Grantham Research Institute on Climate Change and the Environment

Centre for Climate Change Economics and Policy

March 2023

The London School of Economics and Political Science

University of Leeds

The voluntary carbon market and sustainable development

Summary

- The voluntary carbon market (VCM) refers to the global trade in carbon credits that takes place outside the scope of legally mandated (compliance) instruments.
- The VCM is now at a critical juncture. Once fully formed, its new architecture and norms must create a legitimate and effective role for the VCM within the international climate policy framework.
- The VCM allows companies and other non-state actors to take action on emissions beyond decarbonising their own value chains to support the global transition to net zero and sustainable development. It can facilitate investments in nature and land-use change.
- The potential of the VCM in the sustainable transition is undermined by a lack of transparency in non-state actors' climate mitigation strategies, including whether their use of credits represents additional action, and uncertainty over the quality of credits themselves.
- Policy uncertainty towards carbon markets, capacity constraints in countries where financed activities take place and low carbon prices are barriers to beneficial activities receiving finance through the VCM.
- More clarification is needed on how the VCM can complement carbon market mechanisms created by Article 6 of the Paris Agreement.
- Forthcoming guidance from leading initiatives has the potential to support a positive paradigm shift for the VCM that includes a greater focus on contributions to climate mitigation and positive sustainable development impacts, rather than compensation for emissions.
- The guidance should also enable a radical improvement in transparency, which can contribute to efforts to evaluate impact, address integrity gaps and improve standards over time.
- Government strategies, laws and regulations should be used to support the VCM to channel finance to priorities not covered by other sources, and move towards wider governance of net zero.
- Indigenous Peoples, local communities, women and other frontline groups should be supported to participate fully in the development and implementation of programmes and projects issuing carbon credits.

Policy briefs provide analysis on topical issues, presenting specific recommendations to inform ongoing policy debates. Drawing on the Grantham Research Institute's expertise, they summarise either our research findings or the state of knowledge about a particular issue.

This policy brief was written by **Rob Macquarie**.

Potential benefits of the voluntary carbon market

The voluntary carbon market (VCM) can support the goals of the Paris Agreement and advance global sustainable development. To achieve this, the sale of carbon credits must finance real emissions reductions and removals, achieve co-benefits wherever possible, and not undermine companies' own decarbonisation efforts. If the VCM can address questions over its credibility, it could make two critical contributions to a sustainable transition: (i) pave the way to a net zero and sustainable economy; and (ii) help close finance gaps in sectors such as nature and land use that are critical to the transition.

Benefit: pathway to a net zero and sustainable economy

Most governments around the world have made commitments to achieving net zero greenhouse gas emissions, but many sectors are still not legally mandated to reduce emissions, nor are they subject to 'compliance' carbon pricing instruments. However, many companies are acting voluntarily to reduce their emissions in reaction to pressure from investors, consumers and civil society. Indeed, many companies and other non-state actors have set net zero targets, including at least one-third of the world's 2,000 largest publicly-traded companies (Net Zero Tracker, 2022).

By enabling non-state actors to support climate change mitigation activities beyond their value chains (provided they are reducing emissions from their own operations and suppliers), the VCM can help to internalise the social cost of their continued emissions. Best practice requires the wider social and environmental impacts of carbon credit purchases to be considered. Both dynamics facilitate the emergence of a system in which private actors take responsibility for the sustainable management of global public goods (Miltenberger et al., 2021).

Benefit: financing the sustainable transition

The VCM has the potential to provide modest but important financial flows to activities lacking sufficient support from other sources, particularly in emerging markets and developing economies. These include avoiding emissions and protecting existing carbon sinks in the near term and ramping up carbon removals by 2050. However, the VCM must not replace international public finance commitments, enable the continuation of high-emissions pathways in advanced economies, or entrench global inequity by constraining the economic development of host countries (those where the projects and programmes generating carbon credits take place).

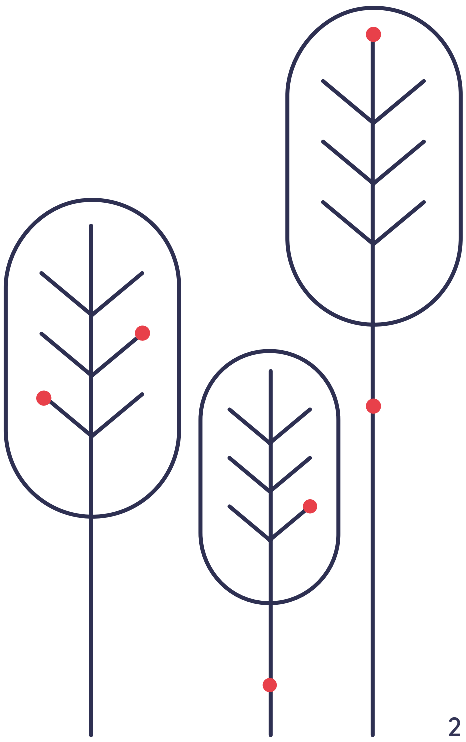
Nature-based solutions to climate change are a priority for financing the low-carbon transition. The land use sector receives a tiny share of global climate finance relative to its contribution to climate mitigation. Forests play a key role, but funding is currently less than 1% of what is needed to halt and reverse deforestation by 2030 (Forest Declaration Assessment Partners, 2022). Peatlands and coastal wetlands also require protection and restoration, and investment in regenerative agricultural solutions is a significant need in many countries (e.g. FOLU, 2022).

Nature-based solutions are also essential for the achievement of many of the Sustainable Development Goals (SDGs) beyond climate action, such as for good health, biodiversity and reduced inequalities. Lands belonging to Indigenous Peoples and local communities account for almost one-third of above-ground carbon stored in existing forests globally (WRI and Climate Focus, 2022), so supporting these groups is also vital.

Box 1. What is the VCM?

The voluntary carbon market (VCM) refers to the global trade in carbon credits that takes place outside the scope of legally mandated (compliance) instruments. Credits represent reductions or avoidance of ongoing greenhouse gas emissions, or removals of past emissions from the atmosphere.

The VCM allows companies and other non-state actors to invest in activities that reduce or remove carbon emissions beyond their own value chains to support the global transition to net zero emissions and sustainable development. Importantly, it facilitates investments in nature and land-use change as well as technological carbon removals.



Challenges for the VCM to overcome

For the VCM to succeed, two related issues must be resolved. First, market norms are in flux, with efforts to improve the VCM's integrity and enhance benefits to the climate still ongoing. Second, several factors complicate how the VCM should operate in the context of governments' responsibilities and voluntary cooperation under the Paris Agreement.

These sources of uncertainty need to be resolved to build credibility and foster buyers' confidence in the VCM. Average prices fell during 2022, and at less than US$10 per tonne of carbon dioxide equivalent (tCO2e), these need to increase for the market to work effectively. According to estimates, prices of $16 and $44/tCO2e are needed for 50% and 80% respectively of potential investments in nature-based solutions to be viable globally (Köberle et al., 2021).

Integrity and market design

The scale and impact of VCM activity will depend on supply and demand. Estimates suggest that VCM finance flows could reach $10–40 billion in 2030 (Trove Research, 2021) and between $25 billion and $1 trillion in 2050 (BNEF, 2023), depending on the types of credits used and whether quality tiers exist for available credits.

Credit issuance (supply) must be transparent and high quality. Despite existing certification methodologies and verification processes, the quality of many credits remains contested. The role of intermediaries in the market is also opaque and flows of money are extremely hard to track (AlliedOffsets, 2023). Consequently, fears of reputational and litigation risk have dampened demand.

While net zero targets dictate VCM demand in the long term, medium-term demand depends on non-state entities' willingness to invest in mitigation beyond their value chains, even as they progress along their own mitigation pathways. Improving transparency and confidence is essential for demand to grow fast enough to provide effective climate mitigation.

Companies' climate mitigation strategies currently lack transparency and accountability across the board, as emphasised by the UN High-Level

"While net zero targets dictate VCM demand in the long term, medium-term demand depends on non-state entities' willingness to invest in mitigation beyond their value chains."

Box 2. Integrity initiatives for the voluntary carbon market

In 2023, Integrity Council for the Voluntary Carbon Market (ICVCM) will release its Core Carbon Principles (CCPs): a threshold for high-quality carbon credits. To be eligible for credit issuance, project developers and programmes must meet several criteria, including on the robustness and additionality of emissions reductions, governance, independent verification, environmental and social safeguards and overall positive sustainable development impacts. Compliance is voluntary but the principles are expected to become a mark of credibility that will improve practices and information across credit supply.

The Claims Code of the Voluntary Carbon Markets Integrity Initiative (VCMI) will guide companies on making marketing claims based on their use of credits. The provisional code builds on the Net Zero Standard of the Science Based Targets initiative's (SBTi), which prohibits companies from using credits to meet interim targets on their 1.5°C-aligned pathway. However, the SBTi strongly recommends that companies that are on track to meet their targets should also support mitigation beyond their value chains, and is developing additional guidance. Both are expected to be released in 2023.

Expert Group on Net Zero Emissions Commitments of Non-State Entities. Enhancing integrity in the VCM requires clear and common standards and guidelines, as well as scrutiny from a wide range of stakeholders. Broad coalitions are working to define and encourage legitimate activity in the VCM. The most prominent are the Integrity Council for the Voluntary Carbon Market (ICVCM) on credit supply, and the Voluntary Carbon Markets Integrity Initiative (VCMI) and Science Based Targets initiative (SBTi) on credit demand (see Box 2 above). Other actors are building a supportive infrastructure for clear information so that market participants and observers can trust in the quality of credits and related claims.

"The Paris Agreement's rules and mechanisms form the context within which the VCM operates, even though the UN has no direct jurisdiction over voluntary action."

The Paris Agreement and the VCM

The Paris Agreement's rules and mechanisms form the context within which the VCM operates, even though the UN has no direct jurisdiction over voluntary action. Article 6.2 of the Agreement permits bilateral or plurilateral carbon trading arrangements between countries, and the Article 6.4 mechanism establishes a centralised marketplace. Non-state actors may purchase carbon credits through these mechanisms instead of the VCM.

Country governments must decide whether and how to permit the VCM to operate in their jurisdiction. Their capabilities include defining the legal status of credits and rights to generate, own and use them (Gold Standard and EY, 2022), tracking credits, and capturing revenues from credit sales. Some may take precautionary measures while they build capacity to manage carbon markets more broadly, including governance arrangements and the monitoring, reporting and verification (MRV) of outcomes – an approach that India and Indonesia have taken. Clear signals of regulatory intent are key to the supply of high-quality credits given that unpredictability harms confidence to invest.

The VCM should target key investment needs that the Article 6 mechanisms are unlikely to cover, especially while those mechanisms are being implemented. Investment needs depend on the context of each country as their emissions, economic interests and natural resource and land use vary.

Areas of continued uncertainty for the VCM include: which activities will be permitted under Article 6; unclear Nationally Determined Contributions (NDCs); and the role of corresponding adjustments (see Box 3) (Clifford Chance, 2022).

Box 3. Carbon markets and emissions accounting under the Paris Agreement

Authorising carbon credits for sale and transfer to a buyer through Article 6 requires a host government to make a 'corresponding adjustment' in its emissions inventory so that the represented change in emissions no longer counts towards its NDC. Voluntary credit suppliers may (but are not required to) seek authorisations, so must also choose whether to integrate with the Article 6 mechanisms.

The absence of a corresponding adjustment could imply that the government would have pursued the activity to achieve its NDC regardless of credits. However, an adjustment is no guarantee of overall 'additionality' (i.e. whether outcomes represent climate mitigation that would not have occurred anyway), which depends on a range of complex factors. Activities outside the scope of NDCs, and that close the gap in NDC implementation, may both be important to invest in. Decisions made at COP27 referred to non-authorised Article 6.4 credits (those without corresponding adjustments) as 'mitigation contribution' credits, which may set a precedent for the VCM to follow.

Paradigm shifts for a viable VCM

Two broad changes would help the VCM to carve out a new role in international climate action: first, a shift in the carbon neutrality claims made by buyers; and second, ensuring benefits for sustainable development.

Climate claims: from offsetting to contribution

Carbon credits are conventionally used to compensate for, or 'offset', buyers' residual emissions: purchasing companies make claims such as being 'carbon neutral' based on such credits. However, matching credits of uncertain quality to actual residual (unabated) emissions reflects faulty emissions accounting. Companies alternatively could claim to have made an overall contribution to securing a net zero economy by supporting outcomes elsewhere – such as the achievement of a country's NDC – without taking full responsibility for those outcomes (Schallert et al., 2020).

The language of contribution is arguably more suitable for near-term investments in avoided emissions, whether these are nature-based investments with multiple co-benefits or large-scale programmes (NCSA, 2023). Offsetting using more permanent carbon removals with robust MRV is less problematic in terms of the integrity of claims, and the market will shift in this direction over time: SBTi's Net Zero Standard requires that only removals are used to 'neutralise' residual emissions at the net zero target date.

The VCM's architecture and public policy should enable and require market participants to make high-integrity claims based on the purchase of carbon credits. Priorities include:

- **Claims guidance**. The forthcoming SBTi and VCMI guidance represents an opportunity to outline how to make and assess different kinds of claims. Normalising contribution claims backed up with robust disclosure could significantly reduce barriers to demand for credits. However, many companies still see value in the offsetting approach (Systemiq, 2021). Guidance could highlight conditions that credits or purchasing strategies should meet to support these claims.
- **Information infrastructure**. Registries track credit ownership and prevent double counting. The ICVCM CCP benchmark, scoring tools (such as the Carbon Credit Quality Initiative) and carbon credit ratings agencies will enable stakeholders to identify high-quality credits and evaluate buyers' contributions more easily. Improved analytical tools can also enable buyers to purchase and mix multiple credits to match residual emissions with greater integrity.
- **Legislation and regulation**. Consumer rights and fair competition laws will drive increasing litigation and extra-judicial action against climate claims not backed up with sufficient information (Kreibich et al., 2022). Disclosure requirements should ensure that credit purchases are reported consistently and comprehensively so that they are compatible with financial decision-making (including tools used to compile environmental, social and governance [ESG] data). Information to disclose would include: the country, year and sector in which the activity took place; the type of credit; the reason that credits are retired; verified SDG impacts; whether credits are authorised under Article 6; and registry IDs.

Photo: Kate Evans/CIFOR

Ensuring benefits for sustainable development

The VCM is an instrument of a global financing strategy for sustainable development (Songwe et al., 2022). The text of Article 6 emphasises this objective, and recent decisions by the Article 6.4 Supervisory Body require the use of a 'tool' to assess sustainable development impacts. Several supporting actions would enable the VCM to have positive impacts on SDGs. These should reflect the principles of whole-systems governance, complete transparency and inclusive participation (Florini and LaForge, 2022). Three priority considerations are:

- **SDG impact evaluation**. Although safeguards to avoid social and environmental harms and measures to report positive SDG impacts are patchy, market participants often claim that credits contribute to action on the SDGs (BeZero Carbon, 2022). ICVCM could raise the bar and align with Article 6 by requiring programmes and projects to incorporate SDG impact measurement and management to issue CCP-eligible credits. VCMI and SBTi could also highlight best practice for scrutinising buyers' claims to promote non-climate benefits. Standardisation of activity-level reporting and market-wide training will be needed for practitioners to measure impacts and use appropriate data sources.
- **Empowerment**. Strengthened representation of women, Indigenous Peoples and other affected communities in VCM projects and programmes, and in market governance, is key to highlight social impacts such as local employment, access to resources and gender equity (e.g., Phillips and Jenkins, 2022). Methodologies, engagement models, safeguards and tools to measure overall development impacts must be updated accordingly. Intermediaries facilitating VCM trading should also require projects and programmes generating credits to be transparent over how revenues and other benefits are shared and to have processes for the independent management of grievances
- **Jurisdictional activities**. Carrying out programmes across an entire country or subnational region is a way to significantly scale up finance, enable a wider range of stakeholders to participate, and generate supportive policy change (Sylvera, 2023). The Tropical Forest Credit Integrity Guide strongly endorses buying forestry credits from such programmes. However, the future of jurisdictional standards in the VCM is uncertain given outstanding decisions on which activities are eligible for Article 6, although host countries may use them to meet NDCs. Clear methodologies and guidance on their use in claims are needed to evaluate these programmes, including their SDG impacts and procedural fairness.


Photo: Kiran Panday/ Asian Development Bank

Recommendations

Policymakers, civil society, and private actors can drive positive change in the voluntary carbon market through the five following actions:

1. **Leading voluntary initiatives, chiefly the ICVCM, VCMI and the SBTi, should develop clear, consistent and workable guidance that reconfigures the VCM and promotes integrated contributions to both climate mitigation and sustainable development.** They should then engage with policymakers to reinforce this through supportive laws and regulations.
2. **Civil society organisations, academic researchers and firms providing data, verification and quality ratings should collaborate on improving market transparency.** Public interest groups and market stakeholders should produce assessments of climate and SDG impacts that are robust and credible, benefiting from improved disclosure triggered by new guidance and dedicated forums for affected communities.
3. **Financial regulators and advertising regulators should create joint working groups on climate claims and carbon credits.** These should fulfil their own obligations for the protection of consumers and investors and for maintaining fair and transparent markets. Such groups should consider inputs including guidance from ICVCM, VCMI, SBTi and the collaborative structures suggested in the preceding point.
4. **Governments in host countries should define national strategies to access carbon markets.** Embedded in wider Article 6 strategies, policymakers should consider how to direct funding from the VCM to where it can make the biggest difference to the country's climate action – whether this is to programmes and projects that will be counted towards their NDC or to activities outside of the NDC.
5. **International donors, development finance institutions (DFIs) and institutional investors should directly support Indigenous Peoples, local communities and women (including farmers and collectives).** These groups need support to design and implement crediting programmes and projects and to advocate for fair benefit-sharing arrangements. Processes and requirements for receiving finance and technical assistance must be accessible to groups that have limited capacity.

“Policymakers can harness the VCM to accelerate progress towards a net zero economy and support sustainable development.”

Looking ahead

Policymakers can harness the VCM to accelerate progress towards a net zero economy and support sustainable development. This will require innovation, strong governance and robust infrastructure for full transparency around emissions and development impacts. The next steps are pivotal: leading voluntary initiatives must generate traction and be reinforced by a revolution in market practice. Without a significant shift in how private actors take wider responsibility for global public goods, including action on climate change, the future of the VCM – and the sustainable transition – may be in jeopardy.

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The author is grateful for helpful feedback on a draft of this report from Ben Filewod, Kate Higham, and Leo Mercer (Grantham Research Institute), Alex Hanafi (Environmental Defense Fund), and Morten Rossé (SYSTEMIQ). Thanks also go to Scarlett Benson, Giulia Carbone, Ronan Carr, Thiago Chagas, Sebastien Cross, James Davis, Santiago García Lloré, Elizabeth Hoyler, Mark Kenber, Finn O'Muircheartaigh, Ben Rattenbury, Hugh Salway, Kirsty Schneeberger, Steve Schwartzman, Polly Thompson, and Vikram Widge for sharing their views on the VCM and its challenges and opportunities.

Natalie Pearson edited and produced this policy briefing report, with additional editing by Georgina Kyriacou.

The author acknowledges support from the Grantham Foundation for the Protection of the Environment and the UK Economic and Social Research Council (ESRC) through the Centre for Climate Change Economics and Policy (CCCEP).

The views expressed in this brief represent those of the author and do not necessarily represent those of the host institutions or funders.

The author held a temporary position as Research Associate at the Integrity Council for the Voluntary Carbon Market during Q1-Q2 2022. No support was received from any organisation for the submitted work, nor have any financial relationships been established with organisations that might have an interest in the submitted work in the previous three years.

Suggested citation: Macquarie, R (2023) *Sustainable development and the voluntary carbon market*. London: Grantham Research Institute on Climate Change and the Environment, London School of Economics.