

## The Role of Accountants in Climate Change in the Cement Industry in Indonesia: Net Zero Emissions Movement 2060

**Yanuar Ramadhan, Cita Restuningsih, Alifia Nur Haristi, Muh Gaus, Sandy, Dewi Siswanti Sulim**

Universitas Esa Unggul, Indonesia

E-mail: [yanuar.ramadhan@esaunggul.ac.id](mailto:yanuar.ramadhan@esaunggul.ac.id), [citarestuningsih@student.esaunggul.ac.id](mailto:citarestuningsih@student.esaunggul.ac.id), [alifianh01@student.esaunggul.ac.id](mailto:alifianh01@student.esaunggul.ac.id), [ulan.zacky@student.esaunggul.ac.id](mailto:ulan.zacky@student.esaunggul.ac.id), [stevanus221@student.esaunggul.ac.id](mailto:stevanus221@student.esaunggul.ac.id), [dewi279@student.esaunggul.ac.id](mailto:dewi279@student.esaunggul.ac.id)

\*Correspondence: [yanuar.ramadhan@esaunggul.ac.id](mailto:yanuar.ramadhan@esaunggul.ac.id)

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### KEYWORDS

industry; accountants;  
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### ABSTRACT

The target of this study discusses the Role of Accountants on Climate Change related to Net Zero Emissions 2060 in the Cement Sub-Sector Industry in Indonesia. This study uses narrative analysis that describes the causes of climate change, the impact on company finances and accountants' efforts in dealing with field conditions. This study found that if the accounting profession can function dominantly covering various climate change issues, its function is to force all accountants to contribute to helping the government meet the target of the Net Zero Emissions 2060 movement by internalizing climate change issues in financial statements, assisting company management in making sustainable strategy planning, measuring environmental impacts and developing carbon emission reduction strategies. The conclusion of this study is companies registered in the cement sector industry in general have supported the Indonesian government's program in the Net Zero Emission 2060 movement. This is evidenced by the activities and activities they carry out in sustainability reports and corporate social responsibility activity reports

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### Introduction

Most countries are concerned about global warming and are trying to find methods to minimize greenhouse gases to cope with environmental change. The Paris climate agreement, agreed in 2016, reflects these concerns. According to (Mahardika, 2022) carbon emission disclosure is part of an entity's contribution to environmental and climate change, exclusively to global warming. The Paris Agreement was implemented on December 12, 2015, where more than 160 participants (including developing and developed countries) settled in an international agreement to overcome the problem of global warming which is an important issue in stimulating the formation of climate transformation. In the agreement, each member nation has a commitment to limit global temperature increase by 2° Celsius at the beginning of the industrial revolution era

(Panglewai, 2023). Although the temperature increase limit set in the Paris agreement is 2° Celsius, each country needs to work to limit the temperature increase by 1.5° Celsius (Sari et al., 2021). The difference between 2 ° and 1.5 ° Celsius seems minimal, but the comparison can produce an increase in energy (Mahardika, 2020). Companies should disclose climate change issues in the creation of annual financial information to quantify the assessment of the company's financial condition as a result of climate change in the future. Indonesia was the first nation to ratify the Paris Agreement. The country is also strongly committed to fulfilling its Net Zero Emissions (NZE) commitment since 2060, which is reinforced by Law No. 16 of 2016 regarding the formalization of the Paris agreement into the United Nations Framework Agreement on Climate Change. The effort to disclose the impact of climate change on financial statements so that they can be considered when making economic decisions is known as internalizing climate change issues (Erwinsyah, 2021).

Climate change and the effects of greenhouse gases are common global challenges in many countries' regimes. Therefore, there is a tendency that international efforts to address it are researched continuously as a way to address the problem through joint action (Lisaria Putri et al., 2023). Thus, the global temperature of the range rose by 0.60 Celsius. On the other hand, carbon dioxide concentrations can increase by 75% to 350 percent beyond preindustrial levels since the 21st century (Dilasari et al., 2023).

One of the important conclusions of the world's high-level meeting on climate change (United Nations Framework Convention on Climate Change / UNFCCC and COP-26) held in Glasgow, United Kingdom, from October to November 2021, is to stop global warming. To implement the findings of this meeting, Indonesia must guarantee that its development will obtain optimal products (Kolopaking et al., 2022). The cement industry is one of the supporters of materials that are the main component in the framework of construction and construction, so there must be special monitoring in the cement industries to support the Indonesia 2060 program, namely the Net Zero Emissions movement or zero carbon emissions (Putri et al., 2023).

Carbon emissions are an element that participates in global warming and climate change. Carbon emissions in the form of gas obtained through the combustion of various carbon-containing compounds in the form of gasoline, diesel, CO<sub>2</sub>, LPG and others (Dilasari et al., 2023).

To reduce the impact of burning fossil fuels on the climate, energy management identifies and finds ways to save energy by controlling and monitoring energy use, especially in the cement sector industry (Dasril & Lukman, 2020). The energy management system aims to improve business in a sustainable manner. Energy consumption, utilization, and efficiency are involved in measuring energy performance.

An accountant must have the ability to tackle climate change because they must understand and care about the environment. Accountants also play an important role in the process of making financial statements (Sarvasti & Yuliati, 2023). Annual financial statements include presenting sustainability report information as a form of corporate social responsibility. The sustainability report reveals how the economic, social and environmental conditions of the company. So the role of accountants in the 2060 Net Zero Emission commitment due to climate change is very important. Accounting requires more roles and responsibilities than just recording transactions and publishing financial statements. They must also be able to estimate the impact of business activities on climate change and convey these impacts in financial statements (Mahardika, 2020).

Referring to the previous research (Mahardika, 2020), the purpose of this study will discuss the Role of Accountants on Climate Change related to Net Zero Emissions 2060 in the Cement Sub-Sector Industry in Indonesia. The novelty of this study is the discussion of internalizing issues in climate change as a form of the role of accountants in climate change which was a limitation in previous research and linking it to the Indonesian government program, namely the Net Zero Emissions 2060 movement in companies incorporated in the Cement Sub-Sector Industry in Indonesia (Ameli, 2022).

## **Research Methods**

This study uses a narrative analysis method, which is to provide an overview of the causes of climate change by relating the role of accountants in it and knowing the current conditions of the Net Zero Emissions 2060 program. To find out the conditions of the impact of climate change and examine the situation in the field, so that the company to be analyzed in this study is in the form of the cement industry. To determine the contribution of accountants' role in tackling climate change problems, research on economic activities and the Net Zero Emissions 2060 movement as well as environmental responsibility reports of cement industry companies will also be included as analysis material.

The manufacturing company is a leading carbon emitter in Indonesia (Sari et al., 2021). One part of the verified manufacturing sector on the IDX that produces emissions in its production is the cement industry sub-sector. The cement industry has as many as 6 companies registered, namely Semen Baturaja, Indocement Tunggal Prakarsa, Semen Indonesia, Solusi bangun Indonesia, Wijaya Karya Beton and Waskita Beton Precast. By understanding the factors that cause climate change and how it impacts economic activity, the Net Zero Emissions 2060 movement and the environmental responsibility of cement industry companies, accountants can identify their roles and responsibilities in company management and help governments meet the targets of the Net Zero Emissions 2060 movement.

## **Results and Discussions**

### **Internalization of Climate Change Issues in Cement Sector Companies**

Climate change is a problem that is different from other problems because it occurs over a long period and is affected by dominant variables. Climate change will bring new risks that corporate management may not have considered before. For example, it is possible that companies will be required to change the way they deal with climate change issues. The assumption of business continuity will be influenced by these various demands, which may be very important for the preparation of financial statements. Thus, handling climate change risks requires the same governance as handling other issues such as geopolitical risks, commodity prices, and currency exchange rate movements. After the existence of strategies to deal with climate change problems, the relevant thing for accountants is how to internalize climate change problems in financial statements. It is imperative for management to incorporate climate change issues into their strategies. This is because there is a relationship between the way companies disclose climate change issues, which is one of sustainability issues, and the way external parties understand the purpose of the disclosure. In other words, such disclosures are not just declarations, they can be included in decision-making processes and management operations (Suratman & AK, 2021).

The following is a summary of environmental responsibility activities in cement sector companies in 2022.

No	Company Name	Environmental Responsibility Activities
1	PT Indocement Tunggal Prakarsa Tbk (PT Indocement Tunggal Prakarsa Tbk, 2023)	Creating more "green" operations and encouraging the marketing of environmentally friendly products, conducting #Trashback campaigns on cement bag waste, utilizing urban waste from the Bantargebang TPST as a fuel solution in the form of refuse derived fuel (RDF).
2	PT Semen Baturaja Tbk (PT Semen Baturaja Tbk, 2023)	Utilizing waste as a fuel solution, shrinking the use of carbon energy and biodiverse conservation plans in the realm of production
3	PT Semen Indonesia Persero Tbk (PT Semen Indonesia (Persero) Tbk, 2023)	Material Utilization to support the Circular Economy, GHG Emission Shrinkage, Water Management, Biodiverse Protection
4	PT Solusi Bangun Indonesia Tbk (PT Solusi Bangun Indonesia Tbk, 2023)	CO2 emission reduction, biodiversity initiatives, water management and renewable resource utilization
5	PT Waskita Beton Precast Tbk (PT Waskita Beton Precast Tbk, 2023)	Product development innovation Lining using Fly Ash
6	PT Wijaya Karya Beton Tbk (PT Wijaya Karya Beton Tbk, 2023)	Recycling the use of fly ash waste as supporting material, Solid waste management, committed to preserving the environment (waste and effluent management, energy efficiency, emission control), Water use and effluent management, Emission control

**Source: Cement Company Annual Financial Report 2022**

Companies with high carbon performance are considered to be able to carry out optimal carbon emissions because they are more to describe all the efforts that have been carried out to reduce carbon emissions (Amir, 2019). To show that the company is environmentally responsible, the company seeks to disseminate its scope report. Furthermore, environmental responsibility consists of a budget in the form of economic sacrifices carried out by the company to avoid damage or negative quality of the surrounding environment. Environmental costs incurred by the company are considered capable of reducing carbon emissions produced by the company. In addition, companies tend to disclose carbon emissions generated by their operations (Ladista et al., 2023). In addition, cement sector companies should include climate change issues in their financial statements and revise their sustainability strategies taking these issues into account. In general, all cement sector companies have provided support in the Indonesian government's commitment to *Net Zero Emission 2060*. The data is summarized from corporate social responsibility reports and corporate sustainability reports.

There are no specific standards governing how financial statements should disclose climate change issues. This means that accounting rules at both the local and international

levels do not accommodate this issue. Companies usually provide financial statements to interested parties as accountability reports for resource management with the aim of conveying all financial information to each stakeholder. Accounting uses materiality criteria, which means determining whether certain reports need to be disclosed in financial information. If the report indicates that the business will survive, the information is considered material and must be disclosed in the financial statements (Utami, 2015).

Financial statements can reveal important future events that occur in more than twelve months, in accordance with the provisions contained in PSAK 1. Climate change cannot be underestimated by accountants when they compile financial information because this report is material information. In addition, the material condition of climate change indicates the possibility of stranded assets against the dominant sectors related to fossil fuels. A decrease in the value of asset reserves in the bowels of the earth will cause many companies that produce fossil fuels to lose value. As shown in Table 2, PSAK 16, 48, 55, 68, and 57 are some of the PSAKs that can be affected by climate change.

**Table 2 Climate Change Impacts on Some PSAK**

<b>PSAK</b>	<b>Climate Change Impacts</b>
16	Paragraph 31: "once recognized as an asset, a valued fixed asset can be reliably measured in writing in the total revaluation..." (Indonesian Institute of Accountants, 2017b).
	Paragraph 34: "... Fixed assets change in value with fluctuations and significantly, so they must be reviewed annually..." (Indonesian Institute of Accountants, 2017b).
48	Paragraph 9: "each suffix reported, the entity assesses whether there are characteristics of the asset depreciating in value..." (Indonesian Institute of Accountants, 2017c).
	Paragraph 12 b: "... To assess the characteristics if assets have the potential for depreciation is to compare significant changes including markets, technology, legal and economic spheres ... which has the effect of giving losses to the entity... in the fast period" (Indonesian Institute of Accountants, 2017c).
55	Paragraph 43: "when the initial acquisition of assets... the entity measures against the reasonable total" (Indonesian Institute of Accountants, 2017d).
	Paragraph 46: "Upon initial recognition, the entity measures its finances as reasonably valued..." (Indonesian Institute of Accountants, 2017d).
57	Paragraph 10: "Provision is a liability whose period and total are not settled" (Indonesian Institute of Accountants, 2017e).
	Paragraph 19: "Provision is referred to as responsibility arising through past events ... For example, in the form of costs recovered and fines for pollution of the scope that causes access to outgoing resources compare the attitude of the entity in the future" (Indonesian Institute of Accountants, 2017e).
68	Paragraph 62: "... 3 ways of assessing that are widely used in the form of revenue, cost and market approaches" (Indonesian Institute of Accountants, 2017f).
	Explanatory Paragraph 9 approaches cost: "... The value to be obtained by the asset is based on the budget of market participants... to

PSAK	Climate Change Impacts
	impact asset replacements aligned on Obsolescence including technological and physical damage, as well as economic" (Indonesian Institute of Accountants, 2017f).

In the process of internalizing climate change issues in financial statements, the provisions of PSAK listed in the table above are very important. The value of fixed assets can shrink if revaluated in total reasonably. Other assets, such as assets that do not look good, can also lose value as a result of climate change problems. The company's financial statements are also affected by provision recognition provisions relating to possible future environmental costs. In other words, accountants can use these three PSAKs to include climate change issues in their financial statements.

After making a plan to deal with climate change issues, the most important thing for accountants is how to internalize climate change issues into financial statements. By considering how companies will be affected by climate change, this internalization process will use applicable SAK provisions (Mahardika, 2022).

### **Contribution and Role of Accountants to Company Management**

Profresi accountants play a very important role in mitigating the impact of climate change. As a webinar in the framework of the Anniversary of the Master of FEB UGM in 2022 with the theme "The Role of Accountants and Auditors to Combat *Climate Change*" produced several conclusions that can be drawn regarding the role of accountants in company management related to climate change that occurs. According to Prabandari, we must redefine sustainability strategies, where companies must revise their strategies for sustainability and incorporate ESG (*Environmental, Social, and Governance*) into their operations. By influencing corporate governance over the long term and incorporating sustainable growth goals into accounting standards, auditors and accountants can play a significant role. Then according to Singgih, understand how accounting relates to climate change and how accountants can actively participate in combating climate change. Accounting has a greater role to play in helping the economy and society by focusing on strategic levels in combating climate change. Ultimately, he argues that viable and sustainable businesses can only maintain trust by doing strategic CSR, especially in the fight against climate change.

On another occasion in December 2022, Hendang Tanusdjaja as chairman of IAPI in a conference themed "Transforming the Public Accountant Profession through the Indonesian Audit Organization (OAI) and Responding to Climate Change / Sustainability to Increase Public Trust" said that not only from a business and economic point of view, public accountants are now required to have a strong understanding of climate change as an unavoidable global event. Thus, they are expected to effectively deal with the impacts of climate change when conducting financial statement audits. Hendang emphasized that public accountants cannot do it alone, so all parties must work together to reduce the impact of climate change. According to Hendang, the company's management is also expected to start considering the impact of climate change risks on the assessment and disclosure in its financial statements, and auditors are also expected to consider climate risks when auditing its financial statements.

These things are some of the contributions made by accountants to company management in the context of climate change issues. By focusing on the strategic level of combating climate change, accountants can play an active role in combating climate change and make a greater contribution to the economy and society.

### **The Contribution and Role of Accountants to the Net Zero Emissions Movement 2060**

Accountants must be able to assist businesses in addressing their growing energy needs through business advice and a risk perspective. In addition, accountants must be able to demonstrate their strategic role and contribute to achieving the 2060 net zero emissions target, not just making a profit. This was stated in a national seminar held by IAI in May 2023 with the theme "The Sustainable Role of An Accountant in Achieving 2060 Zero Emission". Accountants are also expected to measure environmental impacts using environmental accounting systems. Another thing accountants can contribute is in developing their emission reduction strategies. They can do this by creating a carbon accounting system, which can measure carbon emissions generated by business activities, and then create emission reduction strategies.

### **Conclusion**

Climate change that occurs today is a global challenge for countries in the world. Thus, many world countries are competing to find solutions so that the effects or impacts of climate change can be overcome appropriately in order to preserve the earth. Indonesia is one of the countries that participated in finding solutions to the impacts of climate change that occurred. The search for this solution resulted in a commitment to the preservation of the earth, namely Net Zero Emissions by 2060.

The role of accountants in this Net Zero Emission commitment is needed. Some of them that can be done by the accounting profession is by internalizing the issue of climate change in financial statements, because if climate change continues and its impact is very large, it will affect the accounting standards used in Indonesia, namely PSAK 16, 48, 55, 57 and 68, so that changes in standards are inevitable.

The next role of accountants is to apply strategic social responsibility to maintain business sustainability. In addition to social responsibility strategies, accountants must effectively be able to deal with the impacts of climate change when auditing financial statements, ultimately company management is also expected to start considering the impact of climate change risks on the assessment and disclosure in its financial statements.

The last role, accountants are expected to be able to measure environmental impacts using environmental accounting systems and develop carbon emission reduction strategies.

Companies registered in the cement sector industry in general have supported the Indonesian government's program in the Net Zero Emission 2060 movement. This is evidenced by the activities and activities they carry out in sustainability reports and corporate social responsibility activity reports.

Because there are still not many references for research with the same theme, this research still has many limitations. Thus, it is hoped that in the next study will be able to better analyze how the company's efforts contained in the financial statements in supporting the Net Zero Emission 2060 movement program and strategies carried out to deal with climate change issues in a wider variety of industrial sectors

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