# Carbon Credits as Collateral

## Can the carbon credit market liberate required long term finance for smallholder investment in climate resilience?

7 December 2022, M. Mensink (F&S Consulting), M. Muizebelt (Acorn), M. Spaas (FCF) and Lisette van Benthum (NFP).

## Challenge: access to appropriate finance

Climate change is rapidly affecting the livelihood of smallholder farmers, globally. Financial service providers that serve smallholders, notice the effects of climate change among their clientele. They are looking for options to service their rural clients to build climate resilience, while also reducing risks on their agricultural lending portfolio.

A key problem is access to long term funding for climate resilience building, such as finance for: agroforestry, biogas installations, water harvesting and irrigation, as well as for clean energy equipment. Financial service providers are reluctant to provide long-term loans, especially for agriculture since this is considered as high risk. Low-income smallholder farmers often require low interest and long-maturing loans to adopt new sustainable farming practices but lack collateral and access to these types of finance. The absence of medium to long term loans implies that farmers cannot invest in long term adaptation strategies to build resilience, nor can they invest in meaningful mitigation strategies for carbon emission reduction. At the same time, the food industry increasingly becomes aware of the climate risks on their commodities, look for sustainable products and invest in carbon emission, including attention for deforestation free commodities, general do no harm, while aiming for sustainable production.

## Opportunity:

## growing carbon market & possible links to investors

Globally there is a remarkable interest of the private sector to scale up investments dedicated to mitigating and adaptation to climate change, driven by growing concern about the economic costs and

financial losses because of climate impact. Furthermore, the market is demanding greener products and processes, therefore companies are searching to invest in future carbon emission reduction. The carbon credit market is booming. Private sector demand is growing rapidly as companies seek to meet their climate commitments, especially for carbon credits in the food supply-chain. A McKinsey report estimates that by 2030, carbon credit demand across all sectors will reach 1.5 to 2 billion tons of carbon dioxide and the value of carbon credits will increase by at least 15 times[1].

There are several organisations that trade in carbon credits, also in the Netherlands, such as Fair Climate Fund and ACORN[2] . These organisations trade in carbon credits, while also focusing on building resilience of the rural population. Both the Fair Climate Fund and ACORN are interested to channel carbon credit proceeds back to local farmers who invest in activities to reduce the carbon emissions and adapt to climate change.

Historically, the Netherlands, through private impact investors[3], has provided a substantial contribution to financial inclusion in the global south. To capitalise on the interesting opportunities offered by a growing carbon market on the one hand, and the long-term interest of Dutch impact investors in growing inclusive finance on the other hand, NFP would like to explore possibilities to link the need for long term finance in agriculture with the opportunities offered by the growing carbon market. How are carbon credits beneficial for smallholders to invest in climate resilience? Can the (future) proceeds of carbon credits be used as collateral for long-term loans?

# Key question

The NFP CoP Food System Finance working group would like to research if and how (future) income from carbon credits can leverage investments into the transition to climate resilience, including clean energy, clean cooking, agroforestry, and climate smart agriculture. The group would like to explore how creating linkages between carbon trading platforms and the financial sector actors, both local and international, can be instrumental to address some of the constraints in long term finance for smallholders. The key question is:

***Can future estimated incomes from carbon credits enable access to long term finance for smallholders?***

[1] See CompansAction policy brief November 2022

[2] A carbon trading platform for agro-forestry set up by Rabobank

[3] Private impact investors include among others Rabobank, Triodos, Oikocredit, Triple jump etc)

# Critical issues

The carbon credit market is a relatively young market. Specifically carbon credits emerging from agroforestry, face several challenges before actual claims can be realised and transferred to tradable monetary entities[4]. Notwithstanding ethical, financial, and technical challenges, carbon markets potentially could have a huge contribution to facilitate the much-needed long term finance in food chains.

Nevertheless, there are several critical issues that need to be addressed before carbon credits can be used as an established and recognized (guarantee) mechanism for long term finance.

Critical concerns related to the carbon market include:

- Need for standardised models for measuring, identifying and validating carbon credits
- Establishing appropriate monitoring systems on the ground to secured emission
- Avoid double counting of emissions
- Ensure proper risk management and permanence of claimed reductions.
- Challenges in monetizing and pricing of carbon emission reduction

The recently established Integrity council for the voluntary carbon market has established Core Carbon Principles and an assessment framework with the aim "*to provide a credible, rigorous, and readily accessible means of identifying high-quality carbon credits that create real, additional, and verifiable climate impact with high environmental and social integrity. This will underpin trust in the integrity of carbon markets, unlock investment and accelerate climate impact.*"[5] It is a platform to discuss the establishment of a clear and transparent global trading system for carbon credits. Please see table 1 for a summary of critical issues related to the carbon credit market.

Critical issues related to sharing of benefits to rural communities include:

- Ownership/ benefits sharing of carbon credits
- Involve local communities and smallholders needed for ensuring emission reduction
- Access to finance for investment in mitigation and adaptation.

The Fairtrade Climate Standard[6] formulates additional criteria to prevailing carbon credit standards to ensure close participation and benefits sharing to the communities. Local actors are critical in

[4] See article: https://www.preprints.org/manuscript/202007.028

[5] See: https://icvcm.org/wp-content/uploads/2022/07/ICVCM-Public-Consultation-FINAL-Part-1.pdf and https://icvcm.org/wp-content/uploads/2022/07/ICVCM-Public-Consultation-FINAL-Part-2.pdf

[6] see: https://www.fairtrade.net/standard/climate

implementing activities to avoid and sequester carbon emission and need to have a stake in the process.

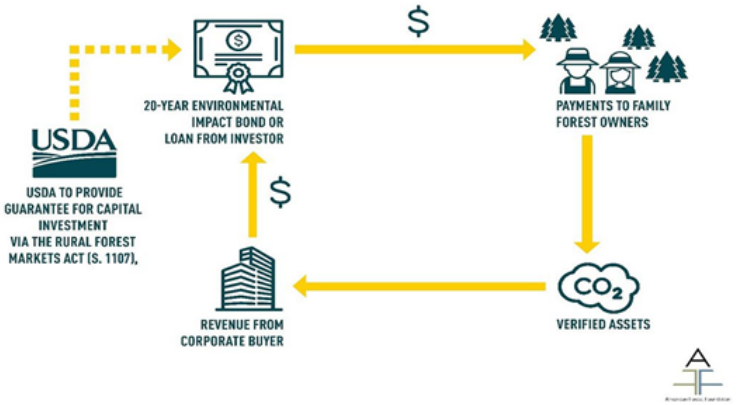
Please see table 2 for a summary of critical concerns related to community involvement.

# Sample Solution:

# Using future carbon income to ensure finance

A quick search on internet for examples where carbon incomes are already used as guarantees for loans, lead to only one interesting experience from the US: 'loan guarantees to help finance carbon projects for small forest holders[7].

The family forest Carbon program in the US provides upfront payments to implement climate friendly forestry. By providing a loan or bond guarantee for carbon projects for small forest owners, the federal government can reduce risk to investors, thus unlocking the capital needed for these projects to scale.




***Can we develop a similar model for smallholder farmers in LMIC?***

Can carbon credits take the form of futures, implying contracts for guaranteed delivery in future against an agreed price? Do the carbon futures offer sufficient guarantee to possible investors/lenders, and can the lender trade the carbon entities in case of default?

FCF notices that some of this is currently happening. Carbon removal credits are high in demand for Net -Zero strategies of companies. More and more, investments in reforestation projects are done by corporate clients to address their needs of carbon removals in the future. In the process, part of the income is invested in community programs. The question now is whether these investments can be used to leverage larger and long-term investments for smallholders to build climate resilience.

[7] See article: https://www.forestfoundation.org/why-we-do-it/family-forest-blog/loan-guarantees-to-help-scale-carbon-projects-for-small-forest-holders/

# Table 1 : Critical concerns related to carbon market in agriculture

| *Area of concern* | *Explanation* | *Suggested action* |
|---|---|---|
| Need for standardised models for measuring and identifying and validating Carbon credits and establish a uniform global trading system. | Currently voluntary carbon market standards and practices are still heterogeneous[8] and lack a global oversight system which makes the actual 'climate value' difficult to establish[9]. In addition, the agricultural carbon market is still limited[10]. Carbon credit units have highly complicated legal and financial accounting issues, and at the same time a potentially extremely valuable tradable commodity.<br><br>Standards for legalising, measuring and accounting for emissions, are essential for a smooth functioning of a transparent carbon market. Existing carbon markets have made progress in the harmonisation of rules and classification of various emission rights. Still, global standardisation remains challenging. Until today accountants and lawyers face issues on how to value carbon units with different regulatory, fiscal and property systems in different countries. A clear global carbon trading system with uniform rules would be needed to unlock its investment potential financing capacity for the financial sector. | Stick to VERRA, Gold standard, Plan Vivo certification schemes in combination with Fairtrade Climate Standard Principles ensuring Fair pricing,<br><br>Ownership of the carbon credits, Fair carbon benefit sharing, transparency |

[8] See: Carbon credits: Scaling voluntary markets | McKinsey

[9] https://www.planvivo.org/blog/making-carbon-markets-work-for-everyone

[10] See paper CompensAction: "In 2021, only ten of 29 carbon credit market initiatives around the globe included agricultural practices, with the largest being the Verified Carbon Standard [4,14]. Five initiatives were independent crediting systems (i.e., American Carbon Registry,Climate Action Reserve, Verified Carbon Standard [14],Gold Standard, and Plan Vivo) and five were domestic programs (i.e., Alberta, British Columbia, Australia,California, Kazakhstan, and Thailand).

| *Area of concern* | *Explanation* | *Suggested action* |
|---|---|---|
| Secured emission reduction established e.g., through monitoring and validation | The establishment of the actual emission reduction value of carbon credits is another challenge. All programs must utilise rigorous baseline and monitoring methodologies approved by international standards to establish reduction. It includes monitoring of improved farming systems/agroforestry/good agricultural practices for a longer period. The certification process can take around 1 to 2 years.<br><br>Implementation should be highly cost efficient to deliver maximal benefits to farmers and have robust measurement, reporting and verification (MRV) to ensure environmental integrity. Novel, low-cost MRV for multiple ecosystem services is a priority for reducing costs | Harmonised standards for MRV would help reduce costs of project design and integration with national reporting[11].<br><br>Digital resources and remote sensing for monitoring ecosystem services are promising areas for MRV innovation |
| Double counting of emissions and overlapping claims | There is a risk of double counting climate benefits among overlapping claims. Country and project level monitoring and reporting need to be transparent and comparable, and information needs to be shared between different entities. | |
| Ensure permanence of the emission reduction | Another complicating factor in establishing lasting value of carbon credits is the uncertainty of certain credits to continue. Forests can be prone to fire or slashing for example, thus losing the actual carbon credit claims. This would conflict with carbon claims already paid for. A thorough monitoring system to ensure permanence would be required. | Include buffers in the certification process for NBS on top of the standard buffer VERRA 20% GS 20% PV 15%. Certified credits all have some form of buffer pool to compensate in case of reversal events. |

[11] See Paper : CompensAction

| *Area of concern* | *Explanation* | *Suggested action* |
|---|---|---|
| Monetizing and pricing carbon emission reduction | In the carbon trading market, an agreement is made between a buyer and a seller of carbon credits. Those who reduce emissions or sequester carbon, receive payments and those who must decrease emissions can buy carbon credits to offset their emissions. These credit allowances are transferable rights to pollute that come into existence through an act of legislation that ensures a harmonised and fungible unit, the carbon credit.<br><br>Ideally, certified emission reductions that can be sold, can be important to finance adaptation activities that build climate resilience in LMICs[12] . This would require monetizing the value and allowing the trading of these offsets to attract private investments. Currently in the voluntary credit markets (VCM) the so-called Verified Emission Reductions are tradable. The VCM is trying to use these for attracting private investments, but a system for true pricing / true cost accounting is still missing.<br><br>Creating a true pricing is challenging for offset credits that result from very heterogeneous land use and forest activities. Each credit is created through a unique process that involves setting a baseline or reference emissions level and including future emission scenarios. The establishment of a secured monetary value to carbon credits is complicated and can limit its use for financial transactions.<br><br>Considering this inclarity, and the expected shortage of high quality credits, there is a danger of free trading in carbon credits, since trading in these rights could result in most profits going to buyers, investors, and intermediaries, and not to the (initial) seller, including local communities[13]. | |

[12] Low- and middle-income countries

[13] To counter this, carbon credits can be retired. Retiring a carbon credit means that when it is purchased it is taken off the market forever—never to be traded or swapped again. This way, only the purchaser of the carbon credit can ever claim to have reduced emissions. They cannot, for example, claim they have reduced emissions and then resell the credit.

# Table 2: Critical concerns related to community participation and ownership

| *Area of concern* | *Explanation* | *Suggested action* |
|---|---|---|
| Ownership/ benefit sharing of carbon credits[14] | Carbon emission rights are often closely linked to land rights and sometimes associated land conflicts. The legal nature and the property right element of carbon units is often difficult to establish. Weak recognition of tenure rights, and growing demand for land have sometimes led to increased land conflicts. Parties must clarify who has the right to generate and transact carbon units. In addition, government need to allow for smallholders to trade "their" carbon reductions onto the voluntary market<br><br>This is still challenging in the current setting where it is mostly programs and companies that invest in monitoring and measuring carbon offsets, without much involvement of local communities. Developing carbon sequestration projects requires expertise and resources, including developing a project idea, calculating the potential volume of carbon reduction; developing a project management plan and establishing potential carbon credit volumes. The costs for project development are significant and require upfront investments which smallholders and local communities don't have. Most carbon projects are designed and managed by professional project developers, who then claim they have the right to the credits. This raises the question: who really benefits? Commercial entities, states, or local communities and smallholders - the stewards of the land? | |

[14] https://www.faircarbonmarkets.org/ https://carbonmarketwatch.org/our-work/fourth-area/

| *Area of concern* | *Explanation* | *Suggested action* |
|---|---|---|
| Involve local communities, smallholders needed for ensuring emission reduction | To make a lasting impact, it is essential to involve local communities, land custodians and drivers of deforestation and beneficiaries. Lasting sustainable Impact can only be achieved if it increases the prosperity of forest-dependent, indigenous, and local communities, smallholders.<br><br>Smallholder farmers will be instrumental in switching to new sustainable land management practices that can support the reduction of GHGs. Commitment and participation of local communities is required. Still projects often lack meaningful engagement with local communities. | The Fairtrade Climate Standard is developed to enhance benefit sharing to local communities[15] |
| Engagement of the private and financial sectors. | Until recently, carbon reduction projects were mostly supported by short-term grants provided by NGOs, governments, international organisations, or environmental agencies. This grant-making approach does not offer a long-term, sustainable solution to address systemic social and environmental issues related to climate mitigation and adaptation.<br>Long term private finance to build climate resilience and establish carbon emission is highly needed, however it is still challenging. Long term finance that can be accessed by smallholders that are willing to invest in agro-forestry, biodiversity etc. is ultimately needed to tackle the devastating impact of climate change on the producers in the global south.<br><br>Better understanding the business case for private sector involvement and developing different options for private sector finance will be necessary to create viable investment models. | A sound monitoring system with information per farmer and per cooperative can be linked to financial services providers and impact investors. This, in combination with a transparent credit market, may create the necessary trust and the basis for a longer-term finance.<br>Transparency would help eventually using carbon income as a guarantee for long term loans in agriculture. |

[15] See: : https://www.fairtrade.net/standard/climate