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Indonesia's Carbon Market: Pathways to Optimize International Trading

Key Summaries

- **Accessing the Voluntary Carbon Market (VCM) to enable achievement of Indonesia's Climate Goals** – VCM provides a significant opportunity to attract private-sector investment while simultaneously supporting Indonesia to achieve its climate objectives. By adopting a balanced and supportive regulatory framework, Indonesia can make the most of carbon trading opportunities while ensuring compliance with essential requirements, and benefitting from both compliance and voluntary market.
- **Recognising international standards to boost market confidence** – Mutual Recognition Agreements (MRA) with international standards like Verra and Gold Standard can strengthen Indonesia's commitment to high-integrity carbon markets and increase market confidence. This action will broaden market access, improve carbon credit integrity, and raise transparency.
- **Regulatory reform can help unlock Indonesia's carbon trading potential** – Bold reforms: Streamlining bureaucracy, embracing global standards, and creating transparency will supercharge Indonesia's competitiveness and unlock major investment.

Introduction

Indonesia has a huge opportunity to meet its climate action target while generating revenue from carbon trading. President Prabowo Subianto declared during the G20 Forum in November 2024 that Indonesia aspires to achieve net-zero emissions by 2050, 10 years earlier than the previous objective.[1]

Additionally, Indonesia is preparing to submit its 2nd Nationally Determined Contribution (NDC) soon, which is its emission reduction efforts by adding two new sectors.[2] Connecting this development with President Prabowo's statement, it appears that Indonesia is set to increase its climate ambition. To meet these ambitious targets, Indonesia must develop a robust emission reduction and avoidance system.

While carbon trading has the potential to support Indonesia to meet its NDC, it also provides a substantial economic opportunity. Indonesia's nature-based solutions alone have the potential to store up to 1.5 gigatonnes of CO_2e per year[3], equivalent to approximately USD 15 billion in value.[4]

[1] Reuters, "Indonesia can reach net zero emissions before 2050, president says", Reuters, 20 November 2024. <https://www.reuters.com/business/environment/indonesia-can-reach-net-zero-emissions-before-2050-president-says-2024-11-20/>, accessed on 22 March 2025.
[2] Prisca Triferna Violetta, "KLH: Dokumen iklim Second NDC tunggu persetujuan Presiden Prabowo", Antara, 13 February 2025, <https://www.antaranews.com/berita/4646565/klh-dokumen-iklim-second-ndc-tunggu-persetujuan-presiden-prabowo>, accessed on 22 March 2025.
[3] Vishal Agarwal and Others, "Indonesia's green powerhouse promise: Ten Bold Moves", McKinsey & Company, May 2024, <https://www.mckinsey.com/id/our-insights/indonesias-green-powerhouse-promise-ten-big-bets-that-could-pay-off> accessed on 22 March 2025.
[4] Assuming the carbon price is $10/tCO2e.

Opportunities and Challenges

The Indonesian government opened its global carbon trading market on 20th January 2025, offering up to 1,780,000 tons of CO2e credits for sale.[5] However, by the 24th February, the total transaction volume in the international carbon market had only reached 49,545 tonnes of CO2e[6], with 41,822 tonnes sold on the launch date.[7] This indicates a low transaction volume, as only around 2.78% of the available credits had been sold, and approximately 84% of that was transacted on the first day. Considering Indonesia's goals and market potential[8], this result is far less than anticipated. Therefore, further analysis is required to identify the challenges in achieving Indonesia's success in the carbon market.

Photo 1. The Indonesian government opened its international carbon trading market on 20th January 2025

The Indonesian government has taken significant steps in setting up the groundwork for carbon trading, particularly through Presidential Regulation No. 98 of 2021 (PR 98/2021) and Minister of Environment and Forestry Regulation No. 22 of 2021 (MOEF 22/2021). While these regulations do not completely restrict international carbon trading, some of the requirements in place limit Indonesia's ability to compete in the global market. After seeing how the market has responded, the Indonesian Government has started taking a more open approach by involving various stakeholders to explore ways to improve the existing framework. This growing openness offers a chance to refine the regulations and better support the growth of Indonesia's carbon market. Some of the key opportunities for reform identified are:

[5] Otoritas Jasa Keuangan (OJK), "Siaran Pers Bersama: Peresmian Perdagangan Karbon Luar Negeri", OJK, 20 January 2025, <https://ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Peresmian-Perdagangan-Karbon-Luar-Negeri.aspx#:~:text=Indonesia%20saat%20ini%20telah%20siap,Blok%204%2C%20Konversi%20Dari%20Pembangkit>, accessed on 22 March 2025.
[6] Iim Fathimah Timorria, "Sebulan Meluncur, Volume Perdagangan Karbon Internasional 49.545 ton", Bisnis.com, 26 February 2025, <https://hijau.bisnis.com/read/20250226/653/1842963/sebulan-meluncur-volume-perdagangan-karbon-internasional-49545-ton#:~:text=Bisnis.com%2C%20JAKARTA%20%E2%80%94%20Otoritas,ekuivalen%20per%2024%20Februari%202025.>, accessed on 22 March 2025.
[7] Mentari Puspadini, "Hari Pertama Bursa Karbon Internasional, Transaksi Capa 41.822 Ton", CNBC Indonesia, 20 January 2025, <https://www.cnbcindonesia.com/market/20250120153136-17-604581/hari-pertama-bursa-karbon-internasional-transaksi-capai-41822-ton>, accessed on 22 March 2025.
[8] According to MSCI's projections, the global carbon credit market is anticipated to experience substantial growth. In 2025, the market's transaction value is estimated to range between 1 to 3 billion USD. However, by 2050, this figure could dramatically increase, potentially reaching 45 to 250 billion USD. Guy Turner and others, "Frozen Carbon Credit Market May Thaw as 2030 Gets Closer", MSCI <https://www.msci.com/www/blog-posts/frozen-carbon-credit-market-may/05232727859> accessed on 30 March 2025.

1. Requirements on corresponding adjustment and authorization

Article 48 par. (2) point g. PR 98/2021 governs that the transfer of carbon rights to other countries must be recorded and authorized by the government. This requirement is also reinforced by the Article 4 par (3) point c and Article 19 point c of MOEF 21/2022), which require the authorisation and Corresponding Adjustment (CA) for international trading. Corresponding adjustment is a mechanism that was established under the Paris Agreement to prevent double counting when countries trade carbon credits.[9] Currently, CA and authorization are only required for carbon trading mechanisms conducted under Article 6 of the Paris Agreement, not for the Voluntary Carbon Market (VCM), which may operate outside of Article 6. Under the VCM, private actors voluntarily buy and sell carbon credits to support host countries' climate mitigation efforts.[10]

Despite not specifically regulating the VCM, Article 6 may impact on how it operates, which may be illustrated by the diagram below:

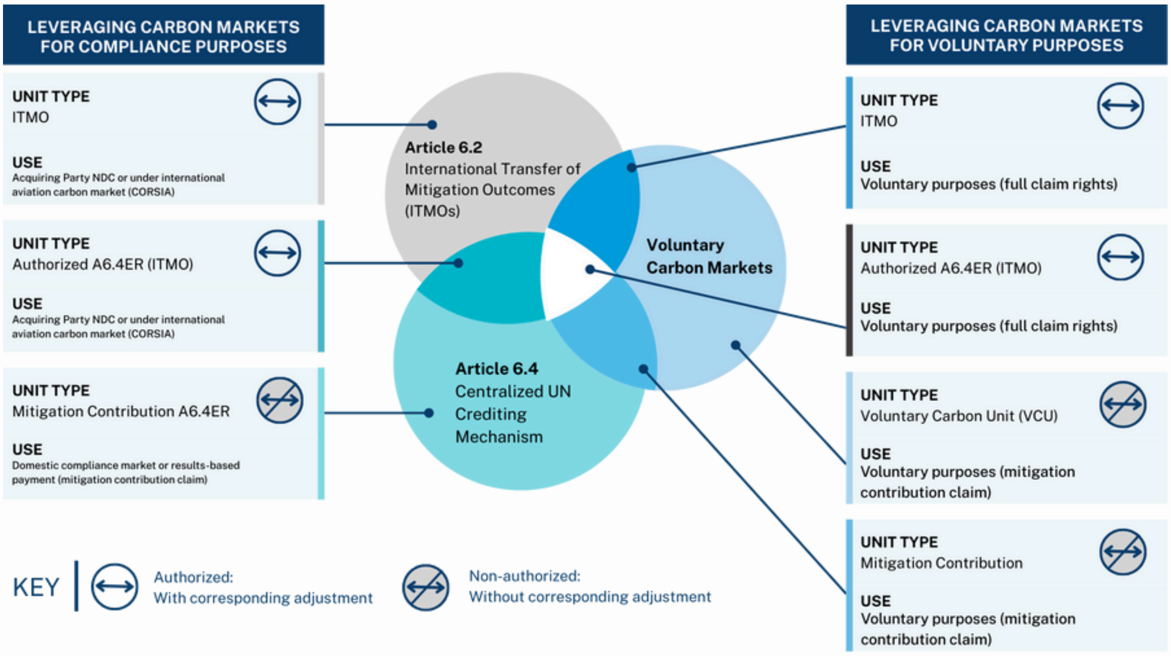


Figure 1. Relationship between Article 6 and the Voluntary Carbon Market
Source: Modified from ADB, 2023

As shown in the diagram above, VCM can function in two ways: (1) With CA and authorization, which complies with Article 6 requirements; and (2) Without CA and authorization.[11] The choice of which strategy to adopt is usually left to the host country. The diagram below illustrates Indonesia's carbon trading framework and highlights these two possible approaches:

[11] Asian Development Bank, National Strategies for Carbon Markets under the Paris Agreement: Making Informed Policy Choices, (ADB, November 2023), 12.
[9] Sandra Greiner and others, Article 6 Corresponding Adjustments Key accounting challenges for Article 6 transfers of mitigation outcomes (Climate Focus, B.V. and Perspective Climate Group, 2019), 8.
[10] Charlotte Streck, Melaina Dyck, and Danick Trouwloon, "What is the voluntary carbon market?", in The Voluntary Carbon Market Explained, (VCM Primer: October 2023), 1.

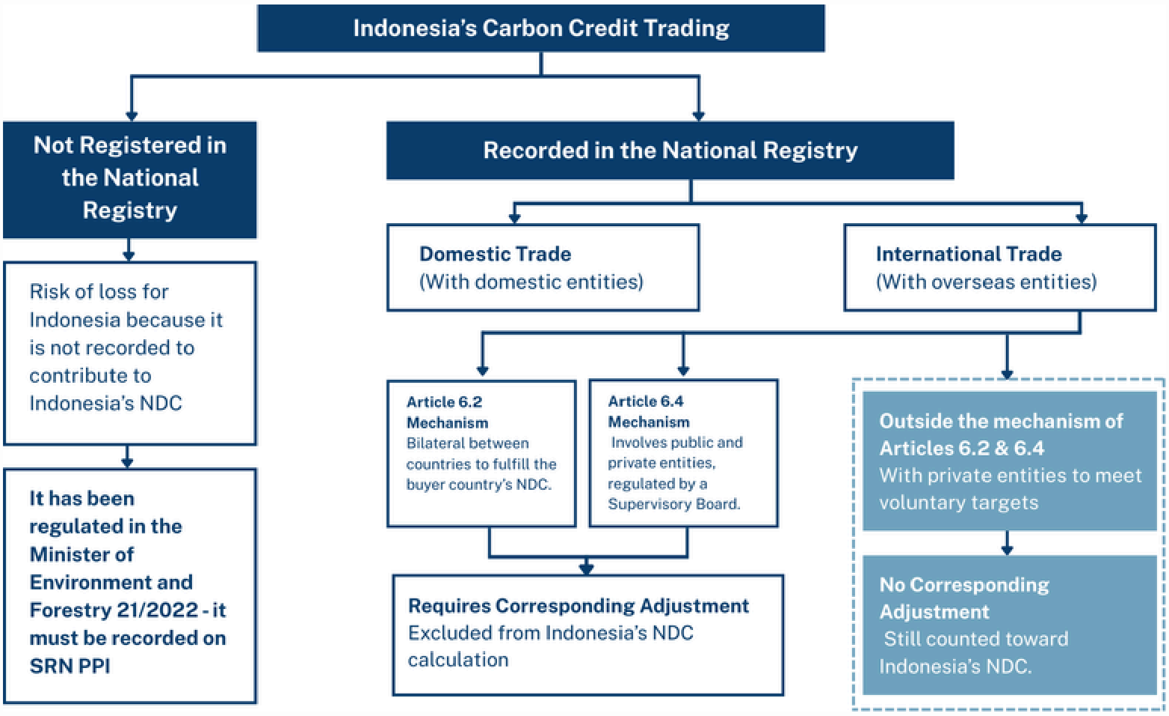


Figure 2. Indonesia's Carbon Trading Framework
Source: Modified from PWC, 2024

Based on the framework above, Indonesia has the option to allow international VCM transactions outside the scope of the Paris Agreement to proceed without requiring CA and authorization. This would facilitate international carbon trading while still contributing to Indonesia's Nationally Determined Contribution (NDC) targets. In fact, Article 18(3) of MOEF Regulation No. 21/2022 already permits international carbon trading without the transfer of claim rights, which is consistent with the concept of non-CA and non-authorized VCM. However, the regulation does not differentiate between transactions subject to CA and authorization, and those that are not, resulting in the blanket application of CA and authorization, even where they may not be necessary.

Other countries, such as Brazil[12] and Ghana[13], already leverage VCM units without CA to achieve their NDC targets. This demonstrates the potential to similarly utilize VCM without CA in Indonesia in order to attract investment and enhance Indonesia's competitiveness in the global carbon market, as well as ultimately achieve the country's NDC targets.

[12] Brazil, Law No 15.042 of 11 December 2024, Art 2 par, XIX.
[13] Environmental Protection Agency, Ghana's framework on international carbon markets and non-market approaches (EPA, 2022), 31.

2. Restriction on International Carbon Trading Before Achieving NDC Targets

Article 4(3)(b) of MOEF 21/2022 presents a significant barrier by prohibiting international carbon trading until Indonesia achieves its NDC goals. This restriction could hinder the development of a robust and competitive carbon market, as Indonesia currently lacks an adequate supply of carbon credits to support broader trading activity. Additionally, as noted in the previous section, VCM transactions may not involve the transfer of claim rights over carbon credits and can still contribute to Indonesia's NDC targets. Therefore, delaying international carbon trading until Indonesia achieves its NDC targets may not be the most effective approach and could limit Indonesia's opportunity from multiple aspects.

3. Requirements on buffer

According to Article 4 par (2) point b and Article 7 MOEF 21/2022, international carbon trading projects must set aside a buffer of 10%–20% for offsets within the NDC and at least 20% for offsets outside the NDC. However, If VCM carbon credits contribute to Indonesia's NDC, then a buffer NDC is unnecessary, as all emission reductions from these credits would still be counted toward Indonesia's climate targets under the non-CA scheme.

Forestry carbon projects, which represent a significant portion of Indonesia's carbon credit potential, already operate with narrow profit margins while facing substantial market risks. Imposing additional buffer requirements severely reduces the volume of credits available for trading, threatening the economic viability of many projects. For perspective, a representative of a global green investment firm recently highlighted that businesses already set aside approximately 35% of credits for standard risk management practices, independent of government requirements. With Indonesia's additional buffer mandate, only 45%–55% of credits ultimately become available for trading. This dramatic reduction in tradable credits further compresses already thin profit margins, potentially driving investors toward more competitive markets with less restrictive policies.[14]

In addition to regulation limitations, a 2021 government moratorium on forestry-sector carbon credits[15] has further hampered market certainty. While this letter has not been revoked to date, recent government statements indicate that carbon trading in the forestry sector will soon be launched and accelerated to support climate action and economic growth.[16] However, without a clear policy direction, uncertainty remains a major barrier to market development.

Additionally, Indonesia still relies on its certification standard for carbon credits, whereas many potential buyers, particularly international ones, prefer credits that demonstrate high quality[17], mostly provided by international standards. This misalignment creates a regulatory gap that may reduce Indonesia's attractiveness as a carbon credit supplier in the international market.

[14] Yulia indrawati Sari and Frans R. Siahaan, "Will Indonesia's new carbon market be a climate solution or a game for big players", Climate Home News

[15] Minister of Environment and Forestry Letter No. S173/Menlhk/Setjen/KLN.0/4/2021 on 27 April 2021 and Director General of Social Forestry and Environmental Partnership Letter No. S.97/PSKL/SET/REN.3/5/2021 on 10 May 2021.

[16] Irsyan Hasyim, "Pemerintah Segera Luncurkan Perdagangan Karbon Sektor Kehutanan", Tempo, 14 March 2025 <https://www.tempo.co/lingkungan/pemerintah-segera-luncurkan-perdagangan-karbon-sektor-kehutanan-1219393>, accessed on 27 March 2025.

[17] Paulina Ponce de León Baridó and others, "In The Voluntary Carbon Market, Buyers Will Pay for Quality", BCG, September 2023, 2.

To improve its competitiveness and promote international carbon trading, Indonesia must implement regulatory changes to provide a clear, supportive, and well-structured framework that encourages market growth and assures compliance with international standards. Strengthening the regulatory landscape may play a significant role in increasing investor confidence, enhancing market credibility, and supporting Indonesia's climate ambitions.

Recommendation

1. Implement Adaptive Regulatory Reform to Boost International Carbon Trading

Current carbon trading regulations in Indonesia are unnecessarily complex, creating a multi-layered administrative burden that slows market dynamics, increases costs for businesses, and ultimately undermines Indonesia's competitiveness in global carbon markets. One aspect that requires attention is the Voluntary Carbon Market (VCM), which should still support the achievement of NDC targets without requiring additional provisions such as corresponding adjustments, buffer NDC, and authorization. Forcing the application of CAs to the VCM could disproportionately burden lower-income host countries by preventing them from counting the emission reduction efforts toward their NDCs, forcing them to undertake additional mitigation efforts while also managing complex accounting requirements, meanwhile, higher-income countries purchasing these credits would benefit, creating an imbalance in climate responsibilities.[18]

According to ICROA, below are the mechanism of credits use, which may allow for non-authorisation and non-corresponding adjustments: [19]

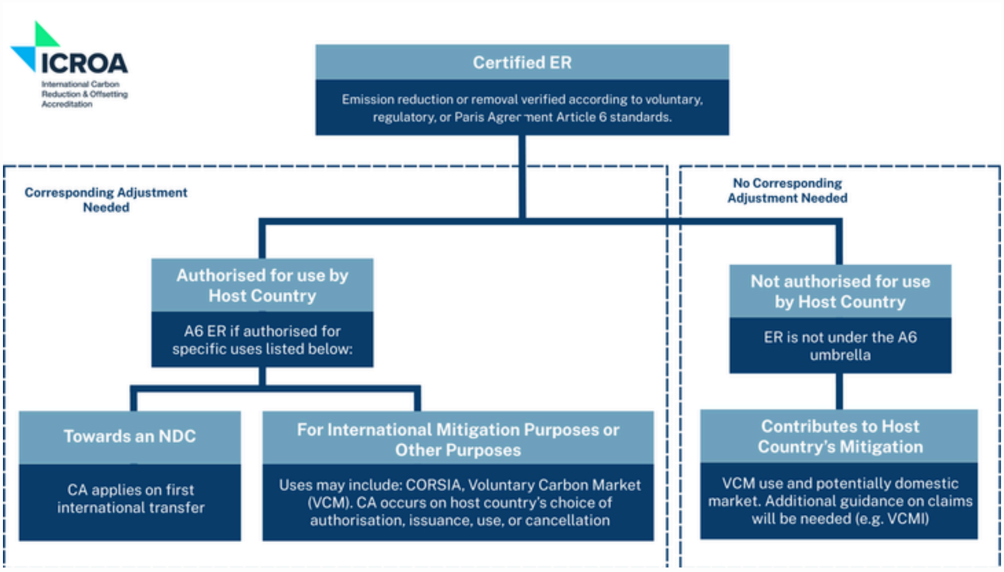


Figure 3. The Mechanism of Credits Use
Source: Modified from ICROA, 2021

[18] Charlotte Streck, Melaina Dyck, and Pablo Nunez, "Corresponding Adjustments: New guidance for policymakers", Climate Focus, <https://climatefocus.com/corresponding-adjustments-new-guidance-for-policymakers/>, accessed 30 March 2025.
[19] ICROA, Article 6: ICROA Analysis (March 2023) <https://icroa.org/wp-content/uploads/2023/03/Article-6-ICROA-Analysis.pdf> , accessed 30 March 2025. 1

Hence, according to the mechanism above, the carbon credits that are traded internationally can be claimed as a mitigation contribution unit by the buyers. The illustration is as follows:

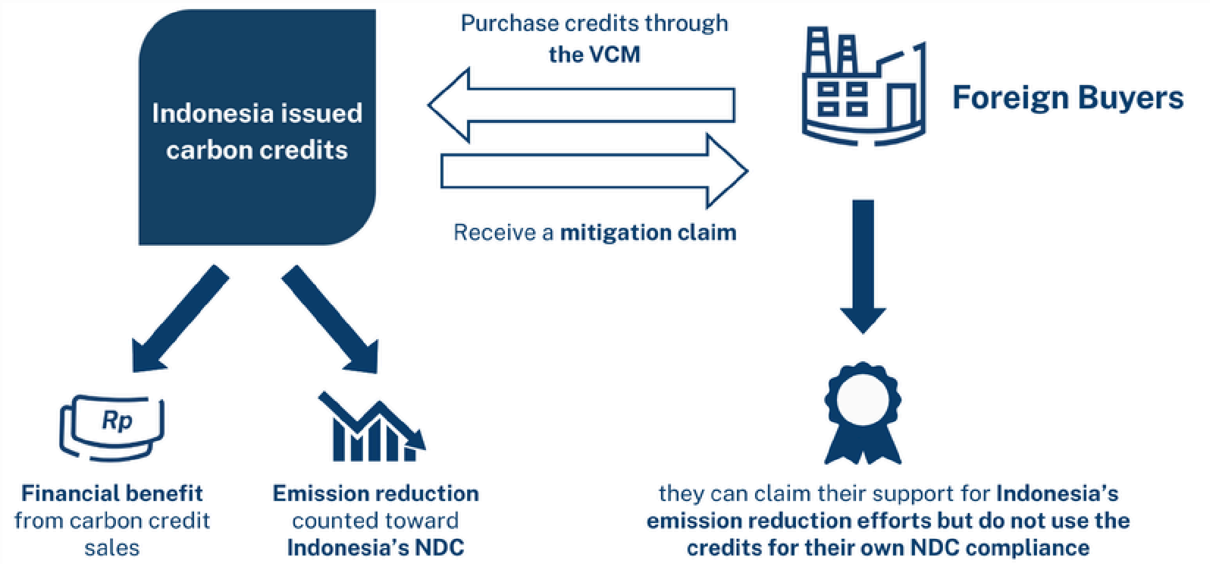


Figure 4. International Carbon Credit Transactions under the Voluntary Carbon Market (VCM) without CA

As a powerful instrument for achieving NDC targets, the VCM should deliver maximum benefit with minimal administrative overhead. Strategic simplification of regulations at both Presidential and Ministerial levels would:

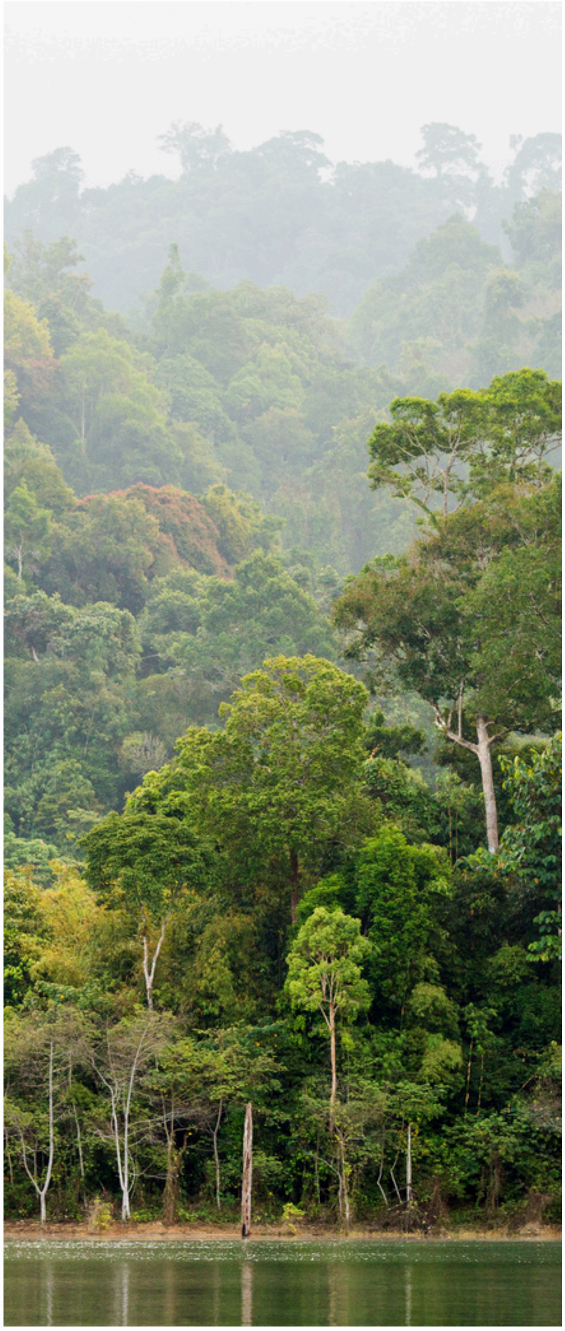
1. Significantly accelerate transaction volumes
2. Enhance the competitiveness of Indonesia's carbon market
3. Expand participation across sectors, particularly among private businesses and local communities
4. Generate substantial economic returns while advancing climate goals

[19] ICROA, Article 6: ICROA Analysis (March 2023) <https://icroa.org/wp-content/uploads/2023/03/Article-6-ICROA-Analysis.pdf> , accessed 30 March 2025. 1

2. Recognising International Standards through Mutual Recognition Agreement (MRA)
To position Indonesian carbon credits as high-quality products that are in demand internationally, Indonesia needs to recognise international standards such as Verra and Gold Standard. This requires integrating these international standards into the SRN PPI, which now serves as Indonesia's central registry system. Such integration aims to ensure strong governance and transparency, prevent double-counting, and maintain the credibility and integrity of Indonesia's carbon market.

Currently, the government aims to sign the Mutual Recognition Arrangement (MRA) with several international standards, such as Verra, Gold Standards and Plan Vivo, by May 2025.[20] This is a good move to accelerate the carbon trading in Indonesia, improving the carbon credits' quality, and improving the international demand.

However, in order to make it more effective, the government should ensure that all methodologies listed under the international standards will be recognised. Moreover, they must agree on phased implementation steps, including how these standards will be integrated into national systems. Additionally, in the long term, Indonesia should continue to update its Forest Reference Emission Level (FREL) and national GHG inventory, which will enable the methodologies used by project-based standards. This alignment would reduce the gap between national and project-level baselines and enhance environmental integrity.



[20] Irsyan Hasyim, "Pemerintah Segera Luncurkan Perdagangan Karbon Sektor Kehutanan".

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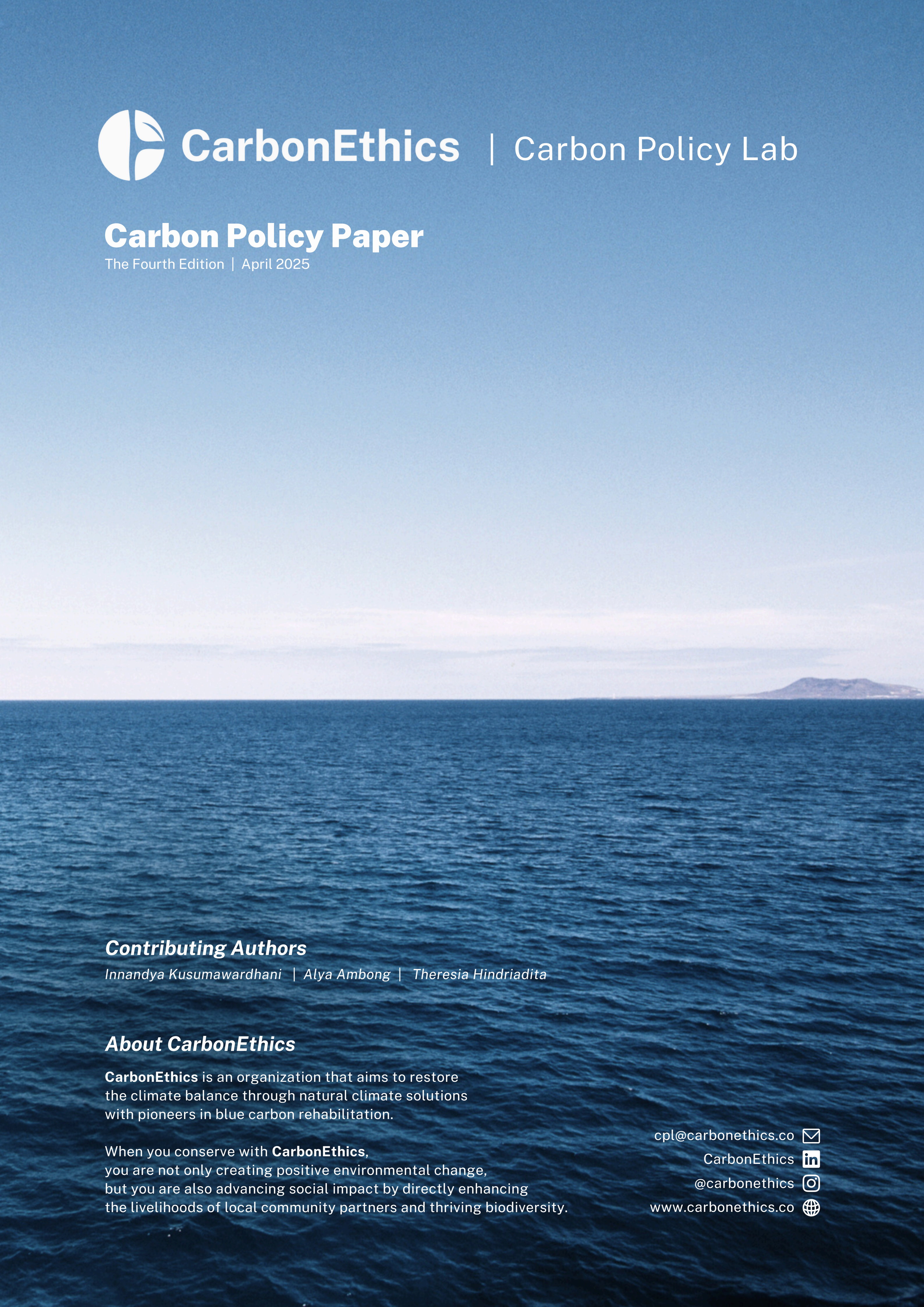

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About CarbonEthics

CarbonEthics is an organization that aims to restore the climate balance through natural climate solutions with pioneers in blue carbon rehabilitation.

When you conserve with **CarbonEthics**, you are not only creating positive environmental change, but you are also advancing social impact by directly enhancing the livelihoods of local community partners and thriving biodiversity.

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