



# CARBON ACCOUNTING ROUNDTABLE

**WHITE PAPER**

Kuala Lumpur, May 2025

---

### **About Asia School of Business**

Challenge conventional thinking and create change beyond business. Established in 2015 by Bank Negara Malaysia in collaboration with MIT Sloan School of Management (MIT Sloan), Asia School of Business (ASB) is committed to developing transformative and principled leaders who will create a positive impact in the emerging world and beyond.

### **About Center of Technology, Strategy and Sustainability**

The Center of Technology, Strategy & Sustainability (CTSS) is a research center housed at Asia School of Business (ASB) in Kuala Lumpur, Malaysia. The Center of Technology, Strategy & Sustainability is endowed by Sapura Energy, and aims to be a leading center of excellence and research on business strategies and technology in emerging markets and their socio-political environment.

Contact us at [ctss@asb.edu.my](mailto:ctss@asb.edu.my).

### **About Yinson Holdings Berhad**

Yinson Holdings Berhad ("Yinson") is a global energy infrastructure company, listed on the Main Market of Bursa Malaysia Securities Berhad. We are active in three businesses:

- Yinson Production is a leading independent owner and operator of floating production, storage, and offloading (FPSO) vessels worldwide, with an order book of over USD 19 billion until 2048.
- Yinson Renewables is a global independent renewable power producer with 557 MW of utility scale renewable generating assets in operation, a pipeline of over 1.5 GW of projects in development and over 3 GW of early-stage opportunities.
- Yinson GreenTech is a green solutions provider that aims to electrify the transportation and logistics sectors across land and sea by delivering a clean, technology-enhanced and digitally-integrated zero-emissions ecosystem.

Yinson is recognised for our leadership position in sustainability and ESG. Through our businesses, we are supporting an inclusive energy transition towards a low carbon future.

For more information, please visit [www.yinson.com](http://www.yinson.com).





---

# Executive Summary

Reducing greenhouse gas (GHG) emissions is critical to limit global warming and its deep social and environmental impacts. Accordingly, the 2015 Paris Agreement (UN 2015) calls for an ambitious goal for emissions reduction and removals by all parties, albeit recognizing the special circumstances of developing countries. In this context, carbon pricing and developing the associated market mechanisms are seen as a key driver to help countries and firms to move to a low-carbon development pathway. Driven by the recognition that climate risks are financial risks, policymakers, investors, and company managers in today's evolving economic landscape have to integrate carbon accounting and disclosure practices into their core decision-making processes.

Although the importance of carbon accounting is now widely recognized, the field is still nascent, lacks a common understanding, and remains mired in fragmented standards and methodologies. Various frameworks – such as the GHG Protocol, ISO standards, and emerging jurisdiction-specific regulations or voluntary standards (like SBTi) – offer different approaches to measuring, reporting, and verifying emissions, leading to inconsistencies and confusion among firms and stakeholders.

It is also unclear whether carbon accounting standards and practices developed by organizations and regulators from rich economies are feasible or appropriate for emerging economies like many nations from Southeast Asia, Africa, or Latin America.

To facilitate a discussion on carbon accounting in the ASEAN and Malaysia context, a group of senior business and financial leaders of major companies in Malaysia gathered at Asia School of Business (ASB) on the 10th of April 2025 for the “Carbon Credit Accounting Roundtable: The Cost of Carbon and its Impact on Finance.” The event was done in collaboration with Yinson Holdings Berhad, the Malaysia Carbon Market Association (MCMA) and ASB. The discussion was conducted under Chatham House rules, allowing participants to speak freely without attribution. This white paper summarizes key points discussed during the roundtable with the aim to inform future dialogue, policy development, and private sector strategies. It concludes by pointing out that regional harmonization, capacity building, and policy clarity are needed to establish a robust, transparent, and credible carbon accounting ecosystem that supports Malaysia's and ASEAN's transition to a low-carbon economy.

---

# Introduction and Background

Tackling climate change includes both reducing emissions from existing economic activities as well as removing them from the atmosphere. The latter is particularly critical for sectors which are technically challenging to decarbonize given current technologies. Offsetting emissions through credits which promote emissions removal (e.g., through mineralization or photosynthesis) is key for corporations and countries to achieve net zero targets (Kaplan, Ramanna, and Roston, 2023).

Pricing carbon – either by creating tradable markets (“cap-and-trade”), a direct tax, or a combination of both (hybrid regimes) – are widely considered to be one of the most efficient ways to reduce emissions. Government regulations and voluntary commitments by companies have given rise to carbon markets, which is the trade of carbon permits or credits where one unit of carbon is equivalent to one ton of carbon dioxide equivalent (CO<sub>2</sub>eq).<sup>[1]</sup> In 2024, 19% of global GHG emissions were covered under the carbon market system as compared to 6% covered under the carbon tax system.<sup>[2]</sup> Today, the two largest carbon markets in the world are the Chinese national carbon trading scheme which has operated since 2021 and the EU which was launched in 2005.<sup>[3]</sup>

Carbon markets can be broadly divided into two types: mandatory or voluntary carbon markets. Mandatory carbon market, sometimes referred to as a compliance market or a cap-and-trade system, is when a government sets a maximum emission level (or a cap) for the country depending on their emissions target. Typically, after setting the targets, the government allocates a permit equivalent to one unit of carbon to entities such as firms.<sup>[4]</sup> The allocation of permits to entities can be calculated based on past emissions or alternatively, allocated through an auction, or through a combination of the two. Firms, especially in hard-to-abate sectors, will respond to reduce emissions based on how these permits are allocated.

Voluntary carbon market is the buying and selling of carbon credits which represents one ton of carbon emissions avoided, reduced, or removed from the atmosphere.<sup>[5]</sup> Voluntary carbon markets are a platform for entities to advance their own sustainability goals beyond government mandates. Carbon credits are issued through the process of “assessment, verification, and registration of carbon projects”.<sup>[6]</sup> Carbon projects can be categorized into two types: nature-based and technology-based.

[1] Bursa Malaysia and Malaysian Green Technology and Climate Change, “VCM Handbook: Your Comprehensive Project Development Toolkit.”

[2] World Bank, “GHG Emissions Coverage.”

[3] World Bank

[4] International Carbon Action Partnership, “What Is Emissions Trading?”

[5] Bursa Malaysia and Malaysian Green Technology and Climate Change, “VCM Handbook: Your Comprehensive Project Development Toolkit.”

[6] Bursa Malaysia and Malaysian Green Technology and Climate Change.

An example of a nature-based carbon project is one where firms engage in reforestation of mangrove trees and an example of a tech-based carbon project is one where firms invest in carbon capture and storage technologies; in both cases, carbon dioxide is removed from the atmosphere.

In Malaysia, the government has pledged to introduce a carbon tax for steel, iron, and energy industries. At the time of writing this paper, discussions were still ongoing whether a cap-and-trade system would also be implemented and the National Policy on Climate 2.0 had reiterated the importance of carbon markets in reducing carbon emissions.<sup>[7]</sup>

In 2021, Bursa Malaysia introduced the Bursa Carbon Exchange (BCX) to facilitate the creation of Malaysia's first voluntary carbon exchange where market players can trade carbon credits.

As of March 2025, the BCX offers carbon credits for firms to reduce their scope 1, 2, and 3 emissions.<sup>[8]</sup> The registration for these carbon projects are done via two organizations: Verra and Gold Standard with vintages starting from 2016. Below is a menu of carbon credit contracts available for traders in the BCX.

Malaysian Contracts	Global Contracts
<b>Malaysia Nature-Based Plus Carbon Contract (MNC+)</b> Each MNC+ represents a carbon credit issued by Gold Standard or Verra via a standardised contract, generated by nature-based projects that demonstrates co-benefits or SDG contributions through prevailing methodologies from the Agriculture, Forestry and Other Land Use (AFOLU) sector located in Malaysia.	<b>Global Nature-Based Plus Carbon Contract (GNC+)</b> Each GNC+ represents a carbon credit issued by Gold Standard or Verra via a standardised contract, generated by international nature-based projects that demonstrates co-benefits or SDG contributions through prevailing methodologies from the Agriculture, Forestry and Other Land Use (AFOLU) sector located outside of Malaysia.
<b>Malaysia Technology-Based Plus Carbon Contract (MTC+)</b> Each MTC+ represents a carbon credit issued by Gold Standard or Verra via a standardised contract, generated by technology-based projects from sectors other than Agriculture, Forestry and Other Land Use (AFOLU) sector that demonstrates co-benefits or SDG contributions located in Malaysia.	<b>Global Nature-Based Carbon Contract (GNC)</b> Each GNC represents a carbon credit issued by Verra via a standardised contract, generated by international nature-based projects from the Agriculture, Forestry and Other Land Use (AFOLU) sector located outside of Malaysia.
<b>Malaysia Technology-Based Carbon Contract (MTC)</b> Each MTC represents a carbon credit issued by Verra via a standardised contract, generated by a technology-based projects from sectors other than Agriculture, Forestry and Other Land Use (AFOLU) located in Malaysia.	<b>Global Technology- Based Plus Carbon Contract (GTC+)</b> Each GTC+ represents a carbon credit issued by Gold Standard or Verra via a standardised contract, generated by international technology-based projects from sectors other than the Agriculture, Forestry and Other Land Use (AFOLU) located outside of Malaysia.
	<b>Global Technology-Based Carbon Contract (GTC)</b> Each GTC represents a carbon credit issued by Verra via a standardised contract, generated by international technology-based projects from sectors other than Agriculture, Forestry and Other Land Use (AFOLU) located outside of Malaysia.

*Diagram 1: Carbon Credit Offerings, taken from <https://bcx.bursamalaysia.com/web/products>*

[7] Ministry of Natural Resources and Environmental Sustainability, "National Policy on Climate Change."

[8] For a brief definition of scopes of emissions please see MIT Climate Portal (2024).

---

# Challenges in Expanding Carbon Credits in Malaysia

The roundtable highlighted several issues with carbon credits in Malaysia and possible challenges as the country is expanding its carbon pricing mechanism to achieve its net-zero goal.

From the supply side, one critical issue highlighted during discussions was the high administrative cost of verification of carbon projects i.e. the second step prior to registering as a carbon credit. One estimate put the process for a forest-based project taking about RM 1 million to comply with verification steps, while a large renewable energy installation takes about RM12 million. “This represents a huge bottleneck...The waiting period, we were told, easily could take up to about eight months to a year,” a market participant complained.

The participant highlighted the role of high administrative costs – in money and time – deterring firms from investing in carbon projects. As a result of these costs, the local supply of carbon credits in the market is limited.

A potential reason to explain the high administrative barriers of carbon credits is the lack of players in the verification and registration markets; the same participant noted that both Verra and Gold Standards make up over 70% of the verification of carbon credits.

Even if there is a high demand for carbon projects, organizations accredited by the two verifiers may not have the capacity to process credit verification efficiently. The processing times for carbon projects to go from inception to credit will delay the potential gains in credit trading and will push firms to invest instead in alternative financial instruments.

The administrative burden by credit verification process is partly explained by the lack of a national crediting scheme when compared to cases such as those by the Indonesian Sistem Registri Nasional (SRN) and the Thai Voluntary Emission Reduction program (TVER). A national crediting scheme with established domestic methodologies of measuring, reporting, and verifying GHG offsets will reduce the cost of entry for local players thereby increasing the speed of verification.

---

The administrative burden by credit verification process is partly explained by the lack of a national crediting scheme when compared to cases such as those by the Indonesian Sistem Registri Nasional (SRN) and the Thai Voluntary Emission Reduction program (TVER). A national crediting scheme with established domestic methodologies of measuring, reporting, and verifying GHG offsets will reduce the cost of entry for local players thereby increasing the speed of verification.

However, countries may have a different definition of carbon credits than others which leads to a difference in the interoperability of carbon credits between different jurisdictions. As such, carbon credit consumers place a premium on credits they can use globally as opposed to domestically. The result is that carbon market players in Malaysia are primarily composed of internationally-exposed firms as opposed to domestic-oriented ones. Expanding the carbon market to also include domestic-oriented firms will be the task ahead.

To meet the demand of market expansion, clear transparency and information on carbon credit interoperability is vital to prevent the failure of the market to set the right price. A mature carbon market would need to resolve the issues of transparency in carbon credit production, better information on carbon credit quality, and more efficient verification processes.

A well-functioning domestic carbon market would adhere to the best practices outlined by organizations such as The Integrity Council for the Voluntary Carbon Market (ICVCM) and Voluntary Carbon Markets Integrity Initiative (VCMI) .

Another major issue of carbon credits involves the trade-off between international standardization and local supply for carbon projects. There is high potential supply for carbon projects in developing economies, particularly nature-based projects. Local carbon accounting standards may be set in a way that is not recognized as meeting the rigor expected by firms based in developed economies, who would be the buyers of credits. On the other hand, setting too high of a standard may not generate the push to develop carbon projects in these developing economies. As a result, carbon credits generated using local standards may not meet the quality of international standards reducing their earning potential. Carbon credit producers may have to forgo international standardization to increase the quantity of credit production whereas carbon credit consumers have to accept the risk of bad reputation (e.g., greenwashing allegations) for accepting carbon credits produced through local standards.

---

# Possible Solutions to Expand Carbon Credits

To soften the bottleneck of administrative costs, the roundtable debated on the potential for mutual recognition of carbon credit methodologies between ASEAN countries through the development of an ASEAN Common Carbon Framework (ACCF). By having an ASEAN standard for one unit of carbon, international and domestic validators can be employed to perform verification without the need to rely on a small number of players. As a result, carbon projects from inception to credit can be done in a shorter time which will induce market entry for firms wishing to reduce their carbon emissions.

The example of the Malaysian Sustainable Palm Oil (MSPO) certification scheme was brought up as a potential model. MSPO was set up as a national alternative to the international, private-led Roundtable on Sustainable Palm Oil (RSPO). MSPO was cited as a more inclusive certification scheme which contributed to raising the sector's sustainability practice.

In addition to easing bureaucratic processes, a mutual recognition of carbon credits between ASEAN countries has the advantage of creating a regional carbon market.

The expansion of the carbon market beyond the local borders can generate the much needed supply of carbon credits for Malaysian firms whilst encouraging the development of projects to be sold to other countries like Singapore or Thailand. Not only that, the regionalization of the carbon market will generate the pressures to specialize based on the relative endowments of each ASEAN country, similar to gains in trade.<sup>[9]</sup> Countries with rich endowments of natural resources suitable for carbon projects can specialize in credit production while carbon-intensive countries can improve their production efficiency through scaling up their manufacturing capacities.

One possibility is the emergence of a dual-market, whereby firms exposed to international regulations, like significant exporters, will seek credits which are recognized beyond national boundaries and ASEAN, while regional firms and SMEs would be the main beneficiaries of certification standards which bear lower costs and are catered to the regional circumstances.



---

A proposed ASEAN Common Carbon Framework, championed by organizations such as the Malaysia Carbon Market Association (MCMA), would support several goals that together would facilitate an ASEAN strategy for carbon neutrality. It can contribute towards the development of more carbon projects (supply) via independent and/or national carbon standard(s) based on mutually recognized methodologies, as well as the buildup of local capabilities and new business opportunities. As shared by different roundtable participants, there is an appetite by institutional investors and large local companies to fund carbon offset projects, but a limited pipeline of such projects based in Malaysia. Public-private coordination to advance the buildup of carbon markets institutional infrastructure can facilitate low-carbon development and the achievement of sustainability commitments by Malaysia and its regional partners.

---

# Recommendations

From the rich discussions, a few key recommendations emerged.

- 1) Accelerate the creation of supporting institutions and regulatory requirements of a carbon market in Malaysia. Strong market signals from the demand side will help further develop local opportunities.
- 2) Consider the emergence of dual carbon markets (local and international) serving small and large players who can participate in buying and selling carbon credits and/or permits. The MPSO and RSPO can be useful reference points. Seek convergence in the medium- to long-term to increase liquidity and international recognition of carbon credits.
- 3) Engage with organizations working on a common ASEAN Carbon Market Framework, which would use methodologies adapted to regional circumstances and with higher recognition and liquidity than strictly-national ones.

The roundtable highlighted both the promise and complexity of building a robust carbon accounting and crediting ecosystem in Malaysia and across ASEAN. As climate action becomes increasingly intertwined with financial and corporate strategies, the need for clear, credible, and inclusive carbon accounting standards grows more urgent. The discussions underscored that while global standards provide essential benefits such as higher liquidity, localized adaptations – reflective of regional capabilities and developmental contexts – are necessary to unlock broader participation and unlock more investments. Moving forward, a collaborative effort among regulators, industry players, investors, and civil society is essential to develop harmonized methodologies, foster institutional capacity, and ensure transparency and trust in the system. Malaysia's position as current chair of the ASEAN secretariat represents an opportunity to catalyze regional cooperation and sustainability action.

---

# References

Bursa Malaysia, and Malaysian Green Technology and Climate Change. "VCM Handbook: Your Comprehensive Project Development Toolkit." Kuala Lumpur: Bursa Malaysia Berhad, 2025.

International Carbon Action Partnership. "What Is Emissions Trading?" October 2023.

Kaplan, Robert S., Karthik Ramanna, and Marc Roston. "Accounting for Carbon Offsets." *Harvard Business Review* 101, no. 4 (July–August 2023): 106–115.  
Ministry of Natural Resources and Environmental Sustainability. "National Policy on Climate Change." Kuala Lumpur: Ministry of Natural Resources and Environmental Sustainability, 2024.

MIT Climate Portal. 2024. Scope 1, 2 and 3 Emissions,  
<https://climate.mit.edu/explainers/scope-1-2-and-3-emissions>

Stek, Pieter E., Renato Lima-de-Oliveira, and Thessa Vasudhevan. "The Development of Carbon Markets in Upper-Middle-Income Countries." *Regulation & Governance* 19, no. 2 (2025): 482–95. <https://doi.org/10.1111/rego.70010>.

United Nations (UN). Paris Agreement. 2015. United Nations Framework Convention on Climate Change,  
[https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf).

World Bank. "GHG Emissions Coverage." Carbon Pricing Dashboard, October 30, 2023. <https://carbonpricingdashboard.worldbank.org/compliance/coverage>.  
*Journal of Economic Literature* 60 (4): 1456–1502. <https://doi.org/10.1257/jel.20211560>.