EU-ASEAN BUSINESS COUNCIL
The Voice of Europe

DEVELOPMENT OF CARBON MARKETS IN ASEAN

MARCH 2025

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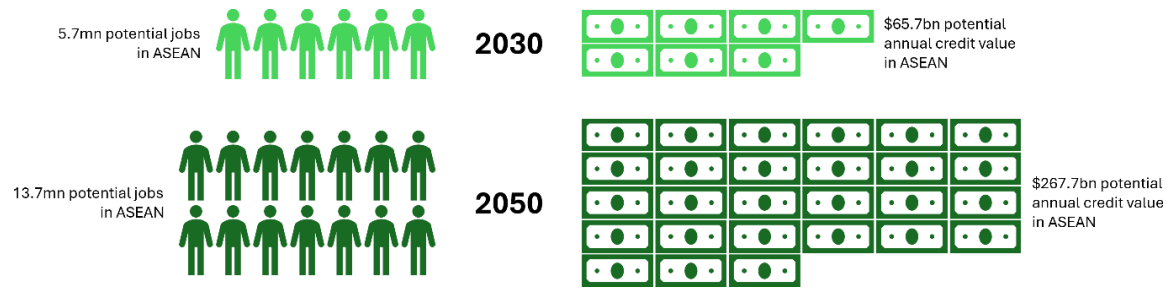
Executive Summary

Carbon markets are essential for achieving global net-zero emissions, with the UN Intergovernmental Panel on Climate Change (IPCC) stressing that their deployment is a key tool to counterbalance hard-to-abate residual emissions. As carbon pricing instruments expand—now covering 24% of global emissions and generating over US$100 billion in revenues in 2024—they are emerging as a key driver of investment into decarbonisation, particularly in Emerging Markets and Developing Economies (EMDEs). Estimates suggest that high-integrity carbon markets could unlock between US$10 billion and US$40 billion by 2030, providing a critical financing stream for countries where traditional climate finance is harder to secure.

ASEAN must prioritise carbon markets as a core component of its economic and environmental strategy. As the region moves toward becoming the fourth-largest economy by 2030, it faces the challenge of balancing economic growth with climate commitments. While policies that directly drive decarbonisation—such as clean energy development, industrial transformation, and energy efficiency—are essential to accelerating emissions reductions, carbon pricing is a powerful tool that internalises the cost of emissions, instils the 'polluter pays' principle, and creates financial incentives for industries to decarbonise. ASEAN holds immense potential in this space—one-third of the world's nature-based carbon solutions are in the region, and scaling carbon markets could generate US$3 trillion in revenue by 2050, creating 13.7 million green jobs.



However, ASEAN's carbon market landscape remains fragmented, with diverse national regulatory approaches limiting cross-border trade, market liquidity, and investment attractiveness. A harmonised, interlinked carbon market aligned with Article 6 of the Paris Agreement would enable seamless carbon credit trading, ensure greater transparency, and attract international capital. COP29's endorsement of Cooperative Approaches under Article 6 marks a major step toward a global carbon market, and ASEAN must position itself to benefit from this integration. Initiatives such as the ASEAN Common Carbon Framework (ACCF) and APEC's proposed non-mandatory market network are critical in ensuring regional alignment.

ASEAN's ability to scale up carbon markets and align them regionally will be crucial for both trade competitiveness and economic resilience. As the EU's Carbon Border Adjustment Mechanism (CBAM) and similar policies expand, ASEAN exporters risk higher costs if their carbon pricing mechanisms are not internationally recognised. A harmonised ASEAN carbon market would mitigate these risks, attract international capital, and position the region as a global hub for carbon trading. By aligning carbon pricing frameworks and strengthening market integrity, ASEAN can drive investment into low-carbon technologies and nature-based solutions, ensuring its long-term competitiveness in global trade and advancing the region's transition to net zero.

Figure 1a: Carbon Market Typology

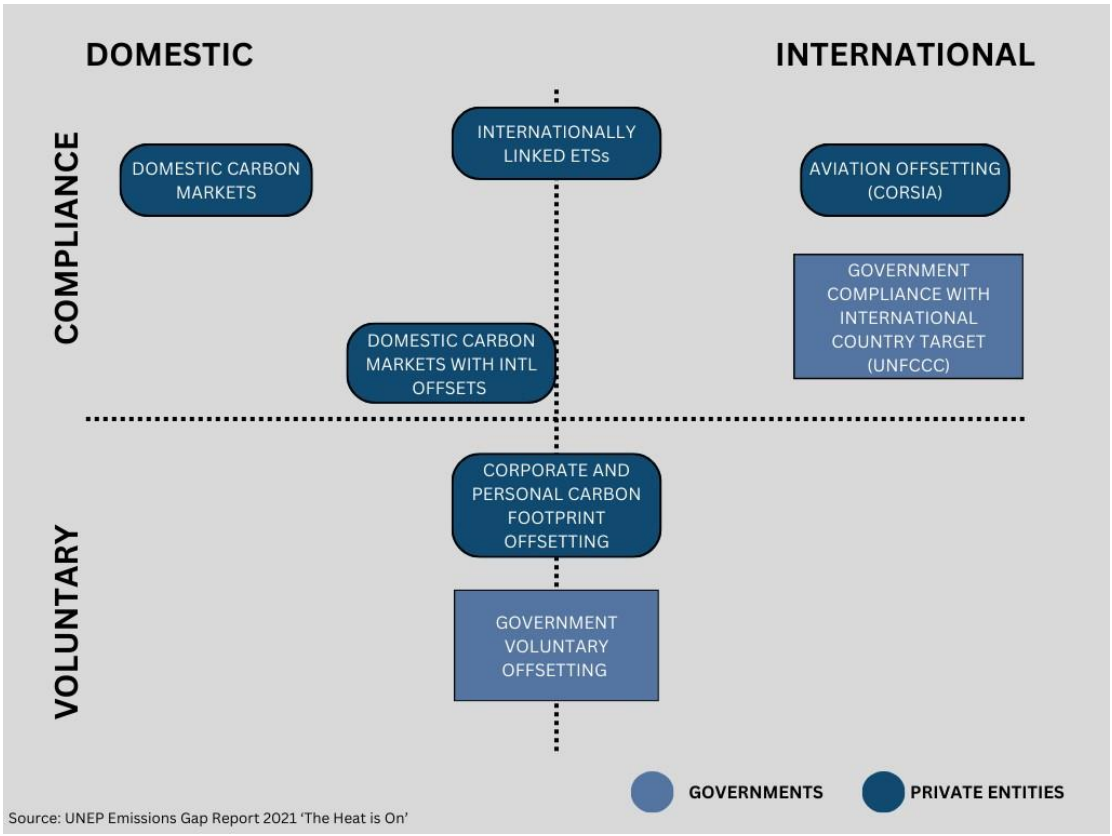
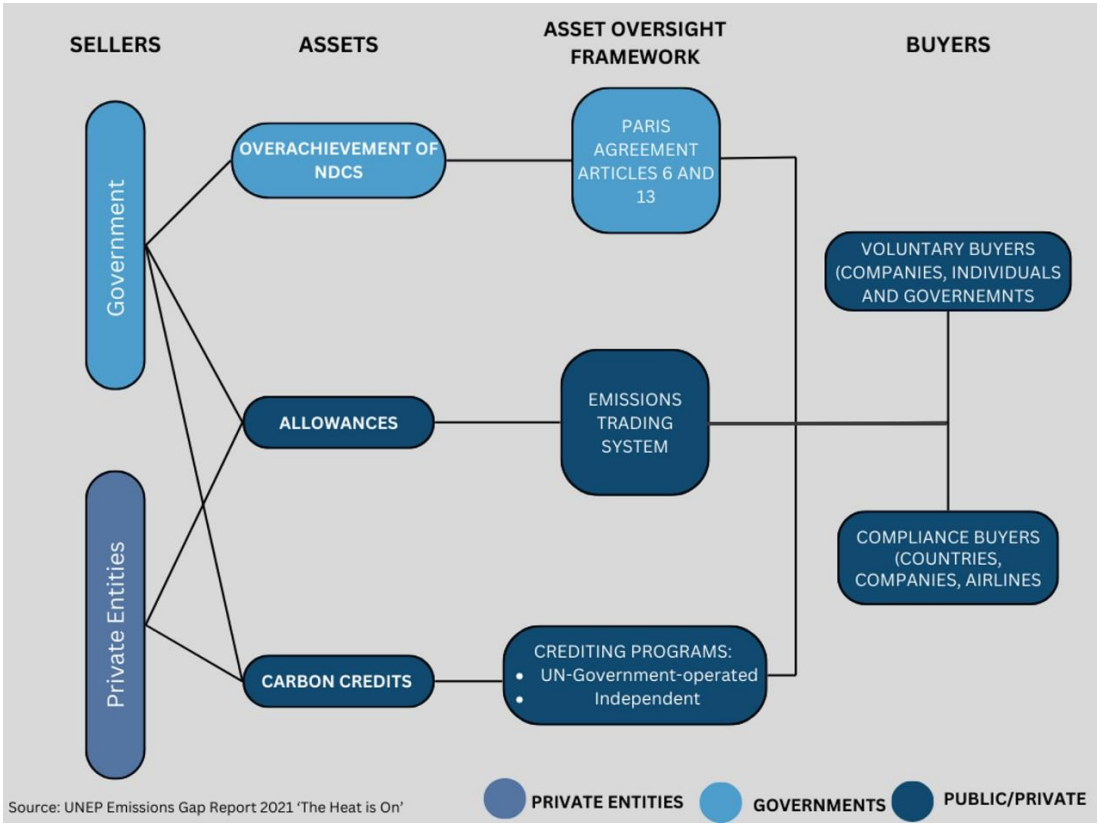


Figure 1b: Carbon Trading Market Structure



Summary of Recommendations

In this paper, we outline the following **recommendations** on that can be made to scale carbon markets in ASEAN:

Develop a regional and globally interlinked carbon market

- Ensure ASEAN carbon markets align with international standards, and support linking domestic compliance markets with each other regionally, with international trading systems and non-mandatory markets.
- Support implementation of Article 6 and ensure registry interoperability under Article 6 to prevent double counting and enable cross-border trading.
- Support regional initiatives like the ASEAN Common Carbon Framework (ACCF) to facilitate mutual recognition of methodologies.

Strengthen market infrastructure to facilitate trade in carbon markets

- Establish a global registry, transparent reporting systems, and secure trading platforms.
- Enhance verification oversight to prevent fraud and ensure market integrity.

Adopt global standards for carbon credit integrity

- Endorse ICVCM's Core Carbon Principles for high-integrity credits.
- Strengthen third-party verification and standardised methodologies for emissions reductions.
- Continue improving credit quality and oversight to maintain market credibility.

Recognise companies making transparent corporate climate claims

- ASEAN governments should support VCMI's Claims Code of Practice for clear disclosure standards.
- Increase adoption of Article 6-related legislation to facilitate carbon credit accounting and ownership recognition.

Enhance carbon accounting and reporting

- Standardise carbon accounting frameworks while minimising administrative burdens.
- Leverage GHG Protocol's Scope 3 guidance to improve emissions reporting.

The Role of Carbon Markets in Economic Growth

Carbon markets have emerged as a critical tool for reducing greenhouse gas emissions by putting a price on carbon and incentivising low-carbon investments. These markets support and complement wider decarbonisation efforts by allowing entities to trade carbon credits or allowances, providing market-based and cost-effective ways to reduce emissions both within and beyond the value chain.

Global Trends

Globally, an increasing number of countries are implementing carbon markets. Currently, there are 75 carbon pricing instruments in operation worldwide, covering 24% of global emissions with revenues now in excess of US$100 billion.[1] Additionally, 83% of NDCs submitted under the Paris Climate Agreement include the intention to use international market mechanisms such as carbon credit and offset trade to reach their GHG emission reduction targets.[2] The operationalisation of Article 6 of the Paris Agreement will further accelerate the development of carbon markets around the world and lay the foundation for a globally-linked carbon market, increasing efficiency, reducing costs, and expanding access to credible emissions reductions across borders.

As carbon markets expand, they are shaping corporate investment strategies, influencing capital allocation, and driving the development of low-carbon technologies. Businesses operating within regulated emissions trading schemes, such as the European Union Emissions Trading System (EU ETS) and China's national carbon market, are integrating carbon pricing into their financial planning, prompting greater investment in renewable energy, energy efficiency, and carbon capture technologies.

Financial markets are also responding to the growth of carbon pricing. Investors are increasingly factoring in carbon costs when assessing corporate risks and opportunities, driving the expansion of climate finance, carbon funds, and sustainability-linked investments. Additionally, the non-mandatory carbon market is witnessing rising demand for high-integrity carbon credits, with a 5% increase in demand in highest-integrity credits in the past two years alone,[3] reflecting a growing emphasis on environmental integrity and credibility in carbon offsetting strategies in the private sector.

Challenges & Opportunities for Carbon Markets in ASEAN

Southeast Asia is at a crossroads in its climate and economic transition. The region is amongst the most vulnerable to climate change, with 87 million people in ASEAN (roughly 13% of the population) living in flood prone areas and five out of 20 of the most impacted countries to climate change are in the region. If climate change mitigation measures are not put in place, the region will see an 11% reduction in GDP by 2100 according to the ASEAN Strategy for Carbon Neutrality.[4]

At the same time, ASEAN is projected to become the world's fourth-largest economy by 2030. The region is seeing a rapid increase in energy demand, with the energy generation sector currently heavily dependent on fossil fuels. Whilst steps are being taken across the region to accelerate the development of renewable energy and low carbon fuel supplies, including through the development of the ASEAN Power Grid, interoperability of those energy sources, more clearly needs to be done if targets in carbon emission reduction are to be achieved.

Challenges

One of ASEAN's most significant hurdles in developing a robust carbon market is the region's fragmentation – both in national policy and market readiness. [5] Unlike regions with integrated emissions trading systems, ASEAN's carbon pricing landscape remains highly uneven, with different Member States adopting varying approaches:

- Indonesia, launched its Emission Trading System (ETS) in early 2023. The Indonesian ETS initially targets the coal-fired power sector, mandating intensity-based emissions caps and enabling tradable allowances.
- Singapore has implemented a compliance carbon tax since 2019, and is focused on developing non-mandatory carbon markets. It is actively working to attract carbon-offset projects, especially those linked to nature-based solutions like reforestation, which have become a preferred means for ASEAN countries to participate in the global carbon market.
- Malaysia, Thailand, and Vietnam are also exploring pathways to introduce domestic carbon trading mechanisms, driven by rising investor demand for sustainable finance, a growing awareness of climate risks, and to balance the effect of international policies like CBAM.

Overview of Carbon Pricing Status in ASEAN

Countries	Net Zero Target	Carbon Pricing in Climate Change Policy	Carbon Tax	Emission Trading System	Carbon Credit Mechanisms
Brunei	Net Zero 2050	🟢	🔴	🔴	🔴
Cambodia	Carbon Neutral 2050	🔴	🔴	🔴	🟢
Indonesia	Net Zero 2060 or sooner	🟢	Legislation exists but not implemented	🟢	🟢
Lao PDR	Net Zero 2050	🔴	🔴	🔴	🟢
Malaysia	Carbon Neutral 2050	🟢	🔴	🔴	🟢
Myanmar	Net Zero from forestry and other land use 2040	🔴	🔴	🔴	🟢
Philippines	No target set	🟢	🔴	🔴	🟢
Singapore	Net Zero 2050	🟢	🟢	🔴	🟢
Thailand	Carbon Neutral 2050; Net Zero 2065	🟢	🔴	🔴	🟢
Vietnam	Net Zero 2050	🟢	🔴	🔴	🟢

Green – Yes Red – No

While the efforts to establish carbon tax and carbon market systems are recognised as a promising foundation for further carbon market development,[6] the regulatory diversity creates two key challenges:

- **Regulatory Uncertainty** – Businesses and investors face a lack of clarity due to inconsistent carbon pricing mechanisms across ASEAN.
- **Market Incompatibility** – Differing carbon accounting methods and verification standards hinder cross-border trading of carbon credits.

Additionally, differences in energy mixes across member states—ranging from coal-heavy power generation in Indonesia and Vietnam to cleaner energy grids in Laos and the Philippines—complicate efforts to establish a uniform carbon pricing mechanism. This disparity in energy sources complicates the creation of a harmonised regional carbon pricing system, as carbon market mechanisms need to account for the varying levels of economic and technological readiness for decarbonisation.

Opportunities

The ASEAN region also holds significant opportunities for carbon markets development. The region is well-positioned to leverage its vast renewable energy resources, natural carbon sinks, and international climate finance to drive a transition towards a low-carbon economy. By working towards an integrated and high-integrity carbon market, ASEAN can unlock new sources of economic growth while strengthening its global position in carbon trading.

ASEAN has immense untapped potential in renewable energy, particularly in solar, wind, and hydropower. The region's growing commitment to clean energy investments—supported by national and regional energy transition plans—creates opportunities to use carbon pricing mechanisms to incentivise the shift from fossil fuels. In addition to renewables, ASEAN is home to some of the world's most valuable natural carbon sinks, including forests, peatlands, and coastal blue carbon ecosystems. The region accounts for over one third of the world's nature-based carbon solutions potential.[7]

The development of carbon markets can support turning these resources into international climate finance flows. From 2009 to 2024, the ASEAN region generated over 233 million tonnes of CO_2 equivalent carbon credits – around 7% of global issuances. But this is only the tip of the iceberg when it comes to the potential of the region. Indeed, modelling done by AACM indicates that the development of effective carbon markets in ASEAN could, by 2050, unlock a cumulative revenue of US$3 trillion, and create 13.7 million jobs in green industries[8]. The operationalisation of Article 6 of the Paris Agreement provides a significant opportunity for ASEAN nations to export high-quality carbon credits to both each other and the rest of the world.

In addition, the development of a well-regulated carbon market in ASEAN is an opportunity to maintain the region's competitiveness as Carbon Border Adjustment Mechanisms (CBAMs) and similar policies gain traction globally. The EU CBAM, which imposes carbon costs on imports from countries without equivalent carbon pricing, is a key example of how carbon markets are becoming integral to international trade. Without clear and interoperable carbon pricing systems, ASEAN exporters—particularly in high-emission industries like steel, cement, and energy-intensive manufacturing—could face additional costs and market disadvantages. A harmonised ASEAN carbon market – through greater alignment of domestic compliance markets and crediting mechanisms – would help mitigate these risks by ensuring compliance with international carbon pricing requirements and facilitating cross-border carbon credit trading.

Recommendations

ASEAN is making significant progress in developing carbon markets, with each Member State advancing its own regulatory frameworks and emissions reduction strategies. At the regional level, the ASEAN Strategy for Carbon Neutrality has identified interoperability of carbon markets both within ASEAN **and** with the world as a key enabler for a low-carbon economy. [9] To achieve this, ASEAN must harmonise measurement, reporting, and verification (MRV) standards, develop frameworks for high-quality carbon credits, and create policy mechanisms that facilitate seamless international carbon credit trade. These efforts will not only enhance the credibility and liquidity of ASEAN's carbon markets but also support the region's climate commitments under the Paris Agreement.

To support the development of a robust, integrated, and high-integrity carbon market in ASEAN, we propose the following recommendations:

1. **We support a regional/global interlinked carbon market underpinned by transparent standards and backed by political will regionally/globally**

   We support the further development of a regionally interlinked carbon market where domestic markets connect with each other and with project-based carbon markets. To achieve this, national regulatory frameworks must enable better linkages between domestic compliance mechanisms, international G2G-led Cooperation Approaches, and the non-mandatory market. Ultimately, an ASEAN-wide carbon market should have the capability to connect with other regional carbon infrastructures, forming part of a globally interlinked carbon market.

   At COP29, parties agreed on the Cooperative Approaches under Article 6, which will facilitate international cooperation in meeting Nationally Determined Contributions (NDCs) through carbon markets. Article 6.2 now provides greater clarity on authorisation, revocation, and reporting for the international transfer of mitigation outcomes (ITMOs), helping to scale up market-based cooperation. Additionally, Article 6.4, now known as the Paris Agreement Certification Mechanism (PACM), will allow the UN to issue carbon credits—similar to those from independent standards such as Verra or Gold Standard in the non-mandatory project-based market. While the framework and process have been agreed, future adoption rates and full operationalisation remain uncertain, with PACM credits expected to be issued starting in 2025.

   A link between registries at the national and international levels—along with integration with existing independent standards—is essential to avoid double counting of emissions reductions and ensure the interchangeability of credits. Interoperability between different countries and regions will enhance cross-border trading of carbon credits, improving market liquidity and efficiency, and create a level playing field for companies reducing risks of carbon leakage.

   We welcome regional collaboration to advance standardisation and liquidity in carbon markets. The APEC Business Advisory Council (ABAC) has proposed launching a pilot programme to develop a non-mandatory market network across Asia-Pacific, which could provide a blueprint for greater ASEAN-wide alignment. Additionally, the ASEAN Common Carbon Framework (ACCF) seeks to facilitate carbon trading in the region through mutual recognition of methodologies, an initiative in which SCB contributes via the Singapore Sustainable Finance Association (SSFA).

2. **We need better market infrastructure to facilitate trading in carbon markets**

A robust market infrastructure is essential for the efficient functioning of carbon markets. Beyond ensuring a seamless trading environment accessible to buyers, sellers, and investors, critical elements include a reliable global registry for tracking carbon credits and their ownership, transparent reporting systems, and secure platforms for trading and credit transfers.

We support greater scrutiny over verification bodies vetting carbon projects to ensure consistency, integrity, and quality control across markets. Strengthening these mechanisms will enhance market integrity, prevent fraud, and build trust among industry participants, ultimately increasing market confidence and trading volumes.

Encouraging progress is being made by key initiatives, including those led by the World Bank, the Global Carbon Markets Utility (GCMU), LSEG, NASDAQ, and SGX, which are working to improve market infrastructure and standardisation.

3. **We need globally recognised standards and a credible framework on the use and the integrity of carbon credits**

We support the adoption of the Integrity Council for Voluntary Carbon Markets' (ICVCM) Core Carbon Principles (CCPs) and call for governments and policymakers to endorse the CCPs as minimum global standards (e.g., The UK Government and MAS will seek to endorse and align with the CCPs). These require carbon-credit programs to be transparent and to be verified by third parties, along with providing standardised baselines for measuring emission reductions, their permanence, additionality, and more. As an industry-led benchmark, the CCPs will gain broader adoption through stakeholder support, encouraging greater adherence and integration into financial markets.

As of December 2024, approximately 50 million credits across various methodologies—such as Landfill Gas and Leak Detection/Repair in Gas Systems—are CCP-eligible. The ICVCM has also approved three methodologies for deforestation prevention (REDD+), strengthening the integrity of nature-based solutions. Besides credits generated via nature-based solutions, renewable energy, energy efficiency and low carbon infrastructure (e.g. EV charging, etc.) projects (technology projects) that can generate carbon credits can also be valuable in the broadening and deepening sources of quality carbon credits in ASEAN and beyond. As the market evolves, continued enhancements in carbon credit quality and oversight will be necessary to maintain confidence and credibility in carbon trading systems.

4. **Companies should get recognised for making transparent and accurate contribution claims.**

Companies must make transparent and accurate claims regarding their targets and contributions to global decarbonisation efforts. This includes reporting gross annual emissions across Scopes 1, 2, and 3 and clearly communicating the type and impact of projects they invest in. Ensuring the credibility of these claims requires robust verification and certification processes to prevent greenwashing and enhance market confidence.

We call on ASEAN governments to support the Voluntary Carbon Markets Integrity Initiative (VCMI), which provides a credible framework through its Claims Code of Practice. This initiative helps resolve uncertainty for companies regarding climate claims and ensures greater transparency in the disclosure of credit use, enabling consumers to make more informed decisions about corporate sustainability efforts. VCMI's ongoing consultation on Scope 3 flexibility claims is an important step toward building a high-integrity carbon market while remaining practical for corporate adoption. We welcome greater industry collaboration, particularly joint efforts by ICVCM and VCMI, alongside other key organisations, to establish a comprehensive integrity framework for carbon credits.

We also support the increased adoption of Article 6-related legislation at the regional and global levels, which will facilitate better carbon credit accounting and ownership recognition. However, while we welcome the use of corresponding adjustments for country-level accounting, we urge caution in applying them at the corporate level. A corresponding adjustment is not necessarily a measure of superior credit quality and is not required for corporate-level claims against their voluntary climate targets.

5. We support enhanced carbon accounting standards and reporting

Companies must have credible, science-based emissions accounting to ensure transparency, comparability, and accountability in their climate commitments. Clear and consistent carbon accounting standards enable accurate measurement of emissions and removals, supporting the integrity of climate disclosures. Reporting frameworks should capture the full lifecycle of emissions while minimising administrative and legal burdens for businesses. Strengthened carbon accounting practices will also ensure that compensation for unabated emissions, including the use of carbon credits, is done transparently and with high integrity. We expect the GHG Protocol's upcoming guidance on measuring Scope 3 emissions to further advance discussions on corporate carbon accounting.

RECOMMENDATIONS FROM THE ASEAN ALLIANCE ON CARBON MARKETS

The ASEAN Alliance for Carbon Markets has identified six key considerations for the region for the development of carbon markets in Southeast Asia. These are all points that the EU-ASEAN Business Council also endorses. For the record the six key considerations are:

1. Develop carbon market regulation to provide policy and legal clarity and create an attractive investment landscape
2. Ensure the requisite institutional and technical capacity is developed to create a robust carbon market
3. Align standards around established best practice and recognise international standards to enable greater market access and standardisation.
4. Develop robust domestic compliance schemes to create new and reliable demand for carbon credits
5. Endorse and raise public awareness of carbon markets.
6. Formulate Article 6 processes to open new avenues for international demand and cooperation.

Appendix

What are Carbon Markets & Carbon Credits?

Carbon markets are mechanisms that enable the trading of carbon credits or allowances to incentivise emissions reductions. They exist in two main forms:

- Compliance carbon markets, where governments set emissions caps and companies can buy and trade allowances for their emissions.
- Non-mandatory carbon markets, where companies or individuals purchase carbon credits to compensate for emissions beyond their own reduction efforts.

Both types of carbon markets play a role in driving climate action, but they must complement, not replace, direct decarbonisation efforts. In other words, carbon markets provide a mechanism to help reduce greenhouse gas emissions by enabling companies that remove or avoid emissions to trade credits with those that face greater challenges in cutting their own emissions.

Carbon markets are carbon pricing mechanisms enabling governments and non-state actors to trade greenhouse gas emission credits. The aims is to achieve climate targets and implement climate actions cost effectively.

UN Environment Programme

Carbon offsets fund emission reduction activities such as tree planting or nature conservation in lieu of completely eliminating their own emissions. A system of carbon credit offsetting was agreed at the Glasgow COP26 in November 2021.

The key principles of carbon allowances are:

- To create a mechanism to reduce greenhouse gas emissions
- Organisations receive a set number of credits that decline over a period of time, and they can sell excess credits to another organisation.
- They create a monetary incentive for organisations to reduce their carbon emissions
- They are based on the “cap-and-trade” model used to reduce sulphur pollution in the 1990s

There are two types of carbon markets: mandatory and non-mandatory. The former, as the name suggests, is one where there is an obligation to participate with the market being established by a regulatory body. Under the latter type, there is no formal obligation to participate and no specific targets, but rather organisations seek to voluntarily offset their emissions.

ENHANCING AMBITION THROUGH CARBON MARKETS

Carbon markets do not create ambition for parties. Rather, they create conditions that make enhanced ambitions more attractive through the implicit incentive that emissions mitigation is cost-effective, thereby lowering political and stakeholder resistance to tightening targets and facilitating emission reductions and strengthened targets over time. Experience from the world's current major emissions trading systems supports this approach (Parker 2019). Emissions within trading systems have always fallen faster and at a lower cost than initially expected (Haites 2018). Periods of low prices have been followed by a period of policy reassessment and more ambitious targets, as seen under the European Union Emissions Trading System (EU ETS), the Regional Greenhouse Gas Initiative (RGGI) and California's cap-and-trade programme.

Extracted from "The Heat is On" Emissions Gap Report 2021 - UNEP

The *Emissions Gap Report 2021*[10] from the UN Environment Programme and the UNEP Copenhagen Climate Centre, made it clear that without substantial additional action global temperature rises far in excess of the original Paris Agreement targets could be expected. That report also made it clear that "carbon markets could also help slash emissions. But that would only happen if rules were clearly defined and target actual reductions in emissions, whilst being supported by arrangements to track progress and provide transparency." That report also noted that "There is growing interest from countries in using markets and voluntary cooperation to implement their NDCs."[11]

There is no doubt that the establishment of Carbon Markets can contribute to emission reduction, as part of broader decarbonisation efforts. The extent that this is possible, though, does depend on there being robust rules to ensure environmental integrity, including the avoidance of double counting, capacity-building and the management of potential carbon leakages.

According to the World Bank there are now 75 carbon pricing instruments in operation worldwide, with carbon pricing revenues now in excess of US$100bn. Over half of the collected revenue is used to fund climate and nature-related programmes.[12]

Carbon Market Best Practice – The EU-ETS

The oldest, and perhaps best known, Carbon Market in the world is the European Union's Emissions Trading System (EU-ETS). According to the European Commission's Directorate-General for Climate Action (DG CLIMA) The EU ETS is based on a "cap and trade" principle. The cap refers to the limit set on the total amount of GHG that can be emitted by installations and operators covered under the scope of the system. This cap is reduced annually in line with the EU's climate target, ensuring that overall EU emissions decrease over time. Since 2005 the EU ETS has helped bring down emissions from European power and industry plants by approximately 47%.

The EU ETS cap is expressed in emission allowances with one allowance giving right to emit one tonne of CO_2 eq (i.e., carbon dioxide equivalent). Allowances are sold in auctions and may be traded in the secondary market. As the cap decreases, so does the supply of allowances to the EU carbon market. Under the system, companies must monitor and report their emissions on a yearly basis and surrender enough allowances to fully account for their annual emissions. If these requirements are not met, heavy fines are imposed.

While allowances are predominantly sold in auctions, companies receive some allowances for free. Companies may also trade allowances among themselves as needed. If an installation or operator reduces emissions, the company can either sell the spare allowances and/or keep them to use in the future. All these operations are recorded in the Union Registry. Importantly, the EU ETS is an open market, with the option to voluntarily participate for both non-obliged companies and individuals.

EU ETS SUMMARY

- Requires polluters to pay for their greenhouse gas (GHG) emissions;
- Launched in 2005, it is the world's first carbon market and among the largest ones globally;
- Helps bring overall EU emissions down while generating revenues to finance the green transition;
- Covers emissions from the electricity and heat generation, industrial manufacturing and aviation sectors - which account for roughly 40% of total GHG emissions in the EU;
- Started covering emissions from maritime transport in 2024;
- Operates in all EU countries plus Iceland, Liechtenstein and Norway, and is linked to the Swiss ETS (since 2020).

Source: https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/what-eu-ets_en

The price of allowances is determined by the EU carbon market, which is subject to a robust set of oversight rules. A key feature of the EU ETS is its declining cap on emissions. This increasing scarcity in allowances ensures that allowances retain market value and serves as a direct incentive for companies to decarbonise, as they must cut emissions or face rising costs. The carbon price incentivises companies to reduce emissions cost-effectively, and also determines the revenue generated from the sale of allowances. Since 2013, the EU ETS has raised over EUR 175 billion.

The EU ETS revenue primarily flows to national budgets and Member States must use it to support investments in renewable energy, energy efficiency improvements and low-carbon technologies that help reduce emissions and, with this, companies' carbon costs. Furthermore, a share of the EU ETS revenue supports low-carbon innovation and the EU's energy transition via the Innovation Fund and the Modernisation Fund.[13]

It is the view of the EU-ASEAN Business Council that the EU-ETS should be used by ASEAN Member States as a reference point when developing their own Carbon Markets, as it would allow for interoperability between markets. Close alignment on approaches would also make it easier for companies to trade carbon credits across borders.

State of Play in ASEAN

Current Mechanisms, Outcomes, Plans and Barriers to Carbon Policies in ASEAN

Countries	Mechanism	Future Plans	Challenges (Barriers)
Brunei	<u>Strategy 6: Carbon Pricing of the Brunei Darussalam National Climate Change Policy</u> • Brunei intends to introduce carbon pricing applicable to all industrial sectors and power utilities emitting beyond a carbon emission threshold limit by 2025	• Reduce overall emissions through 'As Low as Reasonably Practicable' (ALARP) • Increase carbon sink through afforestation and reforestation – plant 500,000 new trees • Increase Electric Vehicles (EV) by 60% of total vehicle sales by 2035 • Reduce GHG emissions by at least 10% through better supply and demand management of electricity consumption • Impose price on carbon emissions	• The oil and gas industry are key drivers for Brunei's economic growth which conflicts heavily with the goal to establish aggressive carbon pricing strategies
Cambodia	No carbon pricing policies have been established yet	• Develop legal instruments for economic measures leading to the establishment of carbon pricing instruments • Develop MRV guidelines and MRV systems at facility, policy, sectoral and national levels	• Lack of activity data and local emissions factors • Insufficient financial support • Lack of technical capacities and national experts
Indonesia	<u>Carbon Pricing Implementation</u> • Framework for Carbon Pricing Implementation presents guidelines and provides the legal basis, covering carbon trading and offsetting institutional arrangements and MRV <u>Carbon Trading in the Power Generation Subsector</u> • Carried out through emissions trading and GHG emission offsets • Conducted through direct trade (over the counter) and carbon exchange	• Set targets to reduce greenhouse gas emissions by 31.89% by 2030 through domestic measures or by 43.2% with international support • Plans to reduce dependence on fossil fuels by shifting to renewable energy, with long-term goal of achieving net zero by 2060, with carbon capture • Outlined a large-scale investment program over the next 15 years until 2040, totalling $235 billion to build more than 100 GW of additional power	• Absence of a comprehensive market (still under development) • Low price of carbon • Indonesia still has subsidies for fossil fuels

Lao PDR	No carbon pricing policies have been established yet	• Aims for a 60% reduction in emissions compared to the 2000 baseline scenario, equivalent to approximately 62 million tonnes of CO2 equivalent • Set conditional targets regarding hydropower, energy efficiency and transport (achieved with voluntary international cooperation or external financial support)	• Currently, there are no specific guidelines or rules for carbon pricing or credits which limits the scope of carbon credit • Historically, the government has not been engaged in carbon trading and has not financially gained from it, might not end up being a long term
Malaysia	In progress: investing the potential for a carbon tax and developing a policy and design framework for a domestic ETS	Budget 2025: plans to implement a carbon tax aimed at the iron, steel and energy industry by 2026 • Aims to reduce carbon emissions intensity by 45% (compared to 2005 levels) by 2030	• The way that implementation occurs needs to be handled really well in order to avoid disproportionate burden in certain sectors or communities, misalignment of carbon pricing policies with existing policies or international commitments/cooperation
Myanmar	No carbon pricing policies have been established yet However, • As of December 2018, Myanmar was the host of 4 registered CDM projects • Participates and hosts project under Japan's Joint Credit Mechanism (JCM)	• Amend existing and/or develop new existing policies, laws and regulations • Strengthen GHG inventory inclusive of emissions • Carbon pricing is not under consideration but Myanmar have been gaining experience on market-based mechanisms + result-based payments related to the reduction of GHG emissions, particularly in the form of CDM (as stated)	• Lack of technical support and capacity enhancement to facilitate the effective implementation of carbon pricing policies • Uncertainties in regards to any mention of carbon pricing strategies and plans for methodologies that will be used • Current policies on energy consumption subsidies are placing negative prices on GHG emissions
Philippines	Considering implementing a domestic carbon pricing instrument, with the support of the World Bank Partnership for Market Readiness • November 2023, a Memorandum of Understanding (MOU) was signed between the Climate Change Commission and Maharlika Carbon Technologies Liability Limited Corporation	• Planning on introducing a carbon pricing framework following the passing of its Low Economy Investment Act of 2023 • Implement market reforms to enhance competition and attract investment within the primary energy sectors • Develop measures to mitigate the impacts of	• Economic expansion led to high electricity prices, unreliable supply, and dependence on fossil fuels which will only worsen with the implementation of carbon tax • Led to significant transmission costs and a costly import of fuel for coal-fired power plants ➔ supplies approximately 40% of the country's

	However, the country was the fastest-growing economy in 2023, the Philippines overtook neighbouring countries with its GDP expansion of 5.6% in 2023.	carbon pricing on industrial competitiveness	energy mix ➔ power generation alone makes up 54% of the electricity rate • However, the country's plans to expand the economy and meet/improve its energy requirement ➔ expensive and unreliable • Furthermore, the country's vulnerability to climate change further underscores the urgency of its commitment to reducing GHG emissions by 75% by 2030 under the Paris Agreement
Singapore	Carbon Pricing (Amendment) Bill • The carbon tax rate was established for the initial 5-year period (2019-2023) • Allows emitters a transitional phase for necessary adjustment before it will be raised to SGD25/tCo2 in 2024-2025 and potentially SGD 50-80 by 2030	• Gradually increase the carbon taxes rate in accordance with regulations, aiming to reach SGD50-80 tonnes of CO2 emissions by 2030 • Establish a transition framework for existing emissions-intensive trade-exposed (ETE) companies to adjust to a low-carbon economy and avoid carbon leakage	• Possibility of developing an oversupplied market due to resistance from industry and the potential impact on competitiveness
Thailand	Thailand's Excise Department is set to implement carbon tax on 3 sectors (energy, transport and industry) February 2025 Thailand plans to levy carbon taxes in 2025, aligned with the enactment of the 'Global Warming Act'	• Integrate with regional market • Expand ETS coverage	• Lack of capacity and knowledge • Controlling the effects on electricity prices
Vietnam	Currently developing pilot National Crediting Programmes (expected to start in 2024) and a national ETS (expected to start at 2028) 24 January 2025: Vietnam Prime Minister issued Decision No. 232/QD-TTg, approving a project to develop the country's carbon market • Carbon credit market (expected in 2029)	• Developing regulations for carbon credit management and operating the carbon credit exchange • Guiding the implementation of the domestic and international carbon credit exchange and offset mechanism	• Struggling to determine the criteria for carbon pricing • Resistance from industry

Existing work at ASEAN-level or other bilateral/multilateral initiatives AMS are involved in

<table>
<tr><th>Countries</th><th>Bilateral Initiatives</th></tr>
<tr><td>Brunei</td><td>• MOU signed with Singapore regarding regional power grids and low-carbon solutions and carbon credits</td></tr>
<tr><td>Cambodia</td><td>• MOU signed with Singapore regarding regional power grids and low-carbon solutions and carbon credits</td></tr>
<tr><td>Indonesia</td><td>• Indonesia and Japan have signed a mutual recognition agreement for bilateral carbon trading (MRA)
o 35 projects under the JCM
• MOU with Singapore to collaborate on climate change, including carbon markets
• MOU to support GHG reductions from FOLU</td></tr>
<tr><td>Lao PDR</td><td>• Singapore importing renewable hydropower from Lao PDR, as part of the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP)
o Lao PDR and Singapore have also signed an MOU to collaborate on carbon credits aligned to article 6 of the Paris Agreement
• Lao PDR signed a bilateral deal with South Korea on the development of large-scale solar and landfill projects</td></tr>
<tr><td>Malaysia</td><td>• Singapore and Malaysia share a Framework on Cooperation (FOC) In Green Economy, including carbon industry collaboration</td></tr>
<tr><td>Myanmar</td><td></td></tr>
<tr><td>Philippines</td><td>• Singapore and Philippines have agreed to strengthen cooperation on carbon credits and the development of healthcare workers, however, nothing has been signed yet.</td></tr>
<tr><td>Singapore</td><td>• 3 bilateral implementation agreements – Papua New Guinea, Ghana, and Bhutan➔ companies can buy carbon credits to offset up to 5% of their taxable emissions, provided the carbon projects done in these 3 countries meet Singapore's eligibility criteria
• Singapore is trying to establish implementation agreements with 19 countries
• Singapore has also signed MOUs (Memorandum of Understanding) with:
<table>
<tr><th>Americas</th><th>Asia + Oceania</th><th>Africa</th></tr>
<tr><td>Chile
Colombia
Dominican Republic
Peru</td><td>Cambodia
Fiji
Lao PDR
Mongolia
Sri Lanka
Vietnam
Brunei
Indonesia</td><td>Kenya
Morocco
Rwanda
Senegal</td></tr>
</table>
• Singapore has also signed further MOUs with: Australia, Brunei, Cambodia, Chile, Indonesia, Japan, Lao PDR, New Zealand and Vietnam – collaborate on areas including regional power grids + low-carbon solutions</td></tr>
<tr><td>Thailand</td><td>• Thailand and Japan have 24 projects together under the JCM
• Switzerland and Thailand collaborate on the Bangkok E-Bus Program which is authorised under Article 6.2</td></tr>
<tr><td>Vietnam</td><td>• Japan and Vietnam collaborate on 18 projects under the JCM
• South Korea and Vietnam collaborate on 3 projects as contracted under Article 6.2
• Singapore and Vietnam have signed an MOU to collaborate on carbon credit aligned under Article 6 of the Paris Agreement</td></tr>
</table>

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