



Introduction to Carbon Credit Projects and its Applicability for Cocoa Agroforestry in Viet Nam

Guidance document for cooperatives and local authorities



Partners in
Transformation
Business & Development
Network



Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



ReClimaTech
Regenerative Climate Tech

Prepared by ReClimaTech:

info@reclima.tech

Disclaimer

The findings, interpretations, illustrations and conclusions expressed in this document are based on information gathered by GIZ, partners and contributors under the framework of the “Regenerative Cocoa Production to Support Livelihood Development in Viet Nam” Project (ReCoPro). ReCoPro is implemented by GIZ Vietnam, Puratos Grand-Place Vietnam and partners under develoPPP - a funding programme of the German Federal Ministry for Economic Cooperation and Development (BMZ). GIZ does not guarantee the accuracy or completeness of information, illustrations in this document, and cannot be held responsible for any errors, omissions or losses which result from its use.

Contents

I. Abbreviations	1
II. Executive Summary	1
III. Technical Guidance	2
3.1 Introduction to Climate Change and Carbon Market	2
3.2 Overview of Carbon Credit Projects	6
3.2.1 Key Elements	6
3.2.2 Requirements.....	8
3.2.3 Certification Process	9
3.2.3 Potential Financial Outcomes from a Carbon Credit Project	10
3.3 Building a Carbon Project	10
3.3.1 Processes from Concept to Credit.....	10
3.3.2 Start Data Collection for Building the Concept.....	11
3.3.3 Organise Project Partnership	11
IV. Conclusion & Recommendations	12
Do's and Don'ts in Agroforestry Carbon Credit project	12
V. References	13
VI. Annexes	14
Carbon Market Regulations	14

I. Abbreviations

AFOLU	Agriculture, Forestry, and Other Land Use
ARR	Afforestation, Reforestation and Revegetation
CCB	Climate, Community and Biodiversity
CCPs	Core Carbon Principles
CO ₂	Carbon Dioxide
FPIC	Free Prior Informed Consent
GHG	Greenhouse Gas
ICROA	International Carbon Reduction and Offset Alliance
INR	Internal Rate of Return
MRV	Monitoring, Reporting, & Verification
NPV	Net Present Value
VCS	Verified Carbon Standard
VCM	Voluntary Carbon Market

II. Executive Summary

This guidance document for cooperatives and local authorities is an Introduction to Carbon Credit Projects and its Applicability for Cocoa Agroforestry in Viet Nam, created to support sustainable development in Viet Nam's agricultural sector. This document is composed in straightforward language to ensure comprehensibility among a wide range of stakeholders. It serves as a practical resource for farmer groups and stakeholders interested in participating in carbon projects, aligning with the broader goals of mitigating climate change and fostering economic resilience.

Building upon the groundwork laid in previous deliverables, this guidance provides actionable steps and best practices for navigating the complexities of carbon project development within the Vietnamese context. Drawing on insights gained from the Review of the Voluntary Carbon Market (VCM) and the Assessment of VCM standards (Deliverables 1 and 2), as well as the Cocoa Agroforestry Carbon Cost-Benefit Analysis and Business Model (Deliverable 3), this document offers tailored advice specific to the agricultural sector.

Key components of the guidance include an overview of carbon project fundamentals, including eligibility criteria, project development stages, and relevant frameworks. It also provides practical tips for project planning, implementation, and monitoring, emphasising the importance of stakeholder engagement, data management, and quality assurance.

In conclusion, this document serves as a roadmap for farmer groups and stakeholders seeking to harness the potential of carbon projects in Vietnam. Through strategic guidance and practical insights, this document aims to empower

local actors to contribute to both climate action and sustainable agriculture, fostering a greener and more prosperous future for Viet Nam's agricultural landscape.

III. Technical Guidance

In Vietnam, farming is at risk because of extreme weather caused by climate change. Due to higher temperatures and shifting rainfall, farmers are facing more frequent and severe droughts, floods, and storms. These extreme weather events can destroy crops, livestock, and farming structures, causing big financial losses and food shortages. Plus, the unpredictable weather makes it hard for farmers to plan and adjust their farming methods.

To cope with these challenges, it is important to use strategies like growing different crops, managing water better, and improving weather prediction tools. These actions can help protect Vietnam's agriculture and ensure there's enough food for everyone.

To make the strategies happen, farmers need support from related stakeholders, government and global efforts. This support can be encouraged through projects that reduce carbon emissions.

3.1 Introduction to Climate Change and Carbon Market

Climate change and Carbon Market

A) Global Warming: Natural vs Human-made

Global warming/climate change is when the Earth's temperature goes up because of certain gases in the atmosphere trapping heat. Some of these gases occur naturally, like carbon dioxide and methane, and they help keep the Earth warm enough for life. However, when people burn fossil fuels like coal, oil, and gas, and when they cut down forests, they release more of these gases. This extra gas in the atmosphere traps even more heat, which makes the

Earth warmer. This is called the greenhouse effect, and it is causing the planet to heat up faster than it should.

B) Greenhouse Gas (GHG) Emissions: Type of Greenhouse Gases

These gases that trap heat are called greenhouse gases (GHGs). Carbon dioxide (CO₂) is the most common one, but there are others like methane (CH₄) and nitrous oxide (N₂O).

When we burn fossil fuels for energy, drive cars, or even raise animals for



Figure 1. Extreme weather due to climate change

food, we release these gases into the air. Over time, the amount of GHGs in the atmosphere has increased a lot because of human activities. This extra gas is causing global warming and changing the Earth's climate.

Below are sources of the GHGs:

- Carbon Dioxide (CO₂)
is produced from fossil fuels, solid waste, land use change, and deforestation.
- Methane (CH₄)
is emitted during production, transport of oil, and livestock or agricultural practices (rice fields, manure, etc.).
- Nitrous Oxide (N₂O)
Is produced from agricultural (manure, fertiliser, etc.) and industrial activities.

C) Emission Reduction & Carbon Removal

To tackle global warming, we need to reduce the amount of GHGs we release into the atmosphere and find ways to remove the extra gases that are already there. This means using cleaner energy sources like solar and wind power instead of burning fossil fuels. It also means making industries, transport, and buildings more energy-efficient.

Planting trees and restoring ecosystems can help absorb CO₂ from the atmosphere, a process known as carbon removal. By cutting emissions and removing carbon from the air, we can slow down global warming and protect the planet for future generations. There are several actions that we could do to reduce GHG emissions.

Emission reduction: Is an effort that aims to decrease the amount of GHG emissions from its usual practices. For example: farmers can shift their energy resources from fossil fuels such as fuels, chemical fertilizers, etc. to renewable energy (wind or solar powers, organic fertilizers).

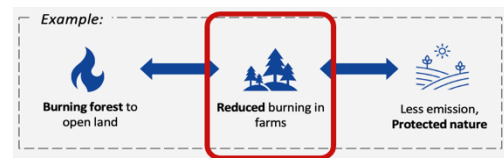


Figure 2: Emission reductions

Carbon removal: Is a process of removing CO₂ from the atmosphere by storing it on soil or plant that aims to increase the carbon stock in the ground. For example: Planting trees, using biochar, and/or implementing agroforestry.

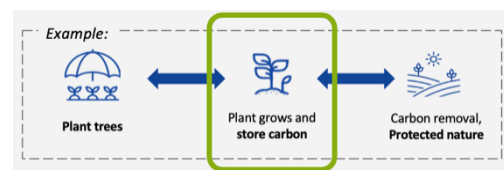


Figure 3: Carbon removals

D) Carbon Credits

A carbon credit, also called a carbon offset, is a way to make money from certified projects that reduce or remove carbon emissions. These are an opportunity for farmers to generate more financial and in-kind benefits from emission reduction and carbon removal activities.

With carbon credits, farmers can access resources to:

- Protect the farm from effects of climate change (irrigation, shade trees, compost, etc.)
- Reduce poverty and improve livelihoods



Figure 4: Carbon credit project mechanism (ReClimaTech, 2023)

Farmers can participate in carbon removal activities for example by planting trees. Through the certification process, farmers can then claim the carbon removals and generate income and support from that, by selling the carbon credit in the carbon market.

It is important to note that cocoa, fruit trees, and timber remain the primary source of income for farmers. Carbon credit projects offer farmers an opportunity to generate extra income and/or valuable in-kind support.

The carbon credit is one tonne of CO₂ or its equivalent reduced or removed from the atmosphere.

E) Carbon Market

A carbon market is a system where national and international companies can buy and sell carbon credits that allow them to claim reduction of a certain amount of GHG like CO₂ to compensate for their own emissions. This practice is called offsetting.

To participate in the carbon market, farmers can start to implement agroforestry systems in the farms to increase carbon stock, while improving income from other trees that are planted in the farm.

F) Agroforestry System as a Carbon Removal Activity to Generate Carbon Credits

A common practice in carbon projects is agroforestry as it enhances the carbon stock in the area while providing additional income from other crops planted on the farm.

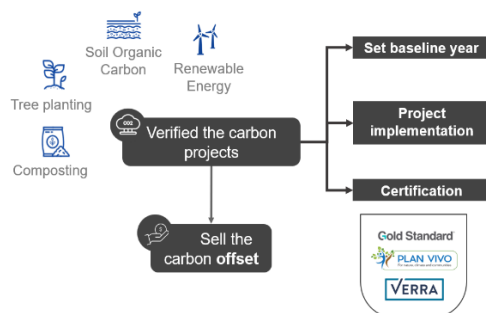


Figure 5: Carbon Credit Project

Definition of Agroforestry

Agroforestry means the combination of agriculture and trees for both fruits and timber. Cocoa trees require some limited shade trees from larger trees against direct sun because they are originally smaller understory trees from the big Amazon Forest. Shade trees can produce fruits and timber.

A good agroforestry model optimises the harvest from all components (cocoa, other fruits, timber) for maximal farmer income and farm protection against risks like extreme weather as well as pests & diseases.

Advantages

- Provide farmers with additional income by selling fruit and timber
- Improve main crop yields through shade trees (e.g. cocoa)
- Increase carbon stock in the field so it can reduce GHG emissions
- Protect farms from risks (pest & disease, extreme weather, soil fertility, etc.)
- Prevent biodiversity loss

G) Agroforestry Planting Recommendation

By strategically integrating trees and shrubs with crops, agroforestry provides multiple benefits such as enhanced soil fertility, better water retention, and increased biodiversity.

This approach not only boosts farm yields but also promotes long-term resilience, making the farm more

adaptable to changing environmental conditions. Below figure is the agroforestry model recommendations.

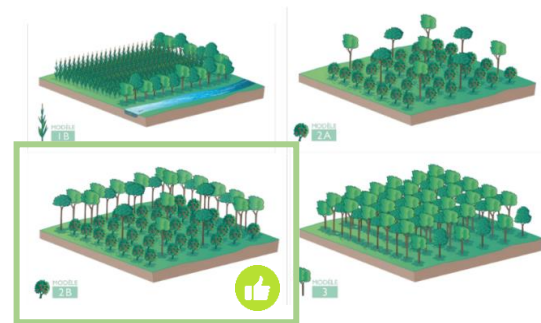


Figure 6: Planting models

Agroforestry Planting Design

For an empty land without trees where the production focus is planned to be cocoa, a mix of cocoa trees with fruit for shade and timber trees on the boundary is suggested for this case study. This equals an implementation practice in the PUR Projet model 2B with shade trees in center & boundary (see Figure 6/ picture bottom left/Model 2B).

Implementing Model 2B makes the farm have a higher diversity of income and is more resistant to climate change. At least three different types of trees should be planted in the area, including the main crop (i.e., cocoa), fruit trees, and timber trees, such as in table 1 below.

Cocoa trees would be planted approximately 3 x 3 meters apart, with fruit trees every 9 x 9 meters. Timber trees would be planted on the boundary in a line every 3 meters. This results in overall roughly 860 trees per hectare.

Ideally, planting all trees in the first year offers the easiest management for a project. However, this approach can be a significant financial burden for farmers in the first year due to the upfront costs of seedlings, fertiliser, labour, and other resources. Therefore, to address this financial challenge and ensure farmers have a steady income stream, the example of spreading the tree planting 860 trees over 5 years is proposed. This phased approach allows farmers to integrate annual crops and farm animals alongside the trees, generating income throughout the early years of a project.

Table 1. Example of possible planting model on one hectare (Suggestion only)

Functional tree type	Location	Planting distance (m)	Planted per hectare Y1	Planted per hectare Y5	Total Planted	Rejuvenation at ages
Cocoa	Centre	4	400	250	650	15-20
Fruit tree (e.g. Durian, Avocado, Jackfruit, Macadamia, Pomelo, Guava etc.)	Centre	10	40	80	120	20-25
Timber tree (e.g. Hopea odorata, Senna siamea, etc.)	Border	3	30	60	90	25-30
TOTAL	-	-	470	390	860	

It is important to note that the **above planting model is merely one of many possible options** and only a suggestion here.

If the land already includes other trees, those should be protected and taken into account in the planting model, decreasing the number of new trees planted. If agronomic considerations recommend more or less shade (e.g. because of high or low temperatures in the farm) this also affects the planting model to be adapted locally.

3.2 Overview of Carbon Credit Projects

3.2.1 Key Elements

Imagine like we build a house, there are key elements that are needed to exist, to construct a good carbon credit project. Below are the elements (in no particular order), based on international best practice and requirements of the voluntary carbon market:

1. Baseline
2. Project scenario
3. Additionality
4. Permanence
5. Leakage assessment
6. FPIC (Free Prior Informed Consent)
7. Benefit sharing mechanism

Details about the seven elements are below.

- **Baseline:** Baseline is the condition before a carbon credit project starts. For example, farmers plant only cocoa trees, other trees are not added yet.



Figure 7 Baseline (Business as usual, only plant coca tree)

It will not occur under normal or business-as-usual circumstances.

To assess additionality, project developers typically compare the emissions or carbon sequestration of the project scenario with what would have occurred in a scenario without the project (the baseline scenario). If the project results in lower emissions or higher sequestration than the baseline, it means that the project has the element of additionality.

- **Project scenario:** Project scenarios are expected scenarios based on calculations and forecasts of what the situation will be when carbon projects are implemented. Examples in Figure 8: a scenario where farmers plant not just cocoa, but also additional trees, such as fruit trees and palm trees.

- **Permanence:** Carbon projects in the forest & agriculture sectors must maintain their carbon stocks for at least 40 years. It is necessary to make sure that the carbon, once reduced or removed, doesn't go back into the atmosphere right away. Therefore, the efforts to reduce emissions need to be long-lasting. When a planted tree grows, and is able to absorb carbon

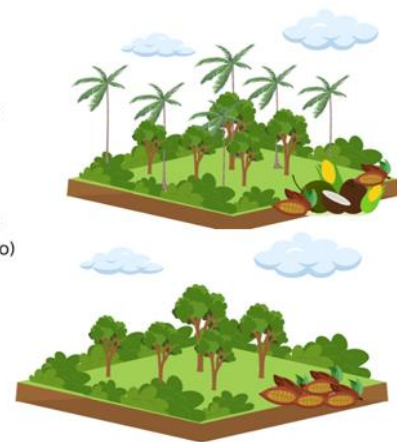
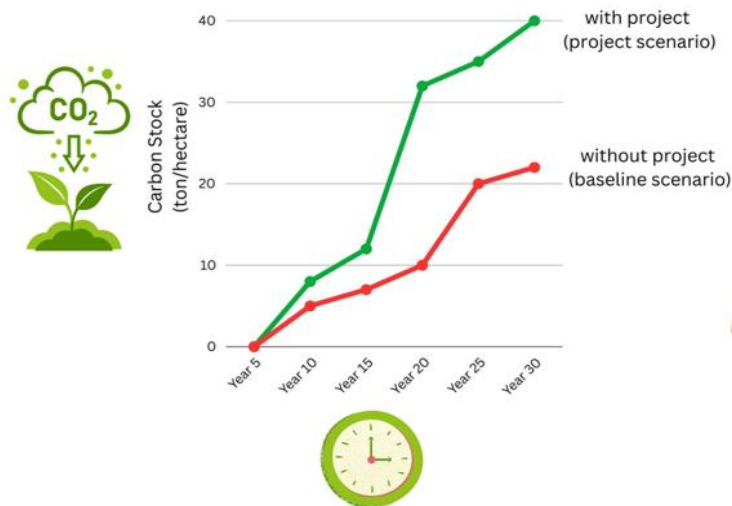


Figure 8: Baseline Scenario versus Project Scenario

- **Additionality:** Additionality is an important concept in a carbon credit project. It ensures that the environmental benefits (in this case the carbon stock or the amount of carbon removed from the air) can only be generated if there is a carbon credit project.

from the air, let the tree live long so that the impact of the project lasts long (is not immediately cut again).

- **Leakage assessment:** Leakage assessment means measuring the impact of the carbon project activities to

other places outside the project area. For example: A project supports farmers to grow perennial trees, but it leads to farmers cutting down forest elsewhere to grow annual crops. It is important to make sure that the carbon project activities in the project area are not causing carbon emissions in surrounding areas.

- **FPIC (Free Prior Informed Consent):** Free Prior Informed Consent (FPIC) is a decision-making process without pressure and intimidation (free), which is performed before the activity that affects the community is undertaken (prior), with the possession of full and accurate knowledge about the activity and its impact on the community (informed), so that the community can either provide or withhold its permission over the activity (consent).

It is important to conduct the FPIC with the community before starting the carbon project activities.

- **Benefit sharing mechanism:** A general rule (or requirement in the case of Plan Vivo) is that 60% of carbon finance (revenue) achieved by the project proponent (developer) is used to the benefit of communities and local stakeholders.

This can be both in terms of in-kind and cash benefits. A benefit sharing mechanism is like a way or a system that helps share the rewards from a carbon project. The mechanism is discussed, developed and agreed between the project parties and communities during FPIC.

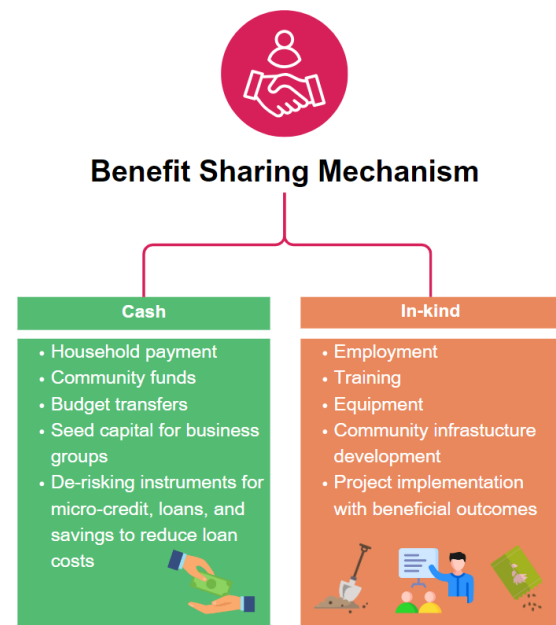


Figure 9: Benefit Sharing Mechanism

3.2.2 Requirements

In order to obtain a credit to be marketed in the carbon market, the farming practices must be in line with:

- **Government Regulation**
The Vietnamese government is going to produce regulations related to carbon projection within a few years from now. Therefore, it is a good practice for the farmers to have a consultation with the government since the beginning of the project preparation. A legal framework and policies to promote GHG emission reductions in the domestic carbon market has established which can be referred to the annex of this guidance document.
- **Carbon Market Standard**
A carbon market standard defines the requirements to certify a carbon credit. Carbon market standards can be issued by national governments, the UN or by voluntary industry associations (Voluntary Carbon Market).

3.2.3 Certification Process

The certification process in carbon projects is very similar to certification of sustainable products, such as organic farming, Rainforest Alliance, etc.

Farmers conduct agricultural practices that are aligned with one of the carbon market standards, for example Plan Vivo standard. An auditor will then assess the alignment between the farming practice and the Plan Vivo Standard. If it passes the standard, and the auditor verifies that a certain amount of carbon is reduced because of the farming practice, a certificate will then be issued mentioning the amount of the carbon reduction (carbon credit). The companies buy the carbon credits from the farmers based on the certificate (see figure 10).

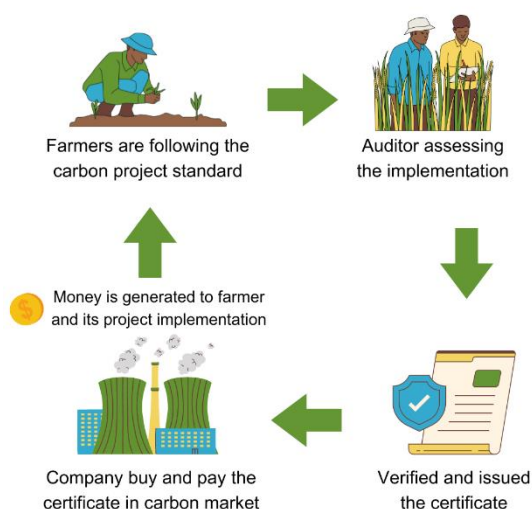


Figure 10: Certification Process

Carbon Market Standards

There are various carbon market standards that can be chosen to apply. Eligible carbon market standards for cocoa agroforestry must cover projects for tree planting (ARR). VCS from Verra, Gold Standard and Plan Vivo standard are all covering ARR, but in our opinion the most suitable standard for cocoa farmers in Vietnam is the Plan vivo

standard (Please see the comparison of the three standards at the table below).

Table 2. Comparison of Gold Standard, Verra and Plan Vivo standards in Vietnam

	Covers ARR	Applied in Vietnam	ICROA Endorsement	CCP-Eligible
Gold Standard	Yes	Only non-AFOLU	Yes	Tbd
Verra (VCS+CCB)	Yes	Only non-AFOLU	Yes	Tbd
Plan Vivo	Yes	Yes	Yes	Tbd

Plan Vivo Standard

Plan Vivo Standard is a carbon market standard that has a high-quality framework for smallholder and community conservation and restoration projects. The Plan Vivo standard focuses on projects in the agriculture & forestry space. It is specialised on projects with local communities and smallholder farmers. It has requirements tailor-made to respect the rights of local communities and simplify certification of small projects.

In our opinion, compared to other standards, Plan Vivo Standard is the most suitable for cocoa farmers in Vietnam because it is:

- Quite simple compared to other standards;
- Plan Vivo is targeting community-based projects; and
- Plan Vivo allows the sale of carbon project products to be done in advance (possible for the certification process and sales to be made at the beginning of planting, so the farmers do not have to wait until all activities are completed/all newly grown large crops to be certified) also known as “ex-ante sales of future Plan Vivo certificates”.

More info: <https://www.planvivo.org/>

Verified Carbon Standard (VCS - Verra)

In terms of scale, Verra supports more on large-scale projects across multiple sectors including energy, industry, transport and eco-system, as well as small-scale cookstoves and tree planting projects. Therefore, its methodologies are highly standardised and more focused on broader carbon market integration.

More info: <https://www.verra.org/>

Gold Standard

The Gold Standard has stronger emphasis on sustainable development goals as the co-benefits throughout the carbon reduction.

More info: <https://www.goldstandard.org/>

3.2.3 Potential Financial Outcomes from a Carbon Credit Project

There are steps to calculate potential benefits gained from a carbon project:

- **Assessment of Carbon Credits:** Determine the amount of carbon credits the project can generate. This involves estimating the reduction in GHG emissions compared to a baseline scenario.
- **Carbon Credit Price:** Research the current market price of carbon credits or estimate future prices based on market trends and regulations.
- **Project Costs:** Determine the costs associated with implementing the carbon project, including initial investment, operational costs, and monitoring expenses.
- **Revenue Generation:** Calculate the revenue generated from selling carbon credits. Multiply the number of credits by the expected price per credit.
- **Discounting and Time Frame:** Consider the time value of money by discounting future cash flows.

Assess the financial outcome over the project's lifespan.

- **Risk Assessment:** Evaluate risks associated with the project, such as regulatory changes, market volatility, and project performance uncertainties.
- **Financial Metrics:** Calculate financial metrics like net present value (NPV), internal rate of return (IRR), and payback period to assess the project's financial viability.

By integrating these factors, stakeholders can gauge the potential financial outcome of a carbon credit project, informing decision-making and investment strategies.

3.3 Building a Carbon Project

3.3.1 Processes from Concept to Credit

There are four main steps of implementing the project concept, until it generates carbon credits.



Figure 11. From Concept to Carbon Credit

1. **Concept**, as the initial stage, there are several steps that are needed to be done before starting the carbon credit project, they are:
 - Establish project partnership
 - Fundraise for upfront costs (3 years)
 - Register interested farmers

- Set a baseline (carbon stock and emissions, community, biodiversity)
 - FPIC & participative design
 - Survey areas to be planted
2. **Project Implementation**, to implement the project, things to be done:
 - Prepare seedlings
 - Plant first wave
 - Monitoring plan
 3. **Certification** (Monitoring, Reporting, & Verification (MRV)) - We should start maintaining the project by:
 - Keep monitoring, keep planting
 - Develop data management system
 - Prepare Project Design and Documentation
 - Validate project
 - Conduct Monitoring, Reporting, and Verification
 4. **Credits Issuance** and selling of the credits

3.3.2 Start Data Collection for Building the Concept

Below are details on the initial stage (Concept):

- **Project Partnership**
Building partnership with stakeholders is the most important part to start a carbon credit project. It could be farmer groups, government (local or national), investors, NGOs, etc who can support the project.
- **Fundraising**
To realise the project concept, we need to have an investment budget to fund the project. Therefore, it is crucial for farmers to engage in fundraising to start their carbon credit project after having established a strong partnership management.
- **Register interested farmers**
Recognise that different farmers have different needs and concerns. Tailor the farmer approach to address these

specific needs, whether it's related to crop type, farm size, or location.

- **Baseline**
Making a roadmap before starting a journey for farmers in carbon projects is necessary because it marks their position — a detailed current farming practices and emissions levels. It helps measure any changes or improvements made during the project.
- **Free, Prior, Informed, and Consent (FPIC)**
This process builds trust and collaboration, fostering a more successful and mutually beneficial partnership between farmers and project implementers. It also ensures their voices are heard, and respect rights over their land.
- **Survey Areas**
Farmers gain insights into how their land contributes to or can benefit from carbon projects, allowing them to make informed decisions about participating and also implementing changes in their farming practices.

3.3.3 Organise Project Partnership

Selling carbon credits worldwide can be challenging for a lot of land managers. Unfortunately, there aren't many examples globally where local farmers have successfully carried out tree planting projects to generate carbon credits without outside assistance. Even with experts to measure GHG, managing the entire process requires support.

Governments and investors are also crucial to support the project. It is also important to make strong partnerships with the experts on carbon project management.

IV. Conclusion & Recommendations



There are potential benefits of carbon credit projects for farmers and related stakeholders. By leveraging carbon finance mechanisms, participants can not only mitigate GHG emissions but also unlock new opportunities for socio-economic development and market access. The very first step to embrace the potential is to start a project partnership. That means building partnerships with stakeholders such as farmer groups, government (local or national), investors, NGOs, etc who can support the project.

From there it can be brainstormed together on how to build the concept of the project. Following that is fundraising (for the first three-year implementation). This is followed by implementing the project and selling the carbon credits resulting from the certification of the project implementation.

Do's and Don'ts in Agroforestry Carbon Credit project

As a conclusion and recommendation, all the things to do (do's) and the things to avoid (don'ts) to achieve a successful carbon project are summarised below.

Table 3. Do's and Don'ts in Carbon Project

 DO's	 DON'Ts
1. Discuss your plans with the government from the beginning	1. Do not cut down trees or forests to plant new trees
2. Plan for a long-term project of the land having trees at least 40 years	2. Plan to get carbon money quick and then convert to non-tree system (e.g. annual crops)
3. Survey land to be planted before distributing seedlings	3. Do not include land where no new trees can be planted in survey (houses, roads, fish ponds etc)
4. Account separately for new trees or old trees	4. Include trees planted >5 years ago
5. Plant at least 3 tree species each area / farm	5. Plant a monoculture
6. Plant species with good experience on growth, market and biodiversity	6. Plant invasive exotics or species not tested for growth or market

V. References

1. Rajab, Y. (2016): Cacao Cultivation under Diverse Shade Tree Cover Allows High Carbon Storage and Sequestration without Yield Losses. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0149949>
2. Santhyami et al (2018): The comparison of aboveground C-stock between cacao-based agroforestry system and cacao monoculture practice in West Sumatra, Indonesia
3. Somarriba, E. et al. (2013): Carbon stocks and cocoa yields in agroforestry systems of Central America. https://www.researchgate.net/publication/280721280_Carbon_stocks_and_cocoa_yields_in_agroforestry_systems_of_Central_America
4. Miharza, t. et a. (2023): Carbon stocks and footprints of smallholder cacao systems in Polewali Mandar, West Sulawesi.
5. Kraenzel, M. (2001): Carbon storage of harvest-age teak (*Tectona grandis*) plantations, Panama
6. Tulod (2015): Carbon stocks of second growth forest and reforestation stands in Southern Philippines: baseline for carbon sequestration monitoring. <http://www.aes.bioflux.com.ro/docs/2015.422-431.pdf>
7. Oviantari et al. (2022): Contribution of Tropical Fruit Plants and Soil Properties to the Potential of Carbon Sequestration in Open Land Utilization for Mixed Plantations. https://www.researchgate.net/publication/357550446_Contribution_of_Tropical_Fruit_Plants_and_Soil_Properties_to_the_Potential_of_Carbon_Sequestration_in_Open_Land_Utilization_for_Mixed_Plantations
8. MinTrees - Mindanao Tree Planting Program For Our Climate and Communities. Unpublished data on agroforestry establishment.

VI. Annexes

Carbon Market Regulations

Vietnam has established a legal framework and policies to promote GHG emission reductions and to establish a domestic carbon market as shown in table below.

Table 4. Legal framework related to climate strategy and carbon market

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
2007	Decision 130/2007/QĐ-TTg	Decision 130/2007/QĐ-TTg refers to The Prime Minister's decisions on Several Mechanism and Policies Applied to Investment Projects on Clean Development Mechanism. The decision defines target and scope of application, potential fields to be invested and carried out CDM project, form to develop and invest in implementation of CDM project, rights and duties, management and utilisations of CERs, CERs selling fee, business income tax for CDM project, and implementation arrangements.
2012	Decision 1775/QĐ-TTg	Decision 1775 of the Prime Minister approves the Project for managing greenhouse gas emissions and managing carbon credit business activities. This decision emphasises that the Government allows "the formation of a domestic carbon market and participation in the carbon market world". Regarding LULUCF, the plan prioritises activities that enhance GHG absorption. These activities include forest protection, forest regeneration and REDD+.
2012	Decision 799/QĐ-TTg	Decision No.799/QĐ-TTg refers to the Prime Minister's approval of the national REDD action programme in the 2011-2020 period. The document sets out the goals, objectives and tasks of Vietnam's REDD+ policy. Principally the legislation is designed to reduce emissions from LULUCF by setting out the legal framework for pilot REDD+ programmes and activities to be demonstrated.
2013	Resolution no. 24-NQ/TW	This resolution is intended to further enhance the mainstreaming of climate change and sustainable development in Vietnam. III-Key Tasks on Mitigating greenhouse gas emission, protecting and developing natural ecosystems, enhancing the ability to absorb greenhouse gases: Developing market of carbon credit exchange market in the country and participating in the global carbon market.
2015	Civil Code 2015	Clause 1, Article 105, prescribes property as follows: "Property is objects, money, valuable papers and property rights". With the regulation of forest carbon in the form of certified carbon credits, carbon can be considered one of a forest's assets along with timber and non-timber forest products.
2017	Forestry Law No. 16/2017/QH14 promulgated by the National Assembly on 15	This law provides a legal framework on forest ownership, financing and benefit sharing mechanisms for payment for

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
	November 2017, effective from 1 January 2019	<p>forest environmental services, in which provisions relating to forest carbon payments, include:</p> <p>Article 7, which stipulates forest ownership, specifically: “<i>The State is the representative of the owner of forests owned by the entire people, including natural forests and planted forests fully invested by the State</i>”.</p> <p>Clause 10, Article 2, which stipulates that “<i>Ownership rights to planted production forests include the right to possess, use, and dispose of forest owners over plants, livestock and other properties attached to the forest invested by forest owners within the allocated and leased timeframe for planting forests</i>”.</p> <p>Clause 2, Article 61, which stipulates that: “<i>forest carbon sequestration and storage; reducing greenhouse gas emissions from deforestation and forest degradation mitigation, sustainable forest management, and green growth</i>” is one of five forest environmental services.</p> <p>A benefit sharing mechanism is specified under Clause 4, Article 73 on the rights of forest owners to: “<i>Be eligible to provide forest environmental services and benefit from forest environmental services</i>”.</p>
2017	Decision No. 419/QĐ-TTg (Vietnam PM 2017): Issued on 5 April 2017 approving the National REDD+ Action Programme to 2030	<p>The objectives of the programme are to provide access to results-based financing sources in line with international requirements; provide solutions for international capital sources, including contributions, sponsorships and trusts from governments, international organisations, non-governmental organisations, businesses, individuals and other financial institutions; and generate revenues from REDD+ implementation, including from forest carbon credit trading. Mitigation interventions include:</p> <ul style="list-style-type: none"> • Activities to mitigate deforestation and forest degradation: interventions made for conversion of natural forests to other use purposes and forest protection; • Activities aimed at preserving and enhancing carbon stock and sustainable management of forest resources through rolling out business models for high-yield forests and large timber forests; and replicating sustainable natural forest management; forest protection, conservation and restoration models.
2018	Decree No. 156/2018/NĐ-CP	Articles 64 to 75 stipulate provisions relating to the management and use of payments for forest environmental services.
2020	Law on Environmental Protection	The Law was promulgated in 2020 and revised in 2022. The Law introduces the “organisation and development of carbon market” to promote GHG emissions reduction in Vietnam with an emissions trading scheme, where businesses will have an emissions quota that can be traded. Article 139 stipulates the organisation and development of carbon market specifically,

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		<p>Clause 1: The domestic carbon market covers the exchange of GHG emission quotas and carbon credits obtained from the participation in domestic and international carbon credit exchange and offsetting mechanisms in accordance with regulations of law and international treaties to which the Socialist Republic of Vietnam is a signatory.</p> <p>Clause 6: Every GHG-emitting facility participating in the domestic and international carbon credit exchange and offsetting mechanisms in accordance with regulations of law and international treaties to which the Socialist Republic of Vietnam is a signatory is allowed to exchange carbon credits on the domestic carbon market.</p> <p>Clause 7: Every GHG-emitting facility participating in the domestic and international carbon credit exchange and offsetting mechanisms shall exchange, auction, borrow, pay for and transfer carbon quotas and credits in accordance with regulations of law and international treaties to which the Socialist Republic of Vietnam is a signatory.</p>
2022	Vietnam NDC 2022	<p>The updated NDC 2022 regulates mitigation measures for greenhouse gas emissions (including increased carbon sequestration). The updated NDC increased Vietnam's emission reduction commitment to 15.8% unconditionally and 43.5% with international support. Specific mitigation measures for agriculture and LULUCF include:</p> <ul style="list-style-type: none"> • Application of integrated crop management system; application of low carbon farming technologies, composting and organic agriculture, replacement of nitrogen fertilisers with slow-dissolving and slow-digesting fertilisers. • Protection of existing natural forest areas in mountainous areas, with priority given to hot spots of deforestation and forest degradation. • Protection of coastal protection forests and special-use forests; restoration of protection forests and special-use forests. • Improvement of the quality and carbon stock of poor natural forests through supplemental planting and forest enrichment to increase carbon sequestration. • Increasing GHG sequestration through improved forest quality, biodiversity conservation and improved ecosystem services. • Improving productivity and quality of plantations to increase carbon sequestration and reduce emissions through the application of advanced techniques (varieties, silvicultural techniques). • Planting new protection forests and special-use forests with native tree species on non-forested land to increase carbon sequestration. • Applying strict controls over the harvesting of timber from planted forests to produce wood chips for export, with a focus on ensuring the supply of wood materials

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		<p>for domestic sawn timber production and furniture processing.</p> <ul style="list-style-type: none"> Establishing and rolling out agroforestry models through additional planting of forest trees and timber species to increase carbon sequestration and combat land degradation, giving priority to sloping land areas. Establishing sustainable forest management and forest certification to reduce and control emissions from deforestation and forest degradation, forest fires and biomass burning.
2022	National Climate Change Strategy to 2050	<p>Targets for reducing emissions include:</p> <ul style="list-style-type: none"> Reduce total GHG emissions by 43.5% by 2030 compared to the BAU, with a 32.6% reduction in the energy sector, 38.3% in the industrial processes sector, 43% in the agriculture sector, 60.7% in the waste sector, 70% from the LULUCF sector and increase 20% of carbon absorption, total emissions and sequestration should reach at least -95 MtCO₂e. Facilities with annual greenhouse gas emissions of 200 tCO₂e or more reduce their GHG emissions. Ensure a total national GHG emissions reach net-zero by 2050, with emissions peaking by 2035, then declining rapidly. Under this target: forestry and land use fields will reduce emissions by 90% and increase carbon sequestration by 30%, with total emissions and sequestration reaching at least -185 M tCO₂e.
2022	Decree No. 06/2022/ ND-CP on Mitigation of Greenhouse Gas Emissions and Protection of the Ozone Layer	<p>Provision related to carbon market include:</p> <p>Article 3, Clause 5: “carbon credit exchanging and offsetting mechanism” means mechanisms of registration and development of programs and projects on mitigation of GHG emissions and generation of carbon credits by methods certified by Vietnam or international countries. The carbon credits from these programs and projects are exchanged on the carbon markets or offset against GHG emissions exceeding GHG emission quotas allocated.</p> <p>Article 3, Clause 12: “carbon trade exchange (CTX)” means a center handling (transactions that are) purchases and sale of carbon credits, GHG emission quotas and auctions, borrowing, return and transfer of GHG emissions quotas.</p> <p>Article 3, Clause 18: “GHG emission quotas exchange” means buying, selling, auctions, borrowing, return and transfer of GHG emissions quotas and carbon credits on the CTX.</p> <p>Article 4, Clause 3: GHG emission quota exchange activities and carbon credits must ensure transparency and harmonious interests of participants in the carbon market. Organisations and individuals participate in the carbon market on.</p>

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		<p>Article 5, Clause 2: The following ministries and sectors in charge must reduce GHG emissions: The Ministry of Industry and Trade, the Ministry of Transport, the Ministry of Agriculture and Rural Development, the Ministry of Natural Resources and Environment, the Ministry of Construction.</p> <p>Article 7, Clause 4b: Implementing GHG emission inventories, formulating and carrying out the GHG emissions mitigation plans according to the quotas allocated by the Ministry of Natural Resource and Environment subject to the goal of GHG emissions mitigation; exchanging and trading GHG emission quotas and carbon credits on the CTX in the period from 2026 to 2030.</p> <p>Article 8, Clause 4b: The MONRE manage and monitor implementation of programs and projects of participation in carbon credit offsetting mechanisms.</p> <p>Article 8, Clause 1&2: on enhancement of greenhouse gas absorption, stipulates that organisations, households, individuals and communities that are forest owners or land users should develop and implement measures for sustainable forest management; and protect and improve forest cover, biomass and quality in order to increase capacity to absorb greenhouse gases. It also allows them to participate in domestic and international carbon credit exchange and offset mechanisms in accordance with the provisions of law and international treaties to which the Socialist Republic of Vietnam is a signatory.</p> <p>Article 16: stipulates that participants in the domestic carbon market can include all organisations, households, individuals and communities specified in Article 8</p> <p>Article 9, Clause 2: The Ministry MONRE shall be in charge of the National MRV system and have responsibility to examine compliance with the regulations on MRV of GHG emissions mitigation specified in Article 10 hereof; formulate and operate national online MRV database.</p>
2022	Decree No. 08/2022/ND-CP on Elaboration of several Articles of the Law on Environmental Protection.	This decree has provisions on payment for natural ecosystem services (Section I, Chapter X), stipulating that: “ <i>Forest environmental services of forest ecosystems shall be applied in accordance with the provisions of the law on forestry</i> ”. Paid natural ecosystem services include wetland ecosystem services, marine ecosystem services and rocky mountain ecosystem services, caves for business purposes, tourism, recreation decoration, aquaculture, etc. Like the forestry law with its provisions on payment for forest environmental services, this decree has yet to stipulate provisions on carbon sequestration services, GHG emissions reduction, etc.
2022	Decision 01/2022/QĐTTg	No. This decision provides a list of greenhouse gas emitting sectors and facilities that must have GHG inventories. Appendix II of the decision stipulates that 1,662 establishments in provinces and in different fields must

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		inventory GHGs. These are potential participants in the exchange and/or trading of carbon credits to achieve prescribed emissions reduction targets.
2022	Decree No. 45/2022/ND-CP on Penalties for Administrative Environmental Protection Offences	<p>This decree was entered into force since August 2022 and apply to all domestic/foreign individuals/organisations of all forms (enterprises, investors, non-business units), household/business households, and residential communities. Administrative environmental protection offences prescribed in this Decree consist of:</p> <ul style="list-style-type: none"> • Offences against regulations on environmental registration, environmental licenses and environmental impact assessment; • Acts of offences against environmental pollution; • Offences against regulations on environmental protection during management of persistent pollutants, raw materials, fuels, materials, products, goods and equipment containing persistent pollutants; • Offences against regulations on prevention and control of environmental pollution and degradation, and waste-related emergencies; reduction of GHG emissions, ozone layer protection; • Offences against regulations on environmental monitoring; management of environmental information and data; provision and publishing of environmental information; reporting of environmental protection.
2022	Decision 942/QD-TTg	<p>Decision 942 of the Prime Minister approves the Methane Mitigation Action Plan until 2030. The plan outlines the application of necessary activities in agriculture, animal husbandry and a number of other activities in the future to reduce methane emissions by 30% by 2030 compared to 2020 levels. This decision requires the MONRE to coordinate with other departments to develop policies to attract investment and involve companies and communities in reducing methane emissions. The decision clearly states that in the period 2022-2023, the Ministry of Agriculture and Rural Development will preside over the development of an Action Plan to reduce methane emissions in agriculture and livestock and implement this plan until 2030. The decision also emphasises that in the period 2022-2025, the MONRE will coordinate with departments and branches to develop regulations on carbon credit management and trading of emission quotas and credits obtained from reducing methane emissions</p>
2022	Decree 107/2022/ND-CP	<ul style="list-style-type: none"> • In 2022, the Vietnam government issued Decree 107/2022/ND-CP dated 28th December 2022 on Piloting the purchase of emissions reduction results

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		<p>and financial management of emissions reduction purchase agreement (ERPA) in the North-Central region. It's one of the key policy efforts of Vietnam's Government to achieve the net-zero target by 2050 and foster climate protection activities.</p> <ul style="list-style-type: none"> • MARD represents Vietnam in signing agreements to transfer emissions reduction results. • Proceeds from the programme are considered revenues from forest environmental services for carbon sequestration and storage services and accounted for separately from other service revenues. • Implementation costs do not overlap with other state budget expenditures. • For forest protection contracts: the minimum contracted level is equal to the level of support from the state budget for forest protection contracts, and the maximum is no more than twice the level of support from the state budget for forest protection contracts applicable to the same contracted subjects in the same province. Specific levels are determined by the provincial people's committees. • The amount for activities to support livelihood development is VND 50,000,000 per residential community per year. • For other expenditures: norms shall be applied only in accordance with current provisions in legislation and approved by competent state agencies.
2023	Decision KHCN	<p>1693/QĐ-BNN-</p> <p>The decision issued on 28 April 2023 by the Ministry of Agriculture and Rural Development (MARD) approved the Greenhouse Gas Emission Mitigation Plan toward to 2050, that stated the objectives of GHG emission reduction in agriculture, forestry and livestock.</p> <p>General objective: By 2030, ensure a total reduction in GHG emissions of at least 121.9 million tCO₂e (excluding GHG emissions from energy use in production); total methane emissions do not exceed 45.9 million tCO₂e; increase carbon sequestration in the forestry and land use sectors, contribute to the country's commitment to achieve net-zero emissions by 2050, creating a basis for sustainable development, enhancing the added value and competitiveness of the Agriculture and Rural Development sector.</p> <p>Specific objectives:</p> <ul style="list-style-type: none"> • By 2025, ensure a total reduction in GHG emissions of 53.57 million tCO₂ (excluding the reduction of GHG emissions from energy use in production), of which, the agricultural sector (cultivation, animal husbandry) will reduce at least 14.26 million tCO₂e, the forestry and land use sector will reduce at least 39.31 million tCO₂e; total methane emissions do not exceed 59 million tCO₂e.

Year of issue	Legal framework	Provisions related to climate strategy and forest carbon market
		<ul style="list-style-type: none"> By 2030, ensure a total reduction in GHG emissions of 121.9 million tCO₂ (excluding the reduction of GHG emissions from energy use in production), of which, the agricultural sector (cultivation, animal husbandry) will reduce at least 42.85 million tCO₂e, the forestry and land use sector will reduce at least 79.1 million tCO₂e; total methane emissions do not exceed 45.9 million tCO₂e, a 30% reduction compared to 2020 emissions.
2023	Resolution 98/2023/QH15	<p>No. Resolution No. 98/2023/QH15 was issued in August 2023 regarding piloting of financial mechanisms to apply measures to reduce GHG emissions of Ho Chi Minh City under carbon credit exchange and offsetting mechanisms in the city.</p> <p>Specific content:</p> <p>Carbon credits formed from programs and projects under mechanisms for exchanging and offsetting investment carbon credits from capital sources of the City budget are traded with domestic and international investors. The City People's Committee shall coordinate with the Ministry of Industry and Trade (MOIT), Ministry of Transport, MARD, Ministry of Construction, MONRE, to determine the contribution rate of GHG reduction and GHG absorption of the city to the national GHG emission reduction target before trading carbon credits. The City People's Committee shall promulgate the order and procedures and decide on the selection of investors. Revenue from carbon credit trading is 100% of the City's budget revenue; these revenues are not used to determine the percentage (%) of revenues split between the central budget and the City budget.</p> <p>The City People's Council decides to use revenues from carbon credit transactions for programs and projects to respond to climate change, develop green economy, digital economy and circular economy in the city.</p>

Other than regulations and decrees that provide guidance how to achieve the climate commitment and the carbon market, the Vietnamese government has issued several policies related to socio-economic development, land use planning, green growth and low carbon agriculture as follows:

- National land use planning for the period 2021–2030, vision to 2050, and the national five year land-use plan 2021–2025:** The targets for using agricultural, forestry, and other land by 2030 include 1) rice land, 3.57 million ha, 2) forestry land, 15.8 million ha, 3) non-agricultural land, 4.9 million ha, 4) unused land, 1.2 million ha, 5) economic land, 1.65 million ha, and 6) urban land, 2.95 million ha.
- The Target Program on Sustainable Forestry Development:** sets out the main tasks for forest protection and management up to 2020, including 1) forest protection and conservation, to ensure the recovery of 15 percent of degraded forest areas, especially special-use forests. Increase the area of special-use forests by 100,000 hectares by 2020, 2) develop and improve forest productivity and quality, including planting and post-harvest rehabilitation with an area of 1,025,000 ha, of which 75,000 are special-use and protection forests; intensive afforestation of 200,000 ha for large timber production; zoning for natural regeneration 360,000 ha/year; planting scattered trees: 250 million trees; converting small timber production plantations into large timber: 90,000 ha; the percentage of planted forests planted with quality control varieties

is from 75–80 percent, and 3) sustainable forest management and forest certification: 100,000 ha/year and supports the national forest certification program.

- **Target Program for Sustainable Forestry Development:** The goals by 2020 include 1) increasing the value of forestry production from 5.5 percent to 6.0 percent/year, 2) achieving national forest cover of 42 percent, and the forest area is 14.4 million ha, 3) an average yield of planted forests of 20m 27 /ha/year, 4) provide 25 million jobs, increase income, contribute to hunger eradication and poverty alleviation, improve living standards for people living in forests, build new rural areas, and ensure national security.

Project on sustainable forest management and forest certification: The scheme aims for sustainable forest resource management, biodiversity conservation, environmental services, and promoting forest certification: meet 80 percent of raw materials to produce wooden furniture for export and increase the value of planted forest wood, reduce hunger, and reduce poverty.



Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Sitz der Gesellschaft
Bonn und Eschborn

Friedrich-Ebert-Allee 32 + 36
53113 Bonn, Deutschland
T +49 228 44 60-0
F +49 228 44 60-17 66

E info@giz.de
I www.giz.de

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Deutschland
T +49 61 96 79-0
F +49 61 96 79-11 15