

VIETNAM CARBON TRADE EXCHANGE PILOT PREPARATION WITH MINISTRY OF FINANCE

Deliverable 2: Report on Recommended Operational Modal and Implementation Framework for Vietnam's Carbon Trade Exchange Pilot

November 2025

1. Introduction of Deliverable 2

2. International carbon trading system review

3. National context and relevant frameworks

4. The proposed CTX operational model in the latest Draft Decree

5. Key gaps and challenges

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1. Introduction of Deliverable 2

- **Objective:** The primary contribution of this report (Deliverable 2) is to serve as a specialised analysis providing constructive, evidence-based recommendations to strengthen and refine the most recent available draft of the Decree on the domestic carbon trade exchange (as of July 2025). The ultimate aim is to support the Ministry of Finance (MOF) in ensuring that Vietnam's Carbon Trade Exchange (CTX) model, upon its launch, is effective, robust, and aligned with international best practices.
- **Scope:** The proposed model covers the following key areas:
 - Governance and infrastructure framework
 - Operational framework and procedures
 - Supervision and reporting framework
 - Market stability and risk management framework
- **Methodology**
 - Combines a review of international best practices (analyzing governance, transaction, and oversight processes) with deep local engagement.
 - Assesses and adapts international models for Vietnam's specific context, informed by direct consultations with public and private stakeholders.
- **Outcome**
 - Provide critical input for MOF to strengthen Vietnam's carbon market
 - Define key institutional roles, supervisory functions, and risk mitigation strategies
 - Ensure the pilot CTX operates with effectiveness, transparency, accountability, and aligns with international best practices.

2. International carbon trading system review (1)

United Kingdom ETS

- **Overview**

- Launched **2021**; supports **Net Zero 2050**.
- Covers power, industry, domestic aviation (~1/3 emissions).
- **Declining cap** (initially 5% below EU ETS); stand-alone but **linkable** (UK-EU linkage announced 2025).

- **2024-2025 updates**

- Cap tightened **30%** (2021-2030); emissions **156** → **~50 MtCO₂e**.
- Release of **53.5M allowances**; scope expansion (waste, maritime, GHG removals).
- Free allocation revised; aligned with **UK CBAM**.
- Stability tools strengthened: **CCM, ARP, SAM**.
 - Allowances treated as **financial instruments**.

- **Legal & operations**

- Based on **UK ETS Order 2020**.
- Institutions: **UK ETS Authority, FCA, ICE, Registry**.
- Trading via auctions, exchange, OTC; CCP clearing; MAR-based oversight.

- **Key lessons for Vietnam**

- Map functions: **SSC-HNX-VSDC**.
- Set **inter-agency coordination protocol**.
- Ensure **legal clarity**: allowances = financial assets.
- Apply **ARP/CCM** early.
 - Establish **technical SLA** for registry-trading-settlement links.

2. International carbon trading system review (2)

European Union ETS

- **Overview**

- Established **2005** → world's **largest & oldest** ETS; cornerstone of EU climate policy.
- Covers **power, industry, intra-EU aviation** (~40% EU emissions).
- Four phases: Pilot (I), Kyoto alignment (II), Centralised cap + MSR (III), Fit-for-55 tightening + ETS2 (IV).

- **2024–2025 updates**

- Rebased cap: **-90M allowances (2024)** and **add more 27M (2026)**; LRF strengthened → **- 62% by 2030 (compare emission in 2005)**.
- Scope expanded: **maritime (2024)**; aviation free allocation – 25% (2024) and non-CO₂ MRV (2025). **ETS2 (buildings & road transport)** to start 2027.
- **CBAM** to replace free industrial allocation from 2026.
- MSR continues stabilising prices; auctions raised **€43B (2023)**.
- Draft **EU-UK ETS linkage** agreed in principle (2025).

- **Legal & institutional framework**

- Based on **Directive 2003/87/EC** + reforms (2009, MSR Decision 2015, European Climate Law 2021, Fit-for-55).
- Key bodies: **European Commission, Member State NCAs, ESMA, EEX/ECC, Union Registry/EUTL**.
- Allowances treated as **financial instruments** → MiFID II + MAR supervision.

- **Operations & market infrastructure**

- Trading: **EEX auctions**, liquid secondary market (spot & derivatives), OTC (post-trade reporting).
- Registry: Union Registry + EUTL (full transparency).
- Risk control: CCP clearing, margining, EMIR reporting, market surveillance (ESMA + ACER).
- MSR + Art.29a = rules-based stability mechanisms.

- **Key lessons for Vietnam**

- **Avoid over-allocation**: strengthen baseline data; consider correction factor & verification period.
- **Early legal clarity**: classify allowances as **financial assets** under SSC supervision.
- **Formal inter-agency coordination** (MAE–MOF–SSC–HNX–VSDC) to avoid fragmentation.
- Apply **simple stability tools** early (ARP + CCM).
- Strengthen **compliance & transparency**: penalties, make-good rule, public registry dashboard.

2. International carbon trading system review (3)

New Zealand ETS

- **Overview**
 - Launched **2008**; first national ETS covering **all sectors & all GHGs**.
 - Supports **Net Zero 2050** under Zero Carbon Act 2019.
 - Covers ~50% national emissions; **forestry is major supply source**.
 - Early issues: weak price signals, unlimited offsets, heavy forestry supply → volatility & distortions.
- **Latest developments (2024–2025)**
 - Cap tightened: **2025 cap = 19.1M NZUs** (down from 27.9M).
 - **Auction floor = NZ\$68**, CCR trigger = NZ\$193; unsold units canceled.
 - Updated free allocation baselines; **agriculture removed from ETS** (new farm-level pricing by 2030).
 - Methane impact reassessment to inform future targets.
- **Legal & institutional framework**
 - Based on **Climate Change Response Act (2002, 2020, 2019 amendments)**.
 - Key bodies: **MfE, EPA, MPI, Treasury, Climate Change Commission**.
 - **NZUs = sole compliance unit**; registry operated by EPA.
- **Operations & infrastructure**
 - Quarterly **auctions (NZX/EEX)**; OTC-based secondary market; strong forestry crediting.
 - **NZETR** tracks all units; near-real-time settlement.
 - Market oversight mainly via EPA; **no financial classification**.
 - **Market stability tools**
 - **ARP** (price floor), **CCR** (price ceiling), **auction withdrawal** mechanisms.
- **Key lessons for Vietnam**
 - Control **quality + volume of offsets**, especially forestry.
 - Introduce **ARP & CCR** early to stabilise prices.
 - Use VN's strong securities infrastructure → empower **SSC-HNX-VSDC**.
 - Establish a clear **inter-agency coordination protocol** to avoid fragmentation.

2. International carbon trading system review (4)

California ETS

- **Overview**
 - Launched **2013** under **AB 32**; strengthened by **SB 32** & **AB 398**.
 - Targets: **-40% below 1990 by 2030, net-zero by 2045**.
 - Covers **~80%** statewide emissions; expanded from power/industry → fuels & gas supply (2015).
 - Linked with **Québec** under WCI; joint auctions.
- **Latest developments (2024–2025)**
 - Proposed reforms tighten cap (2026–2045), reduce free allocation, update offset rules.
 - Higher **price ceiling & reserve triggers** → stronger price signal.
 - Interest in linkage expansion to **Washington State**.
 - Auction revenue > **US\$5B (2024)** for climate & equity programs.
- **Legal & institutions**
 - Based on **AB 32, SB 32, AB 398**.
 - **CARB** = lead regulator (cap setting, allocation, compliance).
 - **WCI, Inc.** administers auctions & **CITSS** registry.
 - Third-party registries certify offsets.
- **Operations & infrastructure**
 - **Joint quarterly auctions** (sealed bid).
 - Active secondary market via **ICE, Nodal, CME** + OTC trades.
 - **CITSS** tracks issuance, transfers, surrender; secure electronic settlement.
 - Linkage → fungible allowances & greater liquidity.
- **Stability mechanisms**
 - **ARP (floor price)** rising annually.
 - **APCR** (soft ceiling with multi-tier triggers).
 - **Hard price ceiling** for extreme cases.
- **Key lessons for Vietnam**
 - Set **holding limits** to prevent market concentration.
 - Adopt a **price collar** (ARP + tiered reserve) to stabilise early-phase volatility.
 - Establish **independent technical advisory committee** for credibility.
 - Build **public data transparency**: dashboard on trading, auctions, compliance.

2. International carbon trading system review (5)

Korean ETS

• Overview

- Asia's **first nationwide ETS**, launched **2015** under the Emissions Trading Act.
- Supports targets: **-40% vs 2018 by 2030, carbon neutrality by 2050**.
- Covers **~70%** of national GHGs (power, industry, buildings, aviation).
- Phase development: **Phase I (2015–17)**: pilot, almost full free allocation, **Phase II (2018–20)**: auctions & tighter caps, **Phase III (2021–25)**: more auctioning, stronger penalties, financial institutions allowed, **Phase IV (2026+)**: tighter caps, broader scope, EU-style stability mechanism.

• Latest developments (2024–2025)

- **Feb 2024 Act amendment (in force Feb 2025)**: Expands participation to banks, insurers, fund managers; legal basis for **brokers & exchanges**. Stricter surplus rule: cancellation threshold cut from **50% → 15%** of unused allocation.
- **Fourth Basic Plan (Dec 2024)** for 2026–2035: More **auctioning** (esp. power sector). **Production-based benchmarks** for free allocation (75% of covered emissions). Automatic **market stability mechanism**; broader auction eligibility; more flexible banking. Auction revenues earmarked for **industrial decarbonisation & innovation**.

• Legal & Institutional framework

- Anchored in **Green Growth Act, Carbon Neutrality Act**, and **Emissions Trading Act** (2012, amended 2024).
- Key systems: **NGMS (emissions data), ETRS (allowances), ORS (offsets)**.
- Main institutions: **MoE** (lead regulator), **MoEF, GIR, K-eco, KRX**, plus compliance entities, project developers, and market makers.

• Operations, surveillance & penalties

- **ETRS/ORS** track all allowances & offsets.
- Integrated surveillance (NGMS + ETRS + KRX).
- Strong transparency (market data, auctions, registry).
- Penalties: up to **3× market price** (max **KRW 100k/tCO₂e**); new misconduct sanctions.

• Key lessons for Vietnam

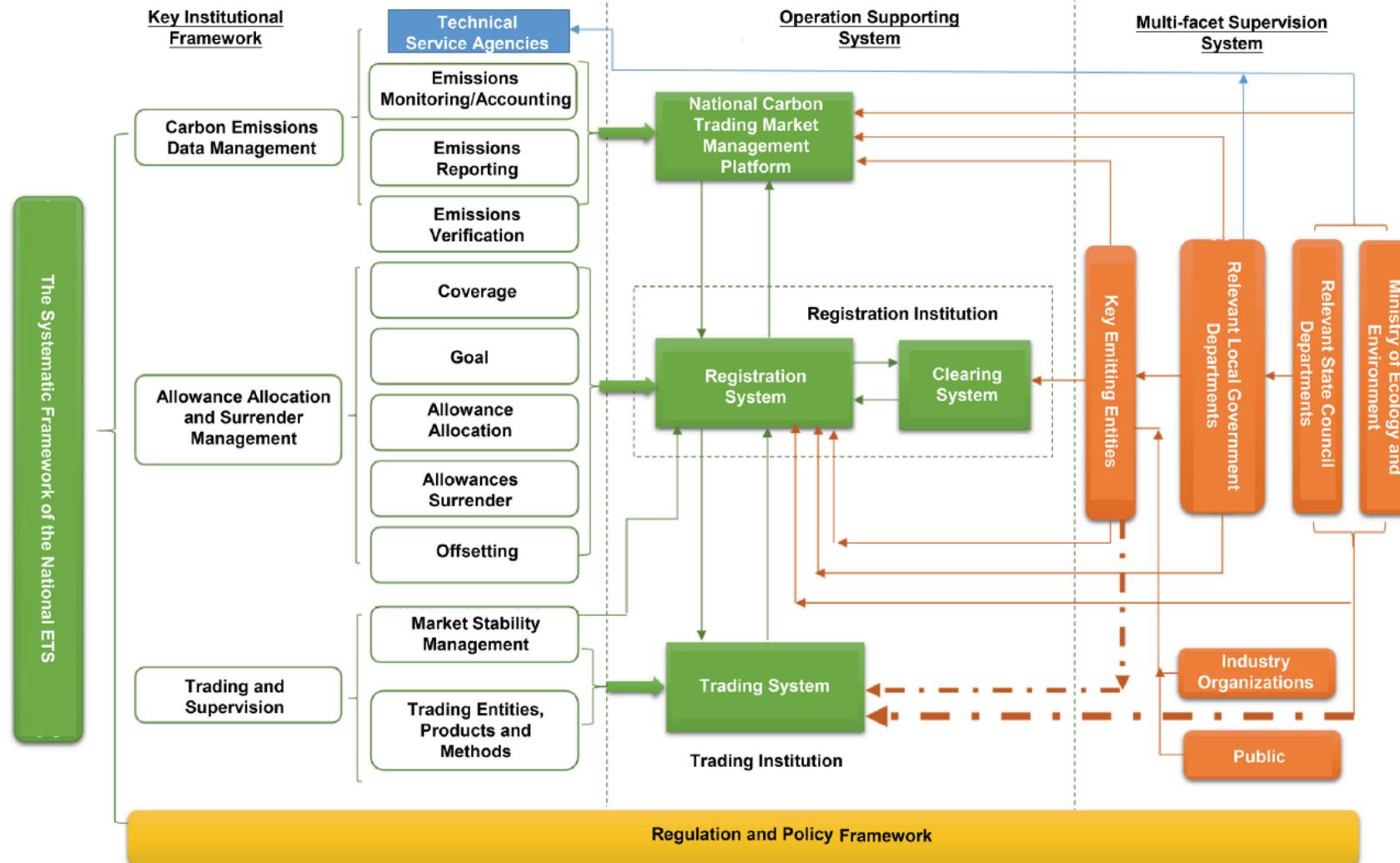
- Treat **pilot CTX as MRV-preparation phase** (focus on data quality & capacity, not volume of trading).
- Establish a **National CTX Helpdesk** to support enterprises (like Korea's helpdesk/knowledge hub).
- Embed a **phased, adaptive framework** with mandatory review of the pilot and legal space to tighten caps, add auctions, adjust rules.
- Adopt a **clear, stable legal framework** plus a formal **Inter-agency Coordination Protocol** (MAE–MOF–SSC–HNX–VSDC), mirroring Korea's structured division of roles.

2. International carbon trading system review (6)

China ETS

- **Overview**
 - **World's largest ETS**; launched **2021**; cornerstone for **2030 peak / 2060 neutrality**.
 - Covers **power sector** first; expanding to **steel, cement, aluminium (2025)** → total **~8 Gt CO₂** (~60% national emissions).
 - **Intensity-based (rate-based) cap** using sector benchmarks; 100% free allocation.
 - High compliance (>99.5%); stable prices (~40–100 CNY).
- **Latest Developments (2024–2025)**
 - Sector expansion adds ~1,500 firms & 3 Gt CO₂.
 - **Banking rules** introduced (base + trading-linked).
 - **Interim ETS Regulation (2024)** strengthens legal authority & penalties.
- **Legal & Institutional Framework**
 - Multi-level framework: **Interim Regulation** → **Administrative Measures** → **Trading/Registry/Settlement Rules**.
 - Core institutions:
 - **MEE** – national regulator (caps, benchmarks, enforcement).
 - **Provincial authorities** – verification & local enforcement.
 - **SEEE** – national exchange (trading, surveillance).
 - **CCERC** – national registry (ownership, settlement).
- **Operations & Market Infrastructure**
 - Dual-hub model: **SEEE (trading) + CCERC (registry/settlement)**.
 - Trading modes: **listed, bulk, one-way bidding** (T+1).
 - Risk controls: **price bands ±10%/±30%**, large trader reporting, anomaly detection.
 - Stability tools: **offsets (5%), banking, future strategic reserve**.
- **Key Lessons for Vietnam**
 - Build **strong legal hierarchy** (Decree → Circulars).
 - Centralised model (HNX + VSDC + NRS) is validated by China's success.
 - **Intensity-based allocation** suits fast-growing economies.
 - Facilitate **initial price discovery** through guided SOE dialogue.
 - Use **state-affiliated exchange** to keep climate-policy alignment.

2. International carbon trading system review (7)



The systematic framework of the China National ETS

2. International carbon trading system review (8)

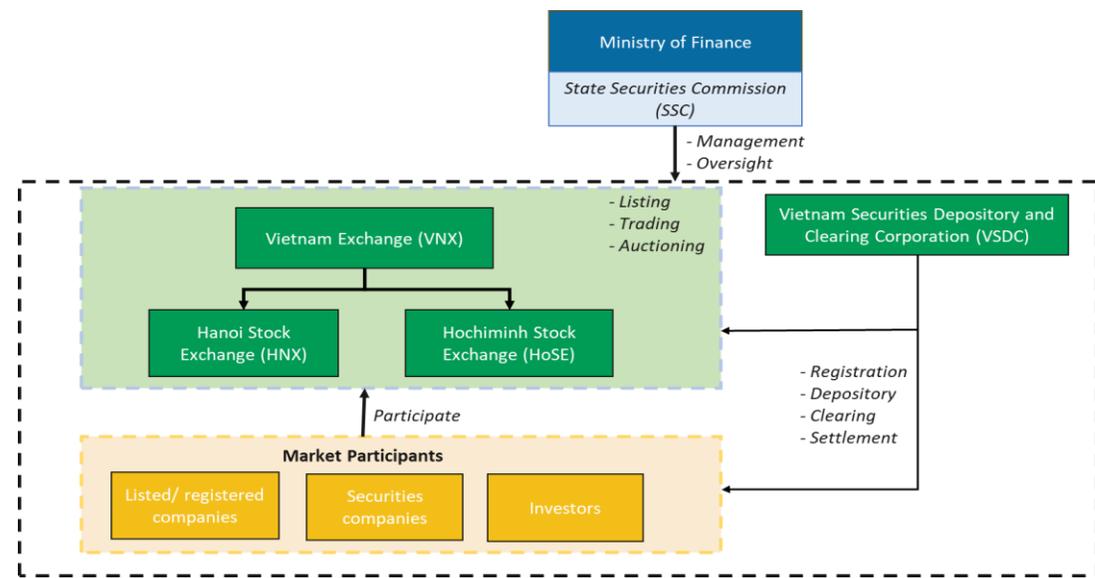
Summary of lessons drawn from international ETS models and its applicability for Vietnam

ETS model	Key lesson learned	Rationale / direct relevance to Vietnam	Specific, actionable implication for Vietnam
UK ETS	Leverage existing financial infrastructure for rapid and cost-effective deployment.	Vietnam's strategy to use the HNX and VSDC aligns perfectly with this best practice, avoiding the high costs and long timelines of building new systems from scratch.	Formalise the institutional mapping: Vietnam should explicitly assign market supervision to the SSC, trading/auctioning functions to HNX, and clearing/settlement to VSDC.
	Formalise inter-agency coordination from the outset to prevent governance gaps.	Vietnam's dual-ministry governance model (MAE and MOF) creates a high risk of regulatory overlap or gaps without a clear protocol.	Establish a binding Inter-agency Coordination Protocol to define decision-making hierarchies and joint enforcement procedures.
EU ETS	(Cautionary Tale) Over-allocation in the pilot phase due to poor baseline data leads to price collapse and erodes market credibility.	Vietnam's pilot will rely on newly collected enterprise data, which carries a high risk of being incomplete or inaccurate, mirroring the EU's initial challenge.	Embed a "conservative correction factor" into the initial allocation methodology and mandate a formal data verification period before the first compliance cycle is finalised.
	Automatic, rules-based market stability mechanisms (like the MSR) are crucial for long-term price stability and supply management.	While an MSR is complex for a pilot, the principle of having a pre-defined tool to manage volatility is critical for building market confidence.	Integrate simpler stability tools from the start: The framework should include provisions for an Auction Reserve Price (ARP) and a Cost Containment Mechanism (CCM) to create a predictable price corridor.
NZ ETS	(Cautionary Tale) An unrestricted supply of offsets (especially from forestry) can saturate the market and suppress the carbon price, undermining industrial abatement efforts.	Vietnam's legal framework allows for a high offset usage limit (up to 30%), creating a similar risk of market saturation by potentially low-cost credits.	Prioritise offset quality over quantity: MAE must issue stringent technical guidelines for offset eligibility (covering additionality, permanence, etc.) before allowing them for compliance use on the CTX.
California ETS	Proactively manage market concentration risk by imposing quantifiable holding limits to prevent manipulation by large entities.	Vietnam's pilot market will be small and potentially dominated by a few large State-Owned Enterprises (SOEs), creating a high risk of market concentration.	Define quantifiable holding limits within the CTX operational regulations for all participant types to ensure fair market access and prevent hoarding.
	Build trust through independent oversight and proactive data transparency via public platforms.	Enhancing credibility beyond government bodies is key to building public and investor confidence in a new market.	Establish an independent Technical Advisory Committee to provide impartial analysis and create a public data dashboard showing prices, volumes, and compliance status.
K-ETS	The value of a mandatory, preparatory MRV phase (via the Target Management System) before the ETS launch to ensure data quality and build enterprise capacity.	Vietnamese enterprises are new to GHG accounting, and the initial data quality is a significant risk to the credibility of the pilot phase.	Treat the pilot phase as an "MRV Perfection Phase": The primary objective should be to establish a reliable emissions baseline and build enterprise capacity, rather than focusing on high trading volumes.
China ETS	An intensity-based allocation model (tCO2 per unit of production) is highly suitable for growing economies, balancing climate goals with economic development.	As a developing economy with strong growth targets, Vietnam faces a similar challenge of avoiding overly rigid caps that could stifle industrial output.	Seriously consider adopting an intensity-based allocation methodology for key industrial sectors to provide flexibility and align environmental policy with economic reality.
	A pragmatic, government-facilitated approach to initial price discovery can ensure a stable market launch in a thin, illiquid market.	Vietnam's pilot market will lack a natural price discovery mechanism at the start, creating a high risk of extreme volatility or no trading at all.	Host a facilitated, non-binding dialogue between MAE, MOF, and key pilot entities to build consensus on a reasonable starting price range before trading officially begins.

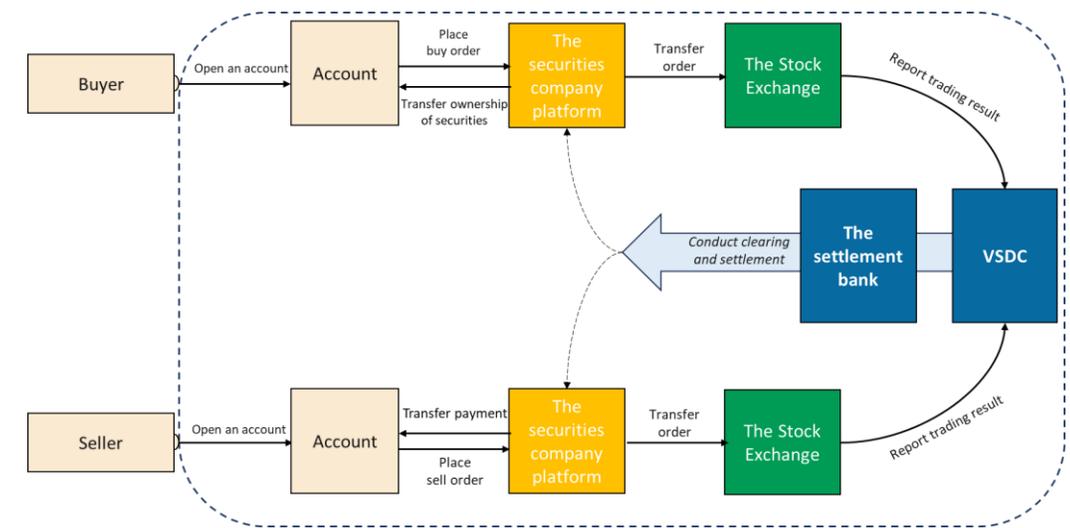
3. National context and relevant frameworks (1)

Assessment of the National Securities Market Operational Model

- The securities market model provides a strong legal and technical foundation for developing the CTX, supported by over 20 years of established infrastructure for trading, clearing, settlement, and market supervision. Leveraging HNX and VSDC helps **accelerate implementation, reduce costs, and minimise operational risks.**
- However, the CTX differs fundamentally from the securities market: **carbon units are compliance instruments rather than financial securities; the system must be tightly integrated with the NRS; and new ETS-specific functions such as surrender, banking, and borrowing must be incorporated.** In addition, market behaviour is compliance-driven rather than investment-driven, **requiring adapted approaches to supervision, risk management, and liquidity support.**
- Therefore, while the securities market offers a solid foundation, **targeted adjustments are necessary to meet the unique requirements of the carbon market.**



Institutional arrangements of the stock exchange in Vietnam



Infrastructure requirements of the stock exchange in Vietnam

3. National context and relevant frameworks (2)

Legal and institutional framework for the carbon market and the CTX in Vietnam

Legal foundation and ongoing refinement	Implementation roadmap
<p>Decree No. 06/2022/ND-CP, issued by the Government on 7 January 2022, on mitigation of GHG emissions and protection of the Ozone Layer. This foundational decree provided the first detailed roadmap for the market's development, setting the initial strategic direction and timeline.</p>	<p>Phase 1: Pilot implementation (through 2028): This initial phase focuses on building core infrastructure, including the establishment and operation of the NRS. Its scope will be limited to select high-emitting sectors to test market mechanisms on a manageable scale. This phase will be complemented by extensive capacity building for both participating enterprises and relevant government agencies.</p>
<p>Decree No. 119/2025/ND-CP, issued by the Government on 9 June 2025, amending and supplementing Decree No. 06/2022/ND-CP. This crucial amendment marks the transition from a conceptual phase to operational readiness. It formalises the core market infrastructure, defines the roles of the CTX and the NRS, and establishes detailed provisions for the pilot phase. Key provisions include:</p> <ul style="list-style-type: none"> • Initial sector coverage • Compliance flexibility • Offsetting framework 	<p>Phase 2: Full operation (from 2029): Following a comprehensive assessment of the pilot, the market is scheduled to transition to full operation. Key activities will include launching allowance auctioning mechanisms, finalising the legal framework, expanding participation to additional sectors, and exploring opportunities for international market linkages.</p>

3. National context and relevant frameworks (3)

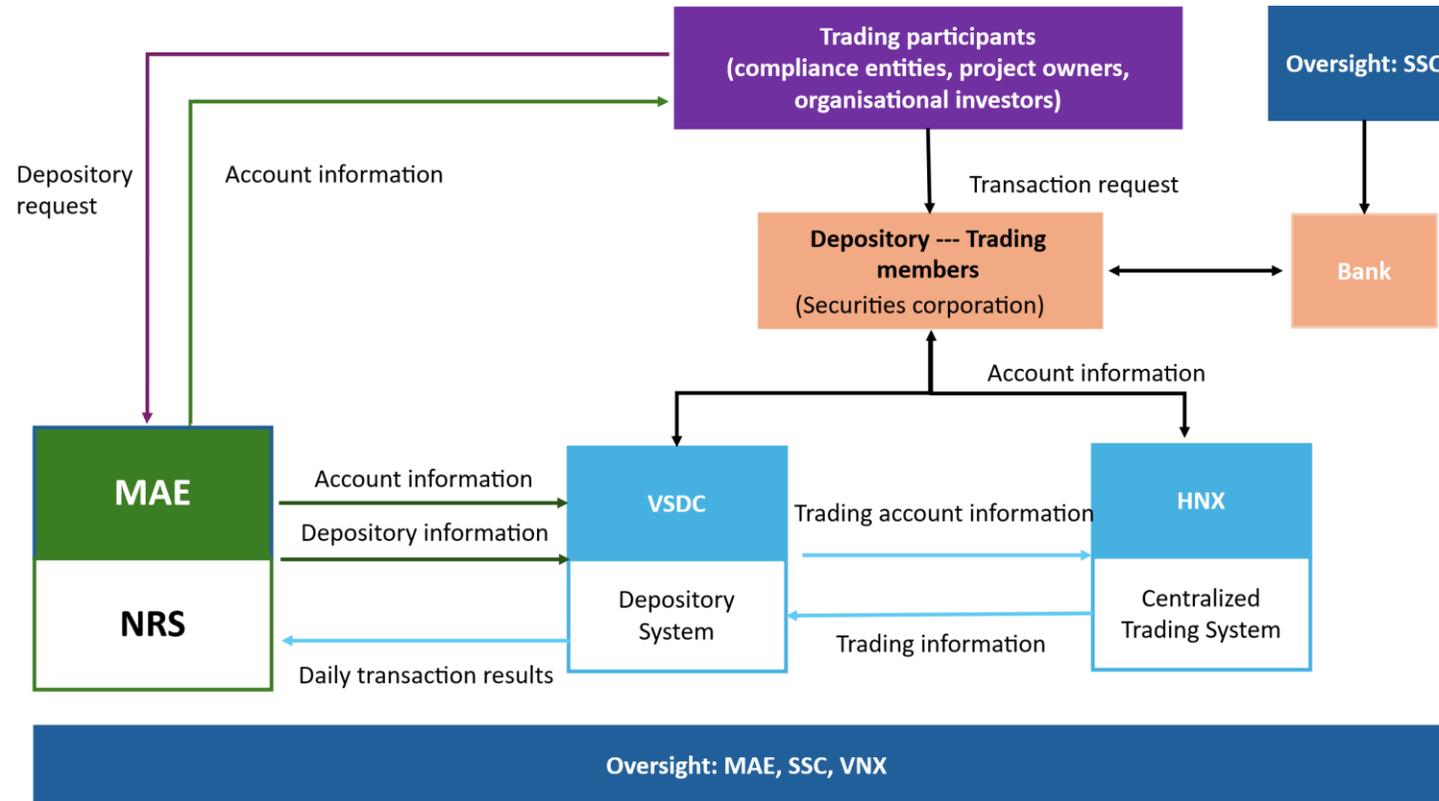
Legal and institutional framework for the carbon market and the CTX in Vietnam

- **Institutional arrangement:**
 - **MAE:** Environmental regulator – NRS operation, MRV standards, allocation, credit methodologies.
 - **MOF/SSC:** Financial supervision – market conduct, anti-manipulation oversight.
 - **HNX:** Operates CTX trading platform.
 - **VSDC:** Depository, clearing & settlement.
 - **Line ministries (MOIT, MOC):** Sector-specific MRV guidelines.
 - **Market ecosystem:** Compliance entities, brokers/investors, verifiers, project developers.
- **Key implementation challenges:**
 - **Legal uncertainty:** Carbon unit definition; timely allocation by MAE.
 - **System integrity:** CTX fully depends on NRS – requires strong technical synchronisation.
 - **Liquidity risk:** 100% free allocation & flexibility may limit early trading.
 - **Supervision fragmentation:** Multi-agency oversight needs a formal coordination protocol.

4. The CTX operational model proposed in the latest Draft Decree (1)

Governance and infrastructure framework

- The proposed operational model for the CTX pilot establishes a framework that strategically leverages Vietnam's existing financial market institutions.
- It is built upon a hybrid governance structure and an integrated technical architecture designed to ensure both environmental integrity and financial market stability.



Proposed operational model for the CTX pilot in Vietnam

4. The CTX operational model proposed in the latest Draft Decree (2)

Operational framework and procedures

1. Depository & Ownership Transfer

- Carbon units must first be **registered in the NRS (managed by MAE)** for validation and coding.
- Units are then **deposited at VSDC** to become eligible for trading.
- VSDC manages all depository functions, executes ownership transfer after settlement, and **reports daily to MAE** to keep the NRS updated.

2. Trading Procedures

- **Pre-validation principle:** participants must have sufficient funds/units before placing orders.
- Orders are submitted through securities companies; trades are matched on HNX → results sent to VSDC for settlement.

3. Clearing & Settlement

- Settlement follows **RTGS**, with each trade settled individually and immediately.
- Strict **DVP** principle ensures simultaneous exchange of units and funds.
- **No CCP** mechanism applied in the pilot phase.
- Clear **failure-handling procedures** for settlement defaults (e.g., insufficient funds/units).

4. The CTX operational model proposed in the latest Draft Decree (3)

Supervision and reporting framework

1. Regulatory oversight structure

- **MAE:** Primary supervisory authority; oversees trading activities, detects market manipulation, ensures carbon unit integrity, and leads inspections of HNX & VSDC.
- **SSC:** Coordinates with MAE; provides feedback on operational regulations and participates in joint inspections.

2. Multi-layered Market Surveillance

- **Exchanges (VNX/HNX):** Conduct real-time transaction surveillance and report directly to MAE.
- **VSDC:** Supervises depository members and ensures compliance with depository and settlement rules.
- **Trading members:** First line of defence, monitoring client activities and reporting suspicious transactions.

3. Reporting & Information Disclosure

- **Regulatory reporting:** Members → HNX/VSDC → periodic consolidated reports submitted to MAE.
- **Public disclosure:** HNX/VSDC disclose aggregated trading data and violations to ensure transparency.

4. The CTX operational model proposed in the latest Draft Decree (4)

Market stability and risk management framework

1. Settlement & Counterparty Risk Controls

- RTGS combined with strict DVP eliminates counterparty risk at the transaction level.
- Clear procedures for transaction cancellation in case of settlement failure (Article 17).

2. Operational & Conduct Risk Controls

- MAE may temporarily suspend market operations during major disruptions (Articles 29–30).
- VNX and VSDC may suspend/terminate members for violations; all breaches must be publicly disclosed (Articles 20–25, 32).

3. International Benchmark Insights

- Vietnam's pilot model is a *hybrid*: cautious like China's ETS (no CCP, negotiated trades) but future-ready by allowing securities firms as intermediaries.
- A clear evolution roadmap is needed: simple initial design → auctions, continuous trading, and market-stability mechanisms.

5. Key gaps and challenges (1)

1. Governance & Legal Gaps

- **Lack of inter-agency coordination mechanisms:** No binding protocol or escalation process for crisis situations → risk of slow or ineffective responses.
- **Unclear legal status of carbon units:** No classification under civil, commercial, or financial law → uncertainty in accounting, taxation, collateralisation, insolvency treatment, and HNX-VSDC operational procedures.

2. Market Design & Liquidity Gaps

- **Structural liquidity risk:** 100% free allocation, high compliance flexibility (15% borrowing, 30% offsets), and reliance on negotiated trades → weak incentives to trade.
- **Price discovery gap:** No continuous trading system or public price disclosure → opaque prices, weak planning signals, limited investor participation.
- **No market stability mechanisms:** Absence of price floors/ceilings, CCR, MSR → vulnerable to volatility and supply-demand imbalances.

3. System & Operational Gaps

- **High dependency on NRS:** No binding SLA for data synchronisation or incident response → single point of failure.
- **No position limits or large-trader reporting:** Risk of market concentration or strategic withholding by large emitters.
- **No daily price fluctuation limits:** Market exposed to extreme, uncontrolled price swings.
- **Lack of proactive market surveillance:** No real-time monitoring, anomaly detection, or tiered enforcement mechanisms for market abuse.

5. Key gaps and challenges (2)

4. Transparency Gaps

- No routine publication of market data (prices, volumes, compliance status).
- Limited public access → weaker oversight, lower market confidence, and reduced evidence-based policymaking.
- Missing public dashboards and periodic market reports.

5. Capacity Gaps

- Regulators (MAE, MOF, SSC) lack specialised skills for market surveillance and manipulation detection.
- HNX & VSDC need deeper technical expertise on carbon assets and compliance cycles.
- Brokers/intermediaries lack knowledge to advise on carbon trading risks.
- Compliance entities face major gaps in GHG accounting and internal risk management capacity.

6. Financial Sustainability Gap

- No defined long-term financial model for CTX operations.
- Missing fee schedule (transaction, account, issuance).
- No cost-recovery or revenue-reinvestment mechanism → risk of dependence on state budget, underfunding critical functions (supervision, IT, cybersecurity).

6. Recommendations (1)

Pre-launch and preparatory launch phase (2025 – Q1 2026) – Institutional, legal, and operational readiness preparation

1. Legal Finalization & Institutional Coordination

- Issue the **Decree on the Domestic Carbon Exchange (CTX)** to officially launch the market.
- MAE & MOF to issue a **coordination agreement** defining data exchange, incident-response procedures, and regulatory responsibilities for supervision, compliance, and financial reporting.
- Hold **quarterly inter-ministerial meetings** to review CTX progress and address emerging issues.

2. Technical Integration & System Readiness

- Complete integration of **CTX – NRS – HNX – VSDC** in line with Decision 1162.
- Sign **SLAs** between MAE, HNX, and VSDC on data synchronisation, cybersecurity, and system uptime.
- Conduct **joint simulation and stress-testing exercises** before market launch.

3. Operating Rules & Market Procedures

- HNX & MOF: Develop rules for trading and depository members.
- SSC: Issue regulations for participating banks.
- HNX & VSDC: Jointly develop **SOPs** for unit registration, transfer, cancellation, and registry–settlement reconciliation.
- MOF: Prepare guidance on **tax, accounting, and collateral eligibility** for carbon units.

4. Capacity Building & Market Outreach

- Implement a national **training programme (2025–2026)** for regulators, market operators, and covered entities.
- Establish an **official CTX information portal** managed by HNX.
- Conduct **mock-trading sessions** once the system is operational to improve readiness.

5. Financial Resourcing

- MOF to secure **public-investment funding** under Article 77 of the 2024 Law on Public Investment.
- Mobilize support from **ETP, ADB, and UK PACT** for system development, training, and communication.

6. Recommendations (2)

Phase 2 (2026–2028): Pilot Operation

- **Operational testing:** 100% free allocation; borrowing up to 15% and offset use up to 30%.
- **Liquidity enhancement:** consider $\pm 10\%$ price bands, ARP, CCM; study pilot auctions (up to 10%).
- **Market surveillance:** develop real-time monitoring; assess holding limits; conduct stress tests and cybersecurity audits.
- **Transparency:** public dashboard with daily prices/volumes; MAE publishes quarterly compliance summaries.
- **Capacity building:** advanced training, mock-compliance drills, Help Desk support, and cross-agency workshops.
- Mid-term review in 2027; prepare a fee schedule for post-2028 implementation.

Phase 3 (From 2029): Full Operation & Integration

- **Allocation reform:** begin auctioning ($\geq 10\%$); implement membership and transaction fees for financial sustainability.
- **Market stability:** institutionalise ARP, CCM, and holding-limit rules; update Decree and Circulars.
- **Market expansion:** extend coverage to new sectors (chemicals, refining, transport); allow high-quality domestic voluntary credits.
- **International linkage:** pursue bilateral alignment, pilot Article 6.2 transfers, and work toward ASEAN interoperability.
- 2030 evaluation to inform the Carbon Market Master Plan 2031–2035.

THANK YOU!

