DCC Department of Climate Change

ENERGY TRANSITION PARTNERSHIP

FINAL REPORT

Emission Trading System Piloting and Simulation in Vietnam

MARCH 2025

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UNOPS · AFD Agence Française de Développement · Federal Ministry for Economic Affairs and Climate Action · Department for Energy Security & Net Zero · Environment and Climate Change Canada / Environnement et Changement climatique Canada · Australian Government Department of Climate Change, Energy, the Environment and Water · Children's Investment Fund Foundation · Sequoia Climate Foundation

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COLOPHON AND DISCLAIMER

Beneficiaries

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ABBREVIATIONS

BM	Benchmarking
CBAM	Carbon Border Adjustment Mechanism
DCC	Department of Climate Change
ETP	Southeast Asia Energy Transition Partnership
ETS	Emissions Trading System
FDI	Foreign Direct Investment
GF	Grandfathering
GGGI	Global Green Growth Institute
GHG	Greenhouse Gas
HCMC	Ho Chi Minh City
ICAP	International Carbon Action Partnership
IETA	International Emissions Trading Association
MOE	Ministry of Environment of Korea
MOF	Ministry of Finance
MAE	Ministry of Agriculture and Environment (MAE, formerly the Ministry of Natural Resources and Environment)
MRV	Monitoring, reporting, and verification
NDC	Nationally Determined Contribution
OTC	Over-the-counter
PMR	Partnership for Market Readiness
TA	Technical Assistance
UNOPS	United Nations Office for Project Services
VETS	Vietnam Technology Solutions
VNEEC	Energy and Environment Consultancy Joint Stock Company

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EXECUTIVE SUMMARY

Background and Rationale

Vietnam is committed to achieving net-zero by 2050, with a significant role for a domestic Emissions Trading System (ETS) in driving this transformation in a cost-effective manner. This carbon financing instrument was mandated by the 2020 "Law on Environmental Protection" and detailed in subsequent government decrees including Government Decree No. 06/2022/ND-CP dated 7/1/2022 on mitigation of greenhouse gas (GHG) emissions and protection of the ozone layer and Prime Minister's Decision 01/2022/QD-TTg dated 18/1/2022 issuing a list of GHG emitting sectors and entities subject to the GHG inventory (now replaced by Prime Minister's Decision 13/2024/QD-TTg dated 13/8/2024 updates the sectors, facilities required to conduct GHG inventories).

Establishing an ETS requires overcoming critical challenges, including technical expertise gaps, institutional capacity constraints, and limited stakeholder readiness. To address these challenges, the Southeast Asia Energy Transition Partnership (ETP), under the United Nations Office for Project Services (UNOPS) and in close collaboration with the Department of Climate Change (DCC) at Ministry of Agriculture and Environment- MAE (formerly the Ministry of Natural Resources and Environment), launched the "ETS Piloting and Simulation in Vietnam" Technical Assistance (TA) initiative. Implemented from July 2023 to March 2025 by a consortium comprising Energy and Environment Consultancy JSC (VNEEC), Vietnam Technology Solutions JSC (VETS), and international experts, this TA focused on equipping key stakeholders with practical skills and comprehensive knowledge on ETS mechanisms.

Readiness and awareness survey

To assess the preparedness of Vietnamese companies for participation in the national ETS, a readiness and awareness survey was conducted. Targeting 537 high-emission companies listed in Decision No.01/2022/QD-TTg, the survey gathered 237 valid responses across various sectors, highlighting low readiness levels, particularly in Monitoring, Reporting, and Verification (MRV) capacity and understanding of carbon markets. While foreign-invested companies demonstrated greater preparedness, overall awareness remained limited, emphasizing the need for extensive capacity-building. The key results and findings of the survey are summarized in the following table.

Table A: Summary of the awareness and readiness survey key results

Grouping of the respondents	Emission profiles	Readiness indicators
• Companies in the industry and trade sector: **202 companies**. • Companies in the construction sector: **22 companies**. • Companies in the natural resources and environment sector: **9 companies**. • Companies in the transport sector: **4 companies**. • **47% of the companies** classified are FDI. • **20% of the respondents** are listed companies.	• **68% of the companies** emit less than 100,000 tCO2e. • Entities emitting over one million tCO2e account for around **73% of the overall emissions**. **Geographical distribution** • The Northern Region: **98 companies**. • The Central Region: **33 companies**. • The Southern Region: **45 companies**.	**MRV Capacity**: • 32% of the companies have conducted a GHG inventory. • Less than 11% of the companies have already had their GHG reports verified by a third party. **Awareness of ETS**: • About 75% of the respondents were aware of the carbon market development roadmap in Vietnam. **Emission Reduction Ambition**: • Only around 13% of the companies already disclosed their emission profiles to the public. **ETS participation willingness**: • Around 42% of the companies expressed a desire to receive capacity-building activities in all areas provided.

Source: Elaborated by the Consultant based on the results of the readiness survey

Key recommendations include prioritizing major emitters, expanding training programs, and enhancing regulatory guidance. The following gaps were identified through the survey, which served as the foundation for conceptualizing the training courses:

- ETS operation and principles
- ETS compliance and international experience of corporate compliance strategies
- ETS-related legislation, regulations, and policies
- GHG inventory preparation - identification of emission sources
- GHG emissions quantification approaches - identification of measurement methods for activity data/emission factors, approaches for significant/minor emission sources
- QC/QA practices - development of internal quality frameworks
- GHG emissions inventory compilation - implementing QC/QA practices and handling external verification

Training Program Design and Conceptualization

At the core of this TA initiative was the development of a comprehensive training program. By integrating a review of international ETS policy developments with an analysis of Vietnam's regulatory framework and drawing on key gaps identified in the survey, the training program was conceptualized to meet the stakeholders' needs.

The courses combined expert-led sessions, interactive CarbonSim simulation exercises, and best practice case studies, enriched by insights from international experts and local policymakers. This blended approach ensured that participants gained a comprehensive understanding of both global trends and local challenges in the carbon market. Policymakers and experts were invited from Canada, the UK, International Emissions Trading Association

(IETA), and the OECD, along with updates from DCC officials, provided a well-rounded view of both international best practices and domestic developments.

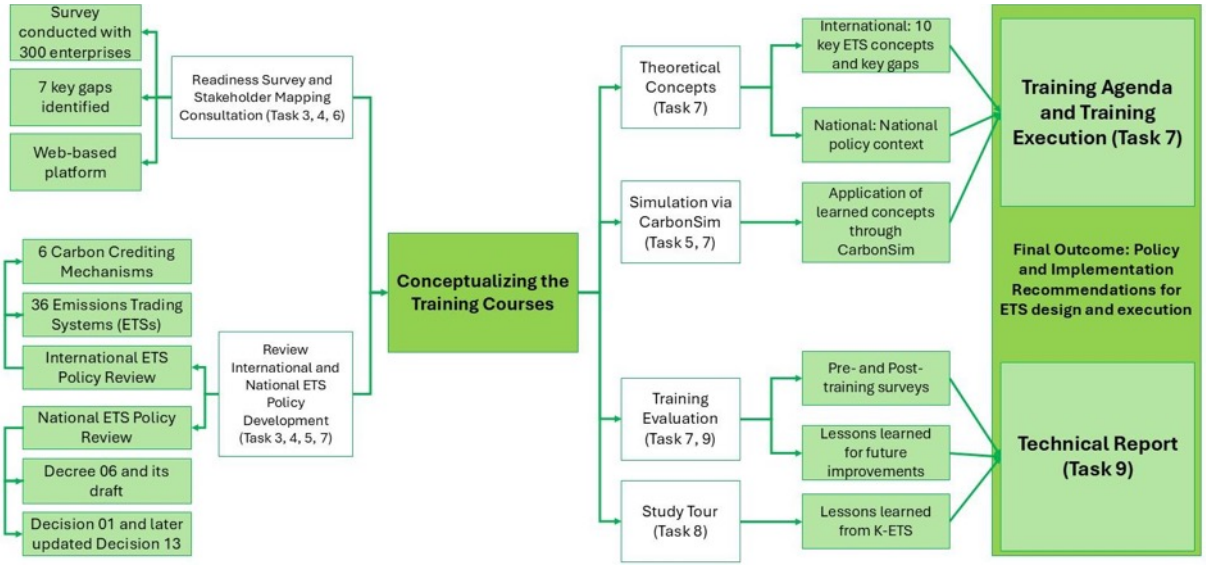

Figure A: Training course design conceptualization

Source: Elaborated by the Consultant

In addition, to better align with Vietnam's unique context, CarbonSim was localized by tailoring content to cultural norms and language, enabling participants to fully engage with the ETS simulation. Continuous refinements were made based on participant feedback, fine-tuning market conditions, auction settings, and scenarios to keep the simulation relevant. Interactive elements, including real-time feedback, scenario challenges, and debriefings, were integrated to enhance engagement and practical application. Furthermore, comprehensive support materials such as user guides, walkthroughs, and case studies were provided to reinforce learning.

Training Implementation and Participant Engagement

Starting with four initial training courses that significantly outperformed expectations, the program was expanded at the request of the DCC to include two additional sessions. Throughout 2024, a total of six courses were delivered in Hanoi and Ho Chi Minh City (HCMC), drawing 657 participants (340 males, 317 females). The courses are summarized in the figure below.

Figure B: Summary of the training courses

Source: Compiled by the Consultant

The courses engaged a broad spectrum of stakeholders, including regulatory policymakers, research institutions, financial sector representatives, and media professionals. With industrial emitters accounting for 59% of participants, the training addressed those most directly impacted by the forthcoming ETS. This diverse and inclusive engagement has set a solid foundation for Vietnam's ETS development and implementation.

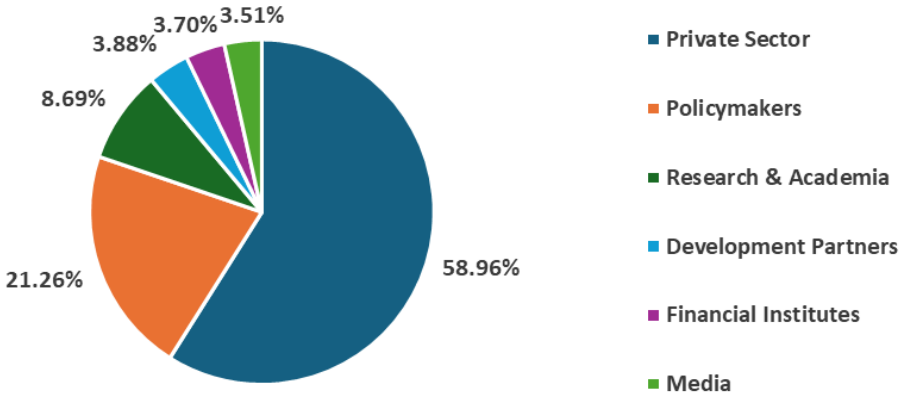

Figure C: Participant distribution by stakeholder groups

Source: Elaborated by the Consultant based on participants' lists

Strengthening ETS Readiness and Capacity-Building

The results of pre- and post-training surveys stressed the substantial impact of the training course on enhancing participants' knowledge and skills in ETS and market-based mechanisms. Prior to training, 14.45% of respondents were unsure about ETS's role in achieving Vietnam's Nationally Determined Contributions (NDCs), and 14.38% questioned its cost-effectiveness. Post-training, the percentage of participants who viewed ETS as indispensable rose from 27.14% to 46.94%, while skepticism about its cost-effectiveness fell to 1.63%, with 73.62% now recognizing it as highly cost-effective.

Furthermore, technical knowledge saw significant gains, with confidence in explaining carbon pricing climbing from 6.12% to 37.44% and understanding of market mechanisms rising from 10.43% to 59.18%. More than 80% of respondents rated the training as "Very useful," a testament to the effectiveness of the interactive sessions and hands-on CarbonSim simulations in transforming initial uncertainties into decisive, actionable confidence for participation in the upcoming ETS in Vietnam.

Figure D: Participants' engagement in the training courses

Beyond knowledge enhancement, the initiative generated significant media coverage, amplifying public awareness of carbon markets and Vietnam's climate policies. Multiple local and international news outlets featured the training events, reinforcing their relevance and impact. The involvement of international partners further strengthened Vietnam's ETS development by fostering knowledge exchange and strategic cooperation.

Vncarbonmarket website as an ETS knowledge hub

As part of efforts to enhance capacity building and awareness, the Vncarbonmarket website was launched on 9 December 2023 at https://vncarbonmarket.com/ before the training series was conducted. It serves as a central platform for ETS simulation guidance, a knowledge hub, and a communication channel, helping to bridge key awareness and readiness gaps. Regularly updated in alignment with the TA and the website will be officially handed over to DCC upon the TA's completion. Additionally, the training and learning materials for the training courses are published on the website, ensuring that participants have ongoing access to course resources.

Key Lessons and Recommendations for ETS Design and Implementation

Building on an in-depth analysis of training sessions, participant feedback, and simulation exercises, this initiative has yielded critical insights to shape Vietnam's ETS. Key recommendations emphasize the need for:

- Policy clarity to align with Vietnam's emissions reduction commitments.
- Well-defined sectoral scope with transparent criteria for emissions coverage.
- Robust market design, including cap-setting methodologies and allocation mechanisms.
- A strong compliance framework, supported by reliable MRV systems.

- Market infrastructure development to enhance liquidity and price stability.
- Strategic risk management to address competitiveness and carbon leakage concerns.

Moreover, Vietnam's ETS must remain dynamic, incorporating periodic evaluations, refining design elements, and closely monitoring global carbon market trends such as the EU's Carbon Border Adjustment Mechanism (CBAM) to maintain international competitiveness.

Recommendations for Future Training and Capacity Building

The success of these training programs highlights the urgent need for ongoing capacity-building to support Vietnam's ETS implementation. To maximize impact, future initiatives should follow a phased learning approach, starting with fundamental ETS concepts and progressing to advanced, sector-specific simulations that prepare stakeholders for real-world market participation.

Capacity-building is more than just training, it is a cornerstone of an effective and resilient ETS. As Vietnam moves forward with its net-zero commitments, a well-informed and capable workforce will be essential to ensuring a smooth transition into a functional carbon market.

The recommendations in this TA offer a clear strategy for future training efforts, providing the tools and knowledge needed to strengthen Vietnam's carbon trading ecosystem, drive emissions reductions, and ensure long-term climate and economic success.

Conclusions

The successful execution of six ETS training courses has significantly advanced Vietnam's carbon market readiness, equipping a wide range of stakeholders with critical knowledge and fostering a collaborative platform for future climate action. The training's inclusive and multidisciplinary approach has ensured broad engagement, from industry leaders to policymakers, strengthening the foundation for a well-functioning ETS.

Building on this progress, the TA delivered strategic recommendations on policy design, market infrastructure, and stakeholder engagement to support the continued development of Vietnam's ETS. These recommendations serve as a roadmap for future training initiatives, ensuring that Vietnam sustains its momentum, enhances technical expertise, and remains competitive in the global carbon market.

1 INTRODUCTION

1.1 BACKGROUND

Vietnam is developing a domestic carbon market, incorporating an Emissions Trading System (ETS) as a key tool to reduce greenhouse gas (GHG) emissions and moving toward net zero by 2050. The legal foundation was established in November 2020 with the amendment of the Law on Environmental Protection (Article 139), marking a significant step in the country's climate policy evolution. This framework has been further reinforced through a series of government directives, decrees, and supporting regulations.

With the issuance of Decree No. 06/2022/ND-CP dated 7 January 2022 on the mitigation of GHG emissions and protection of the ozone layer (Decree No. 06/2022/ND-CP), Vietnam set the stage for a domestic carbon market, reinforcing its commitment to climate action. This Decree provides the legal framework for carbon trading, establishing mechanisms for managing and exchanging carbon credits. As a central component, ETS will facilitate the trading of emission allowances and carbon credits, with a pilot phase scheduled for 2025 and full implementation by 2028. Currently, Vietnam is amending this Decree to provide more specific regulations on the domestic carbon market.

Vietnam took another major step in its climate strategy with the issuance of Decision No. 232/QD-TTg on 24 January 2025 approving a scheme to establish and develop the carbon market in Vietnam. This Decision formalizes the roadmap for developing a domestic carbon market, aligning with the country's GHG reduction targets under the Nationally determined contribution (NDC). By lowering business costs, attracting new financial investments, and accelerating the adoption of green technologies, the initiative aims to enhance Vietnam's economic competitiveness in the global low-carbon transition.

By implementing an ETS, Vietnam aims to create a market-driven approach to emissions reduction, allowing companies to buy and sell carbon allowances based on their emissions levels. This system is particularly important for industries with high carbon footprints, as it provides financial incentives for firms to invest in cleaner technologies and adopt sustainable practices. In addition to reducing emissions, the carbon market is expected to generate new economic opportunities, attract green investments, and enhance Vietnam's competitiveness in the global market.

However, despite these policy advancements, several challenges hinder the effective implementation of the ETS. Limited technical expertise, a shortage of trained personnel, and a lack of awareness among key stakeholders remain significant barriers. As of 2024, there was a lack of government-led training programs or capacity-building initiatives to address this knowledge gap, especially there is no capacity-building activity in Việt Nam have the participation from both public and private sectors that was able to engage and target GHG emission enterprises covered under the pilot ETS phase.

1.2 INTRODUCTION OF THE TECHNICAL ASSISTANCE

In light of the recognized shortcomings in the existing regulatory framework governing the domestic carbon market, the Southeast Asia Energy Transition Partnership (ETP), under the United Nations Office for Project Services (UNOPS), in collaboration with the Department of Climate Change (DCC) under the Ministry of Agriculture and Environment (MAE, formerly the Ministry of Natural Resources and Environment) to launch the Technical Assistance (TA) "ETS Piloting and Simulation in Vietnam". This initiative aimed to provide a pilot ETS simulation tool and learning-by-doing platform for different ETS participants and players to raise their awareness of carbon pricing. In addition, based on the ETS simulation results, the Assignment will develop concrete policy recommendations for designing an ETS in Vietnam based on the analysis of the lessons learnt and impacts of the ETS operation on energy transition. The simulation shall directly support the roll out of domestic ETS as a carbon pricing instrument in 2025.

The primary beneficiaries of this Assignment include MAE as a whole, with a specific focus on DCC, as well as the line ministries and agencies responsible for the design and operation of the future ETS in Vietnam. Additionally, the main beneficiaries encompass large GHG emitters who are required to participate in the future ETS.

The implementation of the Assignment has been carried out by a consortium consisting of Energy and Environment Consultancy Joint Stock Company (VNEEC), South Pole Carbon Asset Management (South Pole), Vietnam Technology Solutions Joint Stock Company (VETS), and international experts subcontracted by VNEEC. Within the Consortium, VNEEC has taken the overall coordination and management of the Assignment. The Consultant/Consortium combines a strong national qualification and experience with international experience and lessons to deliver the Assignment to the highest quality.

According to the Contract signed between UNOPS and the Consultant, the Assignment was initially scheduled to be carried out over a period of 18 months, from July 2023 to January 2025. However, the timeline has been extended, and the Assignment will conclude in March 2025, allowing for additional time to provide comprehensive policy guidance for the successful establishment of the ETS.

Initially, four training courses were planned and successfully executed, generating strong interest and exceeding expectations in improving stakeholder preparedness. Recognizing the impact of these sessions, the DCC requested an expansion of the TA, leading to two additional training courses, bringing the total to six comprehensive training events.

A total of six training sessions was conducted in Hanoi and Ho Chi Minh City (HCMC) throughout 2024, These sessions engaged a diverse range of participants, including government officials responsible for shaping climate policies, industry representatives expected to operate within the ETS framework, financial institutions that may facilitate

carbon credit transactions, and media professionals tasked with raising public awareness of carbon market developments.

The training courses welcomed 657 participants, with a balanced gender distribution of 340 men and 317 women. Industrial emitters, expected to be directly regulated under the future ETS, formed the most critical participant group. Along with other key stakeholders of policymakers, research and academia, development partners, financial institutions, and media, their active engagement was crucial in ensuring that enterprises understand and prepare for compliance requirements under the new system. In addition to regulatory insights, the training series incorporated practical learning through the interactive CarbonSim simulation tool, allowing participants to gain hands-on experience in emissions trading and market operations.

Beyond stakeholder engagement, media coverage of the training sessions helped raise public awareness and understanding of the ETS and Vietnam's broader climate policies. This outreach is expected to support wider acceptance of carbon market mechanisms and encourage greater participation from businesses and institutions as Vietnam prepares for the official rollout of its ETS in 2025.

Overall, this initiative has laid an essential foundation for the development of Vietnam's carbon market. By addressing knowledge gaps, fostering collaboration between the public and private sectors, the TA has significantly contributed to the country's readiness for an operational ETS. Moving forward, continued capacity-building efforts and regulatory refinements will be necessary to ensure the success of Vietnam's ETS and its contribution to the nation's long-term climate goals.

1.3 IMPLEMENTATION AND KEY DELIVERABLES OF THE TECHNICAL ASSISTANCE

The implementation of the TA is divided into 10 Tasks and grouped into 4 milestones with the summary of the key activities and results as follows:

Table 1: Implementation and key deliverables of the Technical Assistance

Task	Activity	Deliverable
Milestone 1		
Task 1: Composing the Inception Report and Workplan	**Activity 1.1:** Conducting Inception kick-off meeting **Activity 1.2:** Preparing Inception Report and updating work plan	Inception Report submitted on 18 August 2023
Milestone 2		
Task 2: Organizing an Inception Workshop	**Activity 2.1:** Preparing for the Inception Workshop **Activity 2.2:** Organizing the Inception Workshop on 14 September 2023 with 91 stakeholders (52 female)	

Task 3: Conducting analysis, surveys, and consultation events on GHG emission/mitigation readiness	**Activity 3.1:** Desk review and consultations on ETS (non-emitter entities) **Activity 3.2:** Designing the survey questionnaire (34 questions) **Activity 3.3:** Determining the scale and coverage of the surveys **Activity 3.4:** Data collection, compilation, and analysis (237 companies with valid data) **Activity 3.5:** Preparing a readiness and awareness assessment report	Task 3 Report on ETS awareness and readiness (Milestone 2 submission)
Task 4: Stakeholder mapping and engagement plan	**Activity 4.1:** Developing a detailed stakeholder list/map **Activity 4.2:** Developing a stakeholder engagement plan	Task 4 Report on stakeholder engagement (Milestone 2 submission)
Task 5: Providing access to a carbon simulation tool	**Activity 5.1:** Identifying options for the carbon simulation tool **Activity 5.2:** Adjusting the CarbonSim tool **Activity 5.3:** Testing the tool (Internal training on 11 October 2023)	Tasks 5 & 6 Report (Milestone 2 submission)
Task 6: Developing a web-based carbon simulation platform	**Activity 6.1:** Developing the web-based platform (Launched on 9 December 2023) **Activity 6.2:** Developing content **Activity 6.3:** Updating the platform	
Final Deliverable: Milestone 2 package report (Task 3, Task 4, Task 5/6) submitted on 2 January 2024		
Milestone 3		
Task 7: Organizing ETS simulation training/workshops/forums	**Activity 7.1:** Pre-training activities **Activity 7.2:** Organizing training sessions: - Training 1: 26-27 February 2024 (Hanoi) - Training 2: 29 February-1 March 2024 (Hanoi) - Training 3: 6-7 May 2024 (HCMC) - Training 4: 8-9 May 2024 (HCMC) - Training 5: 9-10 December 2024 (Hanoi) - Training 6: 12-13 December 2024 (HCMC)	Training Reports submitted on 11 February 2025
Task 8: Planning a carbon market master class	**Activity 8.1:** Identifying training needs/gaps **Activity 8.2:** Designing the study tour/master class (Study tour to Korea from 19-25 November 2023)	Study Tour Report submitted on 17 January 2024
Task 9: Conducting technical report on simulation and impact assessments	**Activity 9.1:** Composing the Technical Report **Activity 9.2:** Organizing the High-Level Consultation	Technical Report submitted on 11 February 2025
Final Deliverable: Milestone 3 package report submitted on 11 February 2025		
Milestone 4		
Task 10: Final report and final workshop	**Activity 10.1:** Composing the final report (Expected submission: March 2025) **Activity 10.2:** Organizing the final workshop (Held on 6 March 2025 with 46 stakeholders, 19 female)	Final report submitted on 17 March 2025

Source: Elaborated by the Consultant

The following figure summarizes the deliverables completed throughout this assignment.

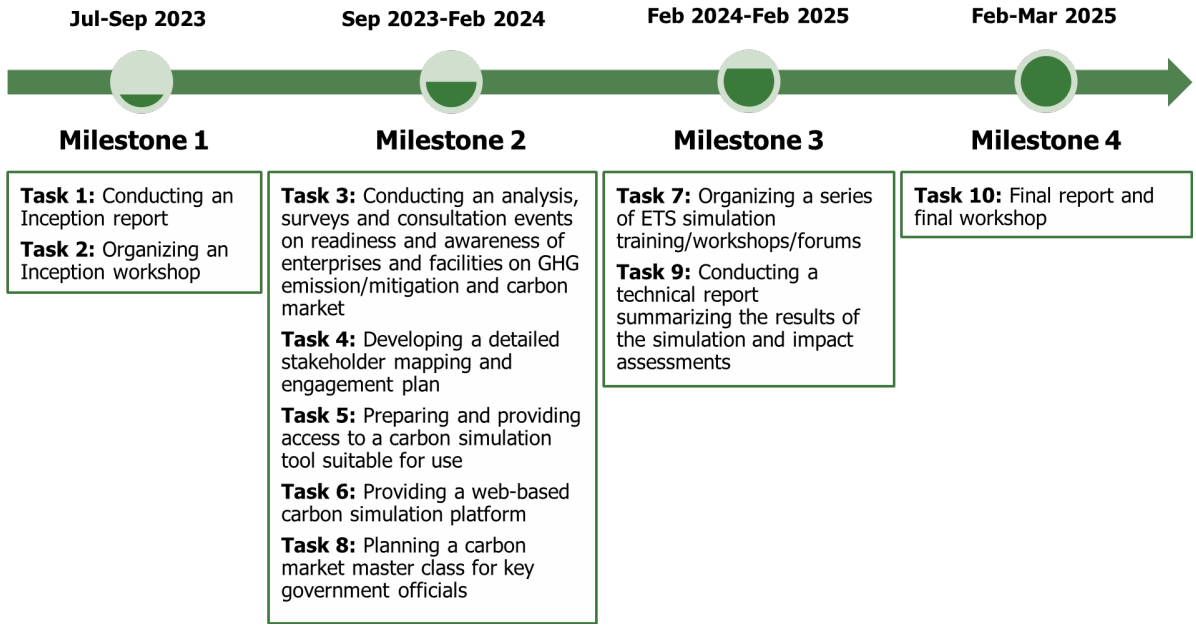

Figure 1: Summary of deliverables completed

Source: Elaborated by the Consultant

2 SUMMARY OF KEY TASKS AND RESULTS

2.1 READINESS AND AWARENESS SURVEY (TASK 3)

Task 3 involved conducting an assessment and consultation on ETS to identify gaps in awareness and readiness among stakeholders. The survey conducted in November 2023 aimed to gauge the preparedness and readiness of Vietnamese companies to participate in carbon markets, with a specific focus on the interest and training needs for the upcoming national ETS. The results were then used to create a targeted stakeholder engagement strategy in Task 4 that was designed to engage major relevant groups and to guide the development of subsequent training sessions. The overall approach of the readiness and awareness survey is demonstrated in the graph below.

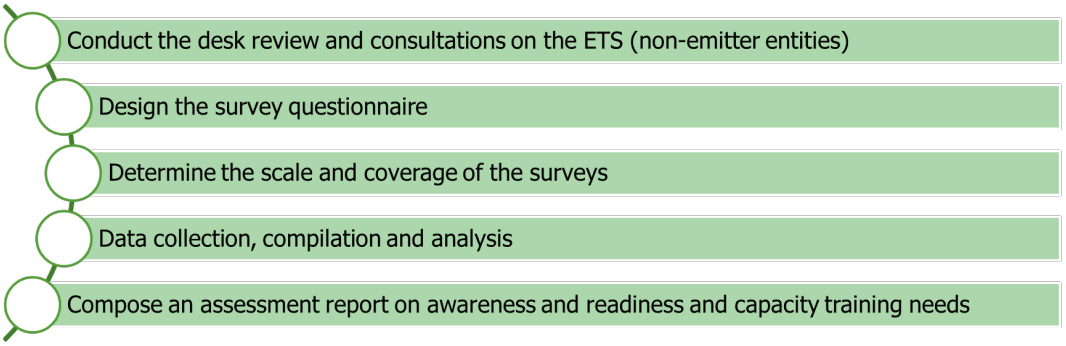

Figure 2: Readiness and awareness survey approach

Source: Elaborated by the Consultant

The targeted companies were those with high emission profiles listed in Decision No. 01/2022/QD-TTg dated 18 January 2022 on the promulgation of lists of sectors and GHG emission facilities subject to GHG inventory development (later replaced by Decision No.13/2024/QD-TTg on 13 August 2024 updates the sectors and facilities required to conduct GHG inventories with 2,166 covered entities). The Decision No. 01/2022/QD-TTg lists 1,912 companies subject to mandatory GHG reporting to the Government that have annual emissions of more than 3.000 tCO_2e or energy consumption of above 1,000 TOE.

Due to the limited number of participants in each training course targeted under this TA, the survey focused on the companies that will be potentially covered under the future ETS in Vietnam, hence the targeted population is identified as 537 companies with emissions above 10,000 tCO_2e. The surveyed companies spanned industry and trade, construction, natural resources and environment, and transport sectors. The survey consisted of 34 questions that addressed a wide range of topics, including awareness of the ETS and carbon market, the companies' preparedness to participate, and their needs for capacity building. To ensure the survey's credibility and encourage substantial involvement, the survey was conducted with an official introduction letter from DCC.

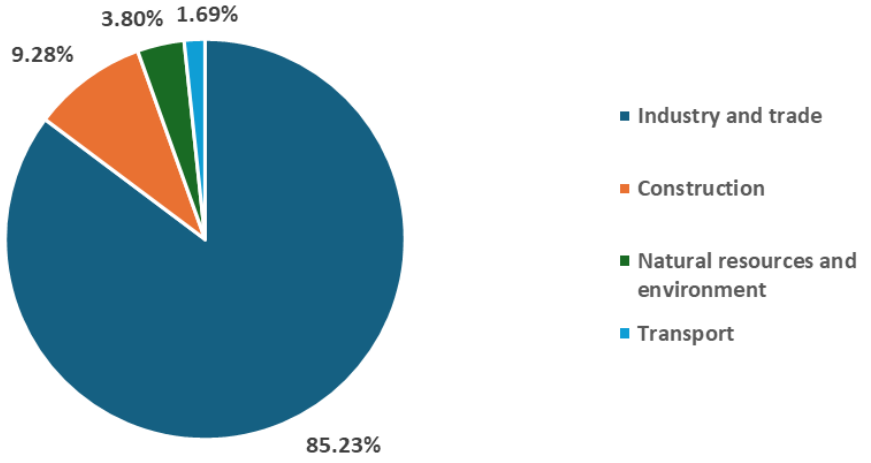

Figure 3: Companies participated in the survey by sector

Source: Elaborated by the Consultant based on the results of the readiness survey

Responding to the survey, 237 (or 44%) submitted valid responses. These included 202 companies in the industry and trade sector, 22 from construction, 9 from the natural resources and environment sector, and 4 from transport. The survey also encompassed 14 distinct subsectors, including energy, food processing, garments and textiles, electronics manufacturing, shoes and leather, paper and pulp, chemicals, minerals, metals, plastics and rubber, mechanical manufacturing, construction materials (excluding cement), cement, and others. Around 50% of the respondents were foreign-invested companies, and 20% were publicly traded.

Geographically, the distribution of companies by regions of Vietnam is presented in the figure below.

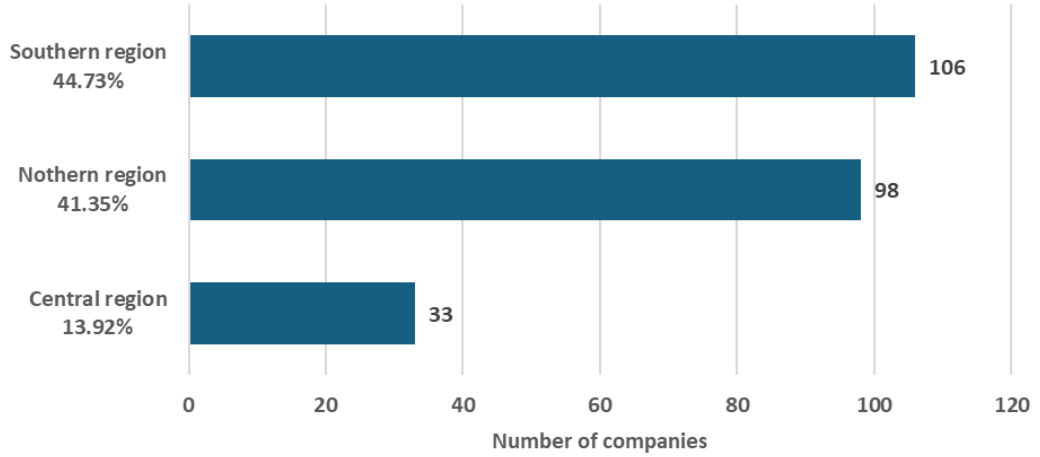

Figure 4: Companies participated in the survey by region

Source: Elaborated by the Consultant based on the results of the readiness survey

Sector-by-sector analysis of the understanding of the ETS and carbon markets of respondents revealed that there was a noticeable gap in awareness and understanding of the ETS and carbon markets across all sectors, indicating that significant efforts are still needed to enhance knowledge and strengthen readiness.

The survey findings showed that foreign direct investment (FDI) companies have greater readiness than non-FDI companies. It was especially evident in their monitoring, reporting, and verification (MRV) capacity, a key factor for participation in the ETS.

Additionally, the emissions from the surveyed companies accounted for about a quarter of Vietnam's expected emissions in the business as usual (BAU) scenario for 2020 in NDC 2022[1], underscoring the significant role these companies played in the national emission landscape.

The key results of the survey are summarized in the following table.

[1] Vietnam Updated NDC 2022, https://unfccc.int/sites/default/files/NDC/2022-11/Viet%20Nam_NDC_2022_Eng.pdf

Table 2: Summary of the awareness and readiness survey key results

Grouping of the respondents	Emission profiles	Readiness indicators
• Companies in the industry and trade sector: **202 companies**. • Companies in the construction sector: **22 companies**. • Companies in the natural resources and environment sector: **9 companies**. • Companies in the transport sector: **4 companies**. • **47% of the companies** classified are FDI. • **20% of the respondents** are listed companies.	• **68% of the companies** emit less than 100,000 tCO2e. • Entities emitting over one million tCO2e account for around **73% of the overall emissions**. **Geographical distribution** • The Northern Region: **98 companies**. • The Central Region: **33 companies**. • The Southern Region: **45 companies**.	**MRV Capacity**: • 32% of the companies have conducted a GHG inventory. • Less than 11% of the companies have already had their GHG reports verified by a third party. **Awareness of ETS**: • About 75% of the respondents were aware of the carbon market development roadmap in Vietnam. **Emission Reduction Ambition**: • Only around 13% of the companies already disclosed their emission profiles to the public. **ETS participation willingness**: • Around 42% of the companies expressed a desire to receive capacity-building activities in all areas provided.

Source: Elaborated by the Consultant based on the results of the readiness survey

The survey-driven analysis indicated that effective ETS preparedness hinged on extensive and well-structured capacity-building efforts.

The survey highlighted a prevailing trend of insufficient readiness across four key areas: (i) MRV capacity, (ii) awareness of the carbon market and ETS policy, (iii) emission reduction activities, and (iv) ETS market functions and the roles of a regulated entity. Based on this finding, key recommendations were provided for the design of the training courses:

- Prioritize major emitters in key industrial sectors that will be subject to ETS regulations, ensuring they receive targeted capacity-building support.
- Expand training programs to include smaller emitters and non-foreign direct investment (FDI) enterprises covered by the ETS to enhance market participation and fairness.
- Direct future capacity-building initiatives toward essential aspects such as ETS functionality, regulatory compliance, legislative frameworks, and GHG inventory management.
- Establish an ongoing engagement framework to maintain company involvement and progressively build readiness over time.

Overall, this survey revealed significant disparities in participants' knowledge of ETS concepts and mechanisms, with many respondents exhibiting limited familiarity. To enhance the capacity building activities for companies as well as the key stakeholders group the training must focus on and further expand to the topics of:

- ETS operation and principles

- ETS compliance and international experience of corporate compliance strategies
- ETS-related legislation, regulations, and policies
- GHG inventory preparation - identification of emission sources
- GHG emissions quantification approaches - identification of measurement methods for activity data/emission factors, approaches for significant/minor emission sources
- QC/QA practices - development of internal quality frameworks
- GHG emissions inventory compilation - implementing QC/QA practices and handling external verification

2.2 STAKEHOLDER MAPPING (TASK 4)

To enhance communication and actively engage target groups, and stakeholders involved in this TA, a Stakeholder Engagement Plan was developed as part of Task 4. The methodology for this task is depicted in the figure below.

Figure 5: Methodology for the stakeholder engagement assessment

Source: Elaborated by the Consultant

The survey results from Task 3 serve as a critical input for Task 4, providing the foundation for developing a Stakeholder Engagement Plan aimed at fostering effective communication and active participation among key stakeholders in the ETS implementation. Additionally, the Task 4 report incorporated further analysis, including:

- A stock-take of various stakeholder groups in Vietnam;
- Vietnam's carbon market development roadmap;
- An assessment of existing challenges and gaps;
- The roles of government and other stakeholders within the carbon market ecosystem;
- Capacity-building needs of key stakeholders.

Under Task 4, the stakeholder mapping and engagement plan was proposed to enhance communication between implementing partners, the Consultant team, the donor, and other relevant stakeholders.

Building on insights from Task 3, the stakeholder engagement process follows a structured methodology for effective collaboration and communication. It begins with stakeholder identification and analysis, assessing their influence and interest. Stakeholder mapping then

categorizes and prioritizes them for targeted engagement. Finally, a tailored engagement approach is developed, featuring three levels: collaboration with key government agencies, involvement of businesses and financial institutions, and information-sharing with other relevant stakeholders.

Training sessions and engagement activities helped stakeholders understand ETS regulations, compliance obligations, and market operations. Furthermore, the Task proposes stakeholder engagement activities with specific timelines, emphasizing collaboration between the MAE, MOF, Ministry of Industry and Trade, and other key entities.

2.3 SIMULATION TOOL AND WEB-BASED PLATFORM (TASK 5, 6)

For this Assignment, CarbonSim was selected as the primary tool for conducting training and simulation activities. Developed by the Environmental Defense Fund (EDF), CarbonSim effectively illustrates the core mechanisms of an ETS, including capping and reducing GHG emissions, leveraging market forces for cost-effective reductions, and fostering investment in clean technologies.

Key features of CarbonSim make it particularly suitable for training stakeholders and simulating real-time compliance markets within an ETS framework. These attributes enable participants to gain practical insights into emissions trading mechanisms, fostering a deeper understanding of ETS operations and enhancing their readiness to engage in real-world carbon markets. These features aligned perfectly with the Assignment's goals. However, to better suit the unique context of Vietnam, the tool was customized under this Task, including:

- Vietnamese Translation: To enhance participant comprehension, the tool was translated into Vietnamese.
- Currency Adjustment to Vietnamese Dong: This change was implemented to simplify decision-making during the simulation by using the local currency. Although participants could choose between Dong or USD, the exercises were typically conducted in USD, considering the exchange rate of about 23,825 Dong to 1 USD.
- Other parameters: Additional parameters were adjusted following each simulation based on participant feedback, ensuring the tool was continuously refined to meet their needs.

The figure below showcases the login and registration interface of CarbonSim after the consultant's adjustments.

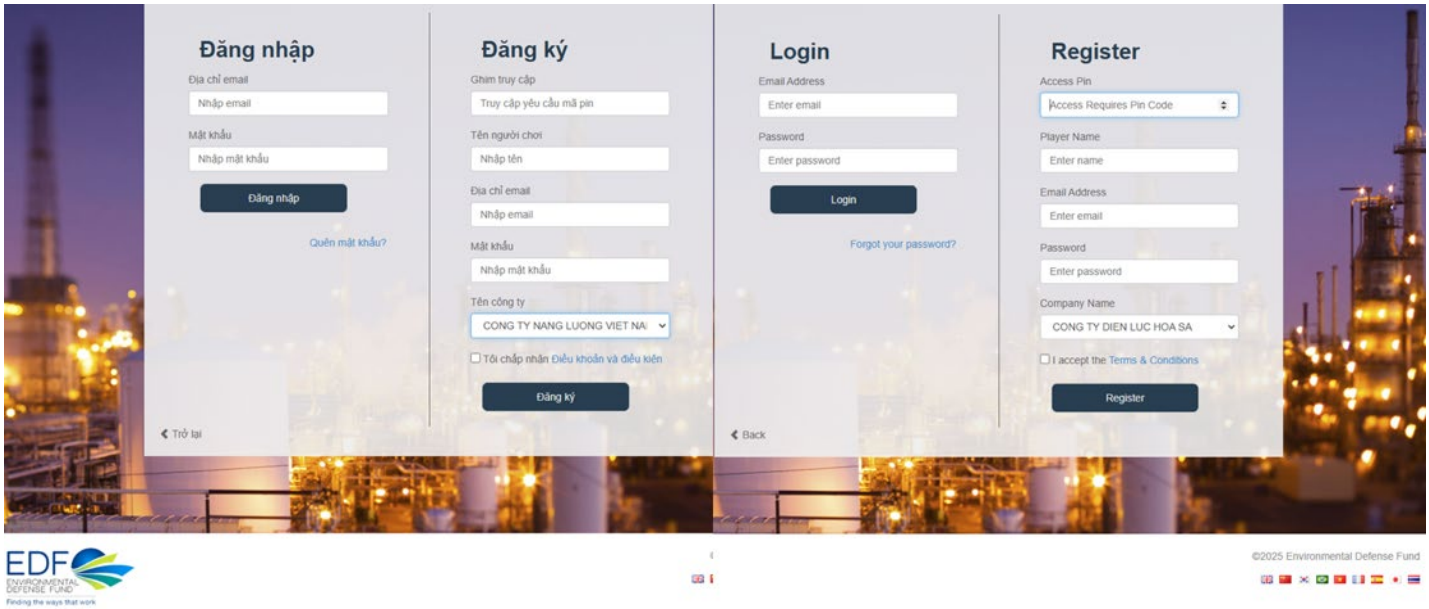

Figure 6: CarbonSim localized interface

Source: https://sim3.carbonsim.org/

Following each round of updates, a beta test was conducted with the Consultant's experts using the simulation tool to ensure its functionality and stability.

In parallel, the Consultant developed and enhanced a web-based platform called VNcarbonmarket at https://vncarbonmarket.com/ which became accessible on 9 December 2023.

This platform has three sub-components: Simulation Guidance, Knowledge Hub, and Communication Channel. In close consultation with ETP and DCC, the Consultant developed content for the platform, incorporating the most up-to-date information on global ETS developments and operations, as well as domestic experiences that is inline with the readiness gaps identified in Task 3. The platform effectively fulfilled the needs of the participants, ensuring that they had the necessary information and resources to actively participate in the simulations. It also served as a reliable source for relevant updates and information, keeping participants informed about the progress and developments of the Assignment.

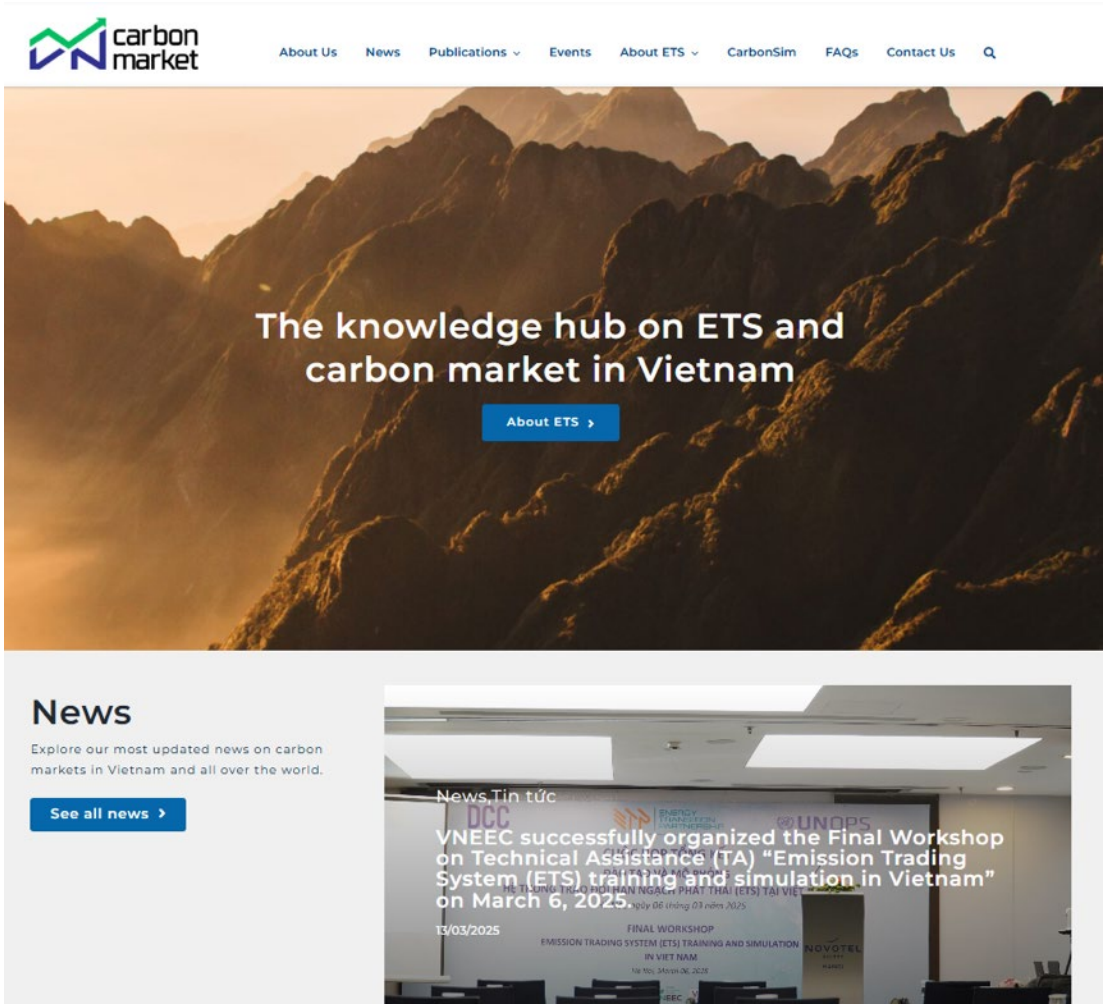

Figure 7: Home screen of VNcarbonmarket web-based platform

Source: https://vncarbonmarket.com/

Throughout the Assignment timeline, the platform undergoes regular updates in line with the TA. Upon TA completion, the platform remains a valuable knowledge hub. The Consultant will hand over the platform to DCC, which can integrate it into their website following the launch of the ETS pilot in Vietnam.

2.4 ETS SIMULATION TRAINING SESSIONS (TASK 7)

The approach for Task 7 consists of two key phases: Pre-training activities and Organizing the training sessions.

2.4.1 Design and preparation of the training courses

2.4.1.1 Training course design and conceptualization

The course design began with an analysis of global ETS policy trends, covering 36 ETSs and six carbon crediting mechanisms, along with a review of Vietnam's ETS regulatory framework. The training design was based on the theoretical approach to ETS design and implementation, following methodologies published by the World Bank's Partnership for Market Readiness

(PMR) and the International Carbon Action Partnership (ICAP). These step-by-step guidelines have been instrumental in shaping ETS policies in various jurisdictions and have also been widely adopted in international ETS training programs. Combining the results and recommendations of Task 3 and Task 4, the training structure was designed to include theoretical sessions on ETS concepts and national policies, followed by a hands-on simulation using CarbonSim to enhance practical application.

The detailed agenda for each session was developed in consultation with DCC and ETP. Lastly, pre- and post-training assessments were conducted to measure learning outcomes and impacts.

The figure below summarizes the training course design process.

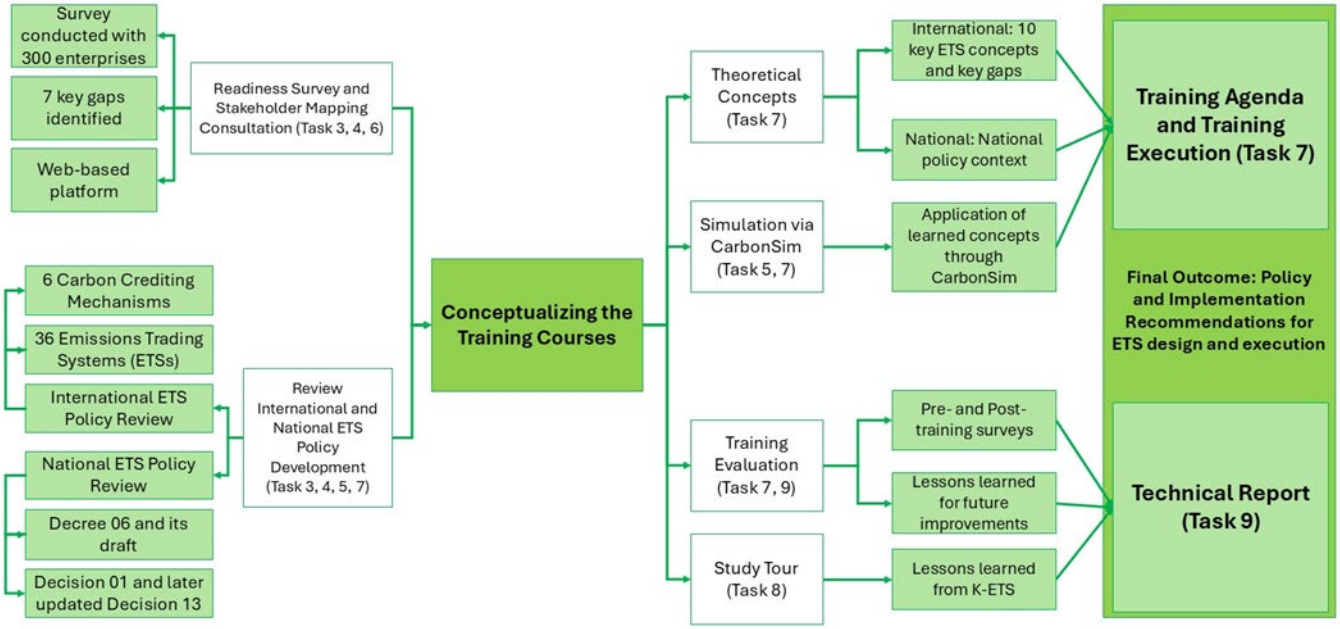

Figure 8: Training course design conceptualization

Source: Elaborated by the Consultant

Additionally, the training program integrated best practices from operational and emerging ETS models worldwide, focusing on EU ETS, Canadian Cap and Trade, and UK ETS that offered practical insights tailored for Vietnam's context.

The training centered on essential design components and the localization of international best practices for the two-day training program as follows:

(1) Defining Policy Objectives – The training course should help participants clarify Vietnam's long-term objectives for ETS implementation, such as cost-effective emissions reduction, market integration, and industrial competitiveness along with the national GHG mitigation targets.

(2) Deciding Scope and Coverage – Participants should learn how to determine which sectors and emissions sources will be included, ensuring a balance between environmental effectiveness and economic feasibility.

(3) Setting the Cap – Training should cover methodologies for determining the overall cap on emissions and how to adjust it over time in line with national and sectoral decarbonization goals.

(4) Allocating Allowances – The training should explore different allocation methods, including free allocation based on historical emissions (grandfathering), benchmarking, and auctioning.

(5) Establishing Offset Rules – A session should focus on how offsets can be integrated into ETS compliance, particularly the role of domestic and international carbon credits.

(6) Setting the Compliance Framework – Training should emphasize MRV requirements and how enforcement mechanisms ensure market integrity.

(7) Ensuring Market Stability – A key component of training should be understanding market stability mechanisms, such as price floors, ceilings, and allowance reserves.

(8) Developing Market Infrastructure – Training must cover the role of registries, trading platforms, and financial market intermediaries in ensuring a functioning ETS.

(9) Addressing Competitiveness and Leakage Risks – Participants should learn how to mitigate risks for industries while maintaining integrity.

(10) Implement, evaluate, and improve – Training must provide a simulation to allow stakeholders to participate in a simulated process of designing or participating in a virtual ETS. The simulation tool should serve to increase ETS literacy, help build support for ETS as a policy option and illustrate how policy outcomes are a function of design.

Each step in the ETS development process has direct implications for shaping Vietnam's ETS training agenda, ensuring that stakeholders acquire the necessary knowledge and skills to support the system's implementation and operation effectively.

Additionally, several ETSs worldwide permit the use of carbon credits for compliance, a mechanism that will also be included in Vietnam's future ETS. Given this, the training courses explored the relationship between ETS and carbon crediting/offsetting mechanisms, a key compliance component with the following critical aspects:

- Principles of carbon credits and interaction with an ETS;
- Types of carbon credits and how they are generated;
- Certification (validation, verification, issuance) and quality assurance;
- Future development and evolving uses in achieving net zero goals.

Alignment with national policies

The training agendas are designed to cover essential aspects of the national and sectoral legal and institutional framework, including:

- National climate change policies and net zero targets;
- Institutional setup and national roadmap for developing the domestic carbon market
- Roles and responsibilities of GHG emitters, including strategies for compliance with new regulations pertaining to GHG emissions and participation in the carbon market.

The main focus is on the key issues in Vietnam's ETS design and regulations, including:

ETS scope and coverage:

The training sessions also updated the latest development of the regulations on the ETS, including the revision of Decree 06/2022/ND-CP, and discussed the key sectors that are targeted to participate in the first ETS phase encompassing three energy-intensive sectors, i.e. power generation, cement production, and steel manufacturing. The following aspects of the national regulations were included in the Agendas:

- **Cap setting and adjustments:** Vietnam's ETS framework sets a limit on GHG emissions, which will gradually decrease over time to align with the country's decarbonization objectives.
- **Allocation mechanisms:** Different approaches for allocating allowances are being explored to maintain fairness and economic efficiency. These include grandfathering based on past emissions, benchmarking against industry standards, and conducting auctions for transparent distribution.
- **Market infrastructure and compliance:** A strong market infrastructure, including registries and trading platforms, is crucial for Vietnam's ETS. These systems enable transparent trading of allowances and credits, while comprehensive MRV systems ensure compliance with market regulations and support enforcement.
- **Integration with international markets:** Linking Vietnam's ETS with international carbon markets is a strategic option to improve market liquidity and align the system with global carbon reduction efforts. This integration would enable cross-border trading of carbon credits, fostering a more comprehensive and effective global approach to combating climate change.
- **Future directions:** As Vietnam's ETS develops, regular updates to the regulatory framework are expected to integrate stakeholder feedback and address emerging economic and environmental challenges. The ongoing revision of Decree 06/2022/ND-CP exemplifies a flexible and adaptive policy approach aimed at refining and optimizing the ETS based on real-world experience and input.

2.4.1.2 Pre and post survey design

The pre- and post-training surveys were designed to assess the training's effectiveness. The questions mirrored the course's learning goals, covering topics such as cap-setting, MRV

processes, allocation strategies, and carbon market functions. To accurately gauge knowledge improvement, identical questions were presented before and after the training, allowing for direct comparisons. Scenario-based questions were also incorporated to reinforce the practical, hands-on nature of the sessions and evaluate participants' preparedness for ETS engagement.

2.4.1.3 Participant identification and selection process

The identification of participants for ETS training was based on empirical data, stakeholder consultations, and gender equity considerations. These groups represented key players across various aspects of ETS implementation, forming a well-rounded and essential cross-section of stakeholders:

- **Policymakers:** Government and regulatory representatives ensured that training aligned with national climate strategies while providing valuable insights into policy directions and compliance requirements. Their involvement facilitated the seamless integration of ETS principles into Vietnam's broader climate goals.
- **Large GHG Emitters:** This group primarily included representatives from high-emission industries, particularly those listed under Decision No. 01/2022/QD-TTg and Decision No. 13/2024/QD-TTg, which mandate GHG inventories. As the primary focus of the TA, they received training on MRV, allowance allocation, and market strategies to enhance compliance readiness.
- **Financial Institutions:** Banks, investment firms, and carbon market intermediaries explored market dynamics, innovative financing mechanisms, and risk management strategies to support ETS compliance. Their engagement helped foster investments in emissions reduction initiatives.
- **Media Representatives:** Journalists and media professionals played a crucial role in raising public awareness, enhancing transparency, and building societal support for ETS initiatives by effectively communicating their benefits and obligations.
- **Other Stakeholders:** Academia, NGOs, smaller enterprises, and non-FDI companies contributed diverse perspectives to ensure equitable participation, address regional disparities, and enhance market liquidity, promoting widespread benefits from ETS implementation.

By fostering collaboration among various groups, the training not only met immediate capacity-building needs but also strengthened mutual understanding and cooperation, which are critical factors for the long-term success and resilience of Vietnam's ETS framework.

2.4.2 Training course results

2.4.2.1 Summary of training results

From February to December 2024, six training courses were successfully held, engaging a broad spectrum of stakeholders from diverse sectors and regions. This comprehensive series

not only delivered critical insights into ETS development and implementation but also demonstrated its wide appeal and relevance across various audiences.

Overview of Training Sessions

The initiative commenced with two first sessions in Hanoi with the first training conducted from 26–27 February. This session was specifically designed for policymakers, financial institutions, and media representatives. It focused on equipping participants with critical insights and strategies necessary for effective ETS development and implementation. The second session, held from 29 February to 1 March, shifted its focus toward large emitters, providing guidance on addressing operational challenges within the context of the ETS framework.

Following these successful Hanoi sessions, the next two courses in HCMC in May 2024 (6-7 May and 8-9 May). These sessions were tailored to address the needs of large emitters in regions with high concentrations of industrial activities.

Building on the momentum of the earlier training sessions and the request of DCC (MAE), in December 2024, two additional training courses were conducted, focusing on three sectors of thermal power generation, iron and steel production, and cement production. The first course was held in Hanoi on 9-10 December, while the second was conducted in HCMC on 12-13 December. These sector-specific training sessions focused on the emissions profiles and operational characteristics of each industry, offering tailored guidance on integrating ETS mechanisms effectively.

To summarize the results of each training session, three full training reports for every two training sessions were submitted.

Diverse Stakeholder Engagement

All six courses attracted a diverse group of participants, including high-level representatives from key government ministries, provincial departments, banks, occupational associations, universities, and international organizations. The key information of each training session is summarized in the following table.

Table 3: Summary of the training courses

Session	Date	Location	Key targeted participants	Total attendees
Training 1	26-27 Feb 2024	Hanoi	Policymakers, media and financial institutions	138
Training 2	29 Feb - 01 Mar 2024	Hanoi	Large emitters	125
Training 3	06-07 May 2024	HCMC	Large emitters	117
Training 4	08-09 May 2024	HCMC	Large emitters	130

Training 5	09-10 Dec 2024	Hanoi	Potential ETS piloting sectors	68
Training 6	12-13 Dec 2024	HCMC	Potential ETS piloting sectors	79

Source: Compiled by the Consultant

All sessions have a total of 657 participants[2], representing a dynamic mix of high-level government officials, provincial department leaders, banking professionals, industry association members, academic experts, and representatives from international organizations. The following table summarizes the main representatives of each group.

Table 4: Summary of stakeholder groups and the key representatives

Group	Participants	Key representatives
Private Sector	319	Vingroup, Vinamilk, Petrolimex, PV Power, Hoa Phat Group, TH Group, Huong Sen Group JSC, Nui Tien Pure Water Co., Ltd, Song Gianh Cement JSC, Vicem, Hoa Phat Dung Quat Steel JSC, Vinfast Trading and Production JSC, C.P.Vietnam Livestock Joint Stock Company, AES Mong Duong Power Company Limited, Hai Phong Thermal Power JSC, Nghi Son 2 Power LLC, Cao Son Coal JSC – TKV, VietJet Air, Tay Nam Steel Production & Trading Company Limited, Vietnam Steel Corporation JSC, Samsung Electronics Vietnam, Suntory PepsiCo Vietnam, Honda Vietnam, Unilever, Adidas, Daikin Vietnam, SCG Cement, Posco Vietnam Co., Ltd, etc.
Policymakers[3]	115	Ministry of Natural Resources and Environment (DCC, Institute of Strategy and Policy on Natural Resources and Environment, Vietnam Institute of Meteorology, Hydrology and Climate Change, Vietnam Environment Protection Fund), MOF (State Securities Commission, Vietnam Exchange, Hanoi Stock Exchange, Ho Chi Minh Stock Exchange), Ministry of Industry and Trade, Ministry of Transport, Ministry of Construction, Ministry of Science and Technology, Provincial departments of HCMC, Ninh Binh province, Dong Nai province, Binh Duong province, Tuyen Quang province, Hai Phong city, etc.
Research & Academia	47	Electric Power University, National Economics University, Hanoi University of Science and Technology, Hanoi University of Natural Resources & Environment, HCMC University of Natural Resources and Environment, etc.
Development Partners	21	Agence Française de Développement (AFD), Stichting Nederlandse Vrijwilligers (SNV) Netherlands Development Organization, Embassy of Canada to Vietnam, British Embassy in Vietnam, International

[2] For full lists of training session participants, please refer to the Annexes of the Training Reports.

[3] The training courses were conducted before the ministerial restructuring; therefore, the original institutional names have been retained

		Emissions Trading Association (IETA), the International Finance Corporation (IFC) / World Bank , World Wide Fund for Nature Vietnam (WWF-Vietnam), Consulate General of Canada in HCMC, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Japan International Cooperation Agency (JICA), and United Nations Development Programme (UNDP), etc.
Financial Institutes	20	VP Bank, TechCombank, BIDV, EVN Finance, VinFuture, VietinBank, HDBank, Dragon Capital Vietfund Management, etc.
Media	19	Forbes Vietnam, VTV24 - Vietnam Television, VnExpress, Vietnamnews, Hanoi Times, Natural Resources and Environment News, VnEconomy, Vietnam Economic News, Vietnam Investment Review, Vietnam Business Magazine, Tuoi Tre Newspaper, Dan Viet Newspaper.

Source: Compiled by the Consultant based on participants' lists

The participant composition is illustrated in Figure 10, highlighting that nearly 59% of participants came from the private sector, followed by policymakers, research and academia, development partners, financial institutions, and media.

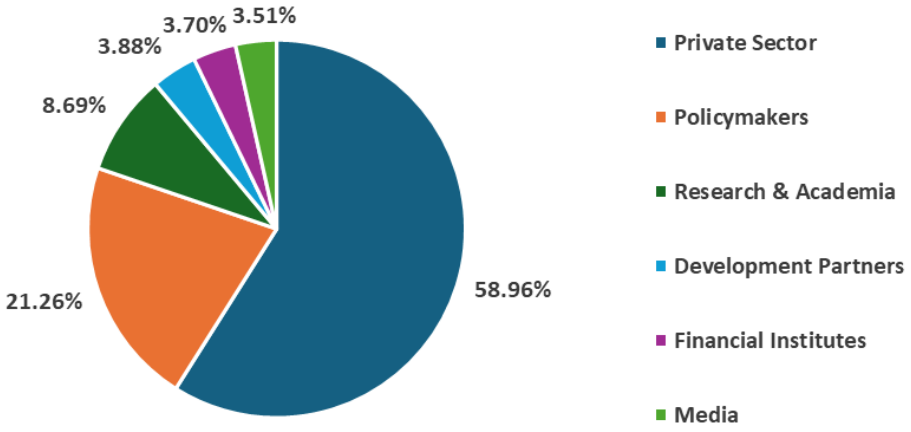

Figure 9: Participant distribution by stakeholder group

Source: Elaborated by the Consultant based on participants' lists

This diversity not only enriched the dialogue but also fostered a holistic understanding of the challenges and opportunities associated with ETS implementation.

Commitment to gender inclusivity

The training sessions have a well-balanced gender representation. With 340 male and 317 female participants, the courses reflected an inclusive approach to capacity building. This balanced representation across genders contributed significantly to a richer exchange of ideas, ensuring that the perspectives and experiences of all participants were considered in shaping strategies for Vietnam's emerging carbon market.

Figure 10: Participant engagement in CarbonSim trading simulation exercises

Overall, the six training sessions have laid a solid foundation for the development and implementation of a robust ETS in Vietnam. The comprehensive curriculum, coupled with the diverse participation and strong gender inclusivity, underscores the TA's success in reaching a wide range of stakeholders and building a collaborative platform for future initiatives.

2.4.2.2 Summary of pre- and post-training survey results

To assess participants' learning progress and the overall impact of the training, pre- and post-course surveys were conducted for each session. These surveys were conducted to evaluate participants' understanding of ETSs, key market mechanisms, and policy implications. The findings demonstrated significant improvements in knowledge and perception, confirming the training's effectiveness. Key results include:

Table 5:Effectiveness of training based on pre- and post-survey results

Key training areas	Pre-training results	Post-training results	Change/Impact
Perception of ETS as a climate policy tool	14.45% were unsure about ETS usefulness; 2.34% considered it ineffective.	Perception of ETS as "indispensable" increased from 27.14% to 46.94%.	Strengthened understanding of ETS's role in emissions reduction.
Understanding of ETS cost-effectiveness	14.38% viewed ETS as not cost-effective; 18.36% saw it as very cost-effective.	Only 1.63% still had doubts; 73.62% recognized ETS as highly cost-effective.	Improved grasp of market-based mechanisms over traditional regulations.
Knowledge of carbon pricing mechanisms	6.12% could confidently explain carbon pricing.	37.44% could confidently explain carbon pricing.	Significant increase in awareness of carbon pricing.

Understanding of ETS, carbon markets, and carbon taxes	10.43% had a confident understanding.	59.18% had a confident understanding.	Improved comprehension of different carbon pricing instruments.
Comprehension of offsets and emission allowances	13.32% had no knowledge of offsets and allowances.	68.36% could thoroughly explain these concepts.	Increased knowledge of carbon market mechanisms.
Understanding of offset limits	8.07% understood offset limits.	65.25% understood offset limits.	Greater clarity on market flexibility mechanisms.
Confidence in explaining abatement strategies	17.46% could confidently explain abatements.	68.13% could confidently explain abatements.	Improved ability to assess mitigation approaches.
Knowledge of ETS trading mechanisms (auction, OTC, exchange)	Many participants lacked knowledge of ETS trading mechanisms.	61.52% could confidently explain trading platforms and their implications.	Stronger grasp of ETS market operations.
Awareness of ETS design and climate objectives	26.88% had no knowledge of ETS design impacts.	87.91% developed a stronger ability to assess policy trade-offs.	Enhanced understanding of ETS alignment with climate goals.
Overall training satisfaction and value	Some participants were unsure of training benefits.	76.70% found the training beneficial and a good use of their time while other 22.65% found the course useful.	High participant satisfaction and endorsement.

Source: Elaborated by the Consultant based on pre- and post- training survey results

The training significantly improved participants' knowledge and perception of ETS and carbon markets. Increased understanding of ETS mechanisms, carbon pricing, and market-based solutions will support Vietnam’s transition to a low-carbon economy and the effective implementation of its ETS framework. Future training programs can build on these insights to further refine content and enhance engagement.

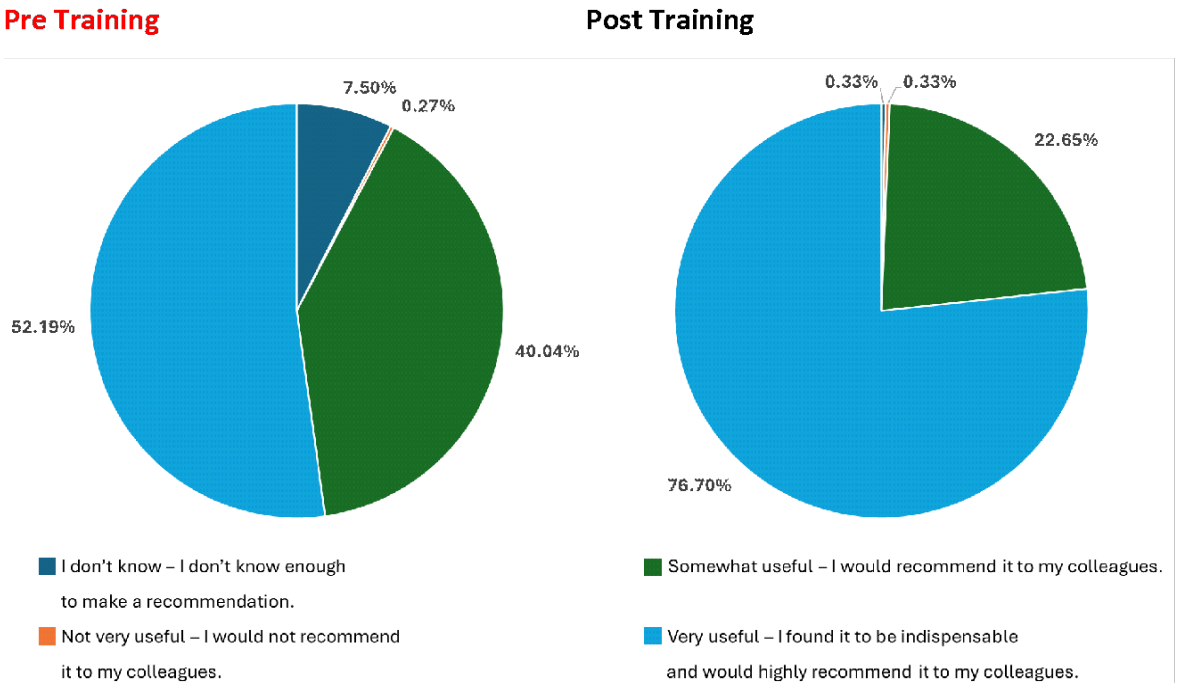

Figure 11: Satisfaction and endorsement for the training sessions

Source: Elaborated by the Consultant based on pre- and post- training survey results

2.4.2.3 Capacity-building efforts for key ETS stakeholders

The TA program was initially approved with only four training courses - two in Hanoi and two in HCMC. The positive responses from the initial four courses far exceeded expectations and there were expectations of having more similar courses.

Given the overwhelming demand and the outstanding results and impacts of the four sessions, DCC requested that ETP broaden the initiative to include additional courses focused on the key sectors, such as steel, cement, and thermal power. In response, the TA incorporated two extra training sessions, one in Hanoi and one in HCMC, specifically tailored to address the unique challenges and needs of large emitters in both northern and southern regions.

The high demand was evident even before the courses commenced, with numerous organizations and individuals expressing a keen desire to participate in this training course. Priority was given to sectors that are proposed to be directly involve in the ETS pilot phase. Nonetheless, the volume of inquiries both prior to and following each session vividly demonstrated the training's practical relevance and its effectiveness in addressing critical knowledge gaps.

Beyond direct engagement in the training sessions, the success of the training courses was further amplified by consistently positive media coverage. This widespread acclaim from the media reinforced the training contributions in advancing the carbon market and GHG mitigation in Vietnam. Headlines and reports from leading outlets encapsulated the training positive impacts with phrases such as:

- **"Understanding Emission Trading System: Navigating Its Impacts on Businesses"** – highlighting the workshop's role in clarifying complex market mechanisms. (Viet Nam News) https://vietnamnews.vn/economy/1651065/understanding-emission-trading-system-navigating-its-impacts-on-businesses.html
- **"The Need for Operating Emission Trading Scheme Pilot"** – underlining the urgency and strategic relevance of implementing ETS. (VietnamPlus) https://en.vietnamplus.vn/the-need-for-operating-emission-trading-scheme-pilot-post280027.vnp
- **"Businesses Understand Too Little About ETS and the Carbon Market"** – pointing to the critical knowledge gap that the training effectively addressed. (VnEconomy) https://vneconomy.vn/doanh-nghiep-hieu-biet-ve-ets-va-thi-truong-carbon-con-qua-it.htm
- **"Hundreds Participate in ETS and Carbon Market Training"** – emphasizing the high level of interest and participation from the business community. (Vietnam Economic News; Vietnam Investment Review) https://vir.com.vn/hundreds-participate-in-ets-and-carbon-market-training-109300.html
- **"Training course sheds light on emission trading system, carbon market"** – making the first capacity-building activity in Việt Nam with participation from both public and private sectors (Vietnam News) https://vietnamnews.vn/environment/1650980/training-course-sheds-light-on-emission-trading-system-carbon-market.html
- **"Helps Localities and Businesses Understand Carbon Credits"** – demonstrating the tangible impact on regional stakeholders. (Resources & Environment Newspaper – Hard copy)
- **"Ready for The Pilot Carbon Trade Exchange in June 2025" –** highlighting the successful completion of six training courses in Hanoi and HCMC (Vietnam Economic News) https://congthuong.vn/san-sang-cho-thi-diem-san-giao-dich-cac-bon-vao-thang-62025-377081.html
- **"Carbon Trade Exchange: Rushing to Train Personnel Before Pilot Operation"** – emphasizing the necessity of ensuring cooperation among stakeholders (Vietnamplus). https://www.vietnamplus.vn/san-giao-dich-carbon-gap-rut-dao-tao-nhan-luc-truoc-khi-thi-diem-van-hanh-post1019094.vnp

The evolution of the TA from four to six training courses is a testament to its success and the ever-growing demand for capacity-building initiatives in ETS design and implementation.

2.4.2.4 Contribution on strengthening the ETS regulation framework

The training courses are timely organized to strengthen Vietnam's ETS regulatory framework by enhancing the capacity of officials responsible for its development. Since early 2024, DCC has been leading the process to revise the Decree 06/2022/ND-TTg aiming to address gaps in the design and governance of both national and international carbon of the existing Decree.

The training sessions offered participants in-depth insights into international best practices in ETS and carbon markets. This deepened understanding enabled policymakers to assess,

refine, and modernize their regulatory approaches, crafting suitable and effective regulations to govern and operate the pilot ETS.

Furthermore, an important aspect of the TA included the active participation of expert speakers in the revision of Decree 06/2022/ND-TTg. Invited by the DCC, these experts provided practical advice and technical recommendations on revising sections related to the establishment and governance of the carbon market, with a particular focus on managing the ETS. The experts shared their extensive experience and specific technical suggestions on the integration of state-of-the-art ETS design principles in the discussion with DCC.

Figure 12: Consulting Consortium shares ETS design insights with DCC

Overall, the training courses significantly bolstered the regulatory capacity of officials, laying a strong foundation for the successful implementation of a dynamic and effective ETS in Vietnam.

2.5 STUDY TOUR FOR KEY GOVERNMENT OFFICIALS (TASK 8)

The Korean Emission Trading System (K-ETS) offers valuable lessons for Vietnam in developing and operating its national carbon market. These insights cover institutional frameworks, regulatory structures, research methodologies, and market operations, all of which can be customized to fit the Vietnamese context.

To facilitate knowledge exchange between the two countries, a study tour was organized for 17 delegates from Vietnam's MOF from 19 to 25 November 2023 in Seoul, South Korea. The study tour was co-financed by ETP and the Global Green Growth Institute (GGGI).

VNEEC was responsible for coordinating the study tour, with GGGI supporting the finalization of the schedule. The itinerary included engagements with government agencies, research institutes, private sector representatives, and international organizations involved in K-ETS.

Initially, representatives from both the MAE and MOF were expected to join the delegation. However, due to MAE's commitments in preparing for COP28 (November–December 2023), only MOF representatives participated. The delegation was led by Ms. Ho Thi Hang, Deputy Director General of the Legal Department, MOF.

Each meeting during the study tour consisted of two key segments: 1) the introductions by the Korean organization visited and the leader of the Delegation 2) Questions and Answers (Q&A), allowing for deeper discussions on ETS-related topics. Meetings with Korean partner organizations can be divided into three main groups:

- Governmental organization: Discussions focused on the legal and institutional preparation and requirements for the establishment and operation of the K-ETS, including allocation methodology, market operations, and policy enforcement. Key participants included the Ministry of Environment (MOE), Ministry of Economy and Finance (MOEF), and Korean Exchange (KRX).
- Organizations directly appointed/contracted by the government for ETS: These meetings explored the practical aspects of ETS implementation, such as allowance allocation, enterprise coordination, market functionality, and ensuring flexibility and liquidity of the market. Key organizations included BNZ Partners, the Korean Chamber of Commerce and Industry (KCCI), the Climate Change Centre (CCC), and KB Securities.
- Organizations providing consultancy, information, and credits/offsets for the ETS: These sessions provided insights into market interactions, trading mechanisms, and offset credit systems. Organizations such as Ecoeye Co., Ltd., SK Forest, SustInvest, and Yesco Co., Ltd. shared their experiences in emissions trading, project development, and carbon credit services.

Figure 13: K-ETS study tour highlights: delegates' participation and engagement

Lessons learned from the Korean Emission Trading System study tour

As of the study tour, K-ETS was in its third operational phase (2021–2025), following the initial pilot in Phase 1 (2015–2017) and the transition in Phase 2 (2018–2020). Some key findings of the study tour that offer valuable insights for Vietnam to design and operate a successful and effective ETS are summarized as follows:

Table 6: Lesson learned as the result of the K-ETS study tour

Korean experience	Lesson learned for Vietnam
Phases 1 and 2 were considered as the pilot for facilities to get used to the ETS.	Vietnam should dedicate an appropriate timeline to design, pilot, and fully operate the ETS.
Phase 1 applied grandfathering (GF) then gradually applied benchmarking (BM) (66% in Phase 3). Three years of historical data for GF is long enough to allocate the allowances, but clear policies and regulations are required.	The pilot phase can rely on GF with 03-year GHG inventory data while developing the BMs to gradually replace GF. The free allocation is the most suitable in the pilot phase, the auction should be gradually applied in phases.
Should consider most potential conflicts and propose intervention policies during the design phase. In K-ETS, MOE always wants to reduce the total cap while the Ministry of Trade, Industry and Energy wants to increase it due to pressure from industries.	Having consensus between the key line ministries will determine the success or failure of the ETS.
The ETS helps businesses/industries calculate their own costs and be proactive in achieving their emission reduction targets, with carbon pricing being a crucial indicator in making decisions.	Continuous and intensive training, capacity building and public awareness are important to different groups of stakeholders, but businesses and industries should be the high priority.
The K-ETS imposes restrictions on the banking of unused allowances in order to stimulate the trading market.	Banking is an important tool for the stabilization and scale of the ETS. It should be considered in the early stages of designing an ETS.
South Korea has ambitious GHG reduction targets, but the demand and prices for allowances both are declining. The stabilization and GHG control policies need to be improved in Phase 4 (beginning in 2026).	The management policies should be flexible and revised regularly to operate an ETS successfully.
A stabilization system should be included in the early stage and auction is the tool for stabilization.	The consideration of the possibility of market shocks and interventions should be made when establishing the ETS.
The MOE manages the ETS and makes decisions on the amount of allocation, system management, and management of participating enterprises based on the decisions of the Allowance Allocation Committee.	The decision on the total allowance and the methodologies for allocation of allowances is very important that should be in charge by a high-level body (i.e. Prime Minister level) who can assign and coordinate line ministries.

Korea set up the Climate Change Response Fund using auctions' revenues and other sources while the Market Stabilization Fund has allowances (no money). The Market Stabilization Fund is managed by the Allowance Allocation Committee.	The Funds for using the revenues from the ETS and to stabilize the operation of the ETS should be decided when establishing the ETS.
The participation of market makers is important to build confidence among market participants. Market makers help to stabilize the market functions and remain resilient even during times of market turbulence/shocks.	The consideration of the Market makers should be made when establishing the ETS.
Korea has used international experts from the EU to support the design and operation of K-ETS.	Vietnam should consider engaging and using international experience and technical support in the early stage of the ETS design.
Korea has been facing many difficulties in implementation.	Korean partners, especially the representatives from MOE expressed the hope that Vietnam will speed up progress when it gains more experience from Korea.

Source: Compiled by the Consultant

For future study tours, it is recommended that participants engage with additional key organizations to gain deeper insights into the design and operation of ETSs.

- Korea Environment Corporation (K-ECO): Provide valuable knowledge on ETS implementation and regulatory challenges, as the primary agency responsible for K-ETS operations,
- GHG Inventory and Research Centre of Korea (GIR): Offer insights into the construction and operation of the National GHG Management System, the ETS Registration System, and the Offset Registration System.
- Korean Standard Association: This organization would help participants understand the methods and principles of ETS and GHG inventory assessment, as well as the challenges in conducting verification and assessment activities.

Engaging with these organizations allowed study tour participants to expand their understanding of ETS governance, market mechanisms, and best practices, ultimately supporting Vietnam in building a more effective and efficient ETS.

The experience from South Korea provides valuable insights for Vietnam in developing an effective ETS, particularly in designing allowance allocation mechanisms and implementing market stabilization policies.

2.6 KEY LESSONS AND RECOMMENDATIONS FOR THE FUTURE DESIGN AND IMPLEMENTATION OF VIETNAM'S ETS (TASK 9)

2.6.1 Lessons and recommendations for the design and implementation of ETS Vietnam

Based on the insights and findings accumulated and analyzed from the studies, surveys, and training sessions conducted under this TA, the following lessons learned and recommendations for the design and execution of the ETS in Vietnam are provided below.

Table 7: Lessons learned and recommendations for the design and execution of the ETS in Vietnam

Key issues	Lessons learned	Recommendations for design and execution of ETS in Vietnam
Defining policy objectives	**Policymakers** emphasized that Vietnam's long-term objectives for the ETS should be clarified, such as whether the focus is on cost-effective emissions reduction, market integration, or enhancing industrial competitiveness. They need to align these objectives with the national GHG mitigation targets to ensure coherent policy development. **Emitters** need to understand how these policy objectives affect their operations and compliance strategies, particularly in terms of investment in clean technologies and shifts in operational practices to meet evolving regulatory requirements.	Set up an institutionalized stakeholder group consisting of policymakers, industrial emitters and their trade associations, and academics, and use ongoing meetings to refine understanding and increase awareness of ETS policy objectives. Conduct regular media campaigns on the domestic carbon market including the rationales for selecting the ETS and the related roadmap.
Deciding Scope and Coverage	**Policymakers** expressed that the regulation must determine which sectors and sources of emissions are included in the ETS. This involves balancing environmental effectiveness with economic feasibility and considering sector-specific challenges and opportunities. **Emitters** are concerned with the preparation to adapt to the obligations under the new decisions/policies, such as potential inclusion or exclusion in the initial phases of the ETS, and how this scope affects their compliance obligations. Stakeholders emphasized the need for clear criteria to determine which emitters are included in the ETS during each phase. They sought transparency regarding the benchmarks and readiness levels required for industries to be incorporated, ensuring a manageable and gradual transition into the system and details elaboration on the eligible participants in the market: (i) entities generating carbon credit; (ii) emitters receiving allowances; (iii) traders/intermediaries? What are the benefits and risks of intermediaries?	Identify the contribution of each candidate sector to overall emissions, as well as average abatement cost and decarbonization technology pathways in each sector, focusing on the sectors most likely to see inclusion in the ETS, notably heavy industry and power generation. Conduct quantitative assessments of the mitigation potential and cost in each sector and the implications of coverage for demand/supply and allowance prices in the ETS as well as for reduction of overall mitigation cost. Conduct quantitative assessment based on available emissions and production data to determine the overall emissions coverage and number of covered entities with different sectoral scopes and thresholds for inclusion in each sector. Assess the number of entities with different coverage thresholds included, setting thresholds to include e.g. 70%, 80%, and 90% of all emissions in relevant sectors, and determine the optimal threshold to maximize coverage with a limited number of entities (e.g. based on Pareto principle).

Setting the cap	**Policymakers** emphasize the necessity to develop methodologies for setting and adjusting the cap on emissions to align with national and sectoral decarbonization goals. This includes establishing procedures for data collection, verification, and cap adjustment mechanisms. **Emitters** need guidance on how these caps will be implemented and adjusted, and what role they will play in shaping these caps through industry feedback and data provision.	Conduct top down and bottom up assessments of emissions data and medium to long term emission trends in relevant sectors; reflect existing national and sectoral mitigation goals as well as mitigation potential across sectors and activities to identify a balanced and efficient cap for ETS-covered sectors. Consider the need for future cap adjustments and predetermined opportunities for adjustment of the cap in light of evolving circumstances.
Allocating allowances	Concerns were raised about how allowances are distributed among participants, particularly the balance between free allocations and auctioned permits. The allocation process requires careful consideration to balance fairness, accuracy, and transparency. Attendees called for equitable and transparent methodologies that align with both environmental goals and economic viability, ensuring that no stakeholder is unduly advantaged or disadvantaged. **Policymakers** expect to have in-depth studies to explore various allocation methods, such as grandfathering, benchmarking, and auctioning, each with its pros and cons. The chosen method should promote fairness and incentivize reductions. **Emitters** expect to understand the implications of different allocation strategies on their operations, especially how they can influence allowance costs and strategic planning for emissions management.	Conduct studies to ascertain the economic impacts of different allocation methods, including competitiveness impacts, likelihood of windfall profits, and fiscal implications. Consider international factors such as recognition towards EU's Carbon Border Adjustment Mechanism (CBAM)compliance, as well as possible uses of auctioning revenue to address competitiveness impacts and other economic disadvantages. Consider phased approaches to help build gradual capacity and secure required information for robust benchmark-setting but ensure long-term trajectory towards the economically and environmentally most efficient approach, auctioning. Assume strong political economic pressure to adopt grandfathering or generous benchmarks but observe lessons from international experience to better understand the disadvantages of an excessively long transition to auctioning.
Establishing offset rules	**Policymakers** expect that there should be clear rules for the integration of offsets in the ETS, considering both domestic and international carbon credits and their role in meeting compliance. **Emitters** need to comprehend how they can use offsets to comply with their obligations, the eligibility criteria for such offsets, and the impact on their overall carbon footprint and compliance costs. Clarify the boundaries for ETS and carbon credit mechanisms in one installation that is under the ETS. *For instance, if the solar rooftop project at the physical site within the ETS boundary generates*	Conduct a detailed study of other jurisdictions' ETS and the rationale and design of including (or opting against inclusion) credits as an eligible compliance alternative. Consider fiscal implications and impact on demand and supply for allowances in the ETS, including price dynamics. Consider qualitative and quantitative limits or criteria for offset credit use, as well as potential international implications (e.g. eligibility towards CBAM compliance). Ensure alignment with existing or emerging international crediting schemes, notably methodologies expected from the Supervisory Body of Article 6.4 of the Paris Agreement.

	electricity merely to the grid, then is it eligible to generate carbon credits?	
Setting the compliance framework	**Policymakers** require robust MRV systems and enforcement mechanisms to ensure market integrity and compliance. **Emitters** should prepare for compliance with MRV requirements, understanding what data needs to be reported, how emissions are verified, and the consequences of non-compliance.	Build on existing domestic emissions transparency frameworks and ensure alignment with international MRV standards to minimize duplication of effort for compliance entities (e.g. towards CBAM, CSRD/CSDDD, ISO 14064, etc.) Provide transparent guidance to compliance entities and offer support or a helpdesk to ensure timely assistance as entities build necessary capacity. Draw on international knowledge products and software. Create necessary institutional and governance frameworks for verification and secure an adequate supply of qualified verifiers through education and training measures.
Ensuring market stability	**Policymakers** hope to understand better market stability mechanisms like price floors, ceilings, and strategic allowance reserves to prevent market manipulation and extreme price volatility. **Emitters** will benefit from understanding how these mechanisms protect them from unpredictable economic burdens and facilitate smoother transitions to compliance. The flexibility of banking and borrowing provisions within the ETS captured significant attention. Participants expressed interest in clear policies that would allow them to strategically manage allowances over time, while also safeguarding market stability and ensuring that these mechanisms do not compromise the system's overall integrity. Stakeholders expected stringent monitoring and oversight measures to prevent market manipulation and ensure that investment activities contribute to genuine emissions reductions rather than undermining the market's credibility.	Conduct domestic debate on the importance of certain price levels vs. market efficiency for the achievement of the policy objectives identified previously (see above). Study price and supply management provisions in existing ETS of other jurisdictions, along with design options, best practices, and tradeoffs. Consider the suitability of alternative options for the domestic context and circumstances. Seek an appropriate balance between price predictability and the degree of government interference in efficient market-led resource allocation.

Developing market infrastructure	**Policymakers** focus on the roadmap and plan to develop necessary market infrastructure such as registries, trading platforms, and the role of financial market intermediaries. **Emitters** need to engage with this infrastructure, understanding how to access and use it for compliance and trading purposes.	Survey existing market infrastructure elements deployed in other jurisdictions' ETS, and study software solutions and available suppliers. Invest in and develop the crucial infrastructure for ETS operation such as registries and trading platforms. Consider interoperability with international infrastructure, such as the registry infrastructure of Article 6 of the Paris Agreement. Deliver training for key stakeholders on the use of infrastructure for ETS operation in the early stage (even in the testing phase of the infrastructure).
Addressing competitiveness and leakage risks	**Policymakers** need strategies to mitigate risks of carbon leakage and maintain the competitiveness of industries under ETS, ensuring that regulations do not unduly penalize domestic industries. **Emitters** should be aware of measures to mitigate leakage risks and the supports available to maintain competitiveness in a regulated environment.	Survey other jurisdictions' existing approaches to addressing competitiveness and leakage risk in an ETS, including lessons learned and best practices developed over time. Define and apply criteria for the identification of energy-intensive and trade-exposed industries and estimate fiscal implications and environmental impacts of alternative leakage safeguards. Reflect recent international trends, e.g. adoption of border carbon measures in trade partner countries and degree of convergence (or lack thereof) of climate efforts across the world.
Implement, evaluate, and improve	The simulation highlighted several key learnings that aligned with the theoretical-step ETS design approach and should be focused on the following: 1. Understanding Policy Objectives and Scope – Participants grasped the importance of defining ETS coverage, including sectoral participation and emissions thresholds. 2. Cap-Setting and Allowance Allocation – Teams experienced the impact of emissions caps and how allocation mechanisms influence market behavior. 3. Trading and Market Stability Mechanisms – Market fluctuations in allowance prices demonstrated the importance of risk mitigation strategies and financial hedging. 4. Compliance and Regulatory Adjustments – Announcements from the virtual regulator about cap adjustments and price floors	Ensure that the ETS design has predetermined entry points for evaluation and review (e.g. at the end of a 3-, 5- or 7-year trading period), and draw on established best practices for the assessment of ETS performance to identify possible improvements to design and implementation of the ETS. Balancing interest in long-term certainty with the importance of intervention points to ensure flaws or an evolved context can be addressed by adjustments to the ETS design. Conduct an evaluation and propose improvements after each period.

	influenced market trends, reinforcing the need for ongoing policy monitoring. 5. Marginal Abatement Cost Management – Highlight the importance of diversifying carbon management strategies, such as combining on-site abatement with market trades. Show how strategic flexibility can lead to better outcomes in ETS participation. The price dynamics and market behavior observed during the simulation closely resembled real-world ETS markets. Auction prices influenced secondary market trends, and regulatory interventions, such as cap reductions, had immediate effects on price volatility. Participants who actively monitored regulatory changes and adapted their strategies accordingly performed better, reinforcing the need for businesses to develop flexible and proactive compliance strategies. Market participants expected transparent and predictable policies from the government in order to make decisions and comply with the most cost-effective for their business.	
Interaction with CBAM	**Emitters** are concerned with the recent CBAM requirement and how they can prepare for additional compliance challenges, especially if their products are exported to markets with CBAM regulations like the EU. They expect that there would be assessment and information on how ETS implementation interacts with CBAM requirements, focusing on emission calculation standards, verification processes, and potential cost implications on exports.	Carefully monitor operational decisions in the EU CBAM regarding the eligibility of foreign carbon prices paid to be accounted towards CBAM compliance, notably the implementing act on Art. 9 of the CBAM Regulation expected in the second half of 2025. Also, track political developments in the EU and other jurisdictions regarding border carbon measures to understand political pressures that might affect relevant design choices and how a Vietnamese ETS will be considered in the context of such measures.

Source: Compiled by the Consultant

2.6.2 Strengthening ETS readiness and capacity-building

The ETS and carbon market training courses received overwhelmingly positive feedback. Pre- and post-training surveys revealed significant improvements in understanding ETS design, cost-effectiveness, carbon pricing, trading mechanisms, and policy implications. Initially, perceptions were mixed, but after the training sessions, 80.07% of participants rated the courses as "Very useful," with most recommending them to colleagues.

Participants moved from uncertainty to strong confidence, gaining the ability to clearly explain complex concepts like carbon pricing, offsets, abatements, and various trading systems, while also distinguishing between ETS, voluntary, and compliance markets. The training transformed initial skepticism into advocacy, positioning ETS as an indispensable tool for achieving Vietnam's climate targets.

The ETS simulation exercises conducted in all six training courses in Hanoi and HCMC provided participants with a hands-on learning experience that reinforced their understanding of ETS principles and the theoretical-step approach to ETS design and implementation. Through structured simulations using CarbonSim, participants engaged in real-time decision-making, developing strategies to comply with carbon pricing mechanisms and market-based compliance obligations.

The simulation offers stakeholders a secure, risk-free environment to explore new concepts, commit errors, and gain insights, thereby accelerating the adoption of an effective ETS. Through experiential learning facilitated by this tool, participants enhance their understanding of ETS, fostering support for it as a policy choice and demonstrating that policy outcomes depend on its design. This approach is a cost-effective and low-risk method for developing the capabilities of policymakers and regulated firms. Furthermore, CarbonSim facilitates the building of relationships, mutual understanding, and trust among stakeholders, essential elements for collaborative policy design and implementation.

Overall, the courses bridged key knowledge gaps and provided actionable insights that prepared stakeholders for active participation in Vietnam’s emerging carbon market. This training has laid a strong foundation for advancing the country's carbon reduction efforts, energy transition, and long-term climate resilience.

2.6.3 Recommendations for future training, capacity building activities

2.6.3.1 Structure for future training, capacity building activities

The positive post-training feedback and strong interest in further training underscore a robust demand for similar initiatives, especially for more technical, sector-specific sessions on ETS and the broader carbon market. This series represents the first of its kind organized by DCC. Its success should be followed by more training sessions that are tailored to different stakeholder groups to foster robust engagement and consensus. Such activities are crucial for the successful implementation of the policies and regulations governing ETS and the domestic carbon market in Vietnam.

To optimize future training courses and cover the gaps that are not yet delivered under this TA, the following recommendations are proposed based on the structure and success of the training sessions:

- Strong foundations for conceptualizing the training sessions: Develop training concepts and agendas that blend international best practices with specific national needs, based on thorough pre-training research and feedback from participants. This ensures that training sessions remain relevant and impactful. The training sessions should include at least two parts:
    - Phased learning approach: Start with an introductory phase covering fundamental concepts of carbon pricing instruments such as allowances, offsets, auctions, trading platforms, and compliance obligations. Include frequent pauses and interactive discussions to help participants internalize key concepts before advancing to more complex scenarios. Future training sessions should focus on delving deeper into each concept, tailored more technically by sectors.
    - Interactive elements: progress to more advanced topics and include simulations that mimic real-world ETS dynamics, fostering strategic thinking and participant engagement.
- Real-world simulation: It is crucial to provide participants with simulations that mirror real-world ETS dynamics. Utilize tools like CarbonSim to reflect actual dynamics, encouraging participants to analyze marginal abatement costs, market trends, and potential regulatory changes. This practical application highlights the impact of strategic decisions in a controlled environment. Future training sessions should include simulation modules that also focus on the governmental decision-making process (e.g., allocation methodologies, rates of free allocation, use of revenues), to demonstrate how different decisions can impact both supply and demand sides, as well as market trading.
- Strategic flexibility training: Emphasize the importance of making adjustments during the training process, which has proven essential for the success of the sessions. These improvements should continue through a cycle of pre- and post-training activities (see below section for further details).
- Follow-up and advanced training: After initial training, provide follow-up sessions to review concepts, discuss real-world applications, and introduce more complex scenarios. This ensures continuous learning and adaptation to evolving market conditions and regulatory frameworks.
- Close collaboration with key parties involved: the training courses are designed and conducted in close consultation and collaboration with ETP/UNOPS and DCC. They are kept well-informed about the events and support requirements, enabling them to provide timely guidance and decisions critical for the design and implementation of the courses. This includes facilitating guest speaker invitations, participating in and presenting at events, and approving necessary adjustments.

Implementing these structured elements in future training sessions will not only enhance learning outcomes but also prepare participants more effectively for active and informed participation in the ETS and the domestic carbon market in Vietnam.

2.6.3.2 Training course adjustments

The training series under the TA was structured with a foundation in both international best practices and a national needs assessment, ensuring relevance and high standards. Initial planning involved a comprehensive desk review combined with a nationwide survey to pinpoint specific training needs, which informed the detailed agendas and content tailored to the country's requirements.

Adjustments made during the training process played a crucial role in its success. The implementation involved a continuous cycle of pre- and post-training activities, alongside real-time modifications based on participant feedback, in-session observations, and emerging needs. To enhance the effectiveness of future training sessions, key recommendations include:

- Responsive training design: Adapt the training structure actively throughout the series based on observations and participant feedback to address any emerging challenges or learning gaps. This might involve adjusting the complexity of simulations or the pace of sessions to better match participant engagement levels and learning speeds.

The content was continuously refined to address specific participant needs, particularly focusing on the national context rather than detailed MRV topics, which were more relevant to the participants at the current stage of ETS in Vietnam. Recap sessions and theoretical presentations were also customized after each training round based on feedback, ensuring the material remained relevant and engaging.

- Enhanced tutor support: Before the initial sessions, the team conducted multiple preparatory tutor sessions, developing a cadre of skilled tutors fluent in both Vietnamese and English. This effort was critical in minimizing language barriers, enhancing communication, and providing targeted support, which significantly improved the learning environment.
- Optimized simulation tools: The introduction of an upgraded CarbonSim tool, which initially allowed parallel group simulations, increased hands-on engagement. However, recognizing the challenges this posed in terms of fragmented learning experiences, the team reverted to a single simulation format in later sessions to enhance delivery consistency and reduce logistical complexities.
- Refined simulation structure: Adjustments to the simulation's pacing and structure were critical. For example, after observing confusion due to limited simulation years, subsequent sessions were adjusted to allow a smoother transition between years. The team also streamlined explanations and increased tutor support to bolster understanding and engagement.

- Innovative engagement techniques: In later sessions, the team introduced new methods to stimulate active participation, such as encouraging the use of the OTC market during simulations, which created a more collaborative and energetic learning atmosphere.

These thoughtful and responsive adjustments ensured that the training not only met the immediate learning objectives but also adapted to the evolving understanding and interests of the participants. This approach led to high levels of participant satisfaction and a deeper understanding of ETS concepts, underscoring the effectiveness of the training and the value of a flexible, participant-centered approach.

3 CONCLUSIONS AND NEXT STEPS

The TA significantly surpassed its main objectives, as demonstrated by the successful execution of six highly effective training courses, exceeding the initial target of four and benefiting over 600 participants. These courses played a pivotal role in enhancing both the understanding and practical skills of participants regarding ETS and market-based mechanisms. This was confirmed by pre- and post-training surveys, with overwhelmingly positive feedback underscoring the boost in institutional and individual capabilities across various sectors.

Moreover, the training sessions captured significant media attention, amplifying their impact further. Positive coverage consistently highlighted the importance of carbon market knowledge and GHG mitigation strategies, raising public awareness about these issues and broader national climate policies.

The comprehensive findings from these training sessions, including detailed simulations, analysis, and assessments, have informed recommendations for policy design, market readiness, and stakeholder engagement. These are aimed at supporting the development of a robust and adaptable ETS framework that aligns with Vietnam's long-term climate goals. An important aspect of the TA included the involvement of expert speakers in revising Decree 06/2022/ND-TTg. Invited by DCC, these experts contributed practical advice and technical recommendations, focusing on the governance of the carbon market and the integration of advanced ETS design principles.

The recommendations put forth in this TA serve as a strategic blueprint for future training initiatives and policy development, ensuring continuous advancement in Vietnam's ETS knowledge and capabilities.

To sustain the momentum and success of this TA, the following steps are recommended:

- Conduct further in-depth capacity-building and engagement activities for diverse stakeholder groups, both before and after the launch of the Carbon Trade Exchange (CTX) platform, including simulations on the actual platform developed by the MOF.

- Develop and distribute knowledge products in Vietnamese that cover the basics of ETS, carbon markets, and related strategies, tailored to the perspectives of different target groups.
- Maintain and regularly update the website developed under this TA to ensure it remains a valuable and current resource.

Continuing these efforts will not only reinforce the foundational work achieved through this TA but also significantly contribute to the development and evolution of the ETS in Vietnam, supporting the nation's climate goals in a substantial and meaningful way

ANNEX. FINAL WORKSHOP MINUTES OF MEETING

Minutes of the Final workshop of Technical Assistance
"Emission Trading System (ETS) Piloting and Simulation in Vietnam"

1. **Date and time:** 9:00 – 11:45, 06 March 2025
2. **Place:** 3rd Floor, Novotel Suites Hanoi Hotel, No. 5 Duy Tan, Dich Vong Hau, Cau Giay, Hanoi, Vietnam
3. **Participants:**

Honored participants

- Mr. Nguyen Tuan Quang – Deputy General Director of DCC, MAE
- Mr. John Robert Cotton – Deputy Director of ETP
- Mr. Do Manh Toan – Country representative in Vietnam, ETP
- Ms. Nguyen Ngoc Thuy – ETP
- Mr. Pham Nam Hung – Department of Carbon market, DCC, MAE
- Ministerial agencies, State Securities Commission, Hanoi Stock Exchange

4. **Workshop materials are accessed at:** ETS FINAL WORKSHOP - Google Drive
5. **Agenda and contents**

5.1. Agenda

Time	Content	Speakers
08:30 – 09:00	Registration	Organizer
09:00 – 09:15	Opening remarks	• DCC's representative • ETP's representative
09:15 – 09:45	Results of implementing Technical Assistance on "ETS Training and Simulation in Vietnam"	Dang Hong Hanh - VNEEC, Experts from the Consortium
09:45 – 10:15	Key findings and policy recommendations for the design and operation of the ETS in Vietnam	Michael Mehling- CEEPR/MIT, Experts from the Consortium
10:15 – 10:30	Q&A session	Experts from the Consortium
10:30 – 10:45	Tea break	
10:45 – 11:15	Latest update on national regulations on ETS and the carbon market	DCC's representative

11:15 – 11:30	Discussion	Experts from the Consortium
11:30 – 11:45	Closing remarks	• DCC's representative • ETP's representative
11:45	Lunch	

5.2. Contents

5.2.1. Opening remarks

(i) Mr. Nguyen Tuan Quang – Deputy General Director of the Department of Climate Change, Ministry of Agriculture and Environment

Mr. Nguyen Tuan Quang underscores the carbon market's critical role in achieving Vietnam's Net Zero target by 2050. He highlights the government's commitment through Decree No. 06/2022/ND-CP, which sets 2025 as the launch year for the carbon market. In preparation, Vietnam has partnered with key international organizations, including UNOPS and ETP, to receive technical support through workshops and carbon trade exchange simulations.

The urgency of market development is evident. On 25 January 2025, the Prime Minister approved the establishment and development proposal, and while the original timeline aimed for implementation in late 2025, government directives have expedited the process. As a result, pilot operations will now begin in June 2025, which is six months ahead of schedule.

To ensure successful implementation, Mr. Quang outlines four key tasks. First, a national carbon credit registry system must be established. Second, an operational framework integrating the registry with a trading platform and depository system must be developed, leveraging the existing stock exchange infrastructure. Third, clear regulations must be enacted to facilitate smooth trading within the exchange framework. Lastly, businesses must be allocated allowances to create a functional market. Without tradable assets, the system would be ineffective.

Mr. Quang acknowledges the crucial role of international support in capacity-building efforts. Six recent training programs have engaged over 700 participants, including government officials and industry representatives. These sessions are essential to ensuring businesses understand the market and are prepared for its operations. Without proper education and readiness, implementation could face significant challenges.

In conclusion, Mr. Nguyen Tuan Quang expresses his gratitude for the support and collaboration of UNOPS-ETP, the DCC, MAE, and other relevant organizations in climate change response initiatives.

(ii) Mr. John Robert Cotton – Deputy Director of Southeast Asia Energy Transition Partnership

The speech by Mr. Cotton begins with an acknowledgement of Vietnam's impressive economic growth as an example of how strong economies can bring prosperity. However, he points out that the global economic system often neglects the environmental impact of GHG emissions. To address this, the introduction of an emissions trading scheme aims to incorporate these externalities and transform them into opportunities.

Mr. Cotton emphasizes that large corporations, including coal-fired power plants, have shown increasing interest in reducing emissions while maintaining profitability. This shift has led to crucial discussions on energy efficiency, carbon intensity, and renewable energy procurement, topics that were not widely explored just a few years ago. The forum has played a significant role in fostering dialogue and encouraging companies to consider sustainable practices as part of their business strategy.

He further acknowledges the key contributors to the project, including VNEEC, South Pole and VETS, who have brought valuable expertise. Their collaboration with international institutions, including MIT, the Environmental Defense Fund, and various emissions trading systems from Europe and Canada, has enriched Vietnam's approach to carbon market development. The ability to adapt global knowledge within a Vietnamese context has been a major strength of this initiative.

In conclusion, Mr. Cotton expresses his appreciation to Mr. Quang and the Government of Vietnam for their leadership in advancing emissions trading systems. Vietnam's efforts have drawn attention from other ASEAN nations, such as Thailand, which now seek to learn from its progress. He highlights Vietnam's rapid movement toward decarbonization, positioning the country as a leader in sustainability within the region. Mr. Cotton ends by thanking all stakeholders, including the ETP team in Vietnam, for their dedication and contributions to making the project a success.

5.2.2. Presentations

(i) Results of implementing Technical Assistance on "ETS Training and Simulation in Vietnam" – Ms. Dang Hong Hanh

- Technical Assistance overview
- Task 3: Survey approach and results
- Task 4: Stakeholder mapping
- Task 5: Simulation tool
- Task 6: Web-based platform
- Task 7: Training courses
- Task 8: Study tour
- Conclusions and Follow-up activities

(ii) Key findings and policy recommendations for the design and operation of the ETS in Vietnam – Dr. Michael Mehling

- Policy Objectives, Scope and Coverage
- Setting the Cap and Allocating Allowances
- Establishing Offset Rules
- Setting the Compliance Framework
- Market Stability and Infrastructure
- Competitiveness, Leakage & CBAM
- Implementing, Evaluating & Improving

(iii) Latest update on national regulations on ETS and the carbon market - Mr. Pham Nam Hung

- Overview of the global carbon market
- Overview of the carbon market in Vietnam
- Legal foundation for establishing the carbon market in Vietnam
- Carbon crediting and offsetting mechanisms in Vietnam
- Roadmap for carbon market development

5.2.3. Q&A session

Mr. Tuan – PetroVietnam	Mr. Tuan from PetroVietnam shares that his company is a large state-owned enterprise in Vietnam, operating within a supply chain and focusing on reducing GHG emissions. As part of this effort, the corporation carries out various activities, including emissions inventory and mitigation, even for businesses not covered under Decision 13/2024/QD-TTg . While PetroVietnam has gained valuable insights from this workshop, Mr. Tuan regrets that they only became aware of it at the conclusion and expresses a strong desire to participate further to fill knowledge gaps. He explains that PetroVietnam operates as a supply chain with multiple subsidiaries, which raises the need for clear policies on responsibility. For example, he believes that emissions inventory and carbon credit transactions should be assigned to the legal entity at the company level rather than to individual thermal power plants, which function merely as subunits under the parent company. To ensure smooth future transactions, he stresses the importance of having a unified definition of legal entities in policy frameworks. Additionally, he questions what role the parent company should play in the broader carbon credit trading market. Another concern Mr. Tuan highlights were that many thermal power plants and emissions facilities are currently operating at a loss. However, as the parent company, PetroVietnam has the financial capacity to support these struggling units and ensure their participation in the carbon market. He emphasizes the need for regulatory provisions that would enable the parent company to assist subsidiaries in compliance and economic viability.

	Since the carbon market is still a relatively new concept, Mr. Tuan expresses PetroVietnam's strong interest in fully engaging in it. To prepare, the company plans to conduct internal training sessions and seeks support from DCC to organize structured educational programs with expert consultants. He also notes that PetroVietnam has the authority to establish overarching policies for its subsidiaries and is looking for consultancy assistance in this process. Lastly, he requests timely updates on six upcoming regulatory amendments so the company can adequately prepare for any changes.
Ms. Oanh – VIR	Ms. Oanh shares that she feels honored to see the role of the media being recognized in the presentation, particularly in contributing to the dissemination of information in this important field. She emphasizes that the media plays a crucial role in raising awareness, shaping public understanding, and ensuring that businesses, policymakers, and the general public have access to accurate and timely information. She acknowledges that while efforts have been made to organize discussions and training sessions for the business community, there is also a growing need to extend these initiatives to journalists and media professionals. In her view, equipping journalists with the right knowledge and insights will help improve the quality of reporting on environmental and carbon market-related topics. This, in turn, will enable the media to convey more precise, comprehensive, and well-informed messages to the public, ensuring that businesses and individuals have a clearer understanding of policies, market developments, and their broader implications.

5.2.4. Closing remarks

Mr. Quang from DCC shares that this project has provided valuable knowledge and experience in building the carbon market. He acknowledges that while the work is extremely urgent, there are still many challenges and unfinished tasks ahead. He appreciates the insights and recommendations from experts and businesses, recognizing that there is still a significant amount of work to be done.

The first priority, according to Mr. Quang, is to complete the legal framework. This includes finalizing the amendments to Decree 06/2022/ND-CP while awaiting approval from the government. Additionally, it is essential to establish regulations that will allow the Ministry of Finance to successfully operate the trading platform. Ensuring that market participants can engage in transactions smoothly is another key focus. A series of legal guidelines and circulars must be developed to provide clarity, with flexibility being crucial since the decree only outlines general principles.

On the technical side, Mr. Quang highlights the need to build and refine systems that facilitate transactions, including registration, depository, and software solutions. These systems must ensure that carbon credits can be traded transparently and efficiently while preventing market distortion or manipulation. There is also an ongoing discussion about the potential expansion of the market zone, which requires careful consideration to avoid unintended consequences for businesses.

Reflecting on the recent technical support provided by UNOPS and ETP, Mr. Quang states that these initiatives have helped create a broad and comprehensive understanding of the principles of carbon trading. From this foundation, concrete steps must now be taken to define the path forward. He expresses a strong desire to continue discussions with UNOPS and ETP to establish a clear and actionable roadmap for the next phase of development.

In closing, Mr. Quang expresses deep appreciation for the dedication and efforts of UNOPS, ETP, and the experts involved. He values their support and hopes for continued collaboration in the future. He extends his sincere gratitude to all those who have contributed to the project.