indonesia Tbk. (2023). *Laporan Tahunan 2022 Investasi Lebih Ramah Lingkungan untuk Masa Depan Lebih Cerah*.
- Scarpellini, S., Marín-Vinuesa, L. M., Aranda-Usón, A., & Portillo-Tarragona, P. (2020). Dynamic capabilities and environmental accounting for the circular economy in businesses. Sustainability Accounting, Management and Policy Journal, 1129-1158. 11(7), https://doi.org/10.1108/SAMPJ-04-2019-0150



© 2023 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) license (https://creativecommons.org/licenses/by-sa/4.0/)