



## REPORT

# DESIGN OF A VOLUNTARY CARBON LABELING PROGRAM, DETAILED IMPLEMENTATION PLAN FOR THE PILOT PHASE AND NOTES ON CONSULTATION WITH RELEVANT GOVERNMENT AGENCIES

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## Abbreviations

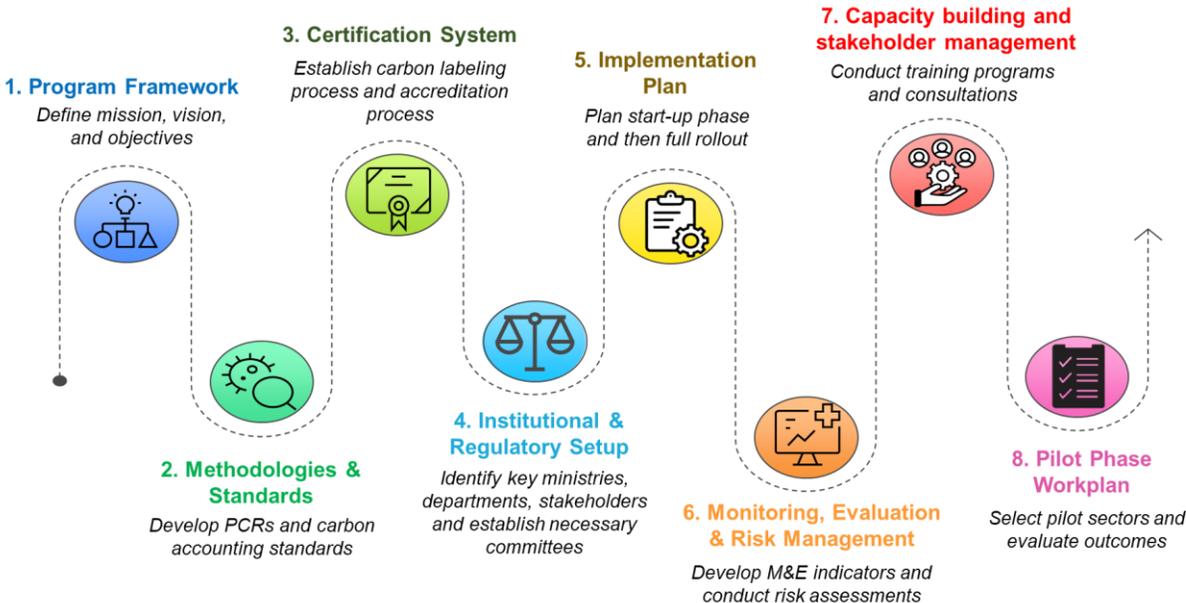
AOSC	Accreditation Office for Standards Conformity Assessment Capacity
APAC	Asia Pacific Accreditation Cooperation
BoA	Bureau of Accreditation
BEIS	Department for Business, Energy & Industrial Strategy
BSI	British Standards Institution
CBAM	Carbon Border Adjustment Mechanism
CDM	Clean Development Mechanism
CEN	European Committee for Standardization
CFP	Carbon Footprint
CFR	Carbon Footprint Reduction
COP	Conference of the Parties
CPC	Central Product Classification
CRL	Carbon Reduction Label
CTX	Carbon Credit Trading Platform
DCC	Department of Climate Change
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
EF	Emission Factor
EFDB	Emission Factor Database
EDGAR	Emissions Database for Global Atmospheric Research
EPD	Environmental Product Declaration
EPR	Extended Producer Responsibility
ETS	Emissions Trading Scheme
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GoV	Government of Vietnam
GPP	Green Public Procurement
HNX	Hanoi Stock Exchange
IAF	International Accreditation Forum
IEA	International Energy Agency
ILAC	International Laboratory Accreditation Cooperation
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
JCM	Joint Crediting Mechanism
JEMAI	Japan Environmental Management Association for Industry
JRC	Joint Research Centre (European Commission)
KEITI	Korea Environmental Industry and Technology Institute
LCA	Life Cycle Assessment

LEFASO	Vietnam Leather, Footwear and Handbag Association
LoA	Letters of Authorization
MAE	Ministry of Agriculture and Environment
M&E	Monitoring & Evaluation
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MOST	Ministry of Science and Technology
MRV	Monitoring, Reporting, and Verification
NDC	Nationally Determined Contributions
PCF	Product Carbon Footprint
PCL	Product Classification List
PCR	Product Category Rules
PME	Program Managing Entity
PVRA	Pre-verification Readiness Assessment
QUATEST	Quality Assurance and Testing Center
REDD+	Reducing Emissions from Deforestation and Forest Degradation Plus
STAMEQ	Directorate for Standards, Metrology and Quality
TGO	Thailand Greenhouse Gas Management Organization
TCVN	Tiêu chuẩn Việt Nam
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
VACI	Vietnam Institute of Accreditation
VASEP	Vietnam Association of Seafood Exporters and Producers
VBs	Verification Bodies
VCLP	Voluntary Carbon Labeling Program
VITAS	Vietnam Textile and Apparel Association
VPPA	Vietnam Pulp and Paper Association
VSA	Vietnam Steel Association
VSQI	Vietnam Standards and Quality Institute
WRI	World Resources Institute
WBCSD	World Business Council for Sustainable Development

# Executive Summary

This report presents the overall design of the Voluntary Carbon Labeling Program (VCLP) for Vietnam by establishing a complete framework to operationalize product-level carbon footprint (CFP) calculation, verification, labeling and governance. It sets out the technical standards, institutional arrangements, implementation approach, and operational procedures needed to guide the government agencies and enterprises in deploying a credible and internationally aligned carbon labeling system.

The design report is structured around eight core aspects of VCLP (Figure ES 1): i) *defining the program framework*; ii) *developing methodologies and standards*; iii) *establishing a certification and accreditation process*; iv) *setting up institutional and regulatory framework*; v) *planning phased implementation*; vi) *establishing monitoring, evaluation, and risk management*; vii) *conducting capacity-building and stakeholder engagement*; and viii) *preparing a pilot workplan to test the system in selected sectors before national rollout*.



**Figure ES 1. Framework for program design, implementation, and pilot execution**

The proposed program design has considered the inputs collected from various stakeholders during the course of this development and also the inputs from national carbon labeling programs from countries like Thailand, Japan, etc. The draft program design was presented to the key stakeholders during a validation workshop conducted on November 5, 2025. The VCLP design and implementation plan are fine-tuned and presented in this report based on these stakeholder

consultations. The stakeholders<sup>1</sup> also emphasized the rollout of VCLP and gave their inputs on the framework.

- Vietnam faces growing pressure from global markets, including the European Union Carbon Border Adjustment Mechanism (EU CBAM) and sustainability requirements from international buyers, which increases the urgency for a national system to disclose product-level carbon footprints.
- Industry stakeholders strongly support the VCLP but require clear and consistent guidance, especially standardized calculation tools and sector-specific methodologies.
- Long-term scalability requires effective pilot implementation, strong institutional coordination, and strategic capacity-building for enterprises and verification bodies.
- The program should also include developing digital infrastructure and independent verification capacity to ensure transparency, consistency, and trust.

Overall, the program design reflects Vietnam's current readiness and stakeholder expectations for implementing VCLP, highlighting both opportunities and challenges.

## Key Recommendations

The report puts forth the following recommendations for the consideration of the Vietnam Government for enabling a practical and scalable VCLP:

- Establish a **national Life Cycle Assessment (LCA) database** with Vietnam-specific emission factors to improve the accuracy and comparability of product carbon footprint (PCF) calculations.
- Develop a **centralized digital platform** to support application submission, document review, verification tracking, and QR-based product label disclosure.
- Define and formalize **accreditation and verification roles** to safeguard independence, avoid conflicts of interest, and ensure quality assurance of CFP results.
- Create **sector-specific Product Category Rules (PCRs)** to standardize CFP calculation rules and boundaries across industries.
- Provide **government-supported verification during the start-up phase**, prioritizing Small and Medium Enterprises (SMEs) to reduce upfront compliance costs and encourage equal participation.
- Develop **standardized tools, templates, and technical guidelines** to support enterprises in CFP calculation and documentation.
- Integrate carbon-labeled products into **Green Public Procurement (GPP)** and consider **incentive schemes** (e.g., preferential financing or certification support) to stimulate industry demand and market recognition.

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<sup>1</sup> Stakeholders participating in the consultation workshop included representatives from MAE, DCC, relevant line ministries, industry associations, private sector enterprises, technical experts, and other relevant public and private sector stakeholders. For further details, please refer Section 4 of this document.

## Piloting of carbon labeling

As the next step, NIRAS will implement the piloting of the VCLP between January to April 2026 in line with the work plan presented in Table ES1 (as per Deliverable 4 (D4) of this assignment).

*Table ES 1. Pilot phase implementation timeline*

<b>Task 4. A report on the detailed results of the pilot phase in selected sectors, summarizing all training and awareness-raising activities</b>			
<b>Sub-task</b>		<b>Expected outputs</b>	<b>Timing and deadline</b>
Act.4.1	Develop and agree with Department of Climate Change (DCC) on sector selection, implementation plan of the piloting, training agenda and schedule	Sector selection (Done already in advance), implementation.	08 January 2026
Act.4.2	Conduct 02 trainings and capacity building workshops to stakeholders	Training and Capacity building	09 March 2026
Act.4.3	Conduct the piloting of carbon labeling (site visit for data collection and validation, evaluation, verification, certification process)	Pilot phase	15 April 2026
Act.4.4	Prepare detailed report on the results of the pilot phase	D4. A detailed report on the results of the pilot phase selected sector, event and workshop notes	25 April 2026

For the carbon labeling piloting, three sectors, namely, food processing, chemicals, and pulp & paper, have been identified considering their exposure to export markets, GHG mitigation potential, and MRV readiness. The lessons learnt from the piloting exercise will help in finalizing VCLP design and to move forward with the start-up phase for nationwide roll-out.

## Way forward

The report concludes that the design phase of the VCLP will establish a strong technical and institutional foundation for the national carbon labeling program. The program structure, institutional roles, accreditation and certification process, digital platform concept, and risk management approach together create a well-organized, applicable, and scalable framework. Overall, the design demonstrates that Vietnam is technically ready to pilot a carbon labeling program that can serve both domestic climate targets and international climate as well as product

market expectations. Vietnam can establish a national mechanism for product carbon labeling that can eventually evolve into a mandatory and widely recognized system linked to green procurement and the domestic carbon market.

The pilot phase work plan provides a clear pathway to test and refine the VCLP before the official launch of the program. It includes selecting priority sectors, delivering capacity-building workshops, implementing the pilot at enterprise sites, and evaluating verification and certification results. Completion of these activities will generate practical experience and insights needed to finalize program standards and ensure readiness for the roll-out of program implementation.

# 1 Introduction

## 1.1 Background

Vietnam is strongly committed to achieving its climate goals, including the net-zero emissions target by 2050 announced at the Conference of Parties (COP) 26. To support this commitment, the Government has adopted key policies such as the National Strategy on Climate Change (2021–2050) and the National Green Growth Strategy (2021–2030, vision to 2050). These strategies emphasize low-carbon production, sustainable consumption, and enhanced competitiveness in the international trade.

As Vietnam’s industries continue to grow and integrate into global markets, there is an increasing need to comply with emerging international sustainability requirements, such as the European Union’s Carbon Border Adjustment Mechanism (CBAM) and corporate carbon disclosure standards, including the GHG Protocol, Publicly Available Specifications (PAS) standards and relevant ISO standards (e.g., ISO 14064). Establishing a Voluntary Carbon Labeling Program (VCLP) will help enterprises measure, verify, and communicate the carbon footprint (CFP) of their products, thereby improving market access as well as promoting sustainable production and consumption practices. Similar programs have already been implemented in several countries, such as Thailand, Japan, Taiwan, the UK, and France to enhance transparency on product-level emissions and guide consumers toward low-carbon choices.

The Ministry of Agriculture and Environment (MAE), through the Department of Climate Change (DCC), is developing the VCLP with technical support from the Southeast Asia Energy Transition Partnership (ETP). The program builds upon analytical work conducted under the United States Agency for International Development (USAID) INVEST Project, which provided research, stakeholder consultations, and policy recommendations for establishing a national carbon labeling framework.

The development of the VCLP forms part of Vietnam’s broader strategy to develop a domestic carbon market and strengthen the national framework for greenhouse gas (GHG) monitoring, reporting, and verification (MRV).

Vietnam has finalized its core legal framework for a carbon market, and the launch of the active trading platform is expected in late 2026. Full market operation of the carbon market is expected by 2029<sup>2</sup>.

Although the carbon market and the carbon labeling program are separate initiatives, they are mutually reinforcing. A credible carbon labeling system can help enterprises strengthen their GHG inventory. Product-level emissions data are foundational inputs that improve the accuracy and integrity of carbon market transactions. Likewise, the development of the carbon market creates stronger incentives for enterprises to invest in emissions reduction and transparency, thereby

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<sup>2</sup> <https://www.the-esg-institute.org/blog/vietnams-carbon-market-takes-shape-what-businesses-need-to-know> (last accessed on 29/12/2025)

increasing the relevance and uptake of carbon labels. Together, these two instruments support Vietnam's transition toward a low-carbon, competitive, and sustainability-oriented economy.

The detailed information regarding the carbon market roadmap is presented in Section 2.4.1.

## 1.2 Objective of the Report

The previous Deliverable 2 captured international experience and assessed Vietnam's carbon market conditions. It also analyzed sectoral readiness and identified gaps in national MRV systems and institutional arrangements. Building on those insights, the objective of this report is to develop a national-level program design and implementation plan for VCLP. It aims to establish a transparent, credible, and practical framework to guide the implementation of product-level CFP assessment, verification, and labeling in Vietnam. The report outlines the program's institutional arrangements, methodological standards, certification procedures, and monitoring mechanisms, serving as a foundation for the start-up phase and future scale-up. By providing clear guidance on roles, responsibilities, and operational processes, the report supports Vietnam's broader goals of promoting low-carbon production, enhancing competitiveness in global markets, and contributing to national climate and net-zero targets.

## 1.3 Objective of the Voluntary Carbon Labeling Program (VCLP)

The VCLP aims to create a credible and practical system for measuring and communicating product-level GHG emissions in Vietnam. It serves as a foundational step toward integrating carbon performance into national policies on sustainable production and consumption.

The program is designed to cover the following key aspects:

1. **Establish standardized methods** for calculating and labeling Product Carbon Footprint (PCF) in line with international standards such as International Organization for Standardization (ISO) 14067, GHG Protocol, and PAS 2050.
2. **Encourage enterprises** to identify major emission sources, assess their PCF emissions and adopt measures to reduce product-level GHG emissions.
3. **Increase consumer awareness** of low-carbon products and promote environmentally responsible purchasing decisions.
4. **Build national capacity** in GHG MRV at the product level.
5. **Strengthen policy connections** between carbon labeling, green public procurement, and national climate targets.
6. **Align with international practices** to enhance Vietnam's market readiness and competitiveness under global carbon regulations.

## 2 Design of VCLP

This section presents the proposed design of a carbon Labeling program, called as Voluntary Carbon Labeling Program (VCLP) tailored to suit Vietnam’s private enterprises to support climate change mitigation and GHG information disclosure. It outlines the key technical elements of the program, including value-chain scope, methodologies, and label design, as well as the institutional arrangements, implementation plan, and associated capacity-building activities.

### 2.1 Overall Program Design

The technical design of VCLP provides the foundation for developing a robust and reliable system for assessing and communicating product-level GHG emissions in Vietnam. It outlines the key elements required for program implementation, including mission, vision, scope, and approach.

#### 2.1.1 Mission and Vision

##### Mission

To establish a trustworthy and clear VCLP at the country level that enables businesses to quantify, verify, and disclose the GHG emissions of their products, empowering consumers and markets to make informed, low-carbon choices.

##### Vision

To position the program as a nationally recognized and internationally trusted benchmark for marking product-level carbon transparency, driving sustainable production and consumption, and contributing to national climate targets and global net-zero goals.

#### 2.1.2 Scope and Approach

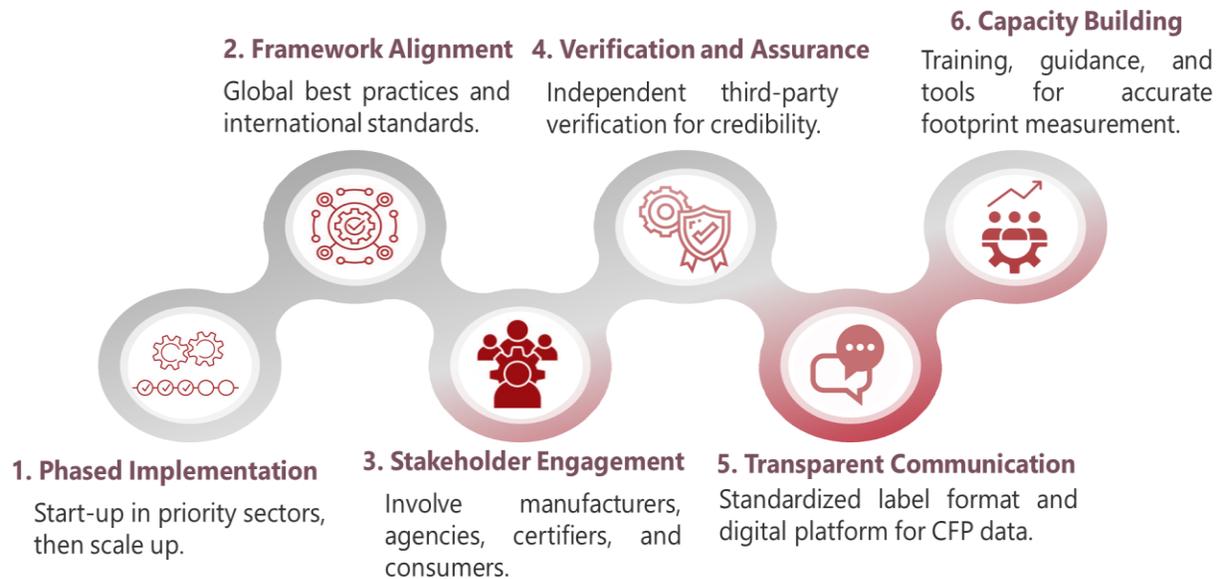
##### Scope:

The VCLP applies to all registered industries, including small, medium, and large enterprises. It will primarily focus on high-emission and export-oriented sectors, as determined by the Government of Vietnam (GoV). The scope may be revised periodically based on government decisions and policy changes.

This national labeling program will begin as a voluntary scheme, with the potential to transition into a mandatory scheme in the future.

##### Approach:

Figure 1 provides the overall program design, start-up, piloting, and implementation that follow the best practice approaches.



*Figure 1. Program Framework*

## 2.2 Methodology for Carbon Labeling

The methodology establishes the fundamental rules and framework governing how the CFP of a product is calculated, verified, and communicated under the VCLP. It ensures methodological uniformity, clarity, and alignment across products and sectors participating in the program.

Two essential components form the basis of the methodology:

- **Overall technical standard/guidance for VCLP**, which provides the overarching framework and general requirements applicable to all products; and
- **Product-specific guidelines**, referred to as Product Category Rules (PCRs), which define detailed calculation and reporting requirements tailored to specific product types.

### 2.2.1 Overall technical standard/guidance for VCLP

The overall technical standard or guidance document serves as the primary reference framework for implementing the VCLP. It provides the general principles, procedures, and criteria to ensure uniformity in CFP quantification, verification, and labeling across various product categories.

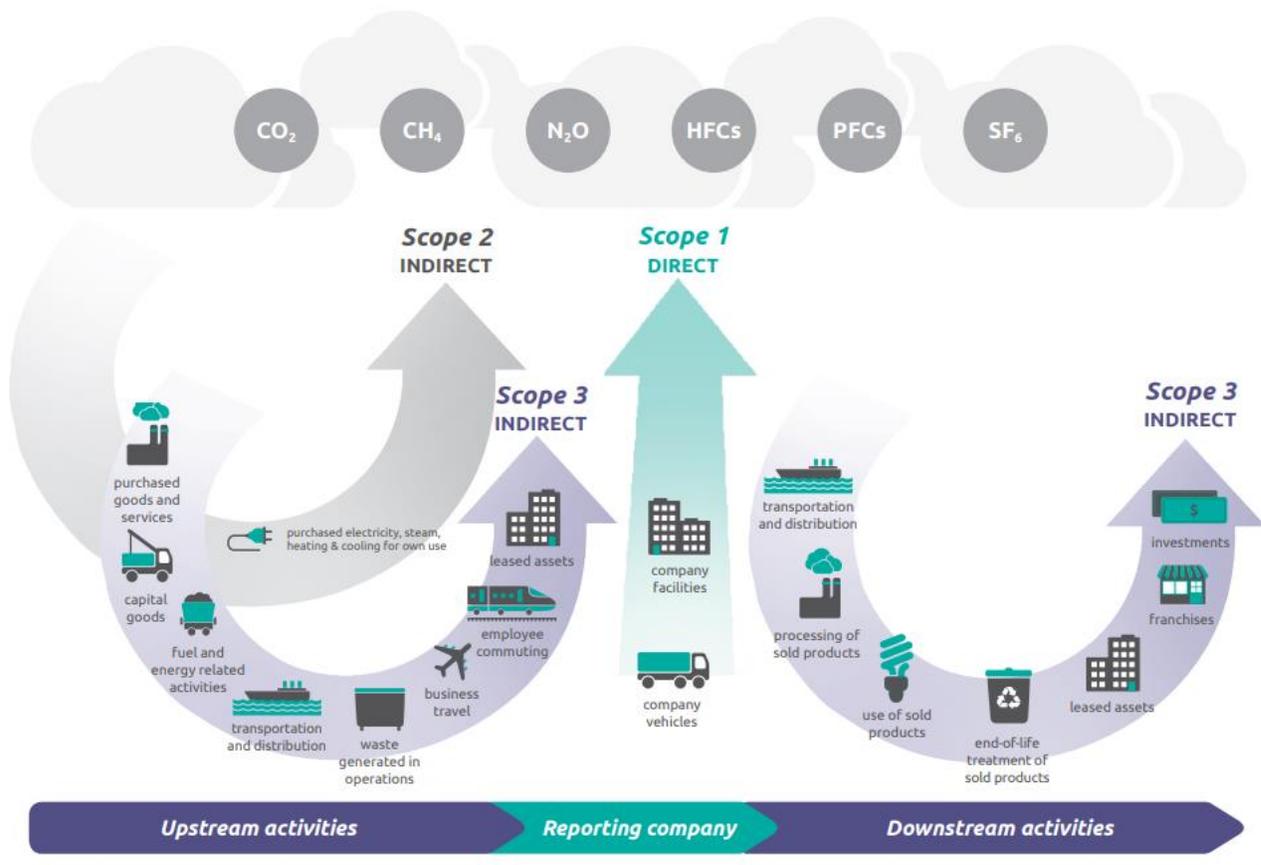
The guidance will define the following key elements:

- a) Scope of life cycle emissions
- b) Applicable standards
- c) General compliance requirements
- d) Carbon labeling logo design

### a. Emission scope based on LCA

Measuring a product's CFP requires understanding Scope 1, Scope 2, and Scope 3 GHG emissions (Figure 2).

- Scope 1: Direct emissions from sources owned or controlled by the company.
- Scope 2: Indirect emissions from the generation of purchased electricity, steam, heat, or cooling.
- Scope 3: All other indirect emissions across the value chain, both upstream and downstream.



**Figure 2. Overview of GHG Protocol scopes and emissions across the value chain<sup>3</sup>**

In a cradle-to-gate product CFP assessment (Figure 3), emissions are measured from raw material extraction (“cradle”) to the point where the product leaves the manufacturing facility (“gate”). This includes Scope 1 direct emissions from on-site operations, Scope 2 indirect emissions from purchased energy (electricity, steam, etc.), and upstream Scope 3 indirect emissions such as raw material production and transport. Downstream Scope 3 emissions from distribution, product use, and disposal are excluded.

<sup>3</sup> [GHG Protocol - Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard report](#) (last accessed on 29/12/2025)

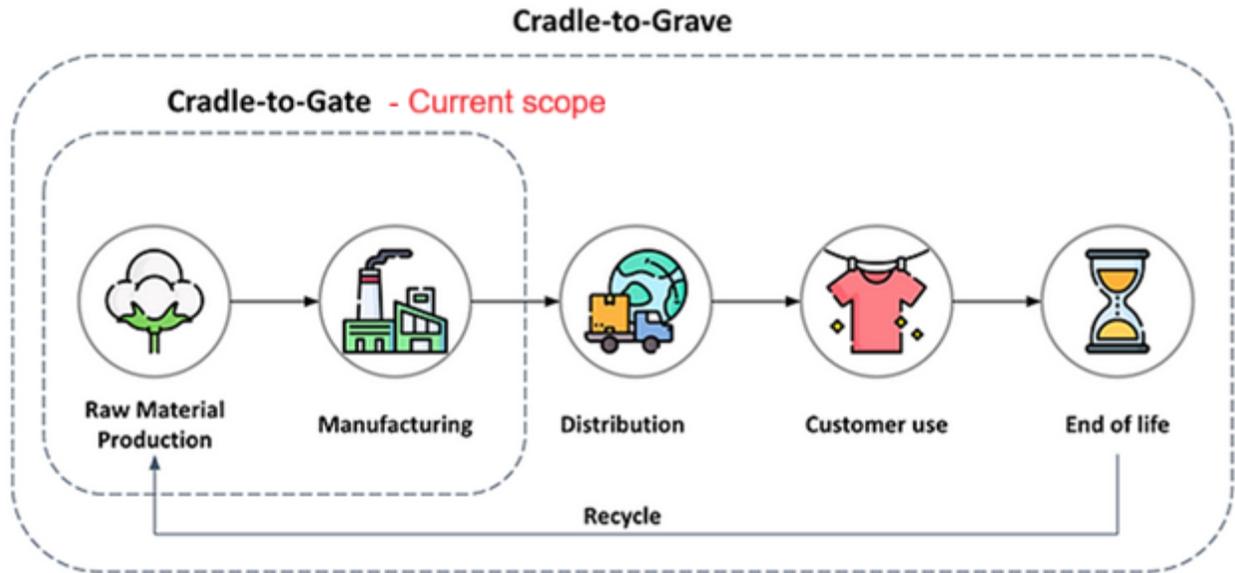


Figure 3. Product LCA model & current emission scope

For Vietnam’s VCLP, the system boundary is set to cradle-to-gate. This covers all emissions from raw material extraction and processing, upstream transport, and manufacturing, up to the point where the product leaves the factory gate.

The cradle-to-grave approach was not selected for this stage, as it requires extensive data collection, which will lead to higher uncertainties that could affect result accuracy. In the future, as data availability and capacity improve, the system boundary for CFP assessment under the program could be expanded or refined to adopt cradle-to-grave approach.

**b. GHG Accounting Standards**

Several accounting standards and frameworks are used for carbon labeling, with the most prominent being the GHG Protocol, PAS, and ISO 14067. The GHG Protocol provides a widely recognized framework for quantifying and reporting greenhouse gas emissions, while ISO 14067 focuses specifically on the PCF. Table 1 provide a summary of key accounting standards that VCLP must seek alignment with. These standards are related to LCA, GHG quantification, verification, reporting and associated environmental product declaration requirements.

Table 1. Accounting standards of carbon labeling assessments

Standard/Protocol	Publisher	Description
<a href="#">ISO 14067:2018</a> – Greenhouse gases — CFP of products — Requirements and guidelines for quantification	ISO	Specifies principles, requirements, and guidelines for quantifying and reporting a product’s CFP, based on life cycle assessment (LCA).

Standard/Protocol	Publisher	Description
<a href="#">ISO 14040:2006 &amp; ISO 14044:2006</a> – Environmental management — LCA	ISO	Provides the general framework (14040) and specific requirements/guidelines (14044) for conducting LCAs, which underpin product CFP calculations.
<a href="#">ISO 14025:2006</a> – Environmental labels and declarations — Type III environmental declarations	ISO	Establishes principles and procedures for developing Type III environmental declarations (e.g., Environmental product declarations (EPDs)), including product category rules (PCRs).
<a href="#">GHG Protocol – Product Life Cycle Accounting and Reporting Standard</a>	World Resources Institute (WRI) & World Business Council for Sustainable Development (WBCSD)	Guidance for quantifying and reporting GHG emissions associated with a product’s full life cycle, aligning with ISO 14067.
<a href="#">GHG Protocol – Corporate Standard &amp; Scope 3 Standard</a>	WRI & WBCSD	Corporate Standard covers Scope 1 & Scope 2 emissions; Scope 3 Standard addresses upstream and downstream value chain emissions. Useful when linking product CFP to corporate inventories.
<a href="#">PAS 2050:2011</a> – Specification for the assessment of the life cycle greenhouse gas emissions of goods and services	British Standards Institution (BSI)	One of the first dedicated product CFP standards, specifying requirements for assessing life cycle GHG emissions.
<a href="#">European Norm (EN) 15804:2012+A2:2019</a> – Sustainability of construction works — EPDs	European Committee for Standardization (CEN)	Defines core rules for EPDs in the construction sector; aligns with ISO 14025 and ISO 14040/44.

### c. Emission Factors and Databases

To ensure consistency and transparency in CFP calculations, standardized emission factors and accessible databases are essential.

In Vietnam, such resources are already available through **Decision No. 2626/QĐ-BTNMT**<sup>4</sup>, issued by the MAE on October 10, 2022. This decision provides an official list of emission factors

<sup>4</sup><https://thuvienphapluat.vn/van-ban/EN/Tai-nguyen-Moi-truong/Decision-2626-QĐ-BTNMT-2022-emission-factors-serving-greenhouse-gas-inventory-development/577938/tieng-anh.aspx> (last accessed on 29/12/2025)

(Energy, Industrial processes, Agriculture, Waste) for GHG inventory development in the energy sector and has been effective since its issuance.

Vietnam has also established an official electricity grid emission factor, which is updated annually by MAE through the DCC. The latest published value, issued under Official Dispatch No. 1726/BDKH-PTCBT<sup>5</sup>, reflects the average carbon intensity of electricity generation in the national grid.

Together, these national resources provide a consistent foundation for CFP assessment while maintaining alignment with international databases such as the Intergovernmental Panel on Climate Change (IPCC) Emission Factor Database (EFDB), the International Energy Agency (IEA) Emission Factors Database, and the Emissions Database for Global Atmospheric Research (EDGAR). Table 2 presents key international references commonly used for emission factors in CFP calculations.

*Table 2. References for key international emission factors*

No.	Database / Source	Description/Coverage
1	<a href="#">IPCC EFDB</a>	Global repository of scientifically reviewed emission factors and parameters used for GHG inventories under IPCC guidelines. Covers energy, industry, agriculture, and waste sectors.
2	<a href="#">IEA Emission Factors Database</a>	Provides CO <sub>2</sub> emission factors for electricity and heat generation for different countries and regions. Useful for Scope 2 emission estimates.
3	<a href="#">EDGAR</a>	Global dataset developed by the European Commission Joint Research Centre (JRC), offering detailed anthropogenic GHG emissions by country and sector.
4	<a href="#">Climatiq Open Emission Factor Database</a>	Aggregated emission factors from global sources, organized by region, sector, and activity type. Includes Vietnam-specific factors.
5	<a href="#">Ecoinvent</a>	Ecoinvent provides a detailed life cycle inventory database for a myriad of products across different sectors. A license fee is applicable to Ecoinvent emission factors.

<sup>5</sup> <https://klinova.vn/latest-news/release-of-vietnams-2023-power-grid-emission-coefficient.html#:~:text=RELEASE%20OF%20VIETNAM'S%202023%20POWER%20GRID%20EMISSION%20COEFFICIENT> (last accessed on 29/12/2025)

No.	Database / Source	Description/Coverage
6	<a href="#">Department for Environment, Food and Rural Affairs (DEFRA)</a>	Official emission factors published annually by the UK Government (DEFRA with Department for Energy Security and Net Zero (DESNZ) / Department for Business, Energy & Industrial Strategy (BEIS)). Used for calculating Scope 1, Scope 2, and Scope 3 emissions across energy, transport, waste, water, refrigerants, and business travel.

**d. Use of GHG Calculation Tools - Model tools**

Various international GHG calculation and LCA tools are available to support the calculation, verification, and cross-checking of PCFs. These tools are based on internationally recognized methodologies such as ISO 14067 (PCF), ISO 14064 (GHG Inventories and Reporting), and the GHG Protocol.

Table 3 highlights some widely used international tools for CFP calculation and assessment, which may serve as references for CFP calculation, verification, and capacity-building in Vietnam.

*Table 3. Key tools for CFP calculation and assessment*

Tool	Type	Key Features
SimaPro	LCA software	Supports ISO-compliant PCF studies; advanced modeling; includes emission databases such as Ecoinvent and Agri-footprint
GaBi	LCA software	Strong in industrial and product process modeling; provides detailed proprietary databases
OpenLCA	Open-source LCA tool	Flexible and widely used; supports CFP calculation and environmental impact assessments
OneClick LCA	Cloud-based tool	Widely used in the construction sector; aligns with EN 15804 and GHG Protocol
Carbon Trust Footprint Calculator	Product and organization footprints	Based on PAS 2050, suitable for certification and organizational footprinting
Cool Farm Tool	Agriculture-focused tool	Calculates GHG emissions, water use, and biodiversity impacts for farm-level assessments

#### e. **MRV System**

A robust MRV system is essential to ensure transparency, accuracy, and credibility of the carbon labeling program. It defines how enterprises measure, report, and verify their PCF and Carbon Footprint Reduction (CFR) results.

- **Monitoring:** Enterprises collect and maintain relevant activity data and emission factors across all life-cycle stages in line with ISO 14067 or GHG Protocol standards.
- **Reporting:** Standardized templates are used for CFP reporting, detailing system boundaries, data sources, calculation methods, and emission factors.
- **Verification:** Independent third-party verification confirms data accuracy prior to label issuance. Verifiers must be accredited under recognized standards such as ISO 14065.

Program Managing Entity (PME) will oversee MRV system implementation, maintain verifier registries, and ensure quality control. A digital platform can support data submission and verification tracking.

*See the institutional setup in section 2.4 for more details.*

#### f. **Carbon Labeling Logo Design**

At the current stage, two types of carbon labels are planned for development under the VCLP:

1. **PCF Label** – This label will indicate the total GHG emissions associated with a product throughout its life cycle, i.e., from raw material extraction to disposal. The PCF label aims to enhance transparency for consumers and encourage enterprises to measure and report their emissions accurately.
2. **Carbon Reduction Label** – This label will recognize products that demonstrate verified reductions in their CFP compared to a defined baseline or previous assessment period. It is designed to incentivize continuous improvement and support enterprises in adopting low-carbon production technologies and practices.

The design, format, and information displayed on both labels will be developed in alignment with international best practices (such as Thailand’s Carbon Label, Taiwan’s Environmental Protection Administration (EPA) carbon label, and Japan’s Carbon Footprint of Products scheme), as shown in Figure 4, while considering Vietnam’s specific regulatory and market context.



(a) Thailand carbon label



(b) Taiwan carbon reduction label



(c) Japan carbon label

*Figure 4. Examples of label design*

The label will include key information such as:

- Total quantified CFP (in kg CO<sub>2</sub>e)
- Functional unit (e.g., 1 kg, 1 unit, 1 m<sup>2</sup>, 1 litre)
- Label type (measured /reduced /carbon neutral)
- Logo

Optional information that may be displayed alongside the label includes:

- Product details (product type, emission reduction measures, standard used, company commitment, verification frequency, and official website link);
- Reference to the accredited verifier and validity period of certification;
- QR code or digital link providing access to the detailed certification report and supporting documents, thereby enhancing transparency and traceability.

## 2.2.2 Product Category Rules (PCR)

The PCRs provide dedicated guidelines for calculating the CFP for each specific product type under the VCLP.

Each PCR provides detailed guidance on how to perform the CFP assessment for a given product type, including the definition of system boundaries, functional unit, data quality requirements, allocation procedures, and specific emission sources to be included or excluded. The use of PCRs ensures that all stakeholders, manufacturers, verifiers, and consumers interpret and apply the CFP methodology uniformly.

### Key Components of PCR

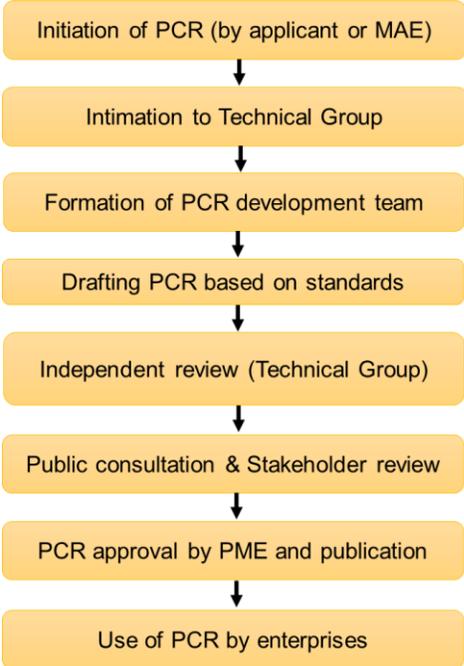
A PCR typically includes the following elements:

- **Product Category Definition:** Clear description of the product or product group covered, based on harmonized classification systems (e.g., Central Product Classification (CPC) and Harmonized System (HS) codes).
- **Functional Unit:** Specification of the quantifiable function of the product that serves as the reference for CFP calculation.

- **System Boundary:** Definition of the life cycle stages and processes included in the assessment (e.g., *cradle-to-gate*, *cradle-to-grave*, or *gate-to-gate*).
- **Data Quality Requirements:** Guidance on acceptable data types (primary, secondary, or modeled), timeframes, geographic relevance, and completeness criteria.
- **Allocation Rules:** Procedures for distributing emissions among co-products, by-products, or multiple outputs within the production system.
- **Calculation and Reporting Rules:** Standardized methods for GHG quantification, emission factor selection, and presentation of results.
- **Review and Update Procedures:** Requirements for periodic review to ensure the PCR remains updated with technological or methodological developments.

Development Process

Figure 5 presents a PCR development process for a given product type from a specific industry.



**Figure 5. PCR development process**

The development of a PCR follows a structured and transparent multi-stage procedure:

1. **Initiation:** The need for a PCR is identified, and a proposal is submitted to the PME. PME forwards this request to the Technical Group.
2. **Formation of PCR Committee:** Technical Group appoints a PCR development team and establishes a working group comprising experts, industry representatives, and stakeholders.
3. **Drafting:** The committee develops the PCR in line with international standards.
4. **Review and Consultation:** The draft undergoes independent review by Technical Group, public consultation, and stakeholder feedback.

5. **Approval and Publication:** PME approves the final version of PCR and publishes the same for official use.
6. **Application and Updates:** Published PCRs are made available to enterprises and periodically revised to reflect new data or methodological improvements.

This structured approach ensures methodological transparency, comparability across products, and credibility of the resulting carbon labels.

### Selection of PCRs by Applicants

Applicants seeking certification must select an appropriate PCR through one of the following approaches:

- Using an Existing PCR: Adopt a published PCR available in VCLP repositories.
- Adapting a Closely Related PCR: If no exact match exists, applicants may adapt a similar PCR from international databases (e.g., International EPD System, Japan's SuMPO, Thailand's TGO, Korea's Korea Environmental Industry & Technology Institute (KEITI)) with approval from the PME.
- Developing a New PCR: Where no relevant PCR is available, applicants may initiate the development of a new PCR following the standard process outlined above.

### Maintenance and Governance of PCRs

The PME will be responsible for:

- Maintaining an official PCR database accessible to all stakeholders;
- Ensuring that PCRs are reviewed periodically (e.g., every 3–5 years) or when significant technological or methodological changes occur;
- Coordinating with industry associations, research institutions, and verification bodies for technical updates;
- Ensuring that PCRs remain consistent with international standards such as ISO 14067, ISO 14025, and regional CFP frameworks (e.g., TGO Thailand, Japan CFP, or Carbon Footprint Italy) as necessary.

## **2.3 Certification Process**

The carbon labeling certification process establishes a structured pathway for organizations to measure, verify, and communicate the GHG emissions of their products. It strengthens trust and improves the quality and coherence of information available to consumers and markets, encouraging producers to reduce emissions. Figure 6 illustrates the proposed step-by-step process for obtaining a carbon labeling certification under VCLP.

The certification process includes the key elements:

- **Accredited Verifiers:** Ensuring that verification is conducted by recognized and qualified professionals to maintain credibility.
- **Quality Assurance:** Implementing checks at multiple stages<sup>6</sup> to avoid errors and inconsistencies before final approval.
- **Transparency:** Providing applicants with clear feedback when issues arise, enabling continuous improvement.
- **Traceability:** Keeping a documented trail of all submissions, verifications, and communications for audit purposes.
- **Standardization:** Using consistent methodologies (e.g., ISO 14067) to ensure comparability of results across products and sectors.

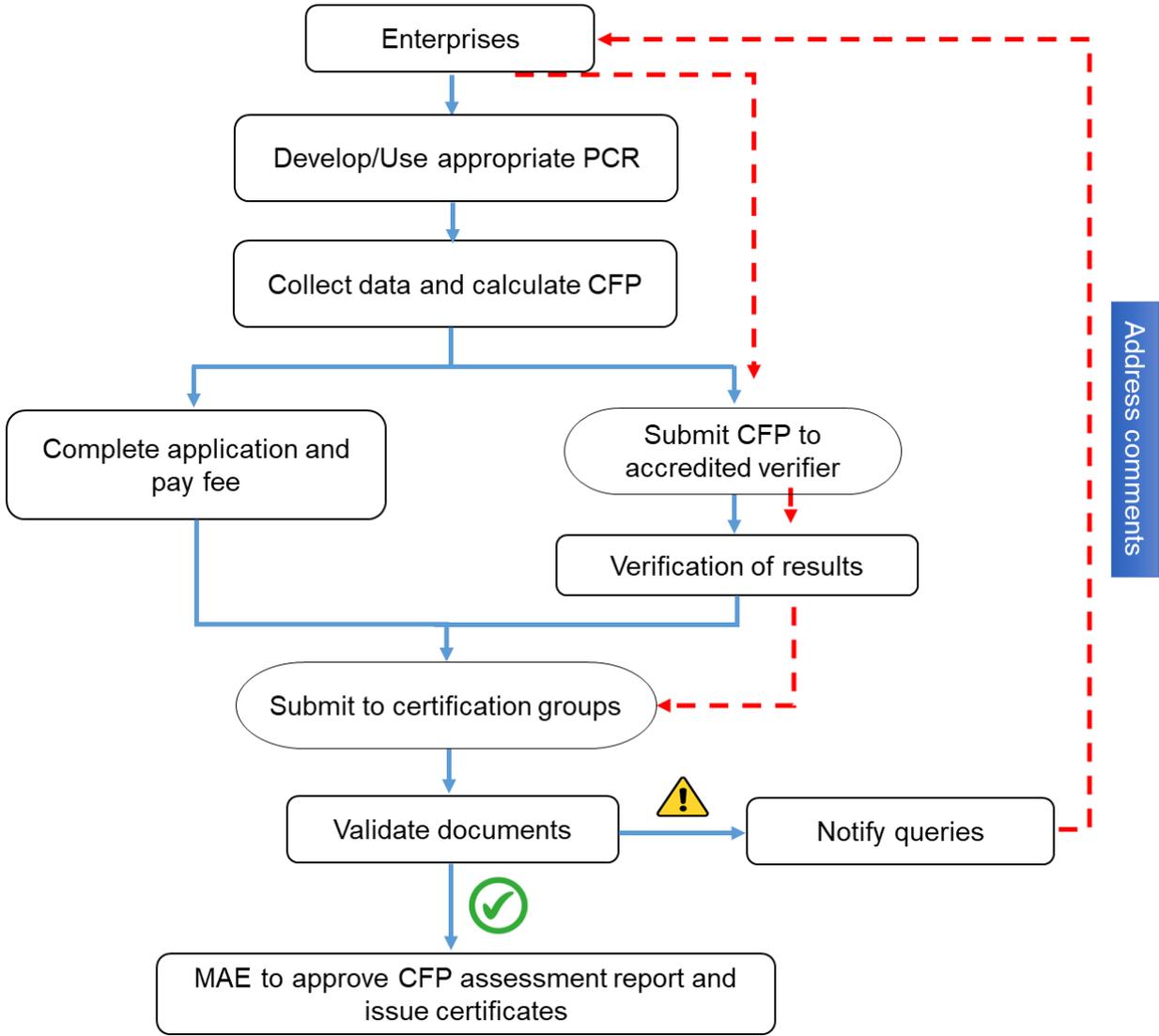


Figure 6. Schematic of carbon labeling certification

<sup>6</sup> Includes internal review, technical review, and third-party verification, etc.

The following core guiding principles apply to the certification body in executing the carbon labeling scheme:

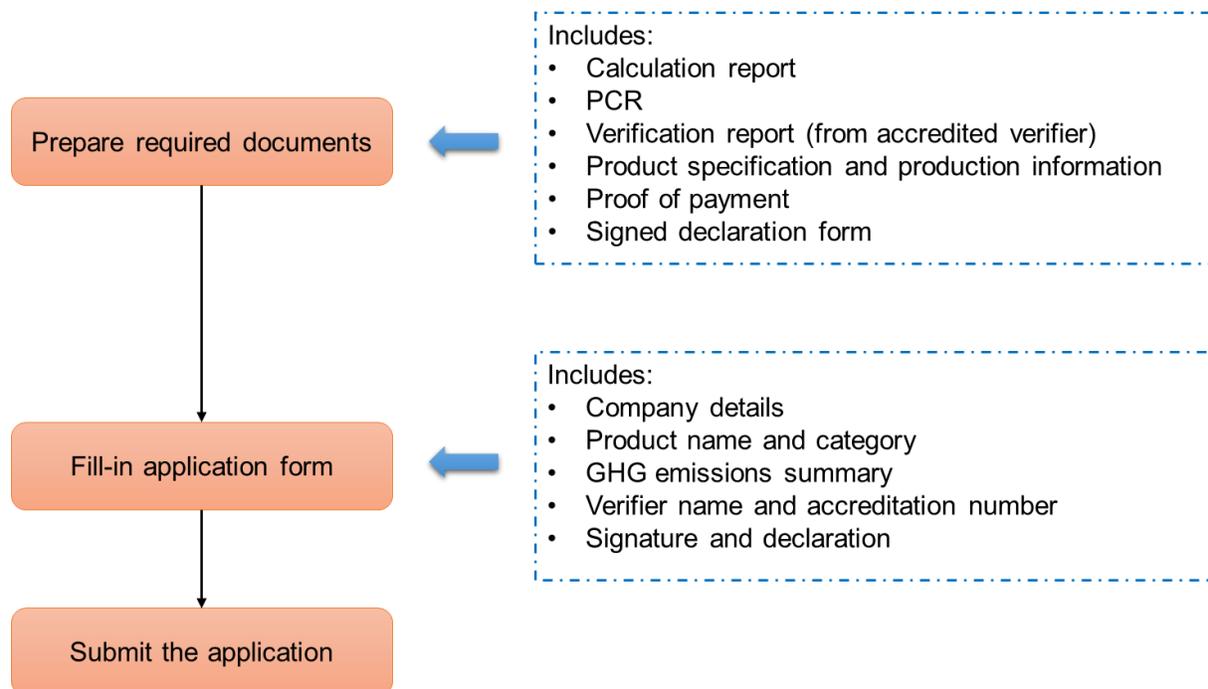
- **Scheme and PCR Compliance:** Certification activities shall adhere to applicable program rules and PCRs.
- **Validity of Verification:** Certification decisions shall be based on verification reports and supporting documentation that meet defined quality and procedural requirements.
- **Decision-Making Impartiality:** Certification decisions shall be made objectively and without conflicts of interest.
- **Qualified Decision-Makers:** Certification decisions shall be taken by competent personnel who are independent from verification activities.
- **Operational Efficiency:** Certification decisions shall be processed and issued within defined timelines.
- **Record-Keeping and Traceability:** Certification decisions and supporting evidence shall be appropriately documented and maintained to ensure traceability and enable audits.
- **Corrective Action Closure:** All identified non-conformities shall be adequately addressed and closed prior to certification approval.
- **Ongoing Surveillance:** Periodic reviews and renewals shall be conducted to ensure continued compliance and maintenance of certification status.

The carbon labeling certification scheme involves three main stages namely, **(1) Application, (2) Verification, and (3) Approval, respectively.** All these stages will be digitalized and managed through online portals.

### 2.3.1 Application

In this stage, the applicant prepares and submits all necessary documentation for carbon labeling under VCLP. This includes the CFP calculation report, LCA report, reference PCR, verification report, and supporting materials such as proof of payment and signed declaration forms. The applicant also completes an official application form containing company information, product category, and GHG emission summary. The completeness of the submission is checked by PME before proceeding to the next stage. Figure 7 outlines the application process.

Training and assistance must be provided to enterprises initially to fill in the forms. The PME defines the price structure for carbon labeling certification per product. Enterprises may apply for more than one product at a time by paying appropriate fee.



*Figure 7. Application process*

### 2.3.2 Third-Party Verification

In this stage, the enterprise engages an accredited verifier to conduct an independent assessment of the product's CFP. The verification process ensures that the CFP calculation follows recognized standards and methodologies, that the data sources and assumptions are valid, and that the results are reliable. The verifier's report is then submitted along with the application for further evaluation.

The verification must be carried out by accredited verifiers<sup>7</sup> under VCLP, which may be accredited individual verifiers or accredited organizational verifier. This approach ensures the integrity of the carbon label, supports clear disclosure, and ensures alignment with global best practices.

#### Types of Accredited Verifiers:

- **Accredited Individual Verifiers:** These are qualified professionals who have met the education, training, and competency requirements set by PME or an accreditation body. They are approved to conduct verifications within specific scopes, such as certain product categories or sectors, and operate independently or as part of a verification team.
- **Accredited Organizational verifiers:** These are legal entities such as companies, consultancies, or certification bodies formally accredited under international standards (e.g.,

<sup>7</sup> Accredited verifiers are independent individuals or organizations that have been formally assessed and approved by the VCLP accreditation authority to verify PCF assessments in accordance with recognized standards and approved scopes.

ISO 14065) to conduct verifications. They maintain a team of competent verifiers, implement a quality management system, and ensure impartiality and financial independence.

Both models are recognized in many national and international carbon labeling schemes. The choice between them depends on:

- Program requirements (some schemes allow only organizations, others accept both)
- Scope of verification (specialized products or industry sectors)
- Availability of qualified personnel

Table 4 outlines the comparison of engaging individual and organizational verifiers for carbon labeling.

*Table 4. Comparison of accredited individual and organizational verifiers*

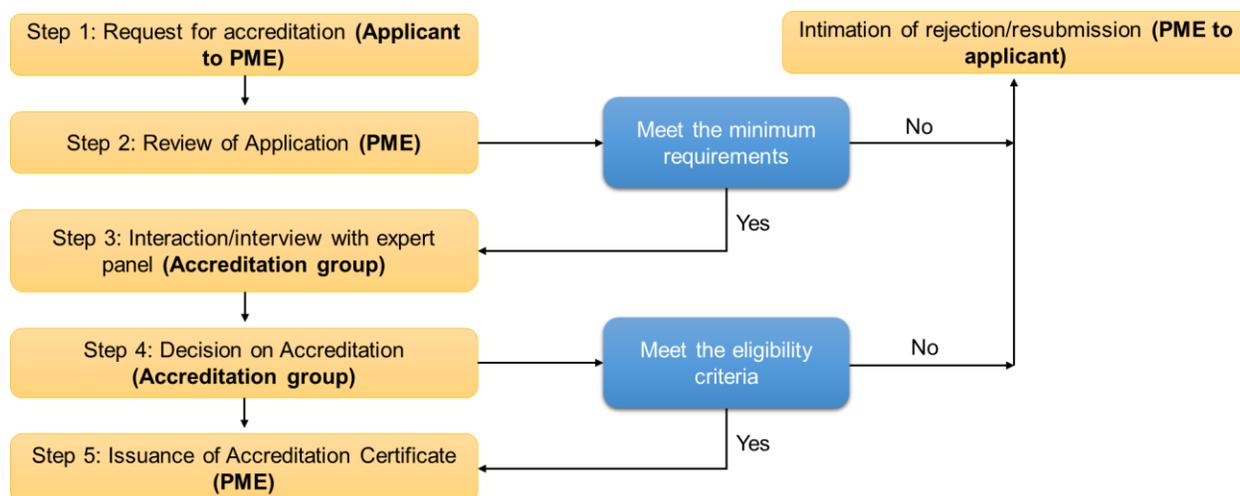
<b>Aspect</b>	<b>Accredited Individual Verifiers</b>	<b>Accredited Organizational Verifiers</b>
Strengths	<ul style="list-style-type: none"> <li>✓ Lower cost, suitable for Small and Medium Enterprises (SMEs) and pilot initiatives.</li> <li>✓ Flexible and quicker to mobilize.</li> <li>✓ Often possess deep expertise in specific sectors (e.g., textiles, food, or chemicals).</li> <li>✓ Direct responsibility and accountability rest with the verifier.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Higher credibility, particularly for international recognition and trade.</li> <li>✓ Capacity to manage large-scale or multi-sector certifications</li> <li>✓ Established quality assurance processes (peer review, internal audits, conflict-of-interest safeguards).</li> <li>✓ Teams with diverse expertise, offering consistency and continuity.</li> </ul>
Limitations	<ul style="list-style-type: none"> <li>✓ Limited capacity for large or multiple certifications.</li> <li>✓ Weaker institutional safeguards for impartiality.</li> <li>✓ May be less trusted by international buyers and regulators.</li> <li>✓ Continuity risks if the individual becomes unavailable.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Comparatively costlier.</li> <li>✓ More procedural, potentially leading to longer timelines.</li> <li>✓ Potential conflicts of interest if working with multiple competing clients.</li> </ul>

Aspect	Accredited Individual Verifiers	Accredited Organizational Verifiers
Best Fit	<ul style="list-style-type: none"> <li>✓ Early-stage or pilot carbon labeling programs.</li> <li>✓ Industries seeking affordable entry into certification.</li> <li>✓ Specialized or niche product categories.</li> </ul>	<ul style="list-style-type: none"> <li>✓ National rollouts and large-scale programs.</li> <li>✓ Export-oriented products requiring international acceptance.</li> <li>✓ High-emission or high-impact industrial sectors.</li> </ul>
Examples	<ul style="list-style-type: none"> <li>✓ Thailand: During early pilots, TGO engaged registered individual experts for PCF verification.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Japan – The CFP Program under JEMAI relies on accredited verification organizations.</li> <li>✓ Taiwan – The Environmental Protection Administration (EPA) only recognizes accredited third-party verification bodies.</li> <li>✓ UK – PAS 2050 carbon label certification is conducted by accredited organizations such as SGS and Bureau Veritas.</li> </ul>

For Vietnam, accredited individuals could be deployed for verification during the pilot stage. As more individuals would be trained, the individual’s capacity development will be significant and helpful for the program.

Accreditation of Verifiers:

Steps for accreditation are a structured system that ensures organizations or individuals meet defined standards of quality, competence, and reliability. The procedure is designed to be transparent and fair, providing applicants the opportunity to demonstrate their capability while also offering scope for improvement through resubmission if necessary. By receiving accreditation, organizations gain credibility, build stakeholder confidence, and strengthen their position in the market as trusted and reliable entities. Figure 8 outlined the accreditation process for verifiers. For Vietnam, the validity period for an accreditation certificate is 3 years (by PME), with annual surveillance of verifiers.



**Figure 8. Accreditation of verifiers**

Before selection can occur, verifiers must first obtain accreditation from a recognized national or international body, demonstrating compliance with relevant standards (e.g., ISO 14065). They must then apply to PME, providing evidence of their accreditation, competence, and operational capability. Upon review and approval by PME, the verifiers are added to the official list, making them eligible for selection by applicants.

### Eligibility Requirements for Verifiers

Accredited verifiers must meet the eligibility requirements to ensure accurate, complete, and reliable verification results are mentioned below. The mentioned criteria and requirements are based on country experience. These criteria are designed to confirm that the verifier has the technical competence, independence, and systems in place to validate and verify GHG data according to recognized standards.

### Individual Verifiers

Individual verifiers shall meet the following eligibility criteria:

- **Eligibility:** The individual shall be a Vietnamese national or shall have a minimum of five years of professional experience working with a Vietnam-based organization.
- **Conflict of Interest:** The individual shall not be an owner, beneficiary, or consultant for the products being registered.
- **Education:** The individual shall hold a bachelor’s degree or higher in science, engineering, or a related field.
- **Training:** The individual shall have completed accredited training of at least 20 hours in LCA and at least 10 hours in carbon footprint calculation.
- **Experience:** The individual shall have practical experience in carbon footprint calculation and verification.

## Organizational Verifiers

Organizational verifiers shall meet the following eligibility criteria:

- **Legal Status:** The entity shall be legally registered in Vietnam and engaged in relevant business activities.
- **Conflict of Interest:** The entity shall not be an owner, beneficiary, or consultant for the products being registered.
- **Management:** The entity shall maintain a robust human resources management system to support verification activities.
- **Team Composition:** The entity shall employ at least two accredited carbon footprint verifiers and may engage additional qualified staff as necessary.

## Common Criteria and Requirements for Registered Verifiers:

All verifiers, whether individual professionals or verification organizations, must meet the following core requirements to be eligible for registration under VCLP:

- **Skill:** Ability to apply verification methods consistently across different circumstances, clearly communicate verification processes, and accurately interpret and present results.
- **Professional integrity:** Demonstrate honesty, responsibility, and impartiality, free from bias or external influence.
- **Confidentiality:** Protect the privacy of all data and information obtained during verification, and disclose information only with explicit authorization or when legally required.
- **Competence:** Maintain the necessary technical knowledge and practical experience to carry out verification tasks effectively within their accredited scope.
- **Compliance history:** Must not have had their registration with the PME previously suspended or withdrawn due to non-compliance.

### Box 1: Verifier Training and Accreditation: Japan vs. Thailand

Japan's Sustainable Management Promotion Organization (SuMPO) EPD Program requires prior LCA/CFP experience, a two-day training, an exam, and two on-the-job sessions before approval. Verifiers must submit regular assessments and undergo annual quality checks to remain recognized as SuMPO-accredited verifiers.

Thailand's CFP Program, managed by TGO, mandates training on ISO 14040/44, ISO 14067, and CFP procedures, followed by an exam and accreditation. Training is open to professionals in environmental, engineering, or sustainability fields (preferably with LCA/GHG experience). Successful candidates are listed as TGO-approved verifiers.

## Verification of CFP:

The selection of an accredited verifier is a critical step in the carbon labeling process, ensuring that verification activities are performed by qualified, impartial, and recognized professionals or organizations. This process upholds the robustness of results, facilitates effective disclosure, and fulfills program-level and international requirements.

The enterprise chooses a verifier from the official list published by PME. This selection is based on the verifier's accreditation scope, sector expertise and availability. Once selected, both parties formalize the engagement through a verifier–applicant agreement, after which verification work begins and concludes with the submission of a verified report.

The enterprise must make available all required documents and evidence to substantiate the CFP claims of its product to the verifier.

Verifier must conduct a careful review of CFP calculations after collecting all required data as per VCLP standards (technical guidance as well as PCR). The final verification opinion must be clearly submitted to enterprise.

The verifiers must ensure that the CFP verification process takes an evidence-based approach to access and examine GHG emission levels. On-site visit to the facility of the enterprise can be made by the verifier if necessary. The verifier must respond to any queries on the verification report from PME or Technical Group regarding specific product certification.

The verification process shall be guided by the following principles to ensure the accuracy, completeness, and reliability of reported information.

- **Accuracy:** Verification shall include checks on the correctness of emission factors, calculations, and reported results.
- **Completeness:** All relevant data, processes, and life cycle stages shall be included in accordance with applicable PCRs or protocols.
- **Methodological Consistency:** Verification shall be conducted in alignment with recognized standards and methodologies, including ISO 14067, PAS 2050, and the GHG Protocol.
- **Transparency:** Assumptions, data sources, system boundaries, and limitations shall be clearly documented and disclosed.
- **Reliability:** Verification results shall be reproducible under the same conditions and assumptions.
- **Impartiality:** The verifier shall remain independent from the product, organization, or system being assessed.
- **Technical Competence:** Verification shall be performed by personnel with demonstrated expertise in LCA and GHG accounting methodologies.
- **Evidence-Based Reporting:** Verification conclusions shall be supported by verifiable data, records, and appropriate documentation.

- **On-site Assessment (if applicable):** Facility- or system-level checks shall be conducted, where required, to validate data collection and monitoring practices.

### 2.3.3 Approval

As international mechanisms such as CBAM increasingly require accurate and verified product-level emissions data, a clear and rigorous approval process is essential to ensure that Vietnam’s carbon-labelled products meet both domestic standards and emerging global expectations. Detailed information on CBAM requirements for Vietnamese exports is provided in Annex 1.

Once verification is completed, the PME undertakes a multi-level review process. This includes:

- **CFP Certification Review:** Due diligence of the document submitted as part of verification.
- **Technical Review:** Certification Group checks CFP calculations, PCR alignment, and verification report by a third-party for conformity with VCLP standard.
- **Administrative Review:** PME verifies proof of payment, eligibility, product category, and completeness of application.

After successful completion of all reviews, the PME issues approval for the carbon label, confirming that the product meets all certification requirements. This will be intimated to the enterprise as an official response and will also be published on the VCLP website.

## 2.4 Institutional and Regulatory Setup for VCLP

### 2.4.1 Existing and upcoming Laws/Regulations on GHG Reporting

#### A. Existing Legal and Regulatory Framework

Vietnam has established a robust and evolving legal framework to manage GHG emissions, promote a low-carbon economy, and align with its commitments under the Paris Agreement and the goal of achieving net-zero emissions by 2050. As of November 2025, the framework comprises laws, decrees, circulars, and decisions governing the GHG inventory, MRV system, and the foundation for a domestic carbon market. These regulations also indirectly support carbon labeling through mechanisms such as carbon credit trading, lifecycle assessment, and sustainable production mandates. The Government of Vietnam has demonstrated strong commitment through its new legal framework (such as the 2020 Law on Environmental Protection and Power Development Plan VIII), setting an unconditional emission reduction target of 15.8% by 2030 and aiming for Net Zero by 2050.

The following subsections detail the key components of the existing framework, organized for clarity into foundational legislation, implementation decrees, facility-level mandates, technical guidance and strategic policies. Table 5 presents the existing legal and regulatory framework covering five key sections. **While Vietnam has enacted a wide range of policies on GHG mitigation and carbon market development, there is no dedicated policy yet for a domestic**

carbon labeling system. The new policy on carbon labeling must be framed on these existing laws and regulations.

Annex 2 provides a detailed summary of the documents listed in Table 5.

*Table 5. Existing legal and regulatory framework*

Sections	Document	Year	Key Relevance to GHG Reporting and Carbon Labeling
<b>a. Foundational legislation</b>	Law on Environmental Protection (LEP) No. 72/2020/QH14	2020	Foundational law establishing the national framework for climate change response, GHG inventorying, MRV, Extended Producer Responsibility (EPR), and authorization for a domestic carbon market.
<b>b. Key implementation decrees</b> <i>(Operationalize LEP 2020 by detailing GHG management and carbon market development)</i>	Decree No. 06/2022/ND-CP	2022	Core regulation defining the national GHG inventory system, facility-level reporting obligations, mitigation assessment procedures, and initial roadmap for carbon crediting and market mechanisms.
	Decree No. 119/2025/ND-CP (Amending Decree 06/2022)	2025	Amends and refines MRV procedures, verification responsibilities, and carbon allowance/credit trading mechanisms under the emerging domestic carbon market.
	Decree No. 08/2022/ND-CP	2022	Implements LEP 2020 in areas of environmental planning, waste management, and EPR obligations, and generates lifecycle-based reporting data relevant to future PCF.
	Decree No. 21/2011/ND-CP	2011	Implements the Law on Efficient Energy Use; establishes requirements for energy-consuming facilities and energy labeling, indirectly contributes to GHG reduction via efficiency, but is not directly related to carbon labeling.
<b>c. Facility-Level Mandates and Carbon Market Development</b> <i>(Prime Minister's Decisions specifying compliance and roadmap)</i>	Decision No. 01/2022/QD-TTg	2022	Publishes the initial list of sectors and facilities subject to mandatory GHG inventory reporting at the facility level.
	Decision No. 13/2024/QD-TTg	2024	Updates and expands the scope of entities required to report GHG inventories under Decree 06/2022.
	Decision No. 232/2025/QD-TTg	2025	Approves the national roadmap for establishing and operating Vietnam's domestic carbon market.

Sections	Document	Year	Key Relevance to GHG Reporting and Carbon Labeling
<p><b>d. Technical Guidance for Sector-Specific Compliance</b> <i>(Ensure consistency and feasibility of MRV implementation across sectors)</i></p>	Circular No. 01/2022/TT-BTNMT	2022	Provides technical procedures for GHG inventory and mitigation reporting, appraisal and verification requirements, and integration of results into the national database; requires independence of verification bodies.
	Circular No. 17/2022/TT-BTNMT	2022	Technical guidance for GHG measurement in waste management, measuring methane emissions from landfills, including emission factors, default parameters, and uncertainty reassessment under MRV.
	Circular No. 38/2023/TT-BCT	2023	Guides MRV for industrial sectors (steel, energy, coal mining), prescribes data collection, uncertainty evaluation, recalculation, and reporting procedures using standardized forms.
	Circular No. 23/2023/TT-BNNPTNT	2024	Provides methodologies for GHG inventory and MRV for forestry, including emissions/removals from deforestation, reforestation, degradation, and wood product carbon pools.
	Circular No. 13/2024/TT-BXD	2024	Establishes MRV procedures for GHG reporting in the construction sector; applies to buildings and construction-material production using sector-specific measurement and verification requirements.
	Circular No. 19/2024/TT-BNNPTNT	2024	Guides MRV for livestock, including default emission factors and responsibilities for provincial livestock agencies to reconcile sector data with national projections.
	Circular No. 26/2024/TT-BNNPTNT	2024 <i>(effective Feb 6, 2025)</i>	Sets economic-technical norms and cost standards for livestock GHG measurement and reporting; supports budgeting and auditability for mitigation investments under national MRV.
<p><b>e. Strategic Policies Supporting</b></p>	Resolution No. 24-NQ/TW	2013	High-Level Party directive on climate change response and environmental protection provides a long-term political mandate for GHG policy development.

Sections	Document	Year	Key Relevance to GHG Reporting and Carbon Labeling
<b>Broader Climate Goals</b> <i>(Provide overarching direction for GHG management and carbon labeling)</i>	Resolution No. 93/NQ-CP	2023	Government resolution promoting green transition and international cooperation, strategic orientation rather than technical MRV regulation.
	Decision No. 896/QD-TTg	2022	Approves the National Climate Change Strategy to 2050, including net-zero commitments and MRV system development.
	Decision No. 1658/QD-TTg	2021	Approves the National Green Growth Strategy, driving low-carbon transition and MRV integration into economic planning.
	Updated Nationally Determined Contribution (NDC)	2022	Vietnam's official emissions reduction commitment under the Paris Agreement provides the benchmark for national MRV and sector reduction targets.

Overall, the current framework provides a solid foundation for GHG reporting and carbon market development, but lacks explicit provisions for product-level CFP and labeling. To address this gap, clear definitions, standardized methodologies, and verification rules will be needed to establish a credible carbon labeling program. At the same time, existing regulations already underpin Vietnam's GHG inventory, MRV system at national and facility levels, ensuring consistent data collection and preparing the ground for the domestic ETS.

**B. Upcoming and Emerging Regulations**

Alongside the existing legal framework, Vietnam is developing a new generation of climate regulations to operationalize its domestic carbon market, enhance GHG inventory coverage, and align with international carbon market mechanisms under Articles 6.2 and 6.4 of the Paris Agreement. These instruments will also ensure compliance with global trade requirements, notably the EU's CBAM, which affects high-emission exports such as steel and cement.

As of December 2025, these upcoming regulations build on LEP 2020 (LEP No. 72/2020/QH14), Decree No. 06/2022/ND-CP, and Decree No. 119/2025/ND-CP, focusing on operationalizing the ETS pilot from 2025 to 2028. Together, they form a critical part of Vietnam's efforts to achieve its updated NDC target of a 43.5% GHG reduction by 2030 (15.8% unconditional and 27.7% conditional) and its net-zero emissions goal by 2050.

The subsections below highlight key upcoming regulatory directions related to GHG reporting, carbon labeling, and their integration into the carbon market.

## **a) Upcoming Directions for GHG Reporting in Vietnam**

Vietnam is strengthening its GHG reporting architecture to support the national registry system, MRV framework, and carbon trading platform. Decision No. 232/QD-TTg provides the roadmap for developing the domestic carbon market, including the ETS pilot phase from 2025–2028 and full operation by 2029, ensuring alignment with NDC commitments and preventing double counting in international transfers.

From January 1, 2025, enterprises listed under Decision No. 13/2024/QD-TTg are subject to mandatory GHG reporting for Scope 1 and Scope 2 emissions. Initial inventory reports are due to provincial People’s Committees by March 31, 2025, and finalized reports to MAE by December 1, 2025. Between 2026 and 2030, enterprises will report annually and submit emission-reduction plans based on allocated quotas.

The updated Decision No. 13/2024/QD-TTg identifies six sectors subject to mandatory GHG inventory in 2025: Energy; Transportation; Construction; Industrial processes; Agriculture; Forestry and land use; and Waste management. The purpose of the GHG inventory is to generate reliable data for emission measurement, management, and climate change mitigation planning.

Decree No. 119/2025/ND-CP outlines the responsibilities and procedures for verifying emission reductions at different levels:

- Facility-level verification – by provincial People’s Committees
- Sectoral verification – by relevant Ministries
- National verification – by MAE.

## **b) Upcoming Directions for Carbon Labeling in Vietnam**

Vietnam’s strategy for carbon labeling centers on implementing the VCLP to strengthen enterprise capacity in product carbon footprinting and fulfill emerging international market requirements. A start-up phase in 2026 will begin with 2-3 priority product groups in major industrial zones, following the issuance of a circular on CFP calculation methodology based on ISO 14067.

Carbon labeling supports national climate objectives by demonstrating supply-chain emission reductions, promoting circular economy practices, and attracting foreign partners and green investments. Enterprises in high-emission sectors like textiles and manufacturing will need to quantify and disclose product-level emissions, improving export readiness and promoting energy-efficient production.

The program also links with the forest carbon market through a forthcoming Decree on Forest Carbon Credits, enabling labeling of forest-based credits and helping commercialize emission reductions from forest protection and afforestation projects. This creates opportunities to verify the green origin of agro-forestry products and contributes to broader national emission-reduction goals.

Between 2027 and 2030, the carbon labeling program will expand to energy and industrial sectors, with the goal of integrating into the national GHG reporting system to enable enterprises

to use carbon labels as a basis for carbon credit trading. Core priorities include building transparent institutional mechanisms, enhancing enterprise capacity, and strengthening international cooperation to apply global standards. By 2035, carbon labeling is expected to become mandatory for selected export products, supporting emission reductions, increasing product value in global markets, and contributing to Vietnam’s overall low-carbon transition.

### **c) Integration of GHG Reporting and Carbon Labeling into the Carbon Market and International Commitments**

Vietnam intends to link GHG reporting and carbon labeling with the domestic and international carbon markets in line with Article 6.2 of the Paris Agreement, and is currently drafting a decree on the international transfer of mitigation outcomes and carbon credits. The national carbon trading platform will be piloted during 2025–2028, with full operationalization targeted for 2029–2030, under a Decree on the exchange of emission reduction results and carbon credits<sup>8</sup>.

By 2030, the carbon market is expected to fully adopt ISO 14064 for GHG reporting and ISO 14067 for carbon labeling, enabling enterprises to access green finance and participate in international carbon credit transactions, fostering cooperation with partners in low-carbon production and recycling sectors. The integration will enhance investment flows, improve export readiness, and accelerate decarbonization across key sectors.

GHG reporting and carbon labeling will form the core data infrastructure for carbon pricing, monitoring emission reductions, and tracking compliance. Participation in market mechanisms will be supported through digital MRV systems, enterprise-level capacity building, and strengthened international cooperation, under the Carbon Market Development Project (Decision No. 232/QĐ-TTg).

#### **2.4.2 Institutional arrangement**

The implementation of carbon labeling and related verification schemes in Vietnam requires the active involvement of multiple ministries and technical agencies. Each stakeholder has a distinct role to ensure effective coordination, standard-setting, certification, and compliance monitoring. The institutional framework for carbon labeling is outlined in Figure 9.

VCLP will not operate directly under MAE. Instead, the program is structured as a multi-ministerial mechanism, with participation based on each ministry’s technical mandate and sectoral expertise. Under this arrangement, a PME will govern the program, while different ministries and specialized agencies take responsibility through designated committees and working groups.

In the initial phase, MAE can serve as the PME, taking the lead on issuing program rules, accrediting verifiers, managing label applications, maintaining the carbon-label registry, and overseeing verification decisions. Other ministries such as the Ministry of Science and Technology (MOST) and the Ministry of Industry and Trade (MOIT) will collaborate through

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<sup>8</sup> <https://luatvietnam.vn/tai-nguyen/du-thao-ngghi-dinh-ve-trao-doi-quoc-te-ket-qua-giam-nhe-phat-thai-khi-nha-kinh-417949-d10.html> (last accessed on 29/12/2025)

committees and working groups to ensure transparency, balance, and shared ownership rather than hierarchical oversight by any single ministry.

This structure enables coordinated national implementation through a clear division of responsibilities. The PME manages the overall program, the Operational Committee aligns cross-ministerial coordination, and the Certification Group, Accreditation Group, and Technical Group contribute specialized functions that support consistent application of technical rules, transparent decision-making, and impartial verification. Together, these components provide a robust oversight mechanism for efficient and credible carbon labeling.



**Figure 9. Institutional framework of carbon labeling process**

Table 6 presents the institutional framework of the VCLP, outlining the main functional groups and their respective roles in managing, coordinating, and implementing different components of the certification and labeling process.

**Table 6. Institutional framework and roles**

Entity/Group	Main Roles and Responsibilities	Entities/Ministries
Program Managing Entity	<ul style="list-style-type: none"> <li>● Central governing and oversight body for the carbon labeling program.</li> <li>● Overall coordination, supervision, and strategic direction.</li> <li>● Integrate VCLP with other country programs and policies.</li> </ul>	<ul style="list-style-type: none"> <li>● MAE</li> </ul>
Operational Committee	<ul style="list-style-type: none"> <li>● Coordinate and support PCR development and approval.</li> <li>● Manage application and payment processes for certification and label issuance.</li> <li>● Oversee MRV systems to ensure transparency and data integrity.</li> <li>● Supervise the national database and</li> <li>● Issue carbon labels.</li> </ul>	<ul style="list-style-type: none"> <li>● MAE,</li> <li>● MOST, and</li> <li>● MOIT</li> </ul>
Certification Group	<ul style="list-style-type: none"> <li>● Review eligibility, applications, and payment processes.</li> <li>● Conduct compliance checks of PCFs.</li> <li>● Approve carbon labels.</li> </ul>	<ul style="list-style-type: none"> <li>● MAE,</li> <li>● Directorate for Standards, Metrology and Quality (STAMEQ), <i>and</i></li> <li>● Quality Assurance and Testing Centers (QUATEST) (<i>under MOST</i>)</li> </ul>
Accreditation Group	<ul style="list-style-type: none"> <li>● Set standards for verifier accreditation.</li> <li>● Review verifier application.</li> <li>● Issue accreditation to verifiers.</li> <li>● Conduct verifier training and capacity building.</li> </ul>	<ul style="list-style-type: none"> <li>● Bureau of Accreditation (BoA),</li> <li>● Accreditation Office for Standards Conformity Assessment Capacity (AOSC), and</li> <li>● Vietnam Institute of Accreditation (VACI)</li> </ul>
Technical Group	<ul style="list-style-type: none"> <li>● Develop and maintain standards for CFP assessment and labeling through PCR development teams.</li> <li>● Assign teams to draft PCRs.</li> <li>● Review PCR submitted by enterprises/others.</li> </ul>	<ul style="list-style-type: none"> <li>● MOIT,</li> <li>● Industry associations,</li> <li>● Research institutions and universities.</li> </ul>

Entity/Group	Main Roles and Responsibilities	Entities/Ministries
Supporting Registries	<ul style="list-style-type: none"> <li>● Carbon Label Registry – Maintain carbon labels issued to enterprises.</li> <li>● Accredited Verifier Registry – Lists accredited verifiers.</li> <li>● PCR Registry – Maintains approved PCRs for reference and updates.</li> </ul>	

**Vietnam Accreditation Bodies**

Vietnam has three main accreditation bodies supporting conformity assessment and international integration.

- **Accreditation Office for Standards Conformity Assessment Capacity (AOSC)<sup>9</sup>**: A scientific and technological organization under the Vietnam Union of Science and Technology Associations. It focuses on accrediting the testing and medical laboratories (ISO/IEC 17025, ISO 15189) and provides training on quality management systems for laboratories.
- **Bureau of Accreditation (BoA)<sup>10</sup>**: Vietnam’s **sole national accreditation body**, operating under STAMEQ – Ministry of Science and Technology. It accredits testing and calibration laboratories, medical laboratories, certification and inspection bodies, organizations that check the accuracy of laboratory test results (proficiency testing providers), and reference material producers. BoA represents Vietnam in international organizations such as ILAC, IAF, and APAC, ensuring international recognition.
- **Vietnam Institute of Accreditation (VACI)<sup>11</sup>**: A third-party accreditation body that supports scientific and technological activities. It accredits certification bodies, laboratories, and inspection organizations operating under ISO 17011 and Vietnam’s legal framework to align with domestic and international practices.

**2.4.3 National Database for VCLP**

A centralized national database should be established to support the management, transparency, and traceability of the PCF labeling program. The database will serve as the primary digital platform for storing, accessing, and updating all relevant information related to the labeling system.

The following records are to be maintained in the database:

- Records of approved labels, including product details, certification status, and validity period.
- Application and payment processes.
- Technical standards, PCRs, and methodological documents.
- List of accredited verifiers.

<sup>9</sup> <https://aosc.vn/> (last accessed on 29/12/2025)  
<sup>10</sup> <https://www.boa.gov.vn/en> (last accessed on 29/12/2025)  
<sup>11</sup> <https://vaci.vn/?lang=en> (last accessed on 29/12/2025)

The database should be managed by PME, with secure access protocols and regular updates to ensure data reliability, transparency, and public accessibility.

## 2.5 Implementation Plan

The implementation plan provides a structured roadmap for operationalizing Vietnam’s VCLP. It outlines the phased approach for rollout, monitoring and evaluation mechanisms, and measures to mitigate potential implementation risks. The plan ensures that all program components from methodology development to certification are implemented efficiently, transparently, and in alignment with the national and international standards.

### 2.5.1 Program Phases

VCLP will be implemented in a phased manner to enable progressive learning, system refinement, and capacity building across government agencies, enterprises, and verification bodies. The implementation will proceed through three main phases namely, **Start-up**, **Full Rollout**, and **Scale-up**. Table 7 presents the implementation phases of VCLP.

*Table 7. Implementation phases*

Phase	Description	Key Activities and Features	Timeline
<b>Start-up</b>	Initial launch and system setup with limited sector coverage.	<ul style="list-style-type: none"> <li>✓ Select 2-3 priority sectors for official program launch and implementation.</li> <li>✓ Government to fund verification, certification, and training.</li> <li>✓ Develop and approve standard PCRs.</li> <li>✓ Build capacity of enterprises, verifiers, and certification bodies.</li> <li>✓ Test the database and label format.</li> <li>✓ Conduct awareness workshops and technical training.</li> <li>✓ Publish standards and guidebooks.</li> <li>✓ Introduce PCF Label only</li> </ul>	2 years (2026 - 2028)
<b>Full-rollout</b>	Program expansion to cover additional sectors and product categories.	<ul style="list-style-type: none"> <li>✓ Extend coverage to more industries and products.</li> <li>✓ Recover costs through training, application, and accreditation fees.</li> <li>✓ Allow enterprises to develop or adapt PCRs with PME approval.</li> <li>✓ Strengthen verifier accreditation and institutional coordination.</li> </ul>	4 years (2029 – 2032)

Phase	Description	Key Activities and Features	Timeline
		<ul style="list-style-type: none"> <li>✓ Enhance data management and transparency.</li> <li>✓ Issue both PCF Label and CFR Label</li> </ul>	
<b>Scale-up</b>	Transition from voluntary to broader or mandatory framework aligned with national and international carbon policies.	<ul style="list-style-type: none"> <li>✓ Expand to more sectors and the full life cycle assessments (cradle-to-grave).</li> <li>✓ Integrate with green procurement and carbon market systems.</li> <li>✓ Collaborating with international cooperations.</li> <li>✓ Promote digital tools for transparency and accessibility.</li> </ul>	2033 onwards

These phases are tentative and will be further refined once the institutional framework for the VCLP is established. After the framework is in place, the Operational Committee will assign a dedicated technical team or subcommittee to develop and oversee each phase in detail, including tasks related to initial phase development, budget planning, and fund mobilization. Budget provisions may also include financial incentives and technical assistance from international donors, climate finance institutions, and other relevant organizations, in consultation with key ministries and stakeholders. In addition, international cooperation will be strengthened during the future scale-up stage to improve technical capacity, align standards with global practices, and share knowledge for program improvement.

As Vietnam’s NDC is revised every five years, the carbon labeling framework should remain aligned with updated national mitigation commitments, including the upcoming revision before 2030. Furthermore, post-2030 updates to the NDC and emerging international requirements, such as the EU CBAM, should be considered before full implementation to ensure policy coherence, competitiveness, and international compatibility.

According to the study and the draft approach, both the carbon market development (including ETS) and VCLP are expected to begin in 2026. The ETS is projected to be fully operational by 2029, following the roadmap approved under Decision No. 232/QD-TTg (2025). Therefore, the development of the carbon market and the carbon labeling program should be regarded as mutually reinforcing initiatives.

**2.5.2 Monitoring and Evaluation**

A robust Monitoring and Evaluation (M&E) system will be established to assess program performance, ensure continuous improvement, and maintain transparency throughout implementation.

Key components of the M&E system include:

- **Performance Indicators:** Regular tracking of key indicators such as the number of labeled products, verified CFPs, trained verifiers, and participating enterprises.
- **Periodic Reviews:** Annual progress reports assessing effectiveness, challenges, and lessons learned from implementation, resource utilization, investment mobilization, and gaps in funding.
- **Quality Assurance:** Internal and external audits to ensure the accuracy and integrity of verification and certification processes.
- **Stakeholder Feedback:** Structured consultations with enterprises, verifiers, and consumers to inform program improvements.
- **Data Transparency:** Publicize verified product data and program performance summaries through the national database and digital portal.
- **Policy Alignment:** M&E findings used to refine policies and align with national carbon market and green procurement strategies.
- **Capacity Building:** Technical and institutional capacity building based on M&E outcomes.

The Operational Committee will assign a dedicated M&E team to oversee these components. This team will coordinate with relevant agencies and stakeholders to conduct reviews, compile progress reports, and provide actionable feedback. The outcomes of monitoring and evaluation will inform the program’s next phases and policy refinements to ensure long-term sustainability and credibility.

2.5.3 Risk Assessment and Mitigation

A successful implementation of VCLP requires proactive identification and management of potential risks. The main risks and corresponding mitigation measures are summarized in Table 8.

*Table 8. Risk assessment and mitigation measures*

Risk Category	Description	Mitigation Measures
Technical Capacity	Limited expertise in LCA and CFP assessment among enterprises and verifiers.	Conduct targeted training programs and develop GHG calculation models and guidelines.
Data Availability and Quality	Incomplete or inconsistent activity data across supply chains.	Develop standardized data templates, promote data-sharing agreements, and use default emission factors where necessary.
Institutional Coordination	Overlapping responsibilities between ministries and agencies.	Clearly define institutional roles, strengthen inter-ministerial coordination through the Operational Committee.

Risk Category	Description	Mitigation Measures
Financial Constraints	High costs for verification and certification may limit SME participation.	Provide subsidized verification support and explore partnerships with donor-funded programs.
Stakeholder Engagement	Low awareness or motivation and limited participation among enterprises and consumers.	Raise awareness and highlight the market benefits of carbon labeling.
Verification and Credibility	Risk of inconsistent verification or conflicts of interest.	Enforce accreditation under international standards and conduct random quality audits.

The above risks can be addressed through the implementation of the proposed mitigation measures by the respective teams assigned by the Operational Committee. Additionally, any emerging risks identified through the M&E system should be incorporated into the overall risk management process and communicated to relevant stakeholders and program participants to enable timely corrective actions.

## 2.6 Capacity Building

The success of the carbon labeling program depends on the active participation and technical competence of key stakeholders, including government agencies, enterprises, verifiers, and certification bodies.

### 2.6.1 Capacity Needs Assessment

A comprehensive capacity needs assessment should be undertaken to identify gaps in knowledge, technical skills, and institutional readiness across stakeholders. The assessment will focus on:

- Understanding of CFP assessment methodologies and standards (ISO 14067, GHG Protocol, and PAS).
- Data collection, management, and reporting capabilities within enterprises.
- Verification and certification procedures.
- Policy and institutional capacities for oversight and coordination.

The outcomes will guide the design of targeted training and support interventions.

### 2.6.2 Training and Knowledge Transfer Plan

Based on the needs assessment, a training and knowledge transfer plan should be developed to strengthen stakeholder capacity at all levels. Key components include:

- Training workshops and webinars on CFP calculation, reporting, and verification processes.
- Technical sessions for verifiers, certification bodies, and government officers on MRV and quality assurance.

- Awareness programs for enterprises and consumers on the benefits and use of carbon labels.
- Knowledge exchange with international experts and regional programs to share best practices.

Training materials and delivery methods should be tailored to the specific roles and technical levels of participants.

### 2.6.3 Support Tools and Guidance Materials

To ensure consistent application of methodologies and standards, a set of support tools and guidance materials should be developed, including:

- User manuals and calculation guidelines for enterprises.
- Verification and certification checklists.
- Templates for reporting and documentation.
- FAQs, case studies, and communication materials for broader outreach.

These resources will help institutionalize the carbon labeling process and promote continuous learning and improvement among stakeholders.

### 3 Work plan for Pilot Phase Implementation

This section outlines a detailed work plan for implementing the VCLP pilot phase, building on the approved program design. It covers key aspects including stakeholder management, program scheduling, private sector participation, training activities, stakeholder engagement, as well as selection criteria, evaluation, and verification processes.

Following the approval of the design phase by the teams and officials, the project will advance to the pilot phase. This phase aims to implement, test, and validate the designed framework, methodology, and procedures through practical application in selected sectors. It will also strengthen the capacity of relevant stakeholders and generate lessons for scaling up the VCLP.

#### Objectives of the Pilot Phase

- Implement the carbon labeling framework and methodology developed during the design phase.
- Prepare draft PCRs for selected product sectors.
- Build institutional and technical capacity for implementation, verification, and certification.
- Collect feedback and identify improvement areas for national rollout.

Based on the VCLP design, NIRAS proposes the detailed work plan for pilot implementation, considering the following key aspects.

#### 3.1 Stakeholder management

A comprehensive stakeholder mapping exercise will be undertaken to identify all relevant actors, including ministries, sectoral associations, research institutes, and verification and accreditation bodies. It is also important to review whether carbon labeling initiatives for products have previously been carried out in Vietnam, either through national programs or international collaborations. All stakeholders will be regularly informed of progress through structured communication channels such as workshops and technical meetings to ensure transparency and collective ownership of the program.

Partnerships with academic institutions, technical experts, and research bodies will be established for the development and validation of PCRs. Verification and certification bodies will be engaged to provide independent third-party validation of PCFs. A technical working group or advisory committee may be established to provide continuous input and guidance during the pilot phase.

#### 3.2 Program schedule

Table 9 provides a detailed implementation timeline for the pilot phase activities, including key deliverables and milestones.

*Table 9. Pilot phase implementation timeline*

<b>Task 4. A report on the detailed result of the pilot phase in selected sectors and summary of all training and awareness raising activities</b>			
<b>Sub-task</b>		<b>Expected outputs</b>	<b>Timing and deadline</b>
Act.4.1	Develop and agree with DCC on sector selection, implementation plan of the pilot, training agenda, and schedule	Sector selection (Done already in advance) and implementation planned	08 January 2026
Act.4.2	Conduct 02 trainings and capacity building workshops to stakeholders	Increased trainings and capacity building	09 March 2026
Act.4.3	Conduct the pilot phase (site visit for data collection and validation, evaluation, verification, certification process)	Pilot phase done	15 April 2026
Act.4.4	Develop a report on the detailed results of the pilot phase	Deliverable 4 (D4) prepared. Report on the detailed results of the pilot phase, selected sector, event, and workshop notes	25 April 2026

### 3.3 Private sector engagement

The private sector will play a central role in the pilot phase. Consultations will be held with selected sectors to identify suitable products for labeling. Clear guidance and criteria will be provided for data collection, CFP assessment, and compliance with labeling requirements.

Training sessions for participating enterprises will cover:

- Carbon labeling standards and methodologies
- Data management and reporting practices
- Requirements for verification and certification

In addition, **standardized Data Collection Forms and GHG Calculation Templates** will be developed to ensure consistency in and ease of data submission. These templates will include:

- Instructions on data entry, units, and system boundaries
- Sample calculation sheets and emission factor databases
- Quality assurance and validation checklists
- Summary tables for GHG results and reporting
- User-friendly digital or Excel-based formats

These activities will build enterprise capacity to actively participate in and benefit from the carbon labeling program.

### **3.4 Selection criteria**

For the pilot phase, three key sectors have been prioritized based on their economic importance, emission intensity, and data availability:

- Food Processing
- Pulp and Paper
- Chemicals

Selection criteria will be developed to guide the identification of suitable products and enterprises from each sector for participation in the pilot carbon labeling program. From these sectors, approximately 10 enterprises will be selected for the initial implementation of the carbon labeling program. The selection process will consider factors such as:

- Availability of reliable production and energy data.
- Willingness of enterprises to participate and share information.
- Representativeness of sectoral production processes.
- Potential to demonstrate measurable CFP reductions.

The pilot implementation will provide practical experience in applying CFP methodologies, verification, and labeling processes across diverse industrial settings.

While the initial focus is on these three sectors, the program is designed to expand in later phases to include CBAM-covered export sectors such as steel, aluminium, cement, fertilizers, hydrogen, and electricity, ensuring Vietnam's industries are better prepared for tightening international carbon requirements. Detailed information on CBAM requirements for Vietnamese exports is provided in Annex 1.

### **3.5 Evaluation process and verification process.**

The evaluation process will include documentation review, approval procedures, and quality checks to ensure data accuracy, methodological consistency, and completeness of reporting. It will also assess stakeholder coordination, private sector participation, and institutional effectiveness, with key performance indicators (KPIs) such as timeliness, data quality, and verification outcomes.

Independent, accredited third-party bodies will carry out verification. In Vietnam, about three accreditation bodies oversee conformity assessment and will play a role in accrediting verifiers. Verification activities will include data review, site audits where necessary, and confirmation of compliance with PCRs and CFP methodologies. Where local capacity is limited, international collaboration will be sought.

The evaluation and verification framework will ensure credibility, transparency, and practical lessons for scaling up the carbon labeling program.

### 3.6 Documents to be prepared in pilot phase

To ensure effective and standardized execution, the following key documents will be developed and finalized before pilot implementation:

1. **Data collection forms and GHG calculation templates:** Provide standardized templates for industries to record energy, material, and emission data, with clear guidance on data entry, boundaries, and validation. Includes sample calculation sheets, emission factor references, and summary tables for accurate and consistent CFP assessments.
2. **Technical Guidance Document:** Provides detailed instructions on CFP implementation, data collection, verification, and reporting procedures.
3. **PCRs for Selected Products:** Developed in consultation with industries and experts to guide product-specific CFP assessments.
4. **Accredited Verifiers Assignment:** A list of accredited third-party verifiers will be identified and officially assigned to conduct verification and certification activities within the pilot phase.
5. **Implementation Plan and Training Materials:** Includes sector-specific implementation roadmaps, training presentations, and reference manuals for stakeholders.

### 3.7 Summary

The pilot phase represents a pivotal stage in operationalizing the carbon labeling framework and testing its practical applicability across industries. It will validate the technical soundness, institutional readiness, and overall feasibility of the VCLP.

Key outcomes will include:

- Draft CFP methodologies and reporting procedures adapted to national conditions.
- Enhanced institutional and private sector capacity for implementation and verification.
- Strengthened collaboration among stakeholders, fostering shared ownership and accountability.
- Clear recommendations for refining PCRs, verification processes, and technical guidance.
- Practical lessons and evidence to inform national policy and program rollout.

A comprehensive pilot phase implementation report will be prepared as the next deliverable, summarizing activities, outcomes, challenges, and lessons learned. These findings will form the foundation for the start-up phase of the Vietnam Carbon Labeling Program.

## 4 Stakeholder Consultation

The proposed design was developed based on consultation with key stakeholders, particularly the MAE/DCC, and refined through a public consultation workshop involving both public and private sector stakeholders.

Also, the stakeholder consultation process was conducted to ensure that the VCLP is aligned with international standards (such as ISO and GHG Protocol) while remaining feasible within the practical conditions of Vietnamese enterprises.

*Annex 3 provides the consultation workshop report, including the agenda, background and objectives of the workshop, list of participants, photographs, and Q&A summary.*

### 4.1 Agenda and Method

A key technical consultation workshop was organized on 05 November 2025 in Hanoi, focusing on gathering feedback from the stakeholders for the detailed design.

- **Consultation approaches:**

- Technical Presentations: Detailed presentation of VCLP components (calculation methodology, verification process, governance model).
- Open Dialogue: Direct discussion sessions between the drafting team and delegates to address practical concerns.
- Survey: Collection of written feedback regarding the readiness level and priorities of enterprises.

- **Agenda Breakdown:**

- Status of Carbon Market in Vietnam
  - An overview of the establishment and development of Vietnam's carbon market, covering the legal framework, implementation roadmap, and operational mechanisms across different phases, was provided. The carbon market is highlighted as a key economic instrument supporting Vietnam in achieving its greenhouse gas emission reduction targets, fulfilling its NDC, and progressing toward the net-zero goal by 2050.
  - The implementation status of existing crediting mechanisms in Vietnam, including the Clean Development Mechanism (CDM) and the Joint Crediting Mechanism (JCM), was reviewed. This discussion highlighted essential preparatory steps for enterprises to effectively participate in the carbon market, such as developing GHG inventories and planning emission reduction measures. It also emphasized the importance of capacity building and implementing projects aligned with both domestic and international mechanisms.
- Draft carbon labeling program design

- The session presented updates from the design phase of the VCLP, introducing the overall program architecture and clarifying essential components such as calculation methodologies, certification systems, and institutional arrangements. It gathered stakeholder input to refine the model prior to pilot implementation.
- The synthesis outlined the program's background, scope, and anticipated impacts in supporting enterprises to measure, verify, and disclose PCFs in accordance with international standards, including ISO 14067, the GHG Protocol, and the EU CBAM. It further described the technical standards, certification and accreditation mechanisms, implementation roadmap, and risk management measures associated with the VCLP.
- The planned next steps for finalizing the program design and preparing for the 2026–2028 start-up phase was also discussed. Overall, the session summarized the technical vision for establishing a transparent, credible, and internationally aligned carbon labeling framework that promotes sustainable production and consumption while strengthening the competitiveness of Vietnamese enterprises in the transition to a low-carbon economy.
- **System Boundary:** Discussion was held on selecting "Cradle-to-gate" versus "Cradle-to-grave". It was concluded that although cradle-to-grave is the most comprehensive life-cycle method, Vietnam could only feasibly apply cradle-to-gate in the initial stage. Further, the boundary could be gradually expanded with a long-term goal of gaining more visibility into supply-chain emissions and prioritizing low-emission suppliers.
- Carbon labeling pilot phase planning and private sector involvement
  - The session introduced the approach to select pilot sectors for the VCLP. It analyzes the basis and criteria for identifying suitable sectors, considering emission levels, mitigation potential, MRV capacity, and the readiness and interest of enterprises. The analysis incorporated findings from a business survey providing insights into current awareness, technical capacity, and demand related to PCF calculation and disclosure.
  - Based on these assessments, three sectors were identified as having the highest potential for pilot implementation: chemicals, food processing, and pulp and paper. The overall direction emphasized developing a practical and feasible carbon labeling framework tailored to Vietnam's context, supporting green production and enhancing the competitiveness of Vietnamese enterprises in an increasingly integrated international market.
- Certification & Verification Scheme: Discussion involved competency standards for Individual Verifiers, Verification Bodies (VBs), and the proposed systems in the VCLP.
- Start-up Phase: The 2-year (2026-2028) roadmap and criteria for selecting participating sectors were presented to the participants.

## 4.2 Feedback Received and Integration into Design

Table 10 provides the key feedback collected during the workshop, which has been synthesized and integrated into the final design.

*Table 10. Summary of workshop feedback and integration into final design*

Topic	Feedback	Integration into Design
PCRs	Each product category requires its own PCR to define calculation scope and methodological boundaries, though similar products may share a harmonized PCR. PCRs can be developed for groups of comparable products, providing a flexible process-based reference that enterprises can tailor to their production systems.	For LCA, Vietnam will initially adopt a cradle-to-gate boundary due to data limitations. When there is further improvement in enterprise capabilities and supply-chain emission data, a long-term transition toward cradle-to-grave will be done, thereby supporting the development of low-carbon value chains.
Technical Support Tools	Enterprises and consultants expressed concern over the lack of specific guidelines and unified calculation tools, which could lead to data discrepancies.	The drafting team added a component to develop a Product Classification List (PCL), identifying potential products for piloting carbon labeling, along with sector-specific technical guidelines during the start-up phase.
Cost and Verification Process	Hiring international verification bodies is too expensive for SMEs.	The design allows for the use of trained and registered Individual Verifiers for small-scale/pilot projects to reduce costs, alongside VBs for larger scales.
Pilot Sector Selection	Priority should be given to sectors facing immediate export pressure.	Identified 03 priority sectors for piloting: Food Processing, Chemicals, and Paper.
GHG inventory process in Vietnam	Vietnam currently follows its national guidance on international standards and will continue to refine and localize methodologies over time. The emission factors (EFs) for fossil fuels will be updated and adjusted periodically through new research.	Enterprises may develop internal capacity, such as establishing laboratories to conduct research and determine their own emission factors. In the near future, MAE will continue developing more context-specific emission factors to ensure greater accuracy and practicality in national GHG inventories.
Database or platform	Vietnam currently lacks a unified database of low-emission or environmentally friendly suppliers.	DCC plans to propose regulations and a centralized database in the

Topic	Feedback	Integration into Design
exists in Vietnam		future to support enterprise access to green supply-chain partners.

### 4.3 List of Consulted Stakeholders

The consultation process engaged key stakeholder groups, ensuring multi-dimensional representation:

- **Ministries & Regulatory Bodies:**
  - DCC - MAE: The lead agency responsible for climate change policy and the carbon market.
  - Line Ministries: MAE (identified priority sectors for piloting), Ministry of Finance (MOF) (regarding financial/tax mechanisms), MOIT (managing industry/trade).
  - Standardization Agencies: STAMEQ, Vietnam Standards and Quality Institute (VSQI).
  
- **Industry Associations and Private Sector:**
  - Industry Associations: Vietnam Textile and Apparel Association (VITAS), Vietnam Leather, Footwear and Handbag Association (LEFASO), Vietnam Pulp and Paper Association (VPPA), Vietnam Steel Association (VSA), and Vietnam Association of Seafood Exporters and Producers (VASEP).
  - Consulting & GHG Inventory Firms: Environmental consulting service providers and independent third-party certification/verification bodies operating in Vietnam.
  - Pilot Enterprises: Large enterprises targeting export to the EU (subject to CBAM impact) and SMEs within the supply chain.

*Annex 3 provides the list of participants attended the workshop.*

## 5 Final Proposal for Design and Pilot Implementation

### 5.1 Summary of Key Revisions after Consultation

Feedback from the stakeholders during the consultation workshop have been incorporated into the final design of VCLP. The key refinements are summarized as follows:

- i. "Learning by Doing" Approach: The start-up phase is defined as a period for refining the system while building the national emission factor database.
- ii. Flexibility regarding PCRs: In the start-up phase, if Vietnam has not yet issued its own PCRs, the program accepts the use of reputable international PCRs (e.g., EPD International, JEMAI Japan, TGO Thailand) to avoid delaying exports. This practical measure avoids delaying export-oriented enterprises and reflects a pragmatic "learning by doing" approach.
- iii. Strengthened State Role: Clarified the role of DCC in managing the registry database and issuing label codes to ensure transparency and prevent "greenwashing."
- iv. Cost Mitigation for SMEs: To address the concern over the high cost of international verification bodies, the design allows for the use of trained and registered Individual Verifiers for small-scale and pilot projects, alongside VBs for larger scales. This aims to reduce the financial barrier for SMEs.
- v. Addressing Technical Gaps: Enterprises expressed serious concern over the lack of specific guidelines and unified calculation tools, potentially leading to data discrepancies. In response, the drafting team committed to developing a PCL and sector-specific technical guidelines during the start-up phase.

### 5.2 Final Design Elements

The VCLP will operate based on 04 main technical pillars:

#### i. Methodology & Standards:

- The VCLP correctly mandates adherence to ISO 14067 and the GHG Protocol. However, the reliance on international secondary data sources (Ecoinvent, IPCC, IEA, etc.) for emission factors is a major structural vulnerability. The current "Learning by Doing" approach for the Vietnam LCA database is structurally insufficient for ensuring long-term competitiveness. Relying on internationally conservative default EFs will artificially inflate the calculated CFP of Vietnamese products, placing them at a competitive disadvantage against producers in nations with established national LCA databases. Then, a critical structural recommendation is to immediately launch a dedicated, state-funded National LCA Development Project (Q3 2026), as recommended in the report's conclusion section. This project must be executed in collaboration among MAE, MOIT, MOST, and research institutions (QUATEST, STAMEQ). The output must be Vietnam-specific EFs for key inputs (electricity grid, transport,

and prioritized raw materials) that feed directly into the pilot calculations, thereby ensuring calculation accuracy.

- The proposed PCF calculation approach provides methodological robustness by requiring enterprises to strictly prioritize primary, verified data for critical Scope 1 and Scope 2 emissions, while requiring the newly developed national LCA factors for secondary and upstream Scope 3 inputs. This approach ensures maximum accuracy and contextual relevance while aligning with best practices for achieving credible PCF results.
- Core Standards: ISO 14067:2018 (Greenhouse gases – Carbon footprint of products) and GHG Protocol Product Standard.
- Assessment Scope: Prioritize "Cradle-to-gate" (Raw material extraction -> Transport -> Manufacturing -> Packaging -> Factory gate) for the pilot phase due to data limitations regarding usage and disposal in Vietnam.
- Data: Preference is for primary data from factories. Secondary data will be used for the Vietnam Grid Emission Factor (latest version) and international databases (Ecoinvent, IPCC, etc.) when domestic data is unavailable.

## ii. Labeling Scheme:

The VCLP will introduce two label types:

- Type 1 – Product Carbon Footprint Label (PCF Label)
- Type 2 – Carbon Reduction Label (CRL Label)

During the start-up phase, only the PCF label will be issued to validate methodologies, test the database and label format, and build enterprise capacity for data collection and verification. In the full roll-out phase, the CFR label will be introduced alongside the PCF label to recognize verified emission reductions, encourage continuous decarbonization, and support low-carbon supply-chain improvements and carbon market participation.

Format: Each label will appear as a physical label on packaging, accompanied by a QR Code, leading to a verified Environmental Summary Report.

The plan correctly identifies the need for a secure digital platform to manage applications, manage the registry, and issue QR codes. Treating this as a lower priority may result in delays and operational challenges during the start-up phase. The development of the secure, web-based digital platform must be accelerated in Phase 1 (Q3-Q4 2026). This system is foundational and must be operational before any label is issued.

The digital system must support the following functions:

1. Entire workflow, application tracking and fee payment.
2. Data submission and MRV status tracking.
3. Verifier assignment and report review.
4. Issuance of the verified QR code and publication in the National Database for VCLP.

This acceleration ensures that the PME (DCC/MAE) can fulfill its responsibility to manage the registry and prevent greenwashing, as the QR code will only link to officially verified reports.

### iii. **Conformity Assessment:**

The conformity assessment relies on a three-stage process: **Application, Third-Party Verification, and Approval**. Credibility is heavily dependent on the competence of the verifiers, necessitating formalized accreditation.

The Accreditation Group (BoA, AOSC, VACI) must immediately formalize its mandate to issue ISO 14065 accreditation for PCF verifiers. The PME (DCC/MAE) internal technical team would conduct a desk review to pre-screen data quality, check documentation completeness, and confirm methodological alignment with the applicable PCR. By ensuring basic data quality upfront, the Pre-verification readiness assessment (PVRA) minimizes the time and cost required for the final, external third-party verification.

#### Key conformity requirements:

- Adopts a Third-party verification model.
- Verifiers must hold appropriate training certificates and have no conflict of interest with the assessed enterprise.

### iv. **Governance Structure:**

The proposed institutional framework designates MAE as the lead entity and DCC as the scheme owner. Operationalization requires immediate formalization of PME.

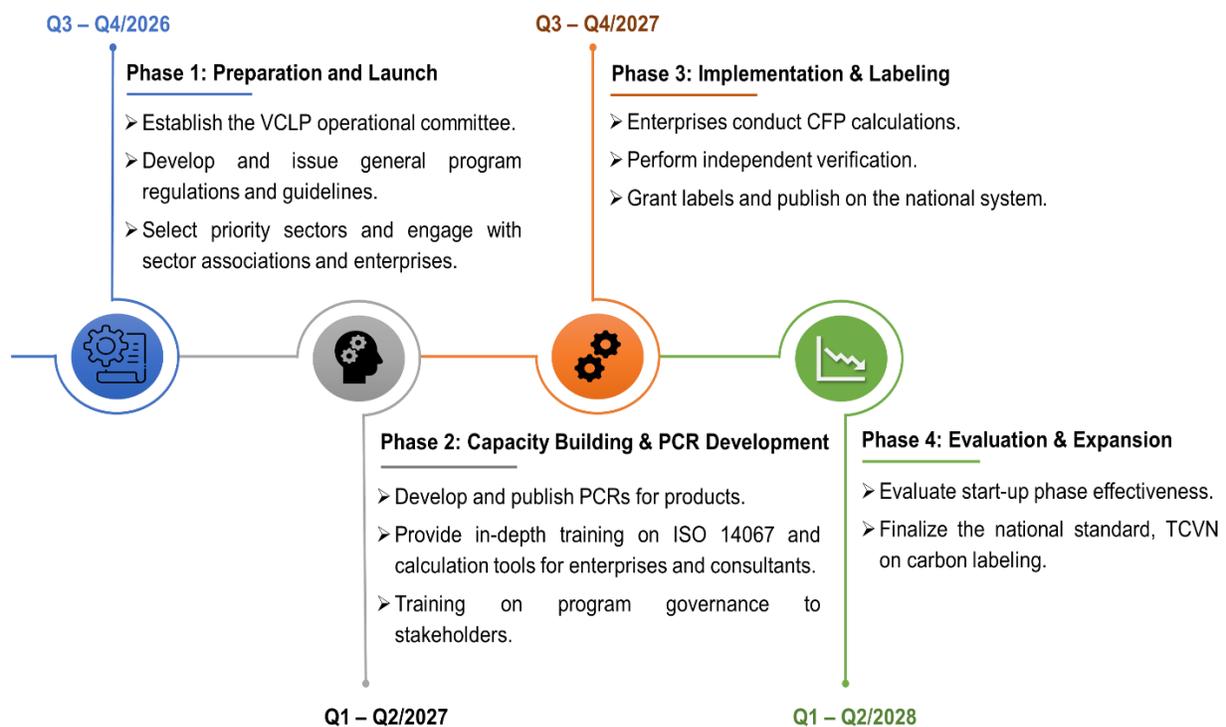
- Scheme Owner: MAE (assigned to DCC).
- Technical Council: Responsible for approving PCRs and recognizing verification bodies.
- Digital Platform: An online registration system to manage applications and issue QR codes. To create a robust, non-export-driven incentive for domestic market participation, the VCLP must be formally integrated with Green Public Procurement (GPP) policy. The VCLP proposal already recommends including "Carbon Labeled Products" as criteria in GPP regulations and offering incentives for CRL.

## 5.3 Start-up Phase Implementation Plan

The start-up phase is expected to last for 02 years (2026 – 2028) with the following specific steps (Figure 10):

- **Phase 1: Preparation and Launch (Q3-Q4/2026):**
  - Establish the VCLP operational committee.
  - Develop and issue general program regulations and guidelines.

- Select priority sectors and engage with sector associations and enterprises.
- **Phase 2: Capacity Building & PCR Development (Q1-Q2/2027):**
  - Develop and publish PCRs for products.
  - Provide in-depth training on ISO 14067 and calculation tools for enterprises and consultants.
  - Training on program governance for stakeholders.
- **Phase 3: Implementation & Labeling (Q3-Q4/2027):**
  - Enterprises conduct CFP calculations.
  - Perform independent verification.
  - Grant labels and publish on the national system.
- **Phase 4: Evaluation & Expansion (Q1-Q2/2028):**
  - Evaluate start-up phase effectiveness.
  - Finalize the national standard, Tiêu chuẩn Việt Nam (TCVN) on carbon labeling.



**Figure 10. Strategic start-up phase timeline (2026 -2028)**

## 6 Recommendations for VCLP Design

Based on stakeholder consultations, the recommendations presented here form the foundational framework for establishing a VCLP program. They address the key components required for effective implementation, including methodological consistency, participation incentives, international alignment, digital infrastructure, sector-specific PCR development, a robust accreditation and verification ecosystem, clear institutional roles, and a phased expansion strategy. Together, these recommendations define the basic VCLP design and provide strategic direction for both the start-up phase and future scale-up. The detailed recommendations are presented below.

### i. Develop a National LCA Database:

- This is vital to ensure calculation accuracy. State budget priority is needed to build a set of Vietnam-specific emission factors (for electricity, water, transport, raw materials), reducing reliance on international data (which often have high default factors and disadvantaging Vietnamese goods).

### ii. Incentives & GPP:

- Recommend the Government to include "Carbon Labeled Products" as a criterion in GPP regulations.
- Consider tax reductions or green credit incentives for enterprises achieving the CRL.

### iii. Mutual Recognition Agreements (MRAs):

- DCC should proactively work with equivalent organizations in export markets (e.g., EU, Japan, South Korea) to promote the recognition of Vietnam's carbon labeling results, helping enterprises avoid repeated assessments (reducing compliance costs).

### iv. Digitalization:

- Develop a digital platform from the outset to manage the entire process from registration and report submission to verification and labeling, ensuring transparency and easy traceability for consumers.

### v. Development of PCRs:

- Publish sector-specific PCRs during the pilot phase to ensure standardization in calculation rules, data quality, and reporting.

### vi. Strengthening the Accreditation & Verification Ecosystem:

- Formalize the role of the Accreditation Group (BoA, AOSC, VACI) to accredit ISO 14065 PCF verifiers and establish qualification requirements and conflict-of-interest controls, supported by PME desk-review screening.

**vii. Institutional Role Clarity:**

- Confirm PME (DCC/MAE) as the central authority for registry management, verification oversight, label approval, and dispute resolution, with clear role division between PME, verifiers, and accreditation bodies.

**viii. Phased Expansion Strategy:**

- Apply cradle-to-gate boundary for the pilot period, expand to cradle-to-grave later as data improves, and gradually add new product categories based on readiness and national priorities.

## Annex 1: Requirements of CBAM for Vietnamese Export Sectors

The EU's CBAM is a key regulatory measure affecting Vietnam's export industries by imposing a carbon price on imported goods equivalent to that faced by EU producers under the EU Emissions Trading System (EU ETS). The mechanism aims to prevent carbon leakage and encourage the transition to low-carbon production globally. During the transitional phase (October 2023 – December 2025), the focus is primarily on data collection and reporting for products such as cement, steel, aluminium, fertilizers, electricity, and hydrogen, with no financial obligations imposed at this stage.

The EU has now approved the core CBAM parameters, including default values, benchmarks, and the calculation methodology, which Vietnamese export sectors must prepare for as CBAM becomes fully operational from 1 January 2026. The newly adopted figures generally increase default values and lower benchmarks, thereby increasing carbon cost exposure for Vietnamese goods entering the EU market. Since the EU acknowledges that most companies will rely on default values in 2026 (due to data challenges), Vietnamese exporters in CBAM-covered sectors will face elevated cost risks unless they can provide accurate, verified product-level emissions data.

The EU has also introduced a phase-in of punitive mark-ups on default values: 10% in 2026, 20% in 2027, and 30% from 2028 onward, further increasing the financial impact on imports using default values. Although fertilizer products receive only a minimal 1% markup, the sector must still prepare for stringent data reporting and verification requirements. CBAM benchmarks used in 2026 will be based on preliminary ETS values and will be updated in 2027, adding another layer of adjustment exporters must track. Moreover, all default values and benchmarks will be reviewed after the first year, creating uncertainty and highlighting the need for Vietnamese enterprises to build strong internal MRV systems to remain competitive.

To comply with CBAM, Vietnamese exporters will need to:

- Strengthen facility-level and product-level GHG inventories aligned with EU methodology.
- Shift from international default emission factors to Vietnam-specific data wherever possible.
- Prepare for third-party verification under ISO-aligned standards.
- Coordinate closely with EU importers to transmit emissions data on time.
- Develop low-carbon production strategies to reduce exposure to rising CBAM costs.

With the EU expected to publish the final documents soon, Vietnamese supply chains must accelerate their readiness to ensure compliance from Day 1 of CBAM implementation (1 January 2026)<sup>12</sup>.

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<sup>12</sup> [https://www.linkedin.com/posts/grozenberg\\_its-a-huge-day-for-cbam-news-here-are-activity-7404551481682710529-kjmZ/?utm\\_source=share&utm\\_medium=member\\_desktop&rcm=ACoAABc86DoBhxAooCRdmO77JBVfq7qsBRwzAIo](https://www.linkedin.com/posts/grozenberg_its-a-huge-day-for-cbam-news-here-are-activity-7404551481682710529-kjmZ/?utm_source=share&utm_medium=member_desktop&rcm=ACoAABc86DoBhxAooCRdmO77JBVfq7qsBRwzAIo) (last accessed on 29/12/2025)

According to a survey carried out for Deliverable 2, five major sectors currently fall under CBAM coverage are iron and steel, cement, fertilizers, aluminium, electricity, and hydrogen, with discussions ongoing to expand coverage to additional sectors such as chemicals, plastics, and electronics in subsequent phases.

The sectoral analysis conducted identified Vietnam's high-risk sectors under CBAM to include:

- **Iron and steel:** Highly energy-intensive with significant export volumes.
- **Cement and chemicals (fertilizers, paints, rubber):** Substantial process emissions and energy use.
- **Aluminium:** Emission-intensive production process, though export volumes remain moderate.
- **Paper & pulp, plastics, and textiles:** Not currently covered under CBAM but potentially affected indirectly through growing emissions disclosure requirements across EU supply chains.

From January 2026, when full implementation begins, EU importers will be required to purchase CBAM certificates to cover the embedded carbon emissions of imported goods. This makes it essential for Vietnamese exporters to provide accurate and verified emissions data to their European customers. In this context, Vietnam's VCLP serves as a practical tool to support CBAM compliance. Integrating CBAM requirements into Vietnam's VCLP will enhance data accuracy, MRV capacity, and low-carbon performance, supporting compliance and boosting the competitiveness of Vietnam's exports in global low-carbon markets.

## Annex 2: Existing Legal and Regulatory Framework

The following subsections detail the key components of the existing framework, organized for clarity into foundational legislation, implementation decrees, facility-level mandates, and strategic policies.

### a) Foundational Legislation: Law on Environmental Protection 2020

The cornerstone of Vietnam's climate policy is the Law on Environmental Protection 2020 (LEP No. 72/2020/QH14), passed on November 17, 2020, and effective from January 1, 2022. This landmark law introduced comprehensive GHG management, marking a significant shift by designating emissions as a tradable "environmental asset" within a carbon market. Article 91 mandates GHG inventories at three levels: national (compiled by the Government), sectoral (overseen by relevant ministries), and facility-level (required for entities emitting  $\geq 3,000$  tons of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) annually or operating in designated sectors, including energy, industry, transport, construction, agriculture, and waste. The law establishes a rigorous MRV system, requiring independent verification aligned with standards like ISO 14065 or UNFCCC guidelines. For carbon labeling, LEP 2020 indirectly supports implementation through provisions promoting environmentally friendly products and comprehensive environmental impact assessments. However, it lacks specific mandatory requirements for product-level CFP labeling, leaving room for future regulations. The law, overseen by the Ministry of Natural Resources and Environment (now MAE), has set the stage for all subsequent regulations.

### b) Key Implementation Decrees

To operationalize LEP 2020, several decrees provide detailed guidance on GHG management and carbon market development:

- **Decree No. 06/2022/ND-CP** on GHG Emission Reduction and Ozone Layer Protection (issued January 7, 2022) details the GHG inventory process for facilities (Article 11), mandating reports by March 31 annually starting from 2025 (covering 2024 data). It covers six key sectors: energy (e.g., coal-fired power plants), industry (cement, steel), transport (aviation, road), construction (building materials), agriculture (livestock, crops), and waste (landfill management), and allocates emission quotas based on national totals and NDC targets. It also introduces carbon credit trading (1 credit = 1 ton CO<sub>2</sub>e), supporting carbon labeling by verifying emission reductions. The Decree forms the legal basis for establishing Vietnam's domestic carbon market and MRV system, aligned with IPCC Guidelines and Paris Agreement commitments. A national registry for emission quotas and credits is under development by MAE to ensure transparency. The pilot phase of the ETS will run from 2025–2027, with full implementation expected after 2028.
- **Decree No. 119/2025/ND-CP** (issued June 9, 2025) amends Decree 06/2022 to address gaps, such as limited guidance on carbon offsets. It expands coverage, integrates Paris Agreement Articles 6.2 and 6.4 for carbon credits, and mandates annual reporting for the ETS pilot (2025–2028). Facilities can offset up to 30% of emissions with credits from projects like

REDD+ or CDM, enhancing transparency and supporting international market integration. This helps Vietnam prepare for measures like the EU's Carbon Border Adjustment Mechanism (CBAM), effective from 2026 for steel and cement exports. The Decree also introduces clearer rules for corresponding adjustments, Letters of Authorization (LoAs), and international credit transfers to avoid double-counting. It strengthens the National Carbon Registry Platform and establishes verification entities under ISO 14065.

- **Decree No. 08/2022/ND-CP** (issued on January 7, 2022) provides detailed guidance for implementing the Law on Environmental Protection (LEP 2020), covering environmental permits, environmental planning, strategic environmental assessment, waste management, and the operational framework for Extended Producer Responsibility (EPR). The EPR mechanism requires producers and importers to take responsibility for the collection, recycling, or treatment of post-consumer products and packaging. While the Decree does not explicitly regulate CFP or labeling, the data and reporting obligations under EPR create a foundation for future lifecycle-based assessments and product sustainability metrics. It also mandates the integration of EPR data into the national environmental database, which can support the development of product-level CFP and eco-labeling in the future.
- **Decree No. 21/2011/ND-CP** mandates energy labeling for appliances, comparing efficiency and certifying savings, indirectly reducing emissions, and supporting carbon labeling. The scheme has since been expanded to cover more industrial and household products, improving data availability for calculating energy-related emissions. It aligns with Vietnam's national energy efficiency targets under the Green Growth Strategy 2021–2030.

### c) Facility-Level Mandates and Carbon Market Development

Decisions by the Prime Minister specify which facilities must comply and outline the carbon market roadmap:

- **Decision No. 01/2022/QD-TTg** (issued January 18, 2022) listed 1,912 facilities required to conduct GHG inventories, accounting for approximately 25% of national emissions. It mandated inventories starting in 2025, with reports due by March 31, 2025, using activity-based data (e.g., fuel consumption, production output). This decision also defined thresholds for inclusion, such as energy consumption or production scales, and required ministries to guide sector-specific inventory methods. After October 1, 2024, Decision 13/2024 replaces this decision and removes the obligation for facilities no longer listed.
- **Decision No. 13/2024/QD-TTg** (issued August 13, 2024, effective October 1, 2024) updated the list to 2,166 facilities, covering 30% of national emissions (1,805 industrial, 75 transport, 229 construction, 57 environmental resources, plus agriculture). The expansion reflects updated emission data, focusing on high-emission sources like large-scale livestock and urban waste management. Non-listed facilities are encouraged to report voluntarily.
- **Decision No. 232/2025/QD-TTg** (issued January 24, 2025) approves Vietnam's Carbon Market Development Plan, establishing the ETS pilot (June 2025–2028) with free emission allowances for high-emission sectors (e.g., power, steel, cement). It launches a carbon credit trading platform (CTX) operated by the Hanoi Stock Exchange (HNX) and a national credit

registry. This supports carbon labeling by verifying reductions from projects like REDD+, enabling businesses to label products as “carbon-neutral” for export markets. The decision aligns with the 2022 Updated NDC (43.5% GHG reduction by 2030) and net-zero by 2050.

Figure A.1 presents the approach to assessing the impact of carbon credit trading and mitigation outcomes from Vietnam on the international market.

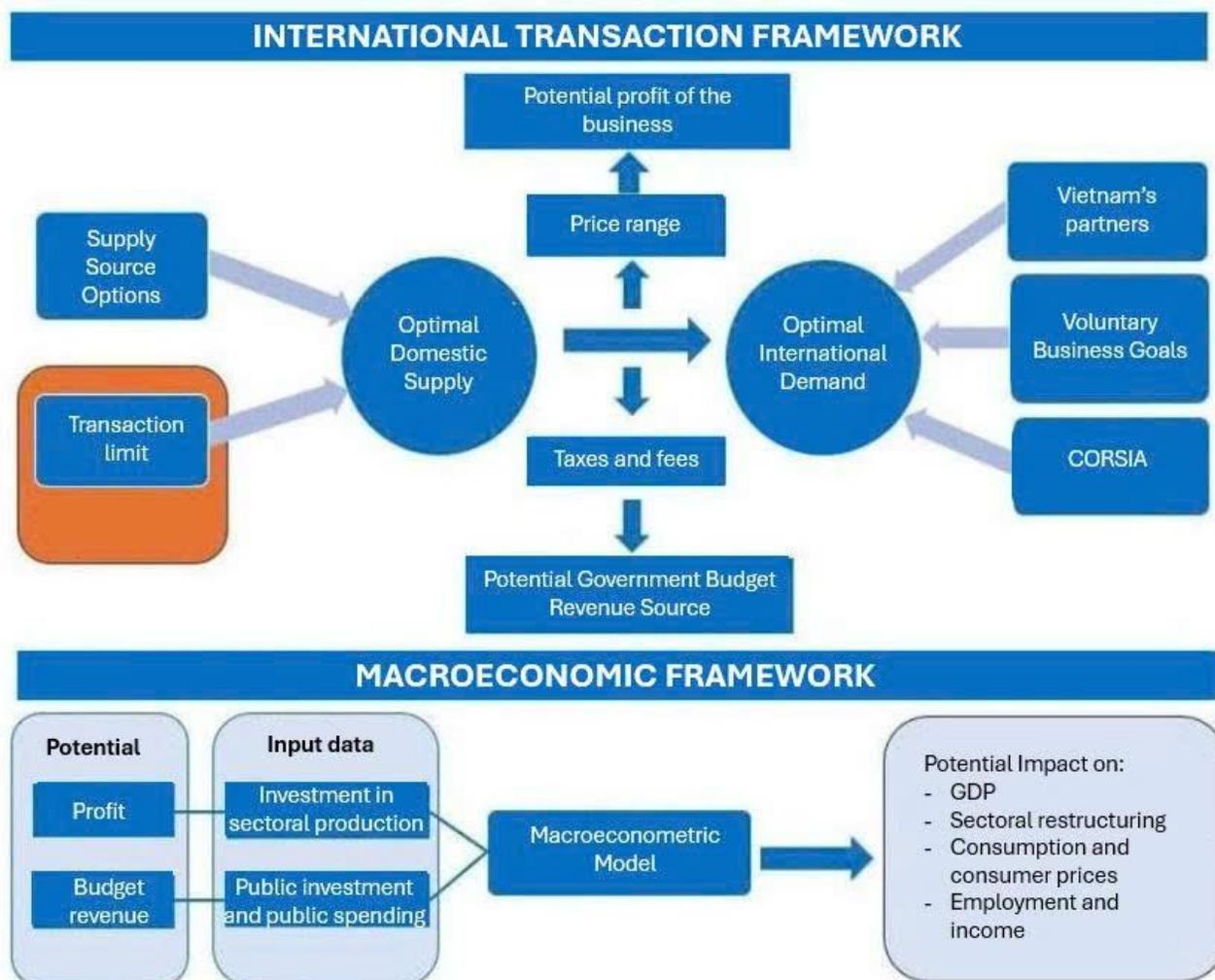


Figure A 1. Framework for Assessing International Carbon Credit Trading Impacts

#### d) Technical Guidance for Sector-Specific Compliance

Sectoral circulars provide detailed technical guidance to ensure consistent and feasible implementation:

- **Circular No. 01/2022/TT-BTNMT** (issued 07/01/2022) provides detailed guidance for implementing the Law on Environmental Protection regarding response to climate change: it sets out requirements for climate-impact and vulnerability assessment, procedures for GHG inventory and for appraisal/verification of facility-level and sector-level GHG inventory and mitigation reports, and assigns responsibilities to competent agencies to manage and store

appraisal records and submit completed reports to the Ministry for updating national/sectoral databases. The Circular also prescribes the structure and duties of appraisal councils, the form of appraisal conclusions, and the process by which verification results must be integrated into the national database. It requires that verification bodies be independent, and that all appraisal records and verification minutes are archived and submitted to MAE.

- **Circular No. 17/2022/TT-BTNMT** (issued in 2022) provides technical guidance for GHG measurement in waste management, focusing on methane emissions from landfills. It defines methane emission factors, oxidation, recovery, and default parameters for various landfill classes. It also requires periodic reassessment of uncertainty margins and verification of estimated emissions under the MRV framework.
- **Circular No. 38/2023/TT-BCT** (issued in 2023) guides GHG inventory and MRV for industry (e.g., steel, energy, coal mining). This Circular specifies measurement methods, reporting, and verification in the industry and trade sectors, and defines technical procedures such as scoping, data collection, emission factor selection, uncertainty evaluation, recalculation, and reporting. It applies to all industrial facilities required under relevant Decisions and mandates that facility-level inventory reports use prescribed forms under Decree 06.
- **Circular No. 23/2023/TT-BNNPTNT** (issued in 2024) provides GHG inventory and MRV for forestry. It lays out methodologies for estimating emissions/removals from deforestation, reforestation, forest degradation, and wood product carbon pools, consistent with the IPCC and national accounting guidance. Departments of forestry at provincial and central levels are required to compile and verify.
- **Circular No. 13/2024/TT-BXD** (issued in 2024) details technical procedures for GHG inventory and MRV in construction. According to the Circular, it applies to facilities listed under Decision 13/2024/QD-TTg, covers both buildings and construction material production, and sets out processes for measurement, reporting, verification, and appraisal under the construction sector. It mandates data collection from building permits, material manufacturing, and energy use.
- **Circular No. 19/2024/TT-BNNPTNT** (issued in 2024) guides GHG inventory, MRV, and reporting for livestock. It defines default emission factors for enteric fermentation, manure management and sets regional feed/husbandry categories. It also assigns responsibility to provincial livestock agencies to collate and reconcile data with national projections.
- **Circular No. 26/2024/TT-BNNPTNT** (issued in 2024, effective from February 6, 2025) sets economic-technical norms for livestock GHG measurement and reporting, supporting budgeting and cost settlement. It standardizes measurement cost parameters, minimum data collection standards, and reporting periods for livestock operations. It aims to align project-level data with national MRV norms to support auditability and financial planning for mitigation investment.

#### **e) Strategic Policies Supporting Broader Climate Goals**

Strategic policies reinforce Vietnam’s climate commitments and indirectly support GHG reporting and carbon labeling:

- **Resolution No. 24-NQ/TW** (2013) sets strategic orientations for climate change, resource management, and carbon crediting participation. It instructs that climate change response be mainstreamed into socio-economic planning and calls for mechanisms to proactively reduce GHG emissions and strengthen natural resource governance. The Resolution also prohibits new investment projects using outdated, highly polluting technologies and promotes the adoption of green growth, circular economy models, and environmental protection policies.
- **Decision No. 1658/QD-TTg** (2021) details the National Green Growth Strategy 2021–2030, Vision 2050, promoting green products, consumer markets, and sustainable labeling. It frames green growth as central to economic restructuring, resource efficiency, and reducing the carbon intensity of GDP, linking consumer demand for eco-friendly products to national climate goals.
- **Decision No. 896/QD-TTg** (2022) outlines the National Climate Change Strategy to 2050, emphasizing net-zero goals, carbon pricing, GHG inventories, MRV, and sustainable production, supporting carbon labeling via green products. It specifically tasks ministries with promoting carbon labeling and low-carbon certification in products and services, advancing forest recovery, mangrove restoration, and clean technology adoption. It also calls for the training of experts in GHG inventory, verification, and carbon markets.
- **Updated Nationally Determined Contribution (NDC)** (2022) increases the GHG reduction target to 43.5% by 2030, supporting carbon markets and voluntary programs like carbon labeling. The updated NDC explicitly links emission reduction across sectors (energy, industry, agriculture, waste) to the development of domestic carbon mechanisms and transparency in reporting.
- **Resolution No. 93/NQ-CP** (2023) strengthens international economic integration and climate action, including GHG reporting systems. It directs the Government to enhance regulatory frameworks for climate resilience and to integrate climate-related criteria into trade, investment, and industry policies. The Resolution also emphasizes cooperation with international climate mechanisms and supports Vietnam’s compliance with global carbon pricing and border adjustment measures.

## Annex 3: Report of the Consultation Workshop

### Design and Pilot of the Voluntary Carbon Labeling Scheme in Vietnam

*Time: 08:30 – 12:30, 05 November 2025 (Wednesday)*

*Location: Fortuna Hotel Hanoi 6B Lang Ha Street, Hanoi*

*Co-chair: ETP and Department of Climate Change*

### Background

Vietnam is actively implementing policies to reduce greenhouse gas emissions and establish a carbon market. To support these endeavors, the Energy Transition Partnership (ETP) is collaborating with the Ministry of Agriculture and Environment (MAE) and the Ministry of Finance (MOF). ETP assists the Department of Climate Change (DCC) in designing carbon pricing mechanisms, simulating an Emissions Trading System (ETS), and developing a voluntary carbon labeling program. As businesses face mounting pressure to reduce emissions, particularly in response to mechanisms such as the Carbon Border Adjustment Mechanism (CBAM), ETP and UNOPS have introduced a carbon labeling initiative to enhance Vietnam's sustainable development and international competitiveness. To design and pilot this program, UNOPS has contracted with RCEE-NIRAS.

The technical support workshop is designed to provide essential inputs and support to the Department of Climate Change (DCC) in designing and implementing a Voluntary Carbon Labeling Scheme in Vietnam. This initiative aims to prepare the private sector for carbon accounting and carbon emission reduction through a pilot program in selected industries. The program's specific objectives include assessing the existing domestic policy framework and infrastructure to identify gaps and requirements for effective implementation. Additionally, the program aims to propose a comprehensive design for the voluntary carbon labeling program, encompassing technical components, certification mechanisms, and implementation strategies. Finally, the designed program will be piloted in selected industries to test its feasibility and effectiveness, ensuring it aligns with Vietnam's goals for carbon emission reduction and sustainable development.

This technical support workshop serves as a pivotal step toward establishing a scalable and effective voluntary carbon labeling system, supporting Vietnam's broader carbon reduction objectives and enhancing the competitiveness of its industries in global markets. In this context, a consultation workshop was held on November 5, 2025, to introduce the "Design and Pilot of the Voluntary Carbon Labeling Scheme in Vietnam." The workshop aimed to present the draft framework of the labeling program, including its scope, methodology, and institutional setup, as well as to discuss the pilot implementation plan and private sector participation. It also served as a platform for stakeholders to exchange ideas, provide feedback on the proposed design, and discuss the next steps toward piloting and implementing the scheme nationwide.

### Objective

The objective of the workshop is to:

- Present an overview of the development of the carbon market in Vietnam to all participants;
- Present and discuss the design of the voluntary carbon labeling program and its detailed implementation plan;
- Present and discuss the selection of pilot sectors for carbon footprint labeling;
- Present the role of independent third-party entities and accreditation organizations.

## Agenda

The consultation workshop on 05 November 2025 on “Design and Pilot of the Voluntary Carbon Labeling Scheme in Vietnam” had the following agenda:

*Table A 1. Workshop agenda*

Time	Session	Content	Presenter
08:30 – 08:45	Registration	Participant registration	RCEE
08:45 – 09:00	Opening & Context Setting	Welcome remarks, workshop objectives, and an overview of the program	DCC & RCEE
09:00 – 09:15	Status of Carbon Market in Vietnam	Overview of the current status and development in Vietnam’s carbon market	DCC
09:15 – 10:00	Draft carbon labeling program design	Presentation on the proposed framework, including scope, methodology, carbon labeling design, institutional setup and certification & verification schemes	RCEE
10:00 – 10:15	Q&A	Discussion and clarifications on technical aspects	All
10:15 – 10:25	Photo session	–	All
10:25 – 10:40	Coffee / Tea Break	–	All
10:40 – 11:15	Carbon labeling pilot phase planning and private sector involvement	Outlines objectives, sector selection, stakeholder engagement, and roles for the pilot phase	RCEE
11:15 – 11:30	Expert presentation	Presentation by Accreditation body	Bureau of Accreditation (BoA)

11:30 – 11:50	Discussion & Way Forward	Feedback from participants and piloting	RCEE
11:50 – 12:00	Closing session	Summary of key outcomes and discussions: Conclusion	DCC/RCEE
12:00 – 13:30	Lunch		All

## Participants

The workshop was well attended by representatives of:

- DCC/MAE
- UNOPS
- Industry Associations
- Technical support projects
- Industrial enterprises
- Energy audit company

The list of participants is discussed below. Participants include:

- [50] offline participants
- [64] online participants

## Workshop content

Content	Speaker
Opening speech	Mr. Nguyen Thanh Cong, Department of Climate Change

Mr. Nguyen Thanh Cong, representative of the Department of Climate Change, presented the background of the research activity conducted under the cooperation framework between the Department of Climate Change and international partners. The objective of this initiative is to develop a voluntary carbon labeling program model suitable for Vietnam's conditions, aiming to establish a mechanism that recognizes and encourages enterprises to implement greenhouse gas (GHG) emission reduction efforts.

The presentation also outlined the research implementation process, including scientific analysis, review of international experiences, enterprise surveys, and assessment of domestic practices. Based on these activities, the expert team has proposed preliminary directions for the program design, focusing on elements such as emission verification procedures, criteria for recognizing emission reduction results, and the operational mechanism of the carbon labeling system.

This technical consultation workshop is organized to discuss the initial research findings, collect feedback from relevant stakeholders, and refine the report and policy recommendations for the

voluntary carbon labeling program, thereby promoting emission reduction activities in the private sector and supporting the operation of the national carbon market.

Content	Speaker
Status of Carbon Market in Vietnam	Mr. Pham Nam Hung, Department of Climate Change

The presentation provides an overview of the establishment and development of the carbon market in Vietnam, focusing on the legal framework, implementation roadmap, and operational mechanisms at different stages. It emphasizes the role of the carbon market as an important economic tool to help Vietnam achieve its greenhouse gas emission reduction goals, fulfill its Nationally Determined Contribution (NDC) commitments, and move toward the net-zero target by 2050. The presentation analyzes various carbon pricing instruments, including carbon tax, the Emissions Trading System (ETS), and carbon credit offset mechanisms under Article 6 of the Paris Agreement, while highlighting the participation of businesses and investors in carbon credit trading activities. It also outlines the roadmap for the domestic carbon market, from the preparation and pilot phases to official operation, along with key principles such as allowance transfer, borrowing, and offsetting.

The presentation reviews the current implementation of existing credit mechanisms in Vietnam, such as the Clean Development Mechanism (CDM) and the Joint Crediting Mechanism (JCM), and proposes essential preparatory steps for enterprises to engage effectively in the carbon market, including greenhouse gas inventory, emission reduction planning, capacity building, and the implementation of projects aligned with both domestic and international mechanisms.

Content	Speaker
Draft carbon labeling program design	Dr. Balasankari Palghat Krishnan, International expert

Bala’s presentation focuses on the design phase of the Vietnam Voluntary Carbon Labeling Program (VCLP). The main objective is to introduce the overall design framework of the program, clarify key components such as calculation methodology, certification system, institutional and organizational structure, and gather feedback from stakeholders to refine the model before pilot implementation. The presentation covers the background, scope, and expected impacts of the VCLP in supporting enterprises to measure, verify, and disclose product carbon footprints in line with international standards such as ISO 14067, the GHG Protocol, and the EU CBAM. It also details the program’s technical standards, certification and accreditation mechanisms, implementation plan, and risk management measures. Finally, the presentation outlines the next steps toward finalizing the design and preparing for the pilot phase during 2026–2028.

Overall, it conveys a vision to develop a transparent, reliable, and internationally aligned carbon labeling program that promotes sustainable production and consumption while enhancing the competitiveness of Vietnamese enterprises in the transition toward a low-carbon economy.

Content	Speaker
Carbon labeling pilot phase planning and private sector involvement	Mr. Hoang Anh - RCEE-NIRAS JSC, Local Consultant

The presentation by Mr. Hoang Anh introduces the selection of pilot sectors for the Vietnam Voluntary Carbon Labeling Program. It focuses on analyzing the basis and criteria for identifying suitable sectors for pilot implementation, taking into account emission levels, mitigation potential, capacity for measurement, reporting, and verification (MRV), as well as the readiness and interest of enterprises. The presentation also reflects the results of a business survey, which highlights current awareness, capacity, and demand for calculating and disclosing product carbon footprints. Based on this analysis, three sectors were identified as having the highest potential for pilot implementation: chemicals, food processing, and pulp and paper. Overall, the presentation outlines the direction for developing a practical and feasible carbon labeling program tailored to Vietnam’s conditions, contributing to the promotion of green production and enhancing the competitiveness of Vietnamese enterprises in the context of international integration.

Content	Speaker
The role of independent third-party entities and accreditation organizations	Bureau of Accreditation (BoA)

The presentation provides an overview of the concept of conformity assessment and highlights the role of independent third parties and accreditation bodies in ensuring quality assurance under international standards. It explains the different types of conformity assessment conducted by the first, second, and third parties, and clarifies key terms such as validation, verification, and accreditation, as well as the functions of organizations performing these activities. The presentation also describes the structure of the conformity assessment system under the IAF MLA (Multilateral Recognition Arrangement), illustrating the relationships between accreditation bodies, certification bodies, and validation/verification bodies based on relevant ISO/IEC standards.

Overall, it emphasizes the importance of the international accreditation system in ensuring competence, impartiality, and mutual recognition among organizations, thereby enhancing the credibility and global acceptance of conformity assessment activities.

## Q&A Session

1. Ms. Ly – Klinova, In the presentation, it was mentioned that the start-up phase will be implemented from 2026 to 2028, and about two to three sectors will be selected for

implementation. Could you please clarify which sectors these will be, and what criteria will be used for their selection?

Ms. Mai (RCEE JSC) replied: At present, the consulting team is proposing a start-up roadmap for the period 2026–2028 to be submitted to the Department of Climate Change for consideration. The detailed plan will be updated later by the Department. Regarding the selected sectors and the selection criteria, these will be presented in upcoming session.

2. Mr. Duc Anh – TQC CGLOBAL Center, In the Product Category Rules (PCR), is the application defined for each specific product or for a group of products? If it applies to individual products, would enterprises be capable of developing their own PCR, and how feasible would this approach be in practice? Furthermore, given that the current assessment boundary follows the cradle-to-gate approach, will the mechanism for information exchange and disclosure be oriented toward a B2B or B2C model to avoid potential misunderstandings among consumers? In addition, since Vietnam currently lacks a national Life Cycle Inventory (LCI) database to support specific industrial processes while some countries in the region, such as Thailand and Indonesia, have already begun developing theirs does the program have any plan or strategy to establish a Vietnam-specific LCI database to assist enterprises in calculating their carbon labels?

Dr. Bala responded that the questions raised were highly relevant and practical in the current context of Vietnam. She explained that the research team is striving to design a model that best fits the country's conditions, ensuring both feasibility and a strong scientific foundation.

Regarding the Product Category Rules (PCR), Dr. Bala noted that each product will have its own PCR, as this document serves as a guideline for calculation methods. Even within the same factory, there may be various types of products, and each product will have a corresponding PCR. She cited the example of Thailand, where every product has a separate PCR published publicly, especially in sectors with high product diversity such as food processing. However, she emphasized that PCRs are guidelines rather than rigid rules, specifying the scope and methodological boundaries of assessment; therefore, similar products can share the same PCR.

With respect to the Product Category Rules (PCR), Dr. Bala explained that common PCRs can be developed for groups of similar products, such as basic chemicals. In such cases, the PCR defines the processes and elements that must be considered during assessment, allowing each enterprise to adapt it to its specific production scope. PCR, she added, is not a strict regulation but a flexible guiding framework that can be applied to multiple similar products, helping enterprises refer to and implement it appropriately within their operations.

On the product life cycle assessment boundary, Dr. Bala clarified that the cradle-to-grave approach (covering the entire life cycle) is the most comprehensive methodology; however, at present, Vietnam can only feasibly apply the cradle-to-gate approach (from raw materials to the factory gate) during the initial stage. The long-term goal is to gradually expand the boundary so that, as businesses gain better understanding of emissions within their supply chains, they can prioritize low-emission suppliers, thereby building low-carbon supply chains—which is the program’s ultimate direction.

Finally, addressing the question about the Life Cycle Inventory (LCI) database, Dr. Bala emphasized that it is a critical component for ensuring accuracy and transparency in calculations. Vietnam currently does not have a national LCI database and relies mainly on publicly available data sources. In the future, the program aims to develop a Vietnam-specific LCI database and integrate artificial intelligence (AI) tools for data management, updating, and processing. This will help improve automation, accuracy, and analytical capability, thereby supporting enterprises more effectively in calculating and reporting their carbon labels.

### 3. Mr. Bach Cong Nam – Participant’s Comments

Mr. Nam expressed his appreciation for the presentations delivered at the workshop, noting that the content was highly practical and applicable for businesses. He recommended that, during the initial phase of implementing the voluntary carbon labeling program, the Ministry of Agriculture and Environment (MAE) should ensure a rigorous approach and provide direct technical support to enterprises. Specifically, he suggested that the Ministry assign technical officers to visit companies and factories to guide them in conducting greenhouse gas (GHG) inventories and emission calculations, as many enterprises are still reluctant to share internal data. Such direct guidance from the Ministry or qualified international organizations would help ensure the consistency and reliability of reported data.

From a technical perspective, Mr. Nam emphasized the importance of accuracy in emission calculations, especially for activities related to carbon capture and storage (CCS). He cited that while many companies plant trees or forests to generate carbon credits, not all tree species absorb CO<sub>2</sub> at the same rate, as this depends on their biological characteristics and environmental conditions. Therefore, the research team should develop clear, scientific, and credible calculation methodologies to avoid misjudgment of carbon absorption efficiency in such projects.

Mr. Nam also pointed out four main groups of solutions that enterprises can adopt to reduce GHG emissions, including:

- Improving energy efficiency;
- Optimizing and transitioning the energy mix;

- Capturing and storing CO<sub>2</sub>;
- Expanding the use of renewable energy.

However, as each solution carries potential calculation errors, he stressed the need to standardize methodologies, validate data, and ensure accuracy to build credibility in reporting and certification results for enterprises.

4. Ms. Hang – Representative of a Brewery Enterprise, Ms. Hang, whose company operates in the beer manufacturing sector with an annual production capacity of 70 million liters and estimated emissions of about 11,430.84 tons of CO<sub>2</sub> equivalent per year, asked what specific documentation, data, or procedures would be required for an enterprise to register for participation in the voluntary carbon labeling program.

Ms. Mai (RCEE JSC) responded that the research team is currently piloting the carbon labeling program in three priority sectors, and therefore, the beer and beverage industry is not included in the current six-month pilot phase. However, the team has acknowledged the company's interest and will propose adding the beer industry in the next phase of the pilot program.

Due to limited funding, the program cannot yet expand to include the beer sector at this stage. Nonetheless, she recommended that companies in this sector proactively prepare in advance by conducting GHG inventories, defining system boundaries, calculating emissions, and familiarizing themselves with carbon labeling procedures to be ready for participation once the program expands.

5. Mr. Dat – Hanoi University of Science and Technology, Mr. Dat raised a question regarding the GHG inventory process in Vietnam, noting that most current guidelines are based on Circular No. 2626, while the data and emission factors are derived from the IPCC 2016 Guidelines, which do not fully reflect Vietnam's actual conditions. He asked: if a third party is contracted to perform the inventory using a methodology different from the current national regulations, to which authority and in what format should the results be reported in order to be officially recognized and legally valid?

Mr. Hoang Anh (RCEE JSC) explained that Vietnam currently bases its national guidance on international standards and will continue to refine and localize methodologies over time. The emission factors (EFs) for fossil fuels will be updated and adjusted periodically through new research.

According to Circular No. 38/2023/TT-BCT, enterprises are allowed to use emission factors that are appropriate to their production technology or recognized by reputable international organizations. Additionally, enterprises may develop internal capacity, such as establishing

laboratories to conduct research and determine their own emission factors. In the near future, the Ministry of Natural Resources and Environment will continue developing more context-specific emission factors to ensure greater accuracy and practicality in national GHG inventories.

6. Ms. Bich Dinh – Online Participant, Ms. Bich Dinh raised a concern that there are currently many types of environmental labels in Vietnam, such as green labels, energy labels, and eco-friendly OCOP labels, but there is no centralized system to consolidate this information. As her business is aiming to build a green supply chain, she asked where she could find a database of certified green suppliers or any platform that could help enterprises identify suitable partners.

Mr. Cong (Department of Climate Change) acknowledged that this was a very practical and relevant question for Vietnamese enterprises. He explained that Vietnam currently does not have a unified database of low-emission or environmentally friendly enterprises and suppliers. In the future, the Department of Climate Change plans to propose developing regulations and a centralized database on low-emission labels and green supply chains. Such a system would enable enterprises to search, connect, and collaborate more effectively, enhancing their competitiveness in both domestic and international markets.

7. Participant – Consulting Organization, A participant from a consulting organization noted that the presentation described the carbon labeling program as voluntary, but from the perspective of enterprises and consumers, it remains unclear which tools or assessment methods would be most appropriate. She asked whether, after the pilot phase, there would be sector-specific guidelines to help enterprises apply the program consistently.

Dr. Bala responded that this is indeed one of the main objectives of the current technical consultation workshop. In the initial phase, the research team will select a few representative sectors and products to develop a PCL and detailed guidance materials. As the program expands, each sector will have its own set of guidelines, tools, and criteria tailored to its production characteristics, paving the way toward the development of a national standard for Vietnam's voluntary carbon labeling program.

## List of participants – Workshop in Hanoi on 5 November 2025



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