

REFORMING INDONESIA'S CARBON TRADING FRAMEWORK TO ACHIEVE ECONOMIC AND ENVIRONMENTAL SUSTAINABILITY

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Abstract

This study investigates establishing a carbon trading mechanism in Indonesia through a carbon exchange, driven by global climate change commitments. It underscores the need to update carbon trading regulations to support green economy initiatives, with a focus on Indonesia's international agreements such as the Kyoto Protocol and the Paris Agreement. Utilizing normative and conceptual research methods, the study highlights the benefits of a regulated carbon market, including price transparency and efficient carbon credit transactions, compared to voluntary markets. It discusses the roles of the Indonesian government and the Financial Services Authority (OJK) in managing the exchange. The paper proposes an ideal regulatory framework to align with sustainable development and human rights goals and recommends establishing an operational carbon exchange under the Indonesian Stock Exchange, contributing valuable insights into integrating carbon trading with Indonesia's financial and environmental strategies.

Keywords: Carbon Trading Mechanism; Carbon Exchange; Green Economy Initiatives; Regulatory Framework; Indonesia.

1. INTRODUCTION

The carbon trade originated from international efforts to address global warming caused by climate change. In 1972, the United Nations (UN) held the United Nations Conference on the Human Environment in Stockholm, marking the first global discussion on environmental issues(1). Later, in 1992, the UN convened the Earth Summit in Rio de Janeiro, where the United Nations Framework Convention on Climate Change (UNFCCC) was established with the primary goal of stabilizing greenhouse gas (GHG) concentrations in the atmosphere at a safe level. The Kyoto Protocol was adopted in 1997 as a follow-up to the UNFCCC, aimed at regulating GHG concentration stability (2). Continuing from the Kyoto Protocol, 195 countries agreed to a global climate accord in 2015, known as the Paris Agreement.

Consistent increases in greenhouse gas (GHG) emissions have led to a rise in the global average temperature. GHGs are gases present in the atmosphere, originating from both natural sources and human activities that absorb and re-emit infrared radiation (3). GHG emissions from human activities such as the burning of fossil fuels and coal create a greenhouse effect in the atmosphere, causing the global average temperature to rise.

This rise in global average temperature has occurred over several time periods and continues to increase annually(4).The annual global temperature has increased at an average rate of 0.08°C (0.14°F) per decade since 1880, with the rate of increase more than doubling (0.18°C or 0.32°F) from 1981 until now(5). Given the numerous negative impacts of global warming, the World Economic Forum 2023 released a survey ranking the failure to mitigate climate

change as the fourth highest global risk in the short term (within the next two years) out of ten global risks(6). Furthermore, this issue is identified as the number one risk in the long term (over the next ten years).

Climate change control through preventing global average temperature rise is a constitutional mandate in Indonesia. The Indonesian Constitution ensures the right to a good and healthy environment. The government must act to mitigate climate change and global temperature increases, which threaten human rights and future generations (7).

Efforts include regulating carbon emissions, which are crucial for climate control and have economic implications. Carbon pricing, based on the Polluter Pays Principle, incentivizes companies to reduce emissions (8). Indonesia's commitment to climate change mitigation is evident through its ratification of international agreements like the Kyoto Protocol and the Paris Agreement (9). The country aims for a 26% emission reduction by 2020 and has established domestic legal frameworks for carbon trading as part of these commitments.

Before the establishment of carbon trading through a carbon exchange, Indonesia engaged in voluntary carbon markets (VCM) (10). In these markets, carbon emitters compensated for their CO₂ emissions by purchasing carbon credits from projects aimed at reducing or eliminating CO₂ emissions (11). The recently enacted Financial Sector Development and Strengthening Law (UU P2SK) formalized carbon trading through a regulated carbon exchange, overseen by the Financial Services Authority (OJK) (13). This exchange offers benefits like price transparency, lower transaction costs, and improved liquidity. Carbon units, now recognized as securities, can be traded and potentially generate derivatives in the future.

Carbon units, unlike stocks, are backed by permits issued by government agencies, giving them a different nature (14). While carbon trading on a carbon exchange is part of capital market activities, carbon units are tied to legal permits, contrasting with stocks that represent ownership in a company and shareholder rights.

Carbon trading regulations are set by the Financial Sector Development and Strengthening Law (UU P2SK) and overseen by the Financial Services Authority (OJK) for the secondary market, with primary market regulation involving the Ministry of Environment and Forestry. The carbon trading framework in Indonesia, distinct from stock trading laws, aims to support Indonesia's commitment to a green economy by enhancing greenhouse gas emission reduction efforts.

2. METHOD

This study uses a normative approach with three methods: statutory, conceptual, and comparative approach. The statutory approach evaluates legislation on carbon trading through a carbon exchange. The conceptual approach develops an ideal concept for this trading, while the comparative approach contrasts the regulatory frameworks between Indonesia and the EU. The research utilizes secondary data, including primary legal sources, secondary materials like journals and literature, and tertiary resources like legal dictionaries. The analysis is legalistic, presented descriptively and evaluatively.

3. FINDINGS AND DISCUSSION

Regulation of carbon trading in Indonesia, which began with the UU P2SK on January 12, 2023, has several shortcomings. Before UU P2SK, carbon trading regulations were limited to UU P2SK and related regulations such as UU No. 7 of 2021 and Government Regulation No. 46 of 2017. Presidential Regulation No. 98 of 2021 addresses carbon trading as part of carbon economic value, but its formulation has not fully complied with UU No. 21 of 2011 on the Formation of Legislation, indicating a need for reconstruction of carbon trading regulations.

Green economy is an economic paradigm focused on social justice while considering environmental sustainability rather than just efficiency. The United Nations Environment Program (UNEP) “A green economy is defined as low carbon, resource efficient and socially inclusive. In a green economy, growth in employment and income are driven by public and private investment into such economic activities, infrastructure and assets that allow reduced carbon emissions and pollution, enhanced energy and resource efficiency, and prevention of the loss of biodiversity and ecosystem services.” defines a green economy as low-carbon, resource-efficient, and socially inclusive. It aims to reduce carbon emissions, enhance resource efficiency, and prevent biodiversity loss (15). As carbon emissions are a major cause of global climate change, reducing them is crucial. Indonesia, under the Paris Agreement, has pledged to cut greenhouse gas emissions by 29% by 2030, with potential for a 41% reduction with international support (18). This includes using renewable energy sources, despite challenges in industries heavily reliant on fossil fuels. Carbon emission control policies must balance environmental goals with economic impacts. Carbon trading, as part of the green economy, seeks to achieve social justice by balancing ecological, social, and economic aspects. This justice must consider both current and future generations. The EU Emissions Trading System (EU ETS) aligns with these goals, aiming to stabilize the atmosphere while protecting businesses that emit significant carbon levels (19).

According to an interview with the former Vice President of Business Development at Telkommetra, to achieve a green economy, the regulation of carbon trading through carbon exchanges must be designed with an ideal concept (21). This regulation should include clarity in the carbon exchange domain, which is crucial for reducing GHG emissions and climate control. The carbon exchange must ensure price transparency, ease of trading, liquidity, efficiency, and affordable financing. Indonesia has significant potential in carbon trading, especially through nature-based solutions. The potential carbon credits in Indonesia are estimated at 1 gigaton CO₂, equivalent to Rp3,000 trillion. However, current regulations lack clarity regarding the financial sector's role in carbon exchange activities. There needs to be clear guidance on whether carbon trading should adhere to the Capital Market Law or have its own specific regulations. Given the differences between carbon units and other securities, carbon trading should be regulated separately from the capital market. The four articles in the UU P2SK law are considered insufficient to provide adequate legal protection for carbon trading. Beside that, carbon trading and carbon exchange regulations in Indonesia are currently scattered across various legislative instruments. An integrated regulatory framework is needed to provide clarity and support market development (17). The EU's ETS Directive serves as a

model, encompassing multiple sectors and recently updated in May 2023. The government should mandate certain sectors and subsectors to participate in carbon trading through carbon exchanges. The European Union Emission Trading Scheme (ETS) is a successful model, requiring participants to reduce emissions. EU energy companies invest in renewables like wind and solar, earning carbon credits and buying emission quotas, achieving emission targets under the Paris Agreement.

Regulation of carbon units and their derivatives in Indonesia is currently limited. These units and derivatives are key in carbon trading markets, so the government needs to establish more comprehensive regulations. As carbon trading is a relatively new sector, innovation and speculation can occur without proper rules (19). Market participants might create derivative instruments like futures or forward contracts, necessitating regulatory oversight, transparency, and monitoring. Carbon units, traded as evidence of compliance with emission reduction obligations, require careful regulation. The International Swaps and Derivatives Association (ISDA) highlights the importance of these derivatives in carbon exchanges, noting that they can aid companies in meeting emission thresholds and provide valuable indicators for carbon pricing regulations.

4. CONCLUSION

The ideal concept for regulating carbon trading through carbon exchanges to ensure fairness includes: establishing clear regulations for carbon exchanges, creating integrated rules for carbon trading and exchanges, strengthening and developing a single carbon exchange, implementing mandatory policies for emission-producing companies to participate in carbon trading, and further regulating carbon units and derivatives in trading. Such as single carbon exchange is ideal for Indonesia due to several benefits:

- 1) **Non-fragmentation:** A single exchange reduces market fragmentation, allowing focused system strengthening and development.
- 2) **Regulatory Consistency:** Uniform regulations across a single exchange ensure consistency and reduce discrepancies compared to multiple exchanges.
- 3) **Efficient Oversight:** Centralized oversight and enforcement by a single entity improve efficiency compared to managing multiple exchanges.
- 4) **Operational Efficiency:** A single exchange reduces transaction costs and administrative expenses, streamlining clearing and settlement processes, and increasing transparency.

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