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Governance Fragmentation and Multi-Stakeholder Dynamics in Vietnam's Greenhouse Gas Emissions Trading System: A Policy Analysis

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Abstract

Vietnam's commitment to achieving net-zero greenhouse gas (GHG) emissions by 2050 and its updated Nationally Determined Contributions (NDCs) pledging a 43.5 percent reduction by 2030 have established the political imperative for a functional domestic emissions trading system (ETS). However, the translation of these high-level commitments into operational market governance faces profound challenges rooted not only in legal design but in the structure of institutional relationships, stakeholder interests, and political economy dynamics that shape policy implementation. This study employs a qualitative policy analysis framework to examine governance fragmentation, inter-ministerial coordination failures, and multi-stakeholder dynamics in Vietnam's emerging greenhouse gas market. Drawing on documentary analysis of official policy instruments, institutional mapping, and comparative insights from ASEAN regional experiences, the study identifies four critical governance deficits: the absence of a primary regulatory authority with sufficient mandate and capacity; structural conflicts of interest arising from the dual roles of state enterprises as both regulated entities and institutional actors; the marginalization of civil society and small-scale stakeholders from market design processes; and weak horizontal coordination mechanisms across the five ministries holding overlapping jurisdiction. The study further examines how these governance deficits interact with Vietnam's broader political-administrative context—particularly the constraints imposed by a single-party governance system and a tradition of consensus-based bureaucratic decision-making—to produce systemic delays in ETS implementation. Policy recommendations focus on restructuring inter-ministerial coordination, creating participatory mechanisms for non-state stakeholders, building political commitment for effective enforcement, and designing phased implementation pathways that are administratively feasible within Vietnam's institutional capacity.

Keywords: Greenhouse Gas Emissions Trading, Vietnam ETS, Governance Fragmentation, Policy Implementation, Multi-Stakeholder Dynamics, Climate Governance, ASEAN

1. Introduction

The establishment of carbon and greenhouse gas (GHG) emissions trading systems has emerged as a central pillar of climate governance strategies across the Asia-Pacific region in the twenty-first century. Market-based instruments for GHG reduction offer a theoretically efficient pathway to achieving emission reduction targets at

lower aggregate economic cost compared to uniform regulatory standards, by allowing abatement to occur where it is least costly across a covered economy (Stavins, 2019). This efficiency rationale, combined with the revenue-generating potential of emissions permit auctioning and the growing international recognition of carbon pricing as a standard policy tool, has motivated a wave of ETS adoption across major economies, including the European Union, China, South Korea, Singapore, and New Zealand.

Vietnam represents one of the most significant—and most studied—cases of an emerging economy attempting to establish a domestic ETS in the context of binding international climate commitments, a transitioning centrally planned economy, and an institutional architecture shaped by decades of state-centric governance. At COP26 in Glasgow (2021), Prime Minister Pham Minh Chinh's commitment to net-zero emissions by 2050 placed Vietnam in the vanguard of developing-country climate ambition. This commitment, reinforced by Vietnam's updated NDCs submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2022, creates a direct policy mandate for carbon market mechanisms capable of mobilizing substantial emission reductions across the energy, industry, and land-use sectors.

Yet the practical trajectory of Vietnam's ETS development since 2021 reveals a persistent gap between policy ambition and institutional reality. The original roadmap articulated in Decision No. 1775/QĐ-TTg (2021) envisioned the pilot operation of a carbon trading exchange by 2025, expanding to a fully operational market by 2028. As of 2025, however, the pilot phase has experienced significant delays, the national GHG registry remains incomplete, and inter-ministerial disagreements over regulatory jurisdiction have produced a fragmented governance architecture that creates uncertainty for market participants and undermines investor confidence (MONRE, 2024; World Bank, 2024).

The existing scholarly literature on Vietnam's carbon market development has predominantly adopted legal-doctrinal or technical-economic perspectives—analyzing the adequacy of legislative provisions or modeling the economic efficiency of different ETS design parameters. Far less attention has been directed at the political and governance dimensions that determine whether formally enacted laws and regulations translate into effective market governance in practice. This gap is particularly significant because, as comparative ETS experience consistently demonstrates, the institutional and political factors governing implementation capacity are often more determinative of market effectiveness than the technical features of market design (Haite, 2018; Zhang et al., 2022).

This study addresses this gap by applying a policy analysis framework to examine the governance architecture of Vietnam's emerging GHG market. It asks: What are the key governance deficits in Vietnam's ETS implementation, and how do they interact with the country's broader political-administrative context to constrain market development? The study is guided by three specific research questions: (1) How is regulatory authority over GHG markets distributed across Vietnamese government institutions, and what coordination failures emerge from this distribution? (2) How are the interests of diverse stakeholders—state enterprises, private business, civil society, and subnational governments—represented and mediated in ETS policy processes? (3) What governance reforms are necessary and politically feasible to advance effective ETS implementation in Vietnam's institutional context? The remainder of the article is organized as follows. Section 2 describes the methodological approach. Section 3 presents the findings, structured around institutional mapping, stakeholder analysis, and comparative ASEAN governance insights. Section 4 discusses the theoretical and practical implications, and Section 5 presents conclusions and policy recommendations.

2. Method

This study employs a qualitative policy analysis design, combining institutional analysis, stakeholder mapping, and comparative case analysis as its primary methodological components. Policy analysis, as a distinct mode of social-scientific inquiry, is concerned not merely with describing what policies exist but with evaluating their design, implementation dynamics, and governance structures in light of stated objectives and contextual constraints (Howlett et al., 2009). This analytical orientation is particularly appropriate for the study's focus on the gap between Vietnam's formally stated ETS goals and the institutional realities of implementation.

The primary data source consists of official Vietnamese policy documents, legal instruments, and government reports, including Decision No. 1775/QĐ-TTg (2021), Decree No. 06/2022/ND-CP, the Law on Environmental Protection 2020 (LOPE 2020), ministerial circulars and guidelines, annual environmental monitoring reports from the Ministry of Natural Resources and Environment (MONRE), and relevant reports from the Ministry of Finance (MOF), Ministry of Industry and Trade (MOIT), and Ministry of Agriculture and Rural Development (MARD). These primary sources are supplemented by secondary data from international organizations, including the World Bank, UNDP, ADB, and GIZ, all of which have published detailed assessments of Vietnam's carbon market readiness and governance capacity.

Institutional analysis draws on the Institutional Analysis and Development (IAD) framework developed by Ostrom (2005), which provides a structured methodology for mapping the rules, norms, and physical/material conditions that shape the action arena in which institutional actors interact. Applied to Vietnam's ETS governance, this framework enables systematic identification of formal and informal institutional arrangements, their distributional implications for different stakeholder categories, and the incentive structures they create for compliance or non-compliance.

Stakeholder analysis follows the methodology of Reed et al. (2009), which classifies stakeholders according to their levels of interest in and power over a given policy domain. A stakeholder matrix is constructed identifying the primary actors in Vietnam's GHG market governance—state agencies, state-owned enterprises (SOEs), private sector actors, civil society organizations, and international development partners—and assessing their interests, influence, and relationships. This matrix serves as the analytical basis for evaluating the participatory adequacy of existing policy processes and identifying gaps in stakeholder representation.

Comparative analysis draws on the ETS governance experiences of Singapore, Thailand, and Indonesia—Vietnam's most relevant ASEAN comparators in terms of economic development level, institutional traditions, and climate policy ambition. The comparative cases are analyzed using a structured, focused comparison (George & Bennett, 2005) organized around the key governance dimensions identified in the Vietnamese case: regulatory architecture, stakeholder participation mechanisms, enforcement capacity, and inter-institutional coordination.

3. Results

3.1 Institutional Mapping of Vietnam's GHG Market Governance

3.1.1 Fragmented Regulatory Architecture

The most structurally significant finding of the institutional analysis is the extreme fragmentation of regulatory authority over GHG markets across Vietnamese government ministries and agencies, unlike many comparable ETS systems—where a single agency holds primary regulatory authority, as with the Environmental Protection Agency (EPA) in the United States or the Ministry of Ecology and Environment in China—Vietnam's GHG market is governed by a constellation of agencies with overlapping mandates and no clear hierarchical authority.

The institutional mapping, summarized in Table 1, identifies five ministries with substantive regulatory claims over different aspects of the GHG market: MONRE holds overall GHG management responsibility, including MRV oversight; MOF exercises authority over financial market regulation and may claim jurisdiction over any exchange-based trading platform; MOIT regulates energy-intensive industries that constitute the primary source of covered emissions; MARD oversees forestry and land-use carbon credits under REDD+ and other nature-based solution mechanisms; and the State Bank of Vietnam (SBV) may exercise jurisdiction over carbon instruments classified as financial products. The National Committee on Climate Change, chaired by the Prime Minister, serves a nominal coordination function but lacks dedicated operational capacity.

Table 1: Institutional Distribution of GHG Market Regulatory Authority in Vietnam

Ministry / Agency	Primary Mandate	GHG Market Jurisdiction	Key Coordination Tension
MONRE	Environmental protection; climate change; GHG inventory	Overall GHG market governance; MRV oversight; national registry	Limited financial market expertise; conflicts with MOF over exchange regulation
MOF	Public finance; financial market regulation; taxation	Carbon exchange regulation; financial instrument classification; revenue management	Competing regulatory claim over trading platform; divergent interests on revenue use
MOIT	Energy; industry; trade	Sectoral emission targets for power, steel, cement industries	SOE protection interests; resistance to stringent caps; energy security framing
MARD	Agriculture; forestry; rural development	Forestry carbon credits; REDD+; land-use sector MRV	Conflicting land tenure rules; uncertainty over forest carbon ownership
SBV	Monetary policy; banking regulation; foreign exchange	Potential jurisdiction over carbon financial products; cross-border carbon flows	Unclear mandate boundaries; foreign currency concerns for international linkage

Description: Institutional mapping based on documentary analysis of legal instruments and policy reports, 2024.

This fragmentation is not merely an administrative inconvenience: it creates structural conditions under which each ministry has incentives to protect its jurisdictional prerogatives and expand its mandate, producing inter-ministerial competition rather than coordination. The most acute tension exists between MONRE and MOF over the regulation of the carbon trading exchange—a dispute that has contributed directly to delays in the establishment of the pilot exchange originally scheduled for 2025 (MONRE, 2024). Without explicit legislative designation of a primary regulator, these tensions cannot be resolved at the bureaucratic level and require political intervention from the Government or the National Assembly.

3.1.2 The State Enterprise Problem

A governance challenge of particular significance in the Vietnamese context is the dual position occupied by large state-owned enterprises (SOEs) as both the primary regulated entities in the ETS and influential actors in the policy processes that determine the design of the market. SOEs in the energy sector—particularly Vietnam Electricity (EVN), PetroVietnam (PVN), and Vietnam National Coal and Mineral Industries Group (Vinacomin)—collectively account for the large majority of emissions in the sectors slated for initial ETS coverage. These enterprises are therefore the largest potential compliance buyers in the carbon market, with strong financial incentives to influence the design of emission caps, baseline allocation rules, and offset eligibility criteria in ways that minimize their compliance costs.

At the same time, senior executives of these SOEs maintain close institutional relationships with the ministries that oversee them—particularly MOIT and the Ministry of Construction—through formal reporting lines and informal political networks. This creates structural conditions for regulatory capture: the agencies nominally responsible for setting and enforcing emission standards have organizational interests in the financial health and operational continuity of the enterprises they oversee, creating inherent conflicts with stringent emission regulation. Comparative evidence from China's ETS—where the power sector's influence over allowance

allocation methodologies has been extensively documented—suggests that this dynamic can significantly weaken the environmental integrity of an ETS even when the formal legal framework appears robust (Zhang et al., 2022).

3.2 Stakeholder Analysis: Interests, Power, and Participation

The stakeholder analysis maps the interests and influence of key actor categories in Vietnam's GHG market governance across two dimensions: their level of interest in ETS outcomes (high/medium/low) and their current power to influence ETS design and implementation (high/medium/low). The resulting stakeholder matrix, presented in Table 2, reveals a governance architecture characterized by significant power asymmetries that favor established state actors over the private sector, civil society, and subnational stakeholders.

Table 2: Stakeholder Matrix for Vietnam's GHG Emissions Trading System

Stakeholder Category	Level of Interest	Influence Power	Key Interests and Positions
Major SOEs (EVN, PVN, Vinacomin)	High	High	Minimize compliance costs; influence cap-setting; lobby for free allocation; resist stringent MRV
Relevant Ministries (MONRE, MOF, MOIT)	High	High	Protect jurisdictional mandates; expand regulatory authority; balance revenue generation with industrial competitiveness
Private Industrial Firms	High	Medium	Level playing field with SOEs; clear compliance rules; access to offsets; reasonable cap levels
Financial Institutions / Banks	Medium	Medium	New financial product opportunities; clear legal framework for carbon credit collateralization; international linkage
Civil Society Organizations	High	Low	Environmental integrity; equitable benefit distribution; transparency in market operations; community co-benefits
Provincial/Local Governments	Medium	Low-Medium	Local economic development; equitable distribution of carbon revenues; forestry credit proceeds
International Development Partners	High	Medium	Technical assistance provision; alignment with Paris Agreement standards; demonstration of developing-country ETS viability
Agricultural and Forest Communities	Medium-High	Very Low	Equitable sharing of REDD+ and forestry carbon revenues; secure land tenure; protection from carbon colonialism

Description: Stakeholder matrix constructed through documentary analysis and comparative ETS literature review. Interest and power levels are assessments based on available policy evidence, 2024.

The power asymmetries revealed by this matrix have direct implications for the political economy of ETS design. The high-power stakeholders—major SOEs and relevant ministries—have strong incentives to design a market with relatively lenient caps, generous free allocation of allowances, and limited enforcement capacity. This configuration would reduce compliance costs for regulated entities while maintaining the formal architecture of an ETS that satisfies international climate commitments. Civil society organizations and community-based stakeholders, who have the strongest interest in a genuinely functional and equitable market, possess the least institutional power to resist such an outcome.

The absence of formal participatory mechanisms for non-state stakeholders in Vietnam's ETS design process amplifies these asymmetries. Unlike the EU ETS, which operates through a regulatory process that includes formal stakeholder consultation requirements, or China's ETS, which has been shaped by extensive engagement with industry associations, Vietnam's ETS design to date has occurred primarily within inter-ministerial working groups with limited transparency. Published consultation records show that civil society input has been minimal, and no formal mechanism exists for affected communities—particularly forest-dependent communities that stand to benefit or lose significantly from REDD+ and forestry carbon programs—to participate in market design decisions.

3.3 Comparative ASEAN Governance Insights

Comparison with Vietnam's ASEAN neighbors that have more advanced carbon market governance provides useful reference points for reform. Singapore represents the most mature case in the region: its Carbon Pricing Act (2018, amended 2022) established a carbon tax with a clear transition pathway to a trading system, administered by a single primary agency (the National Environment Agency) with clear legislative authority, strong enforcement capacity, and a transparent stakeholder consultation process embedded in the regulatory development process. Singapore's institutional capacity is, however, exceptional within ASEAN and reflects decades of investment in regulatory governance that cannot be replicated quickly elsewhere.

Thailand and Indonesia offer more directly comparable cases. Thailand's Climate Change Bill, under legislative consideration since 2022, has encountered delays attributable to institutional dynamics closely paralleling Vietnam's experience: competing ministerial interests, resistance from industrial SOEs, and the difficulty of building political consensus for binding emission constraints in a growth-oriented policy environment. Thailand's experience is informative in demonstrating that even formally advanced legal drafts can remain stalled in implementation when the underlying institutional coordination problems are unresolved (UNDP, 2023).

Indonesia's voluntary carbon market (VCM) and early ETS preparations offer perhaps the most instructive parallel. Indonesia's carbon market regulation (Government Regulation No. 98/2021) establishes a framework for a domestic ETS with an ambitious sectoral coverage, but implementation has been constrained by many of the same governance challenges identified in Vietnam: fragmented institutional authority (shared between the Ministry of Environment and Forestry, the Ministry of Finance, and the Financial Services Authority), weak MRV capacity, and unresolved questions about forestry carbon credit ownership and revenue sharing with indigenous and local communities. A comparative assessment of the two countries' ETS trajectories is summarized in Table 3.

Table 3: Comparative ETS Governance Assessment: Vietnam and Selected ASEAN Comparators

Governance Dimension	Vietnam	Indonesia	Thailand	Singapore
Primary regulatory authority	Fragmented (5 ministries)	Fragmented (3 agencies)	Contested (3 ministries)	Unified (NEA)
SOE influence on ETS design	Very High	High	High	Low-Medium
Civil society participation	Very Limited	Limited	Moderate	Structured
MRV system maturity	Early stage	Developing	Developing	Mature
Implementation timeline adherence	Delayed	Delayed	Delayed	On schedule
International linkage progress	Early-stage	Bilateral agreements	Exploratory	Advanced

Description: Comparative assessment based on UNDP (2023), World Bank (2024), GIZ (2023), and national policy documents. Assessments are qualitative and reflect conditions as of early 2025.

The comparative analysis confirms that Vietnam's governance challenges are not unique within the ASEAN region, but that they are among the most acute. Singapore's successful model is instructive but not directly transferable: its institutional capacity, rule-of-law environment, and political economy differ fundamentally from Vietnam's. The more directly comparable cases of Indonesia and Thailand suggest that governance fragmentation and SOE influence are structural features of ETS development in state-led ASEAN economies that require targeted political and institutional interventions, not merely technical market design improvements.

4. Discussion

4.1 Theoretical Implications

The findings contribute to three bodies of theoretical literature. First, they provide empirical support for and an extension of multi-level governance theory (Hooghe & Marks, 2003) applied to environmental markets in developing countries. The Vietnamese case illustrates how the vertical dimension of governance—tensions between national policy commitments and subnational implementation capacity—interacts with horizontal fragmentation across ministerial silos to produce coordination failures that are qualitatively different from, and more intractable than, the governance challenges encountered in established democracies with stronger rule-of-law traditions. Vietnam's single-party governance system creates both specific constraints (limited civil society voice, restricted media scrutiny of implementation failures) and specific opportunities (greater potential for top-down enforcement once political consensus is achieved) compared to pluralist democratic systems.

Second, the findings advance regulatory capture theory (Stigler, 1971; Dal Bo, 2006) by demonstrating how capture dynamics operate in the context of state-owned enterprises in transitional economies. Classical regulatory capture theory, developed in the context of Western regulated industries, assumes a relatively clear distinction between the regulating state and the regulated private sector. In Vietnam—as in China and other transitional economies with large SOE sectors—this distinction breaks down: SOEs are simultaneously market actors, major employers, political constituencies, and instruments of state industrial policy. This creates a distinctive form of capture that might be termed structural capture, where the interests of regulated entities are embedded within the state apparatus itself, rather than expressed through external lobbying.

Third, the stakeholder analysis findings contribute to political ecology literature on the governance of nature-based carbon solutions by documenting the systematic marginalization of forest-dependent communities from processes that will profoundly affect their land rights, livelihoods, and access to natural resources. The structural absence of these communities from ETS policy processes reflects broader patterns of exclusion from environmental governance that have been extensively documented in the global REDD+ literature (Corbera & Schroeder, 2011), and which are replicated in Vietnam's emerging carbon market architecture.

4.2 Practical Implications

For Vietnamese policymakers, the central practical implication of this study is that the ETS implementation delays and governance deficits are not primarily technical problems requiring better market design, but political and institutional problems requiring deliberate restructuring of governance relationships. Three specific policy interventions emerge as priorities from the analysis.

First, Vietnam should designate a primary ETS regulatory authority through explicit legislative or executive action. The current fragmented architecture cannot resolve the inter-ministerial coordination failures identified in Section 3.1 through informal coordination mechanisms: the institutional interests at stake are too significant, and the power relations among agencies too asymmetric, for voluntary coordination to succeed. A credible primary regulatory authority requires not only a formal legal mandate but also dedicated human resources, technical capacity, and political backing sufficient to withstand pressure from both industrial SOEs and competing line ministries. MONRE is the most logical institutional home given its existing GHG management mandate, but it requires substantial capacity investment and clear legal authority to override competing ministerial claims.

Second, the design of Vietnam's ETS must incorporate structured participatory mechanisms for non-state stakeholders. The current exclusion of civil society, private sector associations, and affected communities from market design processes creates dual risks: it produces policy outputs that may be technically flawed due to the absence of diverse knowledge inputs, and it generates legitimacy deficits that will impede compliance and enforcement when the market becomes operational. Practical mechanisms might include: formal public consultation requirements for major ETS regulatory decisions; an advisory council with representation from industry associations, environmental NGOs, academic institutions, and international organizations; and specific consultation protocols for forest and agricultural communities affected by nature-based carbon programs.

Third, Vietnam should design an ETS pilot specifically calibrated to the country's actual institutional capacity rather than imported from more institutionally advanced systems. The existing roadmap's emphasis on a broadly designed trading exchange with multiple sectors and complex market infrastructure may be premature given the governance conditions documented in this study. A more pragmatic approach would concentrate the pilot phase on a small number of large industrial emitters in a single sector (the power sector offers the most tractable entry point given its limited number of large installations), with simple compliance mechanisms, administratively feasible MRV requirements, and enforcement systems that leverage existing regulatory relationships rather than requiring new institutional capacities.

4.3 Limitations and Future Research Directions

This study has several limitations that should be acknowledged. The analysis relies primarily on documentary sources and published institutional assessments; primary qualitative data from interviews with Vietnamese policymakers and stakeholders would provide richer insight into the informal political dynamics, personal networks, and bureaucratic incentives that shape implementation in ways not fully captured by official documents. Future research should incorporate systematic interview-based fieldwork with key informants across the ministerial and stakeholder categories identified in the stakeholder matrix.

The comparative analysis is necessarily limited in scope: a deeper comparative study focused specifically on governance fragmentation in ASEAN ETS development, using process-tracing methodology to examine how and why specific governance decisions were made, would provide stronger analytical traction on the causal mechanisms linking institutional structure to implementation outcomes. Additionally, this study focuses on the national level of governance; subnational dimensions—particularly the role of provincial governments in implementing forestry carbon programs and managing local stakeholder conflicts—merit dedicated research attention.

Future research directions include: longitudinal tracking of Vietnam's ETS governance evolution as implementation proceeds through the 2025-2028 pilot phase; comparative political economy analysis of SOE influence on carbon market design across ASEAN transitional economies; empirical assessment of civil society capacity and organizational resources available for participation in Vietnamese carbon market governance; and evaluation studies of the effectiveness of specific governance reforms once implemented.

5. Conclusion

This study has examined the governance architecture of Vietnam's emerging greenhouse gas emissions trading system through a qualitative policy analysis framework, identifying four critical and interrelated governance deficits: institutional fragmentation across five ministries with overlapping and contested jurisdictions; structural conflicts of interest arising from the dual position of state-owned enterprises as both regulated entities and embedded political actors; the systematic marginalization of civil society, private sector, and community stakeholders from market design processes; and weak horizontal coordination mechanisms that produce inter-ministerial competition rather than coherent policy implementation.

These deficits are not accidental or easily remediable through technical market design adjustments. They are rooted in structural features of Vietnam's political-administrative system—the fragmentation of sectoral regulatory authority, the centrality of SOEs in the economy and the state, and the constraints on civil society voice inherent in a single-party governance context—that require deliberate political and institutional interventions to address. The comparative analysis of ASEAN ETS governance experiences confirms that Vietnam's challenges are severe relative to regional comparators, and that the countries that have made the most progress are those that have invested most heavily in governance reform, not merely technical market design.

The study's policy recommendations—designating a primary regulatory authority, creating structured participatory mechanisms, and designing a pilot phase calibrated to institutional capacity—are presented not as a complete solution to Vietnam's ETS governance challenges, but as necessary conditions for progress. Vietnam's net-zero commitment and its NDC targets create a genuine imperative for effective carbon market development. Whether that imperative generates sufficient political will to drive the difficult institutional reforms required is ultimately a political question that lies beyond the reach of policy analysis to resolve. What this study can contribute is a clearer diagnosis of the governance architecture that must be reformed, and a set of evidence-based recommendations for how that reform might be structured.

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