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Transitioning a Greener Indonesia through Carbon Tax

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A Glimpse of Global Challenges and Agreements

Economic turbulence may return following the COVID-19 pandemic. For more than three years, the global economy has endured significant challenges, with each country continuing its journey towards recovery; however, there have been indications of remarkable resilience emerging from the depths of the COVID-19 crisis. Several efforts have been deployed to achieve economic resilience. Nonetheless, the global market should stay prepared in the face of emerging threats such as climate change, which might affect economic growth.

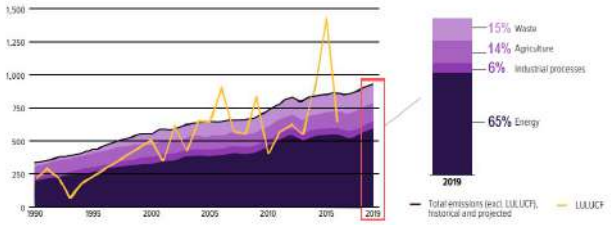
The World Economic Global Risk Forum Report (2022) stated that for the last 10 years, climate change has become the most threatening risk in the long-term. Scientists discovered that climate change is occurring as a response to global warming caused by human activities over the last 50 to 100 years. Various human activities such as industrialization, deforestation, and high-intensity mobilization have contributed to CO^2 emissions which raised the average global temperature by 1.1 degrees Celsius.

The lack of collaborative efforts to mitigate emissions could lead to a potential increase in Earth's temperature of up to 5.4 degrees Celsius. In response to this concern, the Paris Agreement was established to set targets aiming to restrict the global temperature rise within the range of 1.5 to 2 degrees Celsius, while also striving to achieve net-zero emissions by 2050.

Indonesia's Current Emissions and Strategies: An Overview

Indonesia, the third largest country with a population of 270 million, has been identified as the tenth highest global emissions contributor, accounting for 1.69% of global emissions in 2022. The graph shows that energy is the largest contributor to Greenhouse Gas (GHG) emissions (65%). Industrial processes, agriculture, and garbage sectors are also experiencing increased GHG emissions.

GHG emissions across sectors[5]
Total sectoral GHG emissions ($MtCO^2e$/year)



Indonesia's emissions (excl. LULUCF) increased by 193% between 1990-2019 to 933 $MtCO^2e$/yr. Emissions growth was seen in all categories over this timeframe, with emissions from energy fluctuating between 59% and 67% of the total. From a low of 6 $MtCO^2e$ in 1990, in 1998, emissions from waste overtook those from industrial processes, and then in 2013, overtook agriculture to become the second largest contributor of GHG emissions.

Source: Climate Transparency

The high quantity of commodities exported (palm oil, coal, and petroleum) is probably variable, as these tend to be the most profitable commodities. The trade balance of Indonesia shows tremendous movement, yet each extra exported product lead to massive land expansion, which contributed to an increase in Indonesia's carbon emissions. As a result, Indonesia has developed a strategic plan to increase climate ambition. Indonesia released the newest Nationally Determined Contribution (NDC) in July 2021 as a form of their mitigation commitment under the Paris Agreement, which is:

Introducing a Long-Term Strategy on Low Carbon and Climate Resilient Development 2050 (LTS-LCCR 2050)
Climate resilience is a word that transforms the goals of the Paris Agreement into economic, social, and environmental resilience. The LTS-LCCR 2050 document published for attaining climate resilience underlines the necessity of synergy between climate change mitigation and adaptation. Climate resilience can be noticed throughout the LTS-LCCR 2050 through initiatives to enhance capacity, navigate NDC roadmap tactics, synergize regional and sectoral paths, and engage stakeholder participation.

Carbon Pricing Schemes
The Ministry of Finance is currently exploring instituting carbon pricing as a support effort for long-term economic recovery.

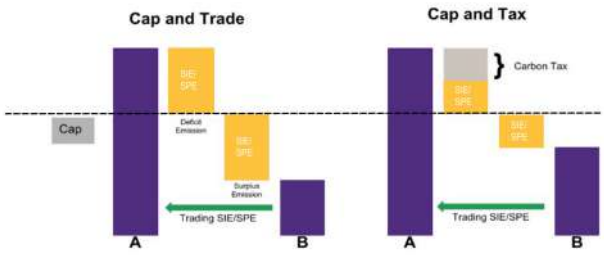
Indonesia implemented a carbon tax as one of their carbon pricing schemes to make GHG emissions cost more. The carbon tax, which was to be implemented in April 2022, with a minimum rate of IDR 30,000 per ton CO^2e levied on GHG emissions that exceed a cap and tax system threshold, has been postponed until 2025.

A Deep Dive Exploring Carbon Taxation

To accomplish its GHG reduction targets, Indonesia must establish a carbon tax. A carbon tax allows the government to levy taxes that match the carbon content of fossil fuels. The government has regulated tax policy under Law 7/2021 on Harmonization of Tax Regulations (UU HPP). The following are the main points to emphasize in the regulation:

- Before implementing the Carbon Tax on stage, the rise of the carbon market, achievement of NDC targets, sector readiness, and economic condition are all given consideration.
- Maintain the emphasis on fairness and affordability principles making the rule relevant in small communities and aligning with the business climate.
- The carbon price is fixed at a minimum of IDR 30,000 per ton CO^2e and will be evaluated periodically.
- The implementation of a cap and tax regime, which will begin in 2022, has already begun in the coal-fired power plant sector.

Carbon Tax Implementation



Source: Ministry of Finance

Entities that exceed the cap must purchase emission permits (SIE) from entities that are not bound to the cap or acquire certification of emissions reduction (SPE carbon offset).

The government initially executed the carbon cap-and-tax scheme by placing a cap on each emitter's emissions and imposing a charge when an emitter emits more than is permitted. Emitters are the subject of the tax in tax terminology. Meanwhile, the tax targets any activity that emits carbon dioxide through fossil fuels. In Indonesia, a tax benefit is available if an emitter purchases carbon market allowances from another emitter's unused allowances or utilizes carbon offset certificates gained when the emitter engages in voluntary emission reduction programs.

Spotting the difference, Carbon Tax vs ETS

Carbon Tax	ETS
Straightforward administration	May not be practical for capacity constrained countries
Promotes clean technology innovation and adoption by price certainty	Volatility of price can be obstacle
Tax rate is periodically adjusted due to uncertain emissions and determined by the government	Certainty over emission quotas and emission cap relatively to the market demand
Revenue usually accrues to finance ministry for general proposes and can be recycled to make overall policy distribution neutral or progressive	Free permit allocation may help with acceptability but lowers revenue and free allowance allocation may limit opportunity for desirable distributional outcomes
Compatible with overlapping instruments	Overlapping instruments reduce emissions price without affecting emissions

Source: International Monetary Fund

Carbon pricing scheme implementation in ASEAN+3 Economies

	Mentioned in NDCs	Type of Carbon Pricing		Sector Coverage	Carbon Price	Revenue Collected
		ETS	Carbon Tax			
Brunei Darrusalam	✓			Industry	NA	NA
Cambodia	✓			Transport	NA	NA
China	✓			Transport, Buildings, Industry, Domestic Aviation, and Power	6,37	40,24340,243
Hongkong	NA			NA	NA	NA
Indonesia	✓			Coal-fired power generation	2,1	NA
Japan				Buildings and Industry	4,13 (ETS) 2,36 (Tax)	1800,3341800,334
Korean	✓			Waste, Domestic Aviation, Buildings, Industry, and Power	18.75	243,50
Laos	✗			NA	NA	NA
Myanmar	✗			NA	NA	NA
Malaysia	✗			NA	NA	NA
Philippines	✗			NA	NA	NA
Singapore	✓			All facilities that emit a minimum of 25,000 tCO^2e GHG emissions per annum	3,69	152,98
Thailand	✗			NA	NA	NA
Vietnam	✗			NA	NA	NA

Source: Andriansyah and Hong (2022)

Carbon pricing is still being developed in Indonesia, and our government is currently looking for an approach of reaching the 2030 emissions reduction objective. Currently, only the energy and agriculture sectors have accomplished their GHG emission reduction targets; nevertheless, there are still vast sectors that require a strict plan to meet their objectives.

To guarantee that each sector is prepared to implement carbon pricing schemes, particularly carbon taxes, it is vital to understand the methods required to measure and verify GHG emissions. The measures that will be taken are the identification of emission sources, data collection, data conversion, calculation, reporting, and verification. By contributing to fostering climate resilience, an organization can improve its image and gain the trust of stakeholders. However, a company may demonstrate a dedication to running a business while simultaneously concerned about the environment.

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Source:

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