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Legal Foundations of Vietnam's Emission Trading System: A Path toward Climate Commitments

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Recent global efforts to combat climate change have accelerated, with nations adopting carbon strategies such as carbon taxes and emission trading system (ETS) to support their net-zero commitments. These initiatives enable governments to enforce mitigation while maintaining their dual goal of fostering economic growth. Vietnam, a developing country, has emerged as a proactive participant by launching a national ETS, drawing from international best practices and domestic geographical advantages. This article examines the process and challenges involved in designing and implementing an ETS in Vietnam, exploring the necessary policy frameworks, institutional structures, and market mechanisms. It highlights key considerations such as the selection of sectors and entities to be covered, the allocation of emission allowances, and the establishment of new market management solutions. This article concludes with strategic recommendations to support the development of a successful and sustainable ETS mechanism in developing country like Vietnam.

Keywords
Vietnam, Carbon Market, Emission Trading System, EU-ETS, Climate Change, Kyoto Protocol, Paris Agreement

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I. Introduction

The Emissions Trading Systems (ETS) have become a cornerstone of global efforts to mitigate greenhouse gas (GHG) emissions, offering a market-driven approach to reducing the impact of climate change. By turning emissions into tradable commodities, the ETS allows polluters to buy and sell emission permits, incentivizing the reduction of carbon output.[1] This concept was formalized in the 1997 Kyoto Protocol, which introduced carbon pricing as a key instrument to hold polluters accountable.[2] Carbon credits and allowances, representing one ton of carbon dioxide (CO_2) or its equivalent (CO_2e),[3] have since become the currencies of carbon markets, facilitating the exchange of emission rights.

Carbon markets are generally divided into two types: voluntary carbon markets (VCMs) are driven by voluntary emission reduction initiatives, while compulsory carbon markets (CCMs) operate within national or regional ETS frameworks. The first large-scale ETS was introduced by the European Union (EU) in 2005 (EU-ETS) which remains the largest system globally,[4] accounting for 36% of EU's emissions by 2022.[5] Globally, 36 ETSs are currently in operation, accounting for 18% of global GHG emissions, with many more in the development stage.[6] Most ETSs employ a "Cap-and-Trade" model, where governments cap total emissions and allocate allowances to industries, which are then traded among market participants.

Although the ETS has great potential to reduce GHGs emissions, developing a legal framework for its implementation remains a complex and challenging task, particularly in developing countries. Much of the existing ETS research focused on countries with stronger regulatory frameworks, institutional capacities, and financial resources. These studies tend to emphasize the technical and policy aspects of ETS design in well-established economies, such as the EU and Australia, as well as in large

1 Easwaran Narassimhan et al., *Carbon Pricing in Practice: A Review of Existing Emissions Trading Systems,* 18:8 Climate Pol'y 968 (2018).

2 Kyoto Protocol art. 17.

3 Carbon equivalent (CO_2e) refers to 05 main GHG emissions, including Methane (CH4); Nitrous oxide (N2O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); Sulfur hexafluoride (SF6). *See* Kyoto Protocol, annex A.

4 China's national ETS, which was officially operated in 2022, has become the world's largest system in terms CO_2 emissions covered.

5 European Commission, Report on the Functioning of the European Carbon Market in 2022 pursuant to Articles 10(5) and 21(2) of Directive 2003/87/EC (2023), at 4-5, https://op.europa.eu/en/publication-detail/-/publication/f6ffaa05-77cf-11ee-99ba-01aa75ed71a1/language-en.

6 International Carbon Action Partnership, Emissions Trading Worldwide: Status Report 2024, at 26-7, https://icapcarbonaction.com/system/files/document/icap-2024-status-report-executive-summary_en_240517.pdf.

emerging economies, such as China, where state capacity and resources have enabled more advanced carbon market initiatives.[7] However, there is a critical gap in the literature regarding the unique challenges that developing countries face in adopting the ETS, including balancing economic growth with environmental sustainability, ensuring institutional readiness, and tailoring global frameworks to local contexts.[8]

This study seeks to fill this gap by providing an in-depth analysis of the legal and policy frameworks required to develop a national ETS in Vietnam, which is a rapidly growing economy with ambitious climate goals. Vietnam presents a compelling case study as a developing country that aims to achieve net-zero GHG emissions by 2050. Unlike many other nations, Vietnam's VCM has been active for over a decade and is supported by various international carbon crediting mechanisms.[9] However, the development of a compulsory carbon market (CCM) or an ETS is still in its early stages, with a pilot program scheduled for 2025 and full implementation by 2028. The legal foundation for Vietnam's ETS is established under the Environmental Protection Law (No. 72/2020/QH14) and Decree No. 06/2022/ND-CP on Mitigation of Greenhouse Gas Emission and Protection of the Ozone Layer (Decree No. 06/2022/ND-CP). However, many key provisions remain unclear and lack transparency. Vietnam's experience illustrates the broader challenges that developing countries face in creating the ETS frameworks that are not only legally sound but also compatible with national development objectives.

In this study, the authors are to explore how Vietnam, as a developing nation, navigates the complexities of its ETS design and implementation. It examines legal and institutional challenges, highlights potential solutions, and identifies lessons from international ETS models that can be adapted to Vietnam. In doing so, this article not only provides practical insights for Vietnam, but also offers a template for

7 Michael Pahle et al., *The Emerging Endgame: The EU ETS on the Road Towards Climate Neutrality*, 81 Res. & Energy Econ. 1014476 (2025); Bo Chen & Rui Wu, *Legal and Policy Pathways of Carbon Finance: Comparative Analysis of the Carbon Market in the EU and China*, 24:1 Eur. Bus. Org. L. Rev. 41 (2023); Ara Jo, *Trust and compliance: Evidence from the EU Emissions Trading Scheme* 1-6 & 12-9 (Centre for Climate Change Economics and Policy Working Paper No. 333, 2019), https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2018/06/working-paper-298-Jo-May2019.pdf; Jake Sadikman et al., *The Evolution of Canada's Carbon Markets and Their Role in Energy Transition,* 60:2 Alta. L. Rev. 329 (2022).

8 Partnership for Market Readiness & International Carbon Action Partnership (hereinafter PMR & ICAP), Emissions Trading in Practice: A Handbook on Design and Implementation (2021), at 80-2, https://openknowledge.worldbank.org/entities/publication/fe7cd64d-ec21-566f-86f9-9351d6e3e2e0.

9 Vietnam's carbon credit market began taking shape in 2005, when the country joined the United Nations-run Clean Development Mechanism (CDM), the first international carbon crediting mechanism. As of June 2020, Vietnam ranked fourth globally in the number of registered CDM projects, with 257 projects accounting for a potential reduction of approximately 140 million tons of CO_2. *See* WTO Center, Vietnam's Carbon Market: Progress Report (2023), https://wtocenter.vn/tin-tuc/21632-vietnams-carbon-market-progress-report.

other developing countries facing similar challenges in setting up carbon markets.

The remainder of the paper is structured as follows. First, it reviews Vietnam's current carbon market policies and its international commitments to reducing GHG emissions. Next, it outlines the design framework for the domestic ETS, focusing on market participants, cap-setting, allowance allocation, and carbon trading mechanisms. Finally, it assesses key challenges and provides recommendations for the future development of Vietnam's carbon market, drawing broader conclusions applicable to developing countries.

II. Vietnam's Carbon Market Policy

Global efforts to address environmental protection began to gain momentum in the second half of the 20th century.[10] The establishment of the Intergovernmental Panel on Climate Change (IPCC) in 1988 and its first assessment report (AR1) provided the scientific basis for action on climate change.[11] In June 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted, marking the first international treaty focusing on climate. As outlined in Article 2, the goal is to stabilize greenhouse gas concentrations to avoid harmful interference with the climate system, with developed nations expected to lead in reducing pollution and tackling climate change.

This mandate was further clarified in the 1997 Kyoto Protocol, agreed upon at COP 3 in Japan.[12] The Kyoto Protocol required developed countries (Annex I nations) to reduce their GHG emissions by at least 5% from the 1990 levels in the first commitment period (2008-12) and by 18% in the second period (2013-20).[13] The Protocol also introduced market-based carbon pricing instruments, such as the Clean Development

10 Jasper Mühre, *The Birth of Global Environmentalism: Commemorating 1972 and Its (Legal) Implications for the Human–Nature Relationship,* Völkerrechtsblog (June 1, 2022), https://voelkerrechtsblog.org/the-birth-of-global-environmentalism.

11 IPCC, History of the IPCC, https://www.ipcc.ch/about/history; *See also* Climate Change: The IPCC 1990 and Assessments 6-23 (J. Houghton et al. eds., 1992), https://www.ipcc.ch/site/assets/uploads/2018/05/ipcc_90_92_assessments_far_full_report.pdf.

12 The Kyoto Protocol was adopted on December 11, 1997 and entered into force on February 16, 2005. It operationalizes the UNFCCC by committing industrialized countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. Currently, there are 192 Parties to the Kyoto Protocol.

13 Kyoto Protocol art. 3.

Mechanism (CDM),[14] Joint Implementation (JI),[15] and Emissions Trading(ET),[16] which allowed Annex I countries to meet their emission reduction commitments by engaging in market mechanisms.[17] Later, the Paris Agreement, which came into force on October 5, 2016, set more ambitious global targets, binding all countries to emission reduction obligations aimed at holding "the increase in the global average temperature to well below 2°C above pre-industrial levels" and pursuing efforts "to limit the temperature increase to 1.5°C above pre-industrial levels."[18] The Paris Agreement also introduced a centralized carbon market mechanism in Article 6, with Article 6.4 establishing the Sustainable Development Mechanism (SDM) to support international cooperation in achieving emission reduction targets.

Vietnam, with a long-standing commitment to environmental protection, has been actively participating in these international efforts. Vietnam ratified the UNFCCC in November 1994, the Kyoto Protocol in May 2002, and the Paris Agreement in November 2016. As a non-Annex I party[19] to the Kyoto Protocol, Vietnam is not obligated to meet its binding emission reduction targets. However, the country took voluntary steps to engage in global carbon markets, motivated by the benefits of participating in international carbon crediting mechanisms. In 2005, Vietnam made a significant step forward with the issuance of the Prime Minister's Directive No. 35/2005/CT-TTg, implementing the Kyoto Protocol domestically. Subsequent regulations, including Decision No. 130/2007/QD-TTg, laid the foundation for a national carbon credit market. By June 2015, 254 CDM projects in Vietnam had been approved by the CDM Executive Board, reducing approximately 137.4 million tons of CO_2e.[20]

This progress has paved the way for Vietnam's increased commitment to climate change. In its first Intended Nationally Determined Contribution (INDC) under the

14 *Id*. art. 12.

15 *Id*. art. 6.

16 *Id*. art. 17.

17 Annex I Parties to the UNFCCC include the industrialized countries that were members of the OECD as of 1992, along with countries with economies in transition (EIT Parties), such as the Russian Federation, the Baltic States, and several Central and Eastern European States. This grouping was later refined under Annex B of the Kyoto Protocol, which identified 38 industrialized countries and economies in transition and the EU that have formally stated emission reduction commitments.

18 Paris Agreement art. 2.

19 Non-Annex I Parties to the UNFCCC are primarily developing countries, including groups recognized as particularly vulnerable to the adverse impacts of climate change. The Convention emphasizes support for these countries through targeted activities that address their specific needs, such as investment, insurance mechanisms, and technology transfer. UNFCCC, Vietnam's Intended Nationally Determined Contribution (2015), at 1-4, https://unfccc.int/sites/default/files/NDC/2022-06/VIETNAM%27S%20INDC.pdf.

20 *Id*.

Paris Agreement, Vietnam set the goal of reducing GHG emissions by 8% by 2030.[21] In 2021, however, the country significantly raised its ambition, pledging to achieve net-zero emissions by 2050,[22] a bold commitment that positions Vietnam among the countries making substantial contributions to the global green growth movement.

In response to these challenges, the Vietnamese government has prioritized the development of a national ETS. The initial push came with the issuance of Decision No. 1775/QD-TTg in 2012,[23] which approved the management of GHG emissions and carbon credits trading in international markets. This was codified in Article 41 of the 2014 Law on Environmental Protection (No. 55/2014/QH13), which marks an important step toward GHG management. However, the formal ETS design began to take shape only after the enactment of Law No. 72/2020/QH14 and Decree No. 06/2022/ND-CP.

While Vietnam's progress toward an ETS has been slower than that of global leaders such as the EU (which launched its ETS in 2005) and China (which began piloting systems in 2013 and officially launched a national ETS in 2021), Vietnam remains one of the pioneers in Southeast Asia.[24] Vietnam's efforts demonstrate a serious commitment to developing a functioning carbon market, but there is a clear need to accelerate progress to meet its ambitious 2050 net-zero target.

The framework for Vietnam's ETS, much like that of other countries worldwide, is based on a Cap-and-Trade model. It encompasses key aspects such as allowance allocation procedures, carbon credit management, and the roles of government agencies.[25] The Ministry of Natural Resources and Environment (MNRE)[26] oversees

21 *Id.* at 4.

22 UNFCCC, Remarks by H.E. Mr. Pham Minh Chinh, Prime Minister of the S.R. of Vietnam at the 26th United Nations Climate Change Conference of the Parties (Nov. 1, 2021), https://unfccc.int/sites/default/files/resource/VIET_NAM_cop26cmp16cma3_HLS_EN.pdf.

23 Vietnam Laws, Decision of the Prime Minister No. 1775/QĐ-TTg on Approval of the Project on Greenhouse Gas Emission Management and Carbon Credit Business Activities to the World Market (Nov. 21, 2012), https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Decision-No-1775-QD-TTg-approval-of-project-of-greenhouse-gas-emission-manageme/152113/tieng-anh.aspx.

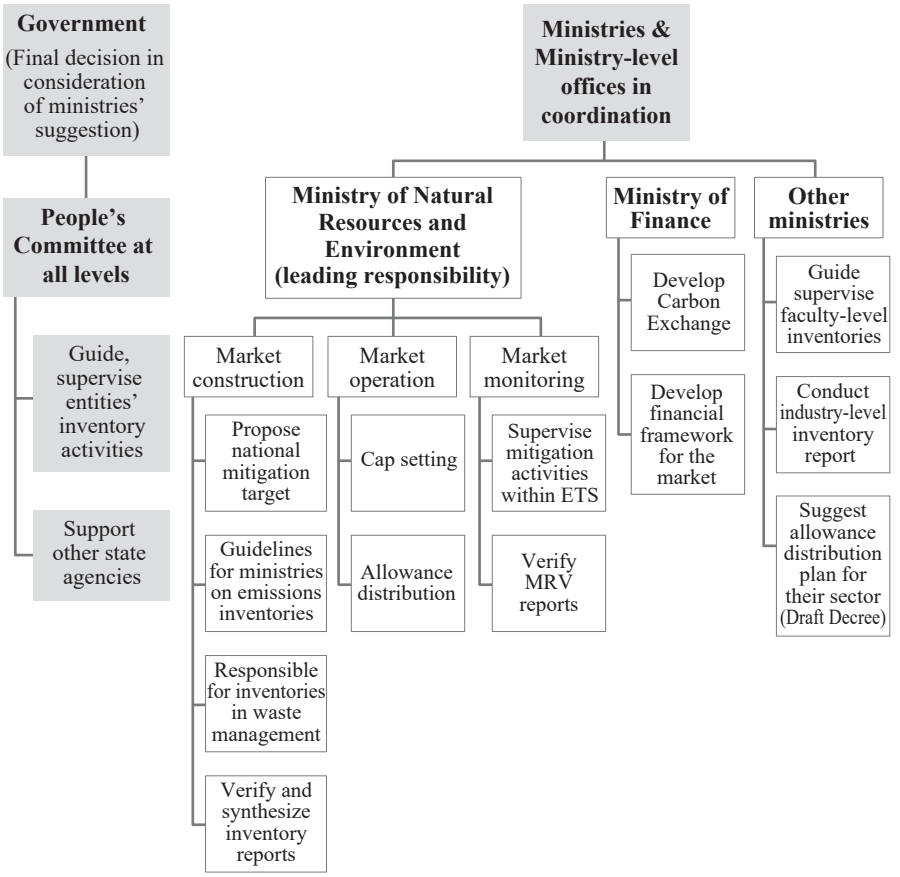
24 As of April 2025, only Indonesia has an operational ETS, while other regional neighbors such as Thailand and Malaysia are still in the planning or pilot phases. See ICAP, *supra* note 6, at 21.

25 In implementing an Emissions Trading System (ETS) under the cap-and-trade model, covered entities are allocated an annual quota of emission permits, also known as carbon allowances. The total number of permits corresponds to the national emissions cap, which is gradually reduced over time to support greenhouse gas mitigation goals (cap setting). Entities may trade these allowances to ensure their emissions remain within permitted limits (trading procedures). *See* Will Kenton, *Cap and Trade Basics: What It Is, How It Works, Pros & Cons*, Investopedia (July 31, 2024), https://www.investopedia.com/terms/c/cap-and-trade.asp.

26 As of March 1, 2025, the Ministry of Natural Resources and Environment (MNRE) was reorganized into the Ministry of Agriculture and Environment (MAE). However, relevant laws and regulations have not yet been updated to reflect this change. See USDA, Vietnam Government Restructuring: Major Changes and Expected Impacts (2025), at 2-3, https://

ETS, while other ministries handle sector-specific activities, such as forestry and industrial emissions. For example, the Ministry of Agriculture and Rural Development supervises forestry, whereas the Ministry of Industry and Trade manages emissions from the industrial sectors.[27] Figure 1 shows the details on the authority structure of Vietnamese state agencies involved in carbon market development.

Figure 1: Authority Structure of Vietnamese State Agencies involved in Carbon Market Development[28]



www.fas.usda.gov/data/vietnam-vietnam-government-restructuring-major-changes-and-expected-impacts.

27 Decree No. 06/2022/ND-CP, Annex I on Mitigation Goals in Various Sectors by 2030 (Jan. 7, 2022), https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Decree-06-2022-ND-CP-mitigation-of-green-house-gas-emissions/503148/tieng-anh.aspx.

28 Complied by the authors.

The current policy framework outlines a phased roadmap for ETS implementation. Vietnam is in the preparatory stage, focusing on building the necessary legal, technical, and data infrastructures. The pilot phase is set to begin in 2025, with full-scale implementation expected by 2028. This timeline is divided into three compliance phases: 2025-2026, 2027-2028, and 2029-2030.

Before the pilot phase, each ministry is responsible for preparing emissions inventories and establishing the required legal foundations. The two critical national policies underpinning this effort are the Environmental Protection Law of 2020 and Decree No. 06/2022/ND-CP. A Draft Decree, opened for public opinion in July 2023, proposes amendments to Decree No. 06/2022/ND-CP. Although the Draft Decree underwent several revisions, it failed to meet the approval deadline set for the end of 2024.[29]

Furthermore, circulars issued by various ministries in 2022 and 2023 have contributed to the development of a comprehensive legal framework for emission inventories as well as measurement, reporting, and verification (MRV) activities. These regulations focus on key sectors such as waste management, industry, and forestry.[30] Table 1 outlines the legal documents published to date that regulate Vietnam's carbon market.

Table 1: List of Published Legal Documents related to Carbon Market Development in Vietnam[31]

No	Legal Document	Legislators	Effective date	Details
1	Decision No. 1775/QD-TTg	Prime Minister	November 21, 2012	Approval of greenhouse gas emission management project; management of carbon credit business activities to the world market

29 Draft Decree Amending and Supplementing a Number of Articles of the Government's Decree No. 06/2022/ND-CP dated January 7, 2022 Regulating Greenhouse Gas Emission Mitigation and Ozone Layer Protection [Dự thảo Nghị định sửa đổi, bổ sung một số điều của Nghị định số 06/2022/NĐ-CP ngày 07 tháng 01 năm 2022 của Chính phủ quy định giảm nhẹ phát thải khí nhà kính và bảo vệ tầng ô-dôn] (hereinafter Draft Decree), https://chinhphu.vn/du-thao-vbqppl/du-thao-nghi-dinh-sua-doi-bo-sung-mot-so-dieu-cua-nghi-dinh.

30 Law Net, Circular No. 17/2022/TT-BTNMT dated November 15, 2022 on Methods for Measurement, Reporting, Appraisal of Reduction of Green House Gas (GHG) Emissions and GHG Inventory Development in Waste Management, https://lawnet.vn/en/vb/Circular-17-2022-TT-BTNMT-measurement-and-reporting-of-reduction-of-green-house-gas-86852.html; Vietnam Laws, Decision No. 01/2022/QD-TTg, on Greenhouse Gas Emitting Facilities Required to Conduct GHG Inventories (Jan. 18, 2022), annex 1, https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Decision-01-2022-QD-TTg-.

31 Complied by the authors.

2	Law on Environmental Protection No. 55/2014/QH13	National Assembly	January 01, 2015	The shape and development of the carbon market are included in the national emission management strategic plan (Article 41)
3	Law on Environmental Protection No. 72/2020/QH14	National Assembly	January 01, 2022	Providing a basic framework on the construction and development of the national carbon market (Article 139)
4	Decree No. 06/2022/ ND-CP	Government	January 07, 2022	Detailing Article 91 (GHG emissions mitigation) and Article 139 (carbon market)
5	Decision No. 01/2022/ QD-TTg	Prime Minister	January 18, 2022	Provide lists of sectors and GHG emission facilities subjected to GHG inventory development that will potentially become market participants
6	Circular No. 17/2022/ TT-BTNMT	Ministry of Natural Resources and Environment	February 15, 2023	Methods for measurement, reporting, and verifying of reduction of greenhouse gas (GHG) emissions and GHG inventory in waste management
7	Circular No. 38/2023/ TT-BCT	Ministry of Industry and Trade	February 11, 2024	Guidelines on methods for measurement, reporting, and verifying of reduction of greenhouse gas (GHG) emissions and GHG inventory in the field of industry and trade
8	Circular No. 23/2023/ TT-BNNPTNT	Ministry of Agriculture and Rural Development	February 1, 2024	Guidelines on methods for measurement, reporting, and verifying of reduction of greenhouse gas (GHG) emissions and GHG inventory in the field of forestry
9	Decision No. 13/2024/ QD-TTg	Prime Minister	October 01, 2024	Lists of sectors and greenhouse gas emitting facilities required to develop greenhouse gas inventory (updated), replacing Decision No. 01/2022/QD-TTg

10	Circular No. 13/2024/ TT-BXD	Ministry of Construction	February 5, 2025	Guidelines on methods for measurement, reporting, and verifying of reduction of greenhouse gas (GHG) emissions and GHG inventory.

As mentioned in Table 1, Vietnam has made significant progress in developing a legal and policy framework for its carbon market supported by a comprehensive set of laws, government decrees, and ministerial guidelines. Although the ETS design is still evolving and the Draft Decree in 2023 marks a positive step toward the realization of a fully operational carbon market, several key details remain to be clarified.

III. Framework for the National Emissions Trading System in Vietnam: Cap and Trade

Under the Cap-and-Trade model, the construction of an ETS involves two main processes: (1) the "Cap," where the government sets a limit on emissions (allowances) and allocates them to participating entities, and (2) the "Trade," where these allowances are exchanged, creating a carbon price that measures the ETS's effectiveness. Therefore, an ETS policy system must determine the market's scope, cap-setting method, allowance allocation process, and trading management solutions.

A. Scope and Coverage

A crucial question in the early stages of the ETS design is determining the GHGs and sectors that should be included. In these stages, policymakers must consider several factors, such as sector emission rates, market structure (number and scale of emissions), availability of infrastructure (data and platforms), the existence of effective emission reduction solutions outside the ETS, and the regulatory environment. It is also important to establish thresholds (e.g., annual emissions, energy consumption, production volume, or capacity) to limit the number of entities required to comply. This helps to reduce compliance costs for small businesses and minimizes the administrative burden on the government. Most countries often choose enterprises with high capacity or pollution in sectors with a high ratio of industry emissions to the total national GDP, such as the energy and manufacturing industries, to be

covered by ETS in the early stages.[32] This range will also gradually expand over time so that the ETS will eventually adjust for all domestic emissions.[33]

In Vietnam, the ETS pilot aims to reduce CO_2 emissions across all economic sectors. For effective management, however, the initial scope must focus on major polluters. The Vietnamese government plans to progressively expand the ETS to six key sectors that together account for 23% of the country's GHG emissions: (1) Energy; (2) Transportation; (3) Construction; (4) Industrial processes; (5) Agriculture, forestry and land use; and (6) Waste management.[34] Facilities subject to regulation under the ETS will be those that meet one of three thresholds related to energy consumption and capacity: (1) annual emissions of 3,000 tons of CO_2e or more, (2) thermal power plants, production facilities, and commercial buildings with annual energy consumption exceeding 1,000 TOE, and (3) waste treatment facilities with a capacity of over 65,000 tons of solid waste.[35] These entities will be required to conduct a facility-level inventory of their GHG emissions starting in 2024 and submit a report to state agencies by March 31 every two years for industry-level emissions assessment, which will inform the determination of the ETS market scope.[36]

At the pilot stage, however, the scope of covering all six sectors may be too ambitious and challenging for state agencies to manage effectively. As a result, an adjustment was proposed in the Draft Decree (Article 12) limiting the allocation of allowances to only thermal power plants, iron and steel production facilities, and cement production establishments from the above inventory list. These entities will become compliance entities, obligated to reduce GHG emissions and permit trade allowances under the national ETS in 2025-26.[37] This selection was influenced by the introduction of the Carbon Border Adjustment Mechanism (CBAM) by both the EU and the US, which aims to control the GHG emissions and impose carbon taxes on certain imported goods. These mechanisms may significantly affect Vietnamese exporters, and the new ETS is expected to incentivize them to reduce emissions, thereby helping them avoid higher export taxes.[38]

32 PMR & ICAP, *supra* note 8, at 59 (Figure 3-1).

33 *Id*. at 55-76.

34 Government of Vietnam, Decision No. 01/2022/QĐ-TTg, on Promulgation of Lists of Sectors and Greenhouse Gas Emission Facilities Subject to GHG Inventory Development [Quyết định số 01/2022/QĐ-TTg của Thủ tướng Chính phủ: Ban hành danh mục lĩnh vực, cơ sở phát thải khí nhà kính phải thực hiện kiểm kê khí nhà kính] (Jan. 18, 2022), https://vanban.chinhphu.vn/?pageid=27160&docid=205181&classid=1.

35 Decree No. 06/2022/ND-CP, supra note 27, art. 6 (1).

36 *Id*. art. 11 (4).

37 Vietnamese law generally uses the term "exchange" in place of "trading," with both terms carrying equivalent meanings in this context.

38 Long Chu et al., Carbon Border Adjustment Mechanism Impact Assessment Report for Vietnam (2023), at 23-37 & 67-75, https://vnlawfind.com.vn/wp-content/uploads/2023/05/Final-CBAM-Assessment-Report_20230503.pdf.

Meanwhile, enterprises not selected for the first phase will still be required to conduct GHG inventories but will not be able to buy or sell carbon allowances. Trading rights will be reserved for compliance entities as well as eligible crediting project holders and those (both organizations and individuals) involved in the carbon credit business. It should also be noted that the participation of financial actors, referred to as "organizations and individuals related to investment and business activities"[39] has been excluded from the market participant list in the Draft Decree. This exclusion may limit liquidity and flexibility in the short term, but this approach better reflects Vietnam's current capacity to manage a simpler ETS.[40]

Notably, the Law on Environmental Protection 2020 and Decree No. 06/2022 do not clearly differentiate between the VCM and the ETS, resulting in regulatory ambiguities. Article 16 of Decree No. 06/2022/ND-CP lists management agencies, inventory units, and various other individuals and organizations as market participants, without distinguishing between the two mechanisms. While the Draft Decree addresses some of these issues, the distinction between the VCM and ETS remains insufficiently defined. Given the different structures and objectives of these markets, the authors believe that it is crucial to establish a separate regulatory framework for the ETS in Vietnam to better clarify its core mechanisms and ensure effective enforcement for the entities it covers.

B. Setting Allowance Limits and Allocations

The first step in developing an ETS is for the government to establish a "Cap" - the maximum allowable emissions for the country and each sector - equivalent to the total number of allowances to be allocated over a given period. The primary aim is to set the cap as strictly as possible (or, in other words, to adopt a higher ETS ambition) to raise carbon prices and enhance the system's efficiency, particularly for a country such as Vietnam, with net-zero target by 2050. However, the actual cap must consider several factors beyond government ambitions, including the capacity of both covered and uncovered sectors to reduce emissions and the balance between administrative costs and economic benefits.[41]

Consequently, in the early stages of ETS implementation, some governments delegate cap-setting authority to regional or sectoral agencies, which estimate the

39 Decree No. 06/2022/ND-CP, *supra* note 27, art. 16 (3).

40 Fabien Roques et al., Impact of Financial Actors on the European Carbon Market and Potential Measures to Stabilise Prices: A Policy Report for Polska Grupa Energetyczna S.A. (2024), at 12-6, https://www.gkpge.pl/content.pdf. It discusses the role of financial actors in increasing long-term instability of EUA prices.

41 PMR & ICAP, *supra* note 8, at 80-2.

total emissions within their jurisdiction and compile them into a national cap (a bottom-up approach).[42] While this method provides better data and insights into national emissions and economic conditions during the pilot period, it can impose a significant administrative burden, as agencies must continually collect and reassess emissions data.[43] For this reason, most ETS systems eventually transition to a top-down approach, by which the government sets an 'absolute' cap for the entire country over a specific period, simplifying cap measurement and assessment. This national cap is typically reduced incrementally over time.[44]

Once the cap is set, the government allocates carbon allowances to regulate entities using methods designed to maximize emission reduction, improve profitability, and minimize carbon leakage.[45] In practice, allowances are often allocated for free in the initial phases to reduce compliance costs and encourage participation. There are two primary methods for free allocation: (1) "grandfathering," which bases the number of allowances on entities' historical emissions, adjusted by factors such as carbon leakage assistance rates and cap decline rates; and (2) "benchmarking," which distributes allowances based on fixed historical output standards for each industry or product type.[46] Grandfathering is typically used for a limited time, owing to its risk of encouraging carbon leakage and diminishing ETS efficiency, whereas benchmarking becomes the preferred method as the systems mature. To incentivize further reductions, policymakers may eventually require entities to purchase allowances through auctions rather than receive them for free. The auction proceeds are then used to fund environmental and energy-related initiatives. This auction-based system is usually introduced once the ETS has reached a more stable phase, aiming to raise carbon prices and enhance market efficiency.[47]

Accordingly, Vietnam's policy on the establishment of caps and allowance allocations will also be gradually adjusted in different phases. During preparation for

42 *Id*. at 83 (detailing how a bottom-up cap was determined by aggregating the emissions/emission reduction potential for those sectors, subsectors, or participants).

43 Jo Dirix et al., *Strengthen Bottom-Up and Top-Down Climate Governance*, 13:3 Climate Pol'y 349 (2013).

44 PMR & ICAP, supra note 8, at 83 (defining that an absolute cap sets an upfront limit on the quantity of emissions using the top-down approach based on the overall emission reduction objectives and a high-level assessment of mitigation potential and costs across covered sectors.

45 Carbon leakage is defined as the increase in CO_2 emissions outside the countries taking domestic mitigation action divided by the reduction in the emissions of these countries. *See* Climate Change 2007: Mitigation of Climate Change 665, ¶ 11.7.2 (Bert Metz et al. eds., 2007), https://www.ipcc.ch/site/assets/uploads/2018/03/ar4_wg3_full_report-1.pdf.

46 PMR & ICAP, *supra* note 8, at 99-121.

47 David Harrison & Daniel Radov, Evaluation of Alternative Initial Allocation Mechanisms in a European Union Greenhouse Gas Emissions Allowance Trading Scheme, European Commission (2002), at 51-82, https://scispace.com/pdf/evaluation-of-alternative-initial-allocation-mechanisms-in-a-3lh3bclvdu.pdf.

the pilot program, the regulations only provide general guidelines on state orientation and principles without specifying the detailed design of the ETS.

1. Cap-setting

Currently, Vietnam's policy has not yet established a total cap for the compulsory market but outlines which agencies have authority. The MNRE is tasked with using emission mitigation targets, roadmaps, and recent inventory results to propose a national cap that will be submitted to the Prime Minister for approval.[48] This cap includes a detailed allocation plan for the estimated compliance period (2026-30) and for each phase. Sectoral ministries then break the cap down into smaller allocations for compliance entities within their respective domains.[49]

If adopted, this regulation would employ a top-down approach, establishing an absolute national cap and dividing it into smaller portions in line with market participants' obligations. Given the early stages of Vietnam's ETS and the lack of detailed emissions inventories, however, this method might be difficult to implement initially. A bottom-up approach, in which sectoral ministries contribute emissions data may be preferable during the pilot phase. Vietnam faces challenges in gathering reliable industry-level data, further complicating its cap-setting efforts.[50]

To address these challenges, the Draft Decree proposes two new options for establishing a national cap.[51] The first option delegates authority to sectoral ministries to propose annual allocations for each facility (e.g., the Ministry of Industry and Trade for thermal power plants and steel production, and the Ministry of Construction for cement production). The MNRE assesses, synthesizes, and submits the final cap for Prime Minister's approval. The second option establishes an interagency council, chaired by the Deputy Prime Minister with 11 members, to approve the national cap and list of compliance entities. These options aim to reduce the administrative burden on central authorities while empowering ministries with sector-specific expertise.[52]

2. Allowance allocation

Decree No. 06/2022/ND-CP stipulates that allowances will be determined by the ministries and allocated free to each compliant facility based on their product units

48 Decree No. 06/2022/ND-CP, *supra* note 27, art. 12 (1).

49 *Id*. art. 12 (2).

50 *Solutions for enterprises in reducing greenhouse gas emissions*, Viet. News (Sept. 28, 2023), https://vietnamnews.vn/economy/1594431/solutions-for-enterprises-in-reducing-greenhouse-gas-emissions.html.

51 Draft Decree, *supra* note 29, art. 1(12).

52 *Id*. art. 1 (12).

(for production and trading entities),[53] which implies using the benchmarking method. However, the Draft Decree proposes that state agencies will rely on the proposals for the cap and verified historical emissions reports at the ministerial level to adjust the actual allocation for enterprises - the grandfathering method.[54] This method may be more suitable in the short term. As the system evolves, however, Vietnam will likely need to transition to benchmarking. In addition, auction-based allocation is expected to be introduced in 2027 on the Carbon Exchange,[55] following the procedures of the Provincial Stock Exchange. Nonetheless, detailed guidelines for these processes are yet to be established. Regarding allocation timelines, the process is expected to be completed by December 31, 2025, for the pilot ETS; by October 31, 2027, for the 2027-2028 phase; and by October 31, 2029, for the 2029-2030 phase.[56]

C. Vietnam's Regulations on the Carbon Trading Process

1. Types of commodities and forms of carbon trading

The carbon market in Vietnam, including the national ETS, facilitates the trading of both carbon allowances and carbon credits (under the offsetting mechanism). The government recognizes these two commodities as tradable property rights, allowing their holders to transfer, exchange, and profit from them, provided that they meet the required quality and allocation standards. Participants seeking to verify the eligibility of their carbon credits and allowances must apply to the MNRE and can receive certification within 15 working days.[57] Particularly for carbon credit cases, commodities exchanged in the market must be issued from January 1, 2021, by legalized crediting programs and projects[58]. Accordingly, projects must be on the list of sectors prescribed by the government, which shall be under international and and domestic crediting mechanisms allowed to be implemented in Vietnam and must satisfy the conditions for project registration and appraisal.[59]

In terms of the transaction form, under the current Decree No. 06/2022/ND-CP, allowances can only be traded through an order-matching system via the Carbon

53 Decree No. 06/2022/ND-CP, *supra* note 27, art. 12(2-3).

54 Draft Decree, *supra* note 29, art. 1(12).

55 The current legislation uses the term "Carbon Credit Exchange," while the Draft Decree proposes replacing it with "Carbon Exchange," a term that aligns more closely with international practice and better reflects the nature of such platforms.

56 Draft Decree, *supra* note 29, art. 1 (12).

57 Decree No. 06/2022/ND-CP, *supra* note 27, art. 18 (2).

58 Draft Decree, *supra* note 29, art. 1 (16).

59 *Id*. art. 1 (18).

Exchange, an electronic platform similar to a stock exchange.[60] Meanwhile, the Draft Decree proposes an additional transaction form allowing direct agreements between market participants.[61] If the Draft Decree is adopted, Vietnam will incorporate the two most common transaction forms in the carbon markets into its legal framework. Compared to international practices, however, Vietnam's trading options remain relatively limited, as over-the-counter (OTC) transactions involving intermediaries, financial entities, and their derivatives in carbon markets are currently prohibited.[62] This restriction is due to the ETS still in its pilot phase. It is expected that as the ETS matures, additional trading forms and financial instruments will be introduced. For carbon credit trading, transactions must be conducted exclusively through Carbon Exchange.[63] Additionally, participants are required to maintain ownership of between 70% and 150% of their total allocated allowances at any given time.[64]

2. Carbon trading management via the National Registry

A well-functioning carbon market requires robust oversight, which Vietnam aims to achieve by establishing a National Registry. This database is distinct from the Carbon Exchange, records, and monitors, and facilitates the issuance, allocation, trading, and transfer of carbon allowances. All market participants must register for an account on the platform before conducting transfers or payments. Typically, the government mandates the establishment of such a registry before the implementation of the ETS, utilizing data collected from state agencies on emissions and allowance allocations for each entity.[65]

While current regulations do not mandate this registry, the Draft Decree amends Article 17 of Decree No. 06/2022/ND-CP, which outlines plans for its establishment by 2026. It also provides detailed requirements for the system, with further guidance expected in subsequent regulations (Supplementing Article 18, Clause 4 of Decree No. 06/2022/ND-CP). Compliance entities automatically receive accounts on the registry, while eligible carbon credit holders wishing to engage in trading must apply for registration through the MNRE. Approval is expected within 15 working days. This

60 Decree No. 06/2022/ND-CP, *supra* note 27, art. 19 (1).

61 Draft Decree, *supra* note 29, art. 1(17).

62 OTC trades introduce liquidity and price information frictions in the EU carbon market due to their larger size and discretionary nature; however, their timing and interaction effects have not been fully investigated. *See* Iordanis Kalaitzoglou & Boulis Ibrahim, *OTC Trades and Liquidity in the European Carbon Market More Than Meets the Eye*, 52:16 Applied Econ. 1760 (2020).

63 Draft Decree, *supra* note 29, art. 18.

64 *Id.*

65 PMR & ICAP, *supra* note 8, at 165-8.

initiative marks significant progress in Vietnam's policy development, promoting better management, transparency, and data consistency.[66]

3. Obligations of enterprises to mitigate and surrender allowances

A compliance entity's performance within the ETS is assessed based on whether its total GHG emissions remain below the allocated limit. This is measured by the number of allowances that the entity must surrender to the state at the end of each phase, where one ton of CO_2 emissions corresponds to one allowance. According to the Draft Decree, enterprises must surrender a minimum number of allowances equivalent to their GHG inventory results for the allocated period by December 31 of the following year.[67] The government also encourages establishments to voluntarily surrender more than the minimum amount (referred to as "deleting allowances"[68]) to help improve overall carbon prices. All these processes are conducted via the National Registry.

In addition to purchasing allowances ahead of time, enterprises can participate in three additional activities to legally manage allowance surrenders: banking, borrowing, and offsetting. "Banking" allows unused allowances from one year to be transferred to the next within the same compliance period (applicable until the end of 2030), while "borrowing" permits the use of up to 15% of the total allowances allocated for the following year within the same commitment period, as a non-transactional loan.[69] These mechanisms offer flexibility in adjusting carbon prices by influencing the market supply and demand. Concerns, however, remain regarding the potential financial risks and delays in mitigation efforts, suggesting the need for tighter restrictions. In terms of offsetting, no more than 10% of allocated allowances may be offset by carbon credit, a ratio considered reasonable to ensure a balanced market supply and avoid reducing the efficiency of the ETS.[70]

4. Compliance Cycle and Enforcement Mechanism

The compliance cycle, which spans one year, involves businesses surrendering their carbon allowances and fulfilling Monitoring, Reporting, and Verification (MRV)

66 *Greenhouse gas emission rules must be streamlined and simple, says Deputy PM*, Viet. News (Mar. 25, 2025), https://vietnamnews.vn/environment/1694483/greenhouse-gas-emission-rules-must-be-streamlined-and-simple-says-deputy-pm.html.

67 Draft Decree, *supra* note 29, art. 1(17).

68 European Commission, EU ETS Handbook (2015), at 80, https://climate.ec.europa.eu/system/files/2017-03/ets_handbook_en.pdf.

69 Draft Decree, *supra* note 29, art. 1(17).

70 Decree No. 06/2022/ND-CP, *supra* note 27, art. 19(3d). This rate remains unchanged in the Draft Decree.

obligations. This process includes: (1) monitoring and measuring emissions; (2) submitting a standard report to authorities according to the stated timeline; and (3) verification, which is usually conducted by a third party to review and evaluate the report.[71] This cycle is crucial for reinforcing confidence in the effectiveness of the ETS and ensuring that businesses fulfill their mitigation responsibilities.

In Vietnam, GHG emission reductions are measured at both the facility and sectoral levels following the guidelines laid out in ministerial circulars for four key industries, namely, electricity, industrial processes, waste management, and forestry. These circulars outline the specific methodologies for each sector. Relevant ministries will prepare and submit sectoral-level reports to the MNRE by January 15 of each year, beginning in 2024. Compliance entities, however, are exempt from these reporting obligations until 2027, after which they must submit annual reports by March 31. Verification will be carried out by an evaluation council comprising representatives and experts from the MNRE and other relevant ministries The Provincial People's Committee will oversee the process by assigning responsibilities to a specialized agency within its jurisdiction.[72] A summary of the evaluation will be submitted to the competent ministry within five working days, after which it will be forwarded to the MNRE in the following year.[73] If required, compliance entities must adjust their reports and resubmit them within an extended timeframe.[74]

The final step in the compliance cycle is surrendering the allowances. In cases of non-compliance, enterprises will face administrative penalties, including the cost of purchasing missing allowances at the current market price and a deduction in the allowances allocated for the next phase.[75] These penalties act as deterrents while generating revenue for the state budget. However, fluctuating carbon prices pose challenges for authorities in determining the exact penalties. To address this, the Draft Decree proposes a new approach requiring enterprises to purchase additional carbon credits from existing forests to offset the surrendered allowances, with the government making adjustments on the National Registry accordingly.[76]

71 Neelam Singh et al., MRV 101: *Understanding Measurement, Reporting, and Verification of Climate Change Mitigation* 1-22 (World Resource Institute, Working Paper, 2016), https://transparency-partnership.net/sites/default/files/mrv_101_0.pdf.

72 Draft Decree, *supra* note 29, art. 1 (11).

73 Circular 11/2022/TT-BTNMT, arts. 11 &13, https://lawnet.vn/en/vb/Circular-11-2022-TT-BTNMT-amending-Circulars-on-business-operations-Ministry-of-Natural-Resources-85D7B.html.

74 *Id*. It requires sectoral management ministries and covered entities to revise and resubmit their reports following the receipt of a valid verification result.

75 Decree No. 06/2022/ND-CP, *supra* note 27, art. 19 (3g).

76 Draft Decree, *supra* note 29, art. 1(19).

Overall, Vietnam has developed a legal framework for its ETS that, while still in its early stages, aligns closely with international practices. This framework addresses key elements such as cap-setting, allowance allocation, and compliance, demonstrating the country's commitment to a forward-thinking and comprehensive system. This policy trajectory reflects Vietnam's ability to adapt its framework to both domestic needs and global standards. In this regard, the ongoing refinement process, culminating in the Draft Decree, marks a significant milestone in the framework's evolution by providing further clarity and legal refinement. The Draft Decree builds on existing regulations by focusing on the pilot ETS on the energy (thermal power) and manufacturing (steel and cement) sectors, which are particularly exposed to external carbon tax measures such as those introduced by the EU and the US. It also introduces new approaches to cap-setting and allowance distribution, empowering ministerial agencies to propose sector-specific caps while establishing a specialized body to manage the national cap.[77]

Furthermore, the Draft Decree addresses the trading of carbon allowances and credits primarily through the Carbon Exchange, which is regulated by the National Registry. Compliance entities must adhere to the MRV obligations and surrender allowances at the end of each cycle, with penalties and future allowance reductions applied in cases of non-compliance. This ongoing development establishes a robust foundation for Vietnam's ETS as it evolves in line with international best practices.[78]

IV. Evaluation of Vietnam's ETS Legal Framework and Future Prospects

Although Vietnam has made substantial progress in its national ETS and carbon market development, one area of concern is the classification of carbon as an asset. Under the current legal framework, carbon allowances and credits are recognized as tradable commodities representing emission rights. However, they do not fit neatly into the property categories defined by Vietnam's Civil Code No. 91/2015/QH13.[79]

77 *Id*. art. 1(12).

78 Major ETSs worldwide - such as the EU ETS, California Cap-and-Trade Program, and the Regional Greenhouse Gas Initiative (RGGI) in the US - all place strong emphasis on the development of MRV systems and rely on annual reporting through electronic data platforms. See PMR & ICAP, *supra* note 8, at 157 (detailing MRV approaches by ETS).

79 Vietnamese Civil Code No. 91/2025/QH13, art. 105, https://thuvienphapluat.vn/van-ban/EN/Quyen-dan-su/Law-No-91-2015-QH13-The-Civil-Code/303230/tieng-anh.aspx.

Some legal scholars have suggested classifying them as "other property rights,"[80] yet even this approach would require a consistent legal definition. This may require amendments to the Civil Code or the introduction of a separate provision in the forthcoming decree that will amend Decree No. 06/2022/ND-CP. Another option would be to classify carbon allowances as financial instruments, as in the EU-ETS and Australia, which would subject them to financial regulations.[81] Allowing financial actors to participate in Vietnam's ETS at this early stage, however, may not align with global trends, and should be considered only after the system has matured.

The current regulations also highlight the challenges related to cap-setting and allocation plans. Although these regulations assign responsibilities to the relevant agencies and outline broad principles for cap-setting, they lack detailed planning. This is partly because of the limited availability of emissions and production data from facilities and insufficient guidance from the government. To address these issues, the Vietnamese government should expedite the approval of the Draft Decree; urge enterprises to complete their GHG emissions inventories; and submit them to the MNRE.[82]

These inventories would be a basis for establishing a national ETS cap. If the bottom-up approach proposed in the Draft Decree is adopted, ministries and local authorities can use verified historical emissions data to allocate allowances. As the ETS expands, however, a benchmarked allocation method is likely to be more effective. Vietnam should also consider introducing an auction mechanism for allocating allowances from 2028, which would improve market efficiency and increase carbon prices. Revenue from auctions can be directed into environmental funds - similar to the EU's Innovation and Modernization Funds[83] - to support energy transitions and environmental protection projects.[84]

Another crucial area of development is to establish a National Registry and Carbon

80 Le Thi Minh, *Some Legal Issues on Carbon Credits* [Một số vấn đề pháp lý về tín chỉ các-bon], 378:1 J. Democracy & L. [Tạp chí Dân chủ Pháp luật] 53-5 (2023), https://danchuphapluat.vn/mot-so-van-de-phap-ly-ve-tin-chi-cac-bon.

81 Marta Ballesteros et al., Legal Nature of EU ETS Allowances 39-49 (2019).

82 Ngọc Quỳnh, *Greenhouse Gas Inventory: Solving Difficulties for Businesses* [Kiểm kê khí nhà kính: Gỡ khó cho doanh nghiệp], Doanhnhan Saigon (Mar. 23, 2025), https://doanhnhansaigon.vn/kiem-ke-khi-nha-kinh-go-kho-cho-doanh-nghiep-316847.html.

83 Bellona Foundation, Financing the Fit for 2030 package: Modernization, Innovation and Social Funds Spell the EU's Recipe for the Future (2021), https://bellona.org/news/eu/2021-09-financing-the-fit-for-2030-package-modernisation-innovation-and-social-funds-spell-the-eus-recipe-for-the-future.

84 The EU's Modernization Fund supports the modernization of energy systems and improvements in energy efficiency, while the Innovation Fund aims to decarbonize European industry and support its transition to climate neutrality, enhancing its global competitiveness. *See* European Commission, Modernization Fund, https://climate.ec.europa.eu/eu-action/eu-funding-climate-action/modernisation-fund_en; European Commission, Innovation Fund, https://climate.ec.europa.eu/eu-action/eu-funding-climate-action/innovation-fund_en.

Exchange, both of which are essential for the effective operation of Vietnam's ETS. While the Draft Decree outlines a plan to establish these systems by the end of 2026, key details of their management, operational principles, and user requirements remain unclear. The Vietnamese government should provide more specific regulations about the authorities responsible for develop1ing and managing these platforms. Moreover, detailed operational guidelines including policies for customer protection should be established. From the authors' perspective, drawing on international best practices - such as those of the EU-ETS Union Registry[85] or the European Energy Exchange (EEX)[86] - could help ensure that Vietnam's ETS regulations are both effective and internationally competitive.

Finally, long-term market stabilization policies are essential for maintaining ETS integrity. Although banking and borrowing mechanisms under the pilot ETS could help stabilize market demand and prices in the short term, these measures lack long-term effectiveness and could result in carbon leakage or other unintended consequences. To create a more sustainable solution, Vietnam might consider establishing a market reserve fund, where a portion of the allowances is withheld and only introduced to the market when necessary. For instance, allowances can be held back when prices fall too low and released when demand spikes. Vietnam could look to the EU's Market Stability Reserve (MSR) for guidance, which adjusts the supply of allowances based on pre-set thresholds.[87] For example, if the number of allowances in circulation exceeds 883 million, 12% of the auction volume is withheld, whereas up to 100 million allowances are released when the circulating supply falls below 400 million.[88]

V. Conclusion

This research on Vietnam's ETS contributes to the ongoing global debate on the viability and effectiveness of the ETS frameworks, particularly in developing

85 EU, Commission Delegated Regulation (EU) 2019/1122 of March 12, 2019, supplementing Directive 2003/87/EC of the European Parliament and of the Council as regards the functioning of the Union Registry, https://eur-lex.europa.eu/eli/reg_del/2019/1122/oj/eng.

86 The European Energy Exchange (EEX) operates as an exchange under the German Exchange Act and is classified as a regulated market under the Markets in Financial Instruments Directive (MiFID) of the European Union. See European Energy Exchange, Rules and Regulations, https://www.eex.com/en/markets/trading-ressources/rules-and-regulations.

87 European Commission, *supra* note 68, at 95.

88 EU, Decision (EU) 2015/1814 of the European Parliament and of the Council, art. 1, ¶¶ 6-7, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02015D1814-20240101.

countries. While much of the existing literature focuses on the ETS development in advanced economies, Vietnam's case provides a compelling example of how a developing nation can embark on establishing a carbon market from its initial stages and progressively enhance it toward a comprehensive system.

Vietnam's approach illustrates that even with limited institutional capacity, financial resources, and regulatory experience, a developing country can build a functional ETS that aligns with international standards. However, this research highlights that Vietnam's ETS holds promise for success only if its regulatory design is further refined to be more detailed, transparent, and practical. Key areas requiring improvement include more specific guidelines on cap-setting, allowance allocation, and legal classification of carbon as a commodity or financial instrument.

With the right adjustments, Vietnam's ETS can gradually expand to cover all major polluting sectors under a comprehensive top-down cap, similar to the EU-ETS. Incorporating financial mechanisms such as investor participation and derivatives trading can further enhance market liquidity and efficiency. Additionally, linking the national ETS to regional carbon markets can provide broader market access, while establishing a domestic carbon crediting mechanism would help maintain the integrity of carbon credits.

The phased development of Vietnam's ETS, from its initial pilot program to a more sophisticated system, sets a valuable precedent for other developing nations. As the system evolves, a separate, comprehensive legal document - either a decree or law - will be necessary to fully regulate these aspects and ensure smoother implementation by businesses and state agencies, as seen in other successful ETS systems worldwide.

Vietnam's efforts demonstrate that while developing nations face unique challenges in balancing economic growth with climate commitment, they can make significant contributions to global carbon markets. The lessons drawn from Vietnam's experience offer valuable insights for other countries seeking to implement or refine their own ETS. As Vietnam continues to develop and refine its system, it can serve as a model for progressive ETS implementation in other developing countries.

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