

LEGAL FRAMEWORK FOR CARBON CREDIT MARKETS, INTERNATIONAL EXPERIENCES, IMPLEMENTATION PRACTICES, AND SOLUTIONS FOR REFINEMENT IN VIETNAM

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ABSTRACT: Within the scope of this article, the author analyzes international regulations and Vietnamese legal provisions governing the carbon credit market. By evaluating Vietnam's legal framework, specifically the 2020 Law on Environmental Protection and its guiding documents, the article identifies limitations in the enforcement mechanisms of carbon market regulations in Vietnam. Based on a study of carbon market models implemented in various countries around the world, the article proposes the legal amendments of these mechanisms into the Vietnamese legal system to enhance the validity and efficiency of carbon credit market enforcement.

I. INTRODUCTION

In implementing the common commitments made at the Twenty-Sixth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26), regarding greenhouse gas reduction in line with climate commitments and the pursuit of Net Zero emissions by 2050, various nations, including Vietnam, have been establishing carbon markets. Vietnam is currently accelerating the development of a carbon trading exchange, with official operations projected to commence by 2028 and the formulation of a legal framework governing the carbon market is of great significance, enabling Vietnam to seize opportunities in fulfilling its carbon reduction roadmap and ensuring the effective operation of the carbon market. However, the current legal regulations have not yet been effectively applied in the implementation and operation of the carbon market in Vietnam. A review of the legal frameworks of other countries reveals numerous advantages and Vietnam could adopt to enhance efficiency, address current limitations, and refine its carbon credit market regulations. The legal basis for the carbon market in Vietnam has been established on the foundation of international commitments on climate change and has been internalized through the national environmental legal system, particularly the **2020 Law on Environmental Protection** and its guiding documents, which establishes the legal prerequisite for the formation and operation of the domestic carbon market in the coming period. This process reflects a transition from a policy-based approach to a legal-based approach in greenhouse gas emissions management.

II. RESEARCH METHOD

The research methodology used in this article include the analytical and comparative methods to examine the legal frameworks governing the carbon credit market in both foreign jurisdictions and Vietnam. Furthermore, analytical and forecasting methods are utilized to formulate recommendations for refining legal provisions, thereby ensuring the effective implementation and enforcement of the carbon credit market in Vietnam.

III. RESULTS AND DISCUSSION

3.1. International and Vietnamese Legal Frameworks on the Carbon Market

3.1.1. International Legal Framework on the Carbon Market: From the perspective of international law, the carbon market has not been established through a single legal instrument; rather, it has been developed through a system of international treaties, decisions adopted by treaty bodies, and soft law standards. The international legal foundation of the carbon market has undergone three primary developmental stages: (1) The foundational stage (UNFCCC 1992); (2) The formal marketization stage (Kyoto Protocol 1997); and (3) The restructuring and expansion stage (Paris Agreement 2015).

The 1992 United Nations Framework Convention on Climate Change (UNFCCC). This is the first international legal foundation for the development of the carbon market. Although it does not directly establish market-based mechanisms, the UNFCCC stipulates that one of the most important obligations of developed countries is to adopt policies and implement measures to mitigate climate change by limiting greenhouse gas emissions and protecting greenhouse gas sinks. In addition, the UNFCCC establishes several important legal principles that serve as the basis for the development of carbon markets. These include the principle of common but differentiated responsibilities and respective capabilities, the principle of cost-effectiveness in emission reduction, and the encouragement of economic instruments to address climate change¹. These principles paved the way for the recognition of emission rights as objects that can be regulated through market-based mechanisms. Additionally, the UNFCCC established the Conference of the Parties to oversee implementation and adopt the necessary decisions to enhance the Convention's effectiveness². Vietnam signed the UNFCCC on June 11, 1992, and officially ratified it on November 16, 1994.

In essence, the UNFCCC established the preliminary legal framework for the institutionalization of market-based logic within environmental protection, while also enabling subsequent international agreements to further develop emissions trading mechanisms at the international level.

The Kyoto Protocol and the Marrakesh Accords. The Kyoto Protocol was adopted on December 11, 1997, in Kyoto, Japan, while its operational rules, known as the Marrakesh Accords, were established in 2001. The Kyoto Protocol is the first international legal instrument to formally establish a carbon market through three flexible mechanisms: (1) International Emissions Trading-IET; (2) Joint Implementation-JI; and (3) the Clean Development Mechanism-CDM³. These mechanisms allow for the allocation of emission allowances to countries, the creation and trading of emission reduction units, and the establishment of a carbon market that is binding for Annex I countries (including developed countries that were members of the OECD in 1992; and as well as countries with economies in transition from centrally planned systems to market economies) which are subject to legally binding obligations to reduce greenhouse gas emissions during the commitment periods established under the Kyoto Protocol. The general principles of the Kyoto Protocol address the reduction of greenhouse gas emissions by developed countries and enable the creation of emission reduction credits and their trading at the international level. These provisions led to the emergence of an international "carbon market," named after the trading of emission credits measured in CO₂ equivalents, thereby international law introduced the term "carbon credits"⁴.

From the perspective of international law, the **Kyoto Protocol** recognizes emission rights as a form of transferable legal interest; while it also establishes systems for registration, monitoring, and compliance, and thereby laying the foundation for regional carbon markets (such as EU ETS)⁵. Consequently, it can be argued that the 1997 Kyoto Protocol is the first international legal instrument to establish legally binding

¹ Le Thi Minh (2025), *Some Legal Issues Regarding Carbon Credits*, available at: <https://danchuphapluat.vn/mot-so-van-de-phap-ly-ve-tin-chi-cac-bon>, accessed 17 December 2025

² Le Thi Minh (2025), *Some Legal Issues Regarding Carbon Credits*, available at: <https://danchuphapluat.vn/mot-so-van-de-phap-ly-ve-tin-chi-cac-bon>, accessed 17 December 2025

³ United Nations (1997), *Kyoto Protocol*, Arts. 6, 12, 17

⁴ Le Thi Minh (2025), *Some Legal Issues Regarding Carbon Credits*, available at: <https://danchuphapluat.vn/mot-so-van-de-phap-ly-ve-tin-chi-cac-bon>, accessed 17 December 2025

⁵ Grubb, M. et al. (1999), *The Kyoto Protocol: A Guide and Assessment*, RIIA

obligations for the reduction of greenhouse gas emissions and to construct the foundation for the global carbon market. However, the scope of application of the Protocol has been considered limited in terms of both applicable entities and duration, which has reduced its long-term regulatory effectiveness. Regarding its scope of application, the Kyoto Protocol imposes mandatory emission reduction obligations only on developed countries and countries with economies in transition (the Annex I countries under the UNFCCC). This means that countries not included in Annex I, which are primarily developing countries, are not subject to legally binding emission reduction obligations. This approach is consistent with the principle of common but differentiated responsibilities. However, in the context of rapidly changing global emission patterns, this framework has revealed significant limitations. Many developing countries with rapidly increasing emission levels such as China and India, are not subject to mandatory reduction obligations, while some Annex I countries account for a progressively smaller share of global gas emissions⁶.

In addition, the scope of application of the Kyoto Protocol was further narrowed due to the non-participation or withdrawal of several key nations. The United States, one of the world's largest emitters, signed but ultimately failed to ratify the Protocol; Canada withdrew from the Protocol in 2011; while Japan, Russia, and New Zealand declined to participate in the second commitment period. The absence of these major emitters undermined the substantive binding nature of the Kyoto framework and simultaneously reduced the scale and liquidity of the international carbon market established under the Protocol⁷.

In terms of the duration of application, the Kyoto Protocol does not establish a continuous long-term framework of obligations. Instead, the implementation of emission reduction commitments is divided into specific commitment periods, specifically the period of 2008–2012 and the period of 2013–2020 under the Doha Amendment. The necessity to renegotiate emission reduction targets and the list of participating nations after each commitment period has made the Kyoto mechanism less stable and less predictable, particularly for long-term investment activities within the carbon market. As a result, this situation has weakened the confidence of market participants and led to an oversupply of carbon credits and a significant depreciation in the value of emission reduction units under the Kyoto framework⁸.

Vietnam signed the Kyoto Protocol on December 3, 1998, and officially ratified it on September 25, 2002. Although categorized as a Non-Annex I party and thus not yet bound by mandatory greenhouse gas emission reduction commitments under the Protocol, Vietnam has proactively fulfilled several general obligations, contributing to global efforts in combating climate change⁹.

The 2015 Paris Agreement. Although the Kyoto Protocol represented a significant breakthrough and laid the foundation for the marketization of environmental protection instruments in international law, its limitations regarding the scope of applicable entities and duration of its implementation prevented the mechanism from effectively addressing the long-term global greenhouse gas control requirements. These structural limitations prompted the international community to develop the Paris Agreement in 2015, which features a more universal scope of application and more flexible mechanisms, with the aim of overcoming the shortcomings of the Kyoto model.

The **Paris Agreement** marks a transition from a model of “**hard obligations**” to a model of voluntary commitment. In this context, the carbon market has been restructured through **Article 6 of the Paris Agreement**, which constitutes an important international legal provision governing voluntary cooperative mechanisms among countries for the implementation of **Nationally Determined Contributions (NDCs)**. The Paris Agreement reflects the increasing urgency of the global climate crisis and widely acknowledges that effective climate action requires comprehensive measures to address climate change. Such measures must be undertaken by all sources of carbon emissions. Accordingly, each country must submit its plans to the Climate Action Programme every five years.

Unlike the **Kyoto Protocol**, the **Paris Agreement** does not impose rigid emission reduction obligations, instead, it grants strategic autonomy to sovereign states. **Article 6 of the Paris Agreement** functions as a flexible legal instrument that allows countries to cooperate in achieving emission reduction targets at lower costs¹⁰, as it provides market-based mechanisms for generating and trading carbon offsets, with three main groups of cooperation mechanisms, corresponding to forms of cooperation with different degrees of “marketization”: *First*, the mechanism for the transfer of mitigation outcomes (Article 6.2); *second*, the sustainable development mechanism (Article 6.4); and *third*, the non-market approach mechanism (Article 6.8).

3.1.2. The Legal Framework for the Carbon Market in Vietnam: First, Vietnam is a party to the **United Nations Framework Convention on Climate Change (UNFCCC)**, the **Kyoto Protocol (1997)**, and the **Paris Agreement (2015)**. Participation in these international agreements establishes the international legal foundation for the development of a domestic carbon market. In particular, **Article 6 of the Paris Agreement** allows countries to participate in voluntary cooperative mechanisms and international carbon markets, while also setting out requirements to prevent double counting, ensure corresponding adjustments, and maintain environmental integrity. These requirements create both pressure and motivation for Vietnam to develop an appropriate national legal framework for the organization and operation of the carbon market¹¹.

From the perspective of domestic law, the legal system governing the carbon market in Vietnam is structured according to a multi-tiered legal hierarchy, in this model, each group of legal instruments performs a distinct legal function while remaining closely interconnected and mutually reinforcing.

First, the **2013 Constitution**, as amended and supplemented in **2025** serves as the constitutional foundation for the development of the carbon market. Although the Constitution does not explicitly provide for carbon markets or emissions trading, its provisions regarding the right to live in a healthy environment, coupled with the State's responsibility for environmental protection and sustainable development, establish the constitutional basis for employing legal-economic instruments- including market mechanisms- to control greenhouse gas emissions. This serves as the premise for asserting the constitutionality of ‘marketizing’ certain environmental rights and obligations.

Second, the **Law on Environmental Protection 2020** serves as the central legal instrument, as it formally and explicitly recognizes for the first time the organization and development of the carbon market in Vietnam. Article 139 of the Law provides for the management of greenhouse gas emission quotas, the trading of emission quotas and carbon credits, as well as participation in regional and international carbon markets. This provision clearly demonstrates a shift in Vietnam's legislative mindset toward utilizing market-based instruments as a complementary measure to traditional environmental management tools. By codifying the core elements of the carbon market, the Law on Environmental Protection 2020 has elevated the carbon market from the level of policy to an independent legal institution, establishing a foundational framework for the development and refinement of subordinate legislation. As a **framework law**, the Law sets out the fundamental principles governing greenhouse gas emission allowances, the trading of emission allowances and carbon credits, and simultaneously opens the possibility for participation in **regional and international carbon markets**. However, due to its nature as a **framework-oriented statute**, the provisions of the **Law on Environmental Protection 2020** are not sufficiently detailed to enable the effective operation of the carbon market in practice, therefore, these provisions require further specification through decrees and implementing regulations.

Third, government decrees, particularly Decree No. 06/2022/ND-CP, as amended and supplemented by Decree No. 119/2025/ND-CP dated 9 June 2025 (hereinafter referred to as Decree No. 06/2022/ND-CP), play a key role in specifying and directly implementing the provisions of the Law on Environmental Protection 2020. This Decree operationalizes general legal principles into operational provisions, including the

⁶ Bodansky, D. (2017), *International Climate Change Law*, Oxford University Press

⁷ Grubb, M. et al. (1999), *The Kyoto Protocol: A Guide and Assessment*, Royal Institute of International Affairs

⁸ World Bank (2014), *State and Trends of Carbon Pricing*

⁹ Le Thi Minh (2025), *Some Legal Issues Regarding Carbon Credits*, available at: <https://danchuphapluat.vn/mot-so-van-de-phap-ly-ve-tin-chi-cac-bon>, accessed 17 December 2025

¹⁰ Bodansky, D. (2016), *The Paris Climate Change Agreement: A New Hope?*, AJIL

¹¹ UNFCCC (2015), *Paris Agreement*, Article 6

identification of entities subject to **greenhouse gas inventories**, the mechanism for allocating emission quotas, the principles of carbon credit trading and offsetting, and the roadmap for developing a domestic carbon market. In particular, **Decree No. 06/2022/ND-CP** establishes a **three-stage roadmap** for the development of the carbon market: a **pilot phase (2025–2026)**; an **expansion phase (2027–2028)**; from **2029 the auctioning of emission allowances and the commencement of official trading**. This roadmap enables enterprises to plan their investments in capital and technology, while also attracting financial institutions to participate in providing **green derivative financial products**¹². From a legal perspective, Decree No. 06/2022/ND-CP serves as a vital bridge between legislative intent and state management practice, while reflecting the extent to which the requirements of Article 6 of the Paris Agreement have been internalized into domestic law. For the first time, the Article 6.2 mechanism (bilateral credit exchange) and the Article 6.4 mechanism (a multilateral market governed by the UNFCCC) have been officially “embedded” into Vietnamese legislation, enabling enterprises to trade carbon credits internationally rather than being confined to the domestic market.

Fourth, the circulars issued by the Ministry of Natural Resources and Environment play a key role in standardizing technical procedures and ensuring the operational feasibility of the carbon market such as Circular No. 01/2022/TT-BTNMT dated 7 January 2022 provides detailed guidance for the implementation of the Law on Environmental Protection regarding climate change response, greenhouse gas mitigation, and greenhouse gas inventories; Circular No. 17/2022/TT-BTNMT dated 15 November 2022 establishes technical regulations on measurement, reporting, and verification (MRV), as well as the responsibilities of emitting facilities in conducting greenhouse gas inventories. From a legal perspective, this is a group of technical documents, but have a direct impact on the transparency, credibility, and environmental integrity of the carbon market, thereby providing the technical and legal foundation for the effective operation of the carbon market in practice.

Fifth, the decisions of the Prime Minister include Decision No. 896/QĐ-TTg dated 26 July 2022 approving the National Strategy on Climate Change to 2050, Decision No. 942/QĐ-TTg dated 5 August 2022 approving the Action Plan for Methane Emission Reduction to 2030, and Decision No. 232/QĐ-TTg dated 24 January 2025 approving the Project on the Establishment and Development of the Carbon Market in Vietnam. These decisions reflect a coherent and consistent policy framework of the Vietnamese Government in addressing climate change and fulfilling its commitment to achieving “net-zero” emissions by 2050, this encompasses: (i) establish long-term objectives and strategic directions for climate change response; (ii) operationalize emission reduction targets for key greenhouse gases; and (iii) develop market-based instruments and implementation mechanisms to realize these objectives.

In summary, it can be observed that Vietnam has initially established a relatively comprehensive legal framework for the carbon market. However, the current regulations remain framework-oriented and are still in the process of refinement, particularly with respect to issues such as **international trading mechanisms under Article 6 of the Paris Agreement, corresponding adjustments, and the determination of the legal status of carbon credits**. The continued refinement of the legal foundation is a prerequisite for the efficient operation of Vietnam’s carbon market and its alignment with international legal standards.

3.2. Current Implementation of Carbon Market Regulations in Vietnam and Proposed Solutions for Legal Refinement

3.2.1. Current Implementation of Carbon Market Regulations in Vietnam

According to the **Law on Environmental Protection 2020**, carbon credits are associated not only with the concept of a **carbon credit exchange**, but also with the broader concept of the **carbon market**. Accordingly, “*the domestic carbon market comprises activities involving the trading of greenhouse gas emission allowances and carbon credits obtained from domestic and international carbon credit exchange and offset mechanisms, in accordance with the provisions of law and international treaties to which the Socialist Republic of Vietnam is a party*”¹³. It can be argued that the 2020 Law on Environmental Protection marks the inaugural recognition of the carbon market as a pivotal economic instrument within Vietnam’s environmental legal system, this marks a transition from a predominantly administrative regulatory approach to the integration of market-based instruments in the mitigation of greenhouse gas emissions. Compared to the 2014 Law on Environmental Protection, the carbon market provisions in the 2020 Law are more clearly structured, systematic, and more highly institutionalized, the concepts pertinent to the carbon market—such as greenhouse gases, climate change response, greenhouse gas emission quotas, and carbon credits—are explicitly defined in terms of their substantive content (Article 3, Clauses 29, 32, 33, and 35)¹⁴, thereby contributing to the **effective organization, development orientation, and operation of the domestic carbon market**.

Overall, the **Law on Environmental Protection 2020** has formally **institutionalized the carbon market** as a component of the **system of economic instruments for environmental protection**. The simultaneous recognition of the carbon market in both Chapter VII (Climate Change Response) and Chapter XI (Economic Instruments, Policies, and Resources for Environmental Protection) demonstrates a comprehensive approach, linking the carbon market with the objective of greenhouse gas emission mitigation while simultaneously placing it within the broader system of environmental economic instruments, such as taxes, fees, environmental deposits, and environmental insurance. These provisions aim to clarify issues related to the **organization and development orientation of the carbon market**. They constitute an important **legal foundation** for Vietnam to gradually transition from an **administrative command-and-control model of environmental management** to a model that **integrates market-based mechanisms**.

According to the **Law on Environmental Protection 2020**, “*The domestic carbon market comprises activities involving the trading of greenhouse gas emission allowances and carbon credits obtained from domestic and international carbon credit exchange and offset mechanisms, in accordance with the provisions of law and international treaties to which the Socialist Republic of Vietnam is a party*”. The **domestic carbon market** is regulated to include: the **trading of greenhouse gas emission allowances and carbon credits** generated from domestic and international **carbon credit exchange and offset mechanisms**, in accordance with the provisions of law and international treaties to which **Vietnam is a party**.

In addition, the Law on Environmental Protection 2020 clarifies the fundamental concepts underlying the carbon market, particularly greenhouse gas emission allowances and carbon credits, thereby contributing to the standardization of tradable assets within the market. Regarding greenhouse gas emission quotas, a tradable asset in the carbon market, this is a relatively new concept and is understood as follows “*the amount of greenhouse gases that a country, organization, or individual is permitted to emit within a specified period of time, calculated in tons of carbon dioxide (CO₂) or tons of carbon dioxide equivalent (CO₂e)*”¹⁵. The concept of carbon credits has also been adjusted for greater transparency under the new Law, which stipulates that: “*a carbon credit is a tradable certificate representing the right to emit one ton of carbon dioxide (CO₂) or one ton of carbon dioxide equivalent (CO₂e)*”¹⁶. This approach enables greenhouse gas emission rights to be recognized as a form of “special commodity”, thereby creating the foundation for the practical operation of emissions trading mechanisms. Compared with the earlier concept under the Law on Environmental Protection 2014, this provision provides greater clarity regarding the form, transactional content, and unit of measurement of such credits when they are brought into commercial exchange. This indicates that the domestic carbon market that Vietnam aims to develop generally shares characteristics similar to those of other carbon markets operating worldwide, in this framework, the permitted amount of greenhouse gas emissions is treated as a form of “commodity” that can be traded in the market through legally recognized mechanisms at both the domestic and international levels¹⁷.

Regarding the market participants in the carbon market

According to the **Law on Environmental Protection 2020**, the participants in the carbon market during the initial stage are **greenhouse gas-emitting facilities** that fall within the list of entities **required to conduct greenhouse gas inventories**. These are greenhouse gas-emitting facilities that fall within the list of sectors issued by the Prime Minister. Specifically, “*The Prime Minister shall promulgate the list of sectors and greenhouse gas-emitting facilities required to conduct greenhouse gas inventories. This list is to be updated every two years, based on the*

¹² Article 17 of Decree No. 06/2022/ND-CP

¹³ Clause 1, Article 139 of the 2020 Law on Environmental Protection

¹⁴ Vo Trung Tin and Nguyen Quoc Dat (2023), *Environmental Legal Regulations on the Carbon Market and Challenges in Implementation in Vietnam*, Vietnam Social Sciences Review, No. 8 (2023), pp. 57–58.

¹⁵ Clause 33, Article 3 of the 2020 Law on Environmental Protection

¹⁶ Clause 35, Article 3 of the 2020 Law on Environmental Protection

¹⁷ Vo Trung Tin and Nguyen Quoc Dat (2023), *Environmental Legal Regulations on the Carbon Market and Challenges in Implementation in Vietnam*, Vietnam Social Sciences Review, No. 8 (2023), pp. 58

following criteria: the proportion of greenhouse gas emissions relative to total national emissions; socio-economic development conditions and context; and the fuel and energy consumption per unit of product or service for production, business, and service facilities”¹⁸. Facilities emitting greenhouse gases are required to conduct greenhouse gas inventories. If they meet the requirements of greenhouse gas verification, the emitting facilities will be allocated greenhouse gas emission allowances by the Ministry of Natural Resources and Environment (now the Ministry of Agriculture and Environment) and will have the right “to exchange and trade these allowances in the domestic carbon market”¹⁹. This is considered an important prerequisite for these entities to participate in the carbon market.

In addition, the Law stipulates the principle that greenhouse gas-emitting facilities are permitted to emit greenhouse gases only within the allocated emission allowances; in cases where a facility needs to emit beyond its allocated quota, it must purchase additional allowances from other entities through the domestic carbon market. Greenhouse gas-emitting facilities that implement emission reduction measures or do not fully utilize their allocated quotas are entitled to sell the surplus to other entities in need through the domestic carbon market.²⁰ Linking the right to participate in the market with the obligation to conduct greenhouse gas inventories demonstrates a logical legislative design. This ensures that only entities with transparent emission data are eligible for quota allocation and trading activities.

Regarding the organization and management of the carbon market. The **Law on Environmental Protection 2020** assigns specific responsibilities corresponding to the functions of each authority involved in the organization and development of the carbon market.

With respect to the Ministry of Agriculture and Environment, in addition to its function of conducting inventories and reporting national greenhouse gas emissions, current regulations also assign the Ministry additional responsibilities in order to implement mechanisms enabling greenhouse gas-emitting facilities to participate in the domestic carbon market. These responsibilities include²¹: *submitting to the Prime Minister for approval the total greenhouse gas emission allowances on a periodic and annual basis; organizing the allocation of greenhouse gas emission allowances to eligible emitting facilities; organizing and operating the domestic carbon market; and participating in the global carbon market.* These are clearly critical responsibilities, serving as a foundational basis for the operation of the domestic carbon market.

Furthermore, the 2020 Law on Environmental Protection for the first time formally recognizes the role of the Ministry of Finance in the institutional framework governing the organization and operation of the carbon market, which is reflected in the provision stating that “*the Ministry of Finance shall take the lead, in coordination with the Ministry of Agriculture and Environment and other relevant ministries and ministerial-level agencies, in establishing the domestic carbon market*”²². This is considered a crucial legal foundation for gradually operationalizing the carbon market in Vietnam and facilitating its integration with the international market.

Overall, this specialized and clearly delineated coordination mechanism not only creates a conducive legal environment for centralized and unified management but also provides relevant ministries, particularly the Ministry of Natural Resources and Environment with more substantial economic insights to develop implementing regulations for the carbon market. At the same time, it contributes to promoting the early operationalization of the domestic carbon market in Vietnam.

Forms of Transactions in the Carbon Market. According to regulations, greenhouse gas emitting facilities that meet the prescribed criteria are allocated emission quotas and possess the right to exchange and trade these on the domestic carbon market²³. Beyond conventional buying and selling, the 2020 Law on Environmental Protection and Decree No. 06/2022/ND-CP (as amended by Decree No. 119/2025/ND-CP) also recognize other forms of transactions in the carbon market, such as the exchanging, borrowing, surrendering, transferring, and offsetting of emission quotas and carbon credits. From these provisions, it is evident that Vietnam’s carbon market legislation is designed as a controlled system, based on the combination of the State’s administrative mechanisms and market-based regulatory instruments. In this framework, the State maintains a leading role in allocation, supervision, and compliance enforcement, while emitters are empowered to choose appropriate instruments to fulfill their legal obligations. These transaction forms can be categorized into four primary groups: (i) transactions of greenhouse gas emission allowances; (ii) transactions for fulfilling administrative-environmental obligations to the State; (iii) inter-period quota adjustment mechanisms; and (iv) the trading and utilization of carbon credits for emission offsetting. However, these activities remain documented at a directional level and lack detailed implementing regulations.

3.2.2. Practical implementation of carbon market law in Vietnam: First, the practical participation of stakeholders in the carbon market

Within the structure of Vietnam’s carbon market, greenhouse gas emitting facilities listed in the mandatory inventory database are identified as the central stakeholders, playing a decisive role in the operational efficiency of the emission quota allocation and trading mechanism. Current legislation has established a relatively comprehensive system of legal obligations for this group of entities, including obligations to conduct greenhouse gas inventories, report emissions, carry out measurement, reporting, and verification (MRV), as well as the obligation to surrender greenhouse gas emission allowances in accordance with each allocation period²⁴. Greenhouse gas inventory serves as the foundational step for enterprises, organizations, and nations to enter the carbon credit market, particularly for countries where a voluntary carbon market has yet to be fully established. In the voluntary carbon market, to qualify for the successful sale of carbon credits, credit-trading projects must meet international standards for greenhouse gas inventory. For enterprises and organizations, greenhouse gas inventory also contributes to enhancing corporate branding and competitiveness. However, the practical implementation of greenhouse gas inventory obligations has revealed several limitations, reflecting a discernible gap between legal design and the capacity and readiness of emitting facilities in their roles as carbon market participants. Although the obligation to conduct greenhouse gas inventories is mandated by law with a clear roadmap, the enabling conditions to ensure practical compliance remain inadequate. Emitting facilities are facing mounting compliance pressure while lacking the necessary technical foundations, human resources, and support mechanisms. This not only undermines the enforcement of greenhouse gas inventory legislation but also poses a significant challenge to the objective of establishing and effectively operating Vietnam’s carbon market in the upcoming phases. According to Decision No. 13/2024/QĐ-TTg, for the 2023–2025 period, a total of 2,166 facilities are mandated to conduct greenhouse gas inventories. These are primarily concentrated in five major emitting sectors: energy, industry, agriculture, waste, and land use. Furthermore, the legislation has delineated a relatively clear implementation roadmap: the 2022–2025 period is designated for enterprises to build capacity and conduct pilot inventories; the 2026–2028 period involves the assessment, inspection, and verification of inventory results; and from 2028 onwards, carbon pricing mechanisms and carbon credit exchange will be progressively applied²⁵. However, the practical implementation of greenhouse gas inventory obligations within enterprises has encountered numerous difficulties, including:

In many cases, enterprises remain uncertain about the nature of greenhouse gas inventories as what they entail; who should conduct them, and how the process should be carried out. Simultaneously, there is a persistent shortage of experts and specialized technical staff in greenhouse gas mitigation. State management of emission reduction at the grassroots level has not yet met practical demands. Consequently, inventory reports often lack accuracy, fail to cover all

¹⁸ Clause 3, Article 91 of the 2020 Law on Environmental Protection

¹⁹ Clause 2, Article 139 of the 2020 Law on Environmental Protection

²⁰ Clause 4,5, Article 139 of the 2020 Law on Environmental Protection

²¹ Clause 8,10, Article 139 of the 2020 Law on Environmental Protection

²² Clause 9, Article 139 of the 2020 Law on Environmental Protection

²³ Clause 2, Article 139 of the 2020 Law on Environmental Protection

²⁴ Articles 8 to 13 of Decree No. 06/2022/ND-CP, as amended and supplemented by Decree No. 119/2025/ND-CP

²⁵ Decision No. 13/2024/QĐ-TTg promulgating the List of Sectors and Facilities Emitting Greenhouse Gases Required to Conduct Greenhouse Gas Inventories (updated)

emission sources, and make incomplete declarations that do not adhere to international standards. Furthermore, data reporting systems, inventory implementation, and overall regulatory compliance remain inconsistent and insufficient...²⁶.

As of the end of 2024, although 2,166 enterprises were required to report greenhouse gas emissions, only approximately 10% of enterprises were actually prepared to comply; primarily those within the steel, cement, and thermal power sectors. The majority of the remaining enterprises have not yet met the basic requirements in terms of human resources, data availability, and technical capacity necessary for conducting greenhouse gas inventories. As the results, primarily those within the steel, cement, and thermal power sectors. Specifically in Ho Chi Minh City, as of June 2025, only over 180 out of 700 large-scale enterprises on the mandatory list submitted their greenhouse gas inventory reports, with nearly 60% of these submissions being rejected due to failure to meet technical standards. This issue is not confined to Ho Chi Minh City; most localities and enterprises face significant barriers in implementing greenhouse gas inventories, particularly regarding the shortage of qualified personnel²⁷.

Most enterprises have not yet met the basic requirements regarding human resources, data availability, and technical capacity necessary for conducting greenhouse gas inventories. Many reports have been returned because they failed to meet technical requirements, calculation methodologies, or input data standards. This situation indicates that enterprises' compliance with greenhouse gas inventory obligations remains largely formalistic and lacks long-term sustainability. One of the core causes of this situation is the serious shortage of specialized human resources. In reality, the majority of enterprises lack dedicated departments or personnel specifically assigned to greenhouse gas inventory tasks. Training a staff member capable of producing technical-standard inventory reports requires significant time and financial investment, whereas a formal national training system has yet to be fully established. Surveys conducted by the United Nations Development Programme (UNDP) indicate that the number of professionals with greenhouse gas inventory skills in Vietnam remains very limited, and has not yet met the demand for providing large-scale support to enterprises. In addition, enterprises face difficulties due to the lack of standardized toolkits, insufficient baseline data and updated emission factor systems, as well as the lack of consistent guidance from state management agencies. This has forced businesses in a situation of "doing and guessing," facing legal risks if mistakes occur while clear mechanisms for verification and validation have not yet been fully established. In many cases, enterprises encounter difficulties in selecting appropriate calculation methodologies and collecting energy consumption data for each stage of the production process, leading to a 'check-the-box' approach to inventory simply to avoid legal repercussions. Meanwhile, technical support and verification mechanisms at the local level remain constrained by a shortage of personnel and experts, thereby reducing the consistency and transparency in the enforcement of legislative enforcement. Furthermore, one of the major obstacles affecting the implementation of greenhouse gas inventory obligations is the absence of a standardized and unified MRV (Measurement, Reporting, and Verification) system. The MRV system plays an essential role in accurately determining the amount of greenhouse gases reduced or absorbed, ensuring transparency and minimizing the risk of fraud. It also enables domestic carbon credits to meet international standards, thereby ensuring that the carbon market operates in a transparent, reliable, and efficient manner. However, Vietnam currently lacks national MRV standards, has not yet established a focal agency responsible for its management and supervision, and still faces limitations in technical capacity as well as insufficient technological infrastructure to support the system. To date, Vietnam has only implemented pilot projects to develop and establish MRV systems in certain sectors such as energy and transportation, mainly through international programs funded by financial institutions and investment funds. A comprehensive MRV system that fully performs its functions at the national and sectoral levels has not yet been developed²⁸. These limitations undermine market transparency and credibility, obstruct the international recognition of carbon credits, impede emission reduction efforts, and increase the risk of fraud. Although the MRV system is mentioned in legal documents such as Decree No. 06/2022/ND-CP, the lack of detailed guidelines has diminished its enforcement efficacy, making it difficult for Vietnam's carbon market to compete with regional peers like China and South Korea²⁹.

Second, the practical implementation of transaction forms in the carbon market. Current Vietnamese legislation has taken initial steps to recognize and regulate various transaction forms within the carbon market, including the trading of greenhouse gas emission quotas and carbon credits. These transaction mechanisms are designed to establish a market-based framework for the efficient allocation of emission reduction costs, while also encouraging entities to invest in low-emission technologies and activities. However, practical application reveals that these forms of transactions have yet to be fully implemented in Vietnam, they primarily exist as legal concepts rather than being substantively operational in practice. *First*, with regard to transactions of greenhouse gas emission allowances, the law permits emitting facilities to conduct activities such as exchanging, transferring, and borrowing emission allowances within certain limits. However, in practice, market-based transactions such as the buying and selling or transfer of emission allowances have rarely occurred or have taken place only to a very limited extent. The primary reason for this situation is that the domestic carbon market has not yet been officially put into operation; a centralized trading platform has not been established, and no mechanism currently exists for determining and publicly announcing carbon prices. In this context, emitting facilities tend to rely mainly on more flexible administrative mechanisms, particularly the borrowing of emission allowances to ensure compliance with short-term surrender obligations, rather than participating in allowance trading in accordance with genuine market principles. Furthermore, regarding carbon credit transactions, although the law recognizes the use of carbon credits for greenhouse gas emission offsetting, domestic credit trading has yet to gain momentum. In practice, the majority of carbon credit projects in Vietnam are still oriented towards international markets or voluntary mechanisms, as the domestic carbon market remains insufficiently attractive in terms of both institutional framework and economic incentives. The lack of a credit pricing mechanism, the absence of a domestic trading system, and the deficiency of detailed regulations governing the relationship between domestic and international credits have significantly hindered the emergence of carbon credit transactions within the domestic market. In addition, regarding the form and methods of transactions, current legislation primarily designs carbon transactions to be conducted through a National Registration System managed by the State. At present, this system mainly functions as an administrative tool for managing and recording the ownership of emission allowances and carbon credits rather than serving as a genuine trading platform. The absence of intermediary institutions such as carbon exchanges, brokerage organizations, pricing entities, and payment mechanisms has left Vietnam's carbon market transactions without liquidity and has failed to attract broad participation from stakeholders. The limitations mentioned above indicate that, for transaction forms in Vietnam's carbon market to operate substantively, the law should not merely recognize the right to trade but must also continue to improve the conditions necessary to facilitate such transactions. These conditions include market infrastructure, pricing mechanisms, the role of intermediary entities, and the level of information transparency. These are the pivotal factors that will determine the ability to transform the carbon market from an administrative management model into a market-based operational model in the upcoming phase.

3.3. Limitations and solutions for improving the legal framework on the carbon market in Vietnam

Based on the analysis and clarification of the current legal framework and the practical implementation of the law governing the carbon market in Vietnam, it can be observed that the legal system in this area still presents the following shortcomings:

Firstly, the legal framework for the carbon market remains largely principled and lacks practical feasibility. Although the **Law on Environmental Protection 2020** and its guiding documents have officially recognized the carbon market and related trading activities, many crucial elements such as the operational methods of the carbon exchange, carbon pricing mechanisms, and trading and payment procedures have yet to be specifically guided, hindering practical implementation.

²⁶ Pham Thu Cuong (2024), *The Roadmap for Implementing Greenhouse Gas Inventory in Vietnam and Some Existing Challenges*, available at: <https://tapchimoitruong.vn/chuyen-muc-3/lo-trinh-thuc-hien-kiem-ke-khi-nha-kinh-tai-viet-nam-va-mot-so-ton-tai-kho-khan>, accessed 23 December 2025

²⁷ Greenhouse Gas Inventory – Transparency for Sustainable Development (Part 1): System errors at the initial stage. *Green Business and Economics Magazine*, <https://igip.gov.vn/tin-tuc/22101/kiem-ke-khi-nha-kinh-minh-bach-de-phat-trien-ben-vung-bai-1--vua-khoi-dong-da-bao-loi-he-thong>, Accessed 23 December 2025

²⁸ Chu Thi Thanh Phuong and Tran Do Bao Trung (2020), *MRV – A Tool for Assessing Greenhouse Gas Emission Reduction Activities*, *Environmental Magazine*, No. 7, p. 41.

²⁹ Tran Linh Huan and Le Thi Khanh Hoa (2025), *Orientations for developing the legal framework for the carbon credit market in Vietnam*, <https://phapluatphat trien.vn/mot-so-dinh-huong-ve-phat-trien-nen-tang-phap-ly-cho-thi-truong-tin-chi-cac-bon-o-viet-nam-d3577.html>, accessed December 23, 2025

Secondly, the total national greenhouse gas emission allowance has not yet been determined, resulting in the inability to allocate emission allowances to emitting facilities. This is the core barrier preventing the 'cap-and-trade' mechanism from functioning, causing the current carbon market to exist primarily on a legal basis without having formed any substantive transactions. *Thirdly*, the capacity for greenhouse gas inventory implementation and the MRV system remain significantly limited. The majority of facilities mandated to conduct inventories have not yet met the requirements for personnel, data and technical expertise; inventory reports often lack accuracy, remain inconsistent, and fail to meet international standards. Furthermore, the national MRV system has not been standardized, particularly in the sectors of agriculture, forestry, and land use. *Fourthly*, the organizational and management model of the carbon market remains suboptimal. The functions of state management and market operation are currently concentrated within a single authority, leading to potential role overlaps and diminishing the objectivity of the market mechanism. Furthermore, the roles of the Ministry of Finance and other market intermediaries have not been fully specified. *Fifthly*, there is a lack of market infrastructure and intermediary entities. The domestic carbon exchange has not yet been put into operation, and services such as brokerage, pricing, consulting, and carbon investment have not yet developed. As a result, Vietnam's carbon market lacks liquidity and does not fully reflect supply-demand dynamics. Based on the aforementioned inadequacies, in order to contribute to the improvement of the legal framework for the carbon market in Vietnam, the author proposes several legal reform solutions as follows: *Firstly*, it is essential to finalize detailed legal regulations on the organization and operation of the carbon market. This includes specific guiding documents on the carbon exchange, trading procedures, payment mechanisms, monitoring, and dispute resolution to ensure transparency and legal certainty for all participants. *Secondly*, establish and announce the total national greenhouse gas emission quota. The determination of the total quota must be aligned with the emission reduction targets set in the Nationally Determined Contributions (NDC) and the socio-economic development roadmap, serving as the basis for quota allocation and trading. *Thirdly*, standardize and improve the national MRV system by developing a unified set of MRV standards for each emission sector in accordance with international practices; simultaneously, enhance the capacity for verification and recognition of greenhouse gas inventory results. *Fourthly*, enhance the capacity of both enterprises and regulatory authorities. The Government should intensify training and workshops on greenhouse gas inventories, MRV, and carbon market operations; additionally, it should develop standardized technical toolkits and appropriate support mechanisms for businesses during the initial stages of market participation.

Fifthly, improve the management model and develop the carbon market infrastructure. It is necessary to clearly distinguish between state management functions and market operational functions; strengthen the role of the Ministry of Finance in financial management and carbon pricing; and simultaneously encourage the participation of market intermediaries to enhance liquidity and market efficiency.

IV. CONCLUSION

Based on a systematic study of the theoretical and practical legal issues surrounding the carbon market in Vietnam, this article has achieved the following research results: From a theoretical perspective, a carbon credit is defined as a specific type of intangible property right, created and limited by the State, arising from activities that reduce, avoid, or sequester greenhouse gas emissions. It holds legal validity only when recognized through the sequences and procedures prescribed by law. Carbon credit possesses dual attributes: an economic attribute, reflected in its tradability and valuation within the carbon market; and a legal attribute, manifested in its function for fulfilling greenhouse gas emission reduction obligations and ensuring compliance with environmental commitments. However, as it is inherently linked to public interest and environmental protection objectives, the right to carbon credits is not absolute like traditional property rights. Instead, it is subject to stringent State control regarding its scope, conditions, and intended purposes. On that basis, the carbon market is perceived as a specific economic-legal mechanism, operating primarily on the cap-and-trade principle, which allows for the transformation of greenhouse gas emission reduction obligations into controlled trading relationships. The distinction between mandatory and voluntary carbon markets, along with the analysis of the international legal basis for carbon market formation—particularly Article 6 of the 2015 Paris Agreement demonstrates an increasingly clear global trend toward globalization and marketization in greenhouse gas emission management, simultaneously, this necessitates appropriate domestic legal harmonization for each country, including Vietnam. From the perspective of law and practice in Vietnam, the study indicates that Vietnam has initially established a legal framework for carbon credits and the carbon market through the Law on Environmental Protection 2020 and its implementing regulations. Vietnamese law has formally recognized the carbon market as an important economic instrument for environmental protection, while also establishing a roadmap for the development of the domestic carbon market, aligned with international commitments on greenhouse gas emission reduction and the objective of achieving net-“zero” emissions. However, the practical application of laws concerning carbon credits and the carbon market in Vietnam reveals numerous limitations and regulatory gaps. Prominently, the legal status of carbon credits remains undefined within the civil law system, there is a lack of a unified legal definition and domestic technical standards for the measurement, certification, and management of these credits. Furthermore, clear mechanisms for establishing ownership and property registration for carbon credits are absent, alongside an incomplete legal framework for determining and regulating the valuation of carbon credits. In addition, the technical infrastructure, the capacity for measurement, reporting, and verification (MRV), the national registry system, as well as the mechanisms for supervision and sanctions are still in the process of being developed and refined. As a result, the domestic carbon market has not yet been able to operate effectively and remains largely dependent on international standards and mechanisms. From the analysis of the shortcomings mentioned above, the author argues that Vietnam should continue to improve the legal framework governing carbon credits and the carbon market in a manner that is coherent, transparent, and aligned with international standards. In particular, the focus should be placed on refining the definition and legal status of carbon credits as a special type of intangible property right; establishing mechanisms for the creation and registration of rights over carbon credits that both ensure effective state management and protect the legitimate interests of market participants; developing a legal framework for the formation and regulation of carbon credit values under a market-based mechanism with state oversight; and simultaneously enhancing regulatory capacity, technical infrastructure, and the transparency of the domestic carbon market. Improving the legal framework in this field is of significant importance not only for fulfilling international commitments on climate change, but also for ensuring legal certainty for market participants and enabling the effective utilization of carbon resources in Vietnam in the future.

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