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UNIVERSITY OF SUSSEX | CSC CENTRE FOR THE STUDY OF CORRUPTION

ACE GOVERNANCE & INTEGRITY
Anti-Corruption Evidence Research Programme

Emerging Insights

Scoping Corruption in Voluntary Carbon Markets

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July 2025

ACKNOWLEDGEMENTS

This research is part of the Governance & Integrity Anti-Corruption Evidence (GI ACE) programme, which generates actionable evidence that policymakers, practitioners and advocates can use to design and implement more effective anti-corruption initiatives. This GI ACE project is funded by UK International Development. The views expressed in this report do not necessarily reflect the UK Government's official policies.

The authors would like to thank the individuals who dedicated their time and expertise to reviewing and editing this paper, including internal and external peer reviewers, the RUSI Publications team, and those who participated in research.

EXECUTIVE SUMMARY

Allegations of weak oversight, fraud and corruption in voluntary carbon markets (VCMs) have caused substantial market uncertainty. VCMs involve the generation and trading of carbon offsets, derived from activities that reduce or remove greenhouse gas emissions. These markets are expected to play an important role in helping countries to meet net zero targets while also channelling finance to environmental preservation.

In the early 2020s, VCMs experienced considerable growth as demand grew from companies seeking to offset their carbon footprint. However, some offsetting claims were overstated, and the media and NGOs reported on high-profile cases of corruption and fraud. Together, these have damaged the market's reputation and contributed to a perception of widespread corruption in VCMs. Demand has subsequently tumbled, causing carbon credit prices to collapse.

Despite public perceptions that corruption is prevalent, there has, to date, been no systematic analysis of corruption risks in VCMs, and empirical evidence remains scarce. There is limited understanding of the full extent of corruption in VCMs – and whether the risk is greater than in other markets – as well as how corruption manifests in practice and which market deficiencies facilitate it. This lack of insight threatens to derail efforts to effectively scale the market.

This paper starts to address this knowledge gap by providing an initial scoping review of the structural and operational features of VCMs that expose them to corruption risk. It finds that market volatility creates the conditions for corruption. During boom periods, characteristics such as the intangibility of carbon credits, difficulties of measuring real emission reductions and the monetisation of emerging sectors attract opportunistic actors. Conversely, busts can depress prices, weakening due diligence checks and incentivising project developers to behave fraudulently.

Deficiencies in the validation and verification processes – such as limited know your client and anti-money laundering controls – along with potential conflicts of interest limit the ability of VCMs to prevent corruption amid these market fluctuations, particularly in high-risk environments. Regulatory ambiguity further compounds these vulnerabilities, creating uncertainty over who is responsible for conducting these checks.

This paper outlines the current state of the market and its preparedness to meet corruption risk, while also identifying evidence gaps to be explored in more depth in two subsequent research papers. The ultimate aim is to inform practical solutions to enhance market integrity and restore confidence in VCMs.

INTRODUCTION

VCMs – where the rights to reductions or removals of greenhouse gas emissions are bought and sold – were designed to support climate change mitigation. However, they have faced growing scrutiny following allegations of weak oversight, fraud and corruption. Following a boom in the early 2020s, the market has fallen flat. High-profile cases of corruption and investigations alleging that the climate benefits of some carbon credits were overstated have damaged market confidence. These difficulties, along with economic headwinds and restrictions on the claims that can be made based on the acquisition of credits, caused demand to tumble and prices to collapse.

The value of voluntary carbon credits (VCCs) relies on public confidence that they represent real, measurable reductions or removals of greenhouse gas emissions. However, measuring emissions reductions and removals has proven challenging, given there are no physical goods that can be inspected. A VCC has no value in its own right, such as a non-fungible token might. This intangibility has raised concerns over fraud,[1] particularly as many projects are located in countries with weak governance, increasing the risk of corruption and exploitation.[2] The absence of targeted regulation and weak market infrastructure has led to fears that VCMs could be used for money laundering.[3] Demand for VCCs for corporate social responsibility or to meet national emissions targets increases the importance of the perceived integrity of the market to the value of credits.

1. International Bank for Reconstruction and Development, 'Governance of Emissions Trading Systems', 2022, <https://icapcarbonaction.com/system/files/document/governance-of-ets_paper_march_2022_0.pdf>, accessed 30 May 2025.
2. Tiffanie Chan et al., 'Corruption and Integrity Risks in Climate Solutions: An Emerging Global Challenge', Grantham Research Institute on Climate Change and the Environment, October 2023, <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2023/10/Corruption-and-integrity-risks-in-climate-solutions.pdf>, accessed 30 May 2025.
3. *Ibid.*

Understanding and limiting corruption risk is therefore critical to ensuring markets for VCCs can function, particularly as carbon markets become increasingly important for fulfilling the 'net' function of net zero in coming years: the reductions in emissions required to offset residual emissions will be accounted and priced in terms of credits. VCMs trade credits produced by projects ('project-based credits'), the role of which is expanding, changing corruption risk. A growing number of compliance and industry offset schemes depend on the VCM architecture, including measures taken to mitigate corruption risk. The operationalisation of Article 6 of the Paris Agreement at COP29 in 2024,[4] which will allow countries to use credits purchased internationally to meet their national emissions targets, will increase demand for project-based credits and involve governments more directly in the market.

NGO and media reporting of VCM scandals creates the impression that corruption is widespread, but lack of empirical evidence makes it impossible to state with confidence whether corruption is more or less of a risk in VCMs than other markets with a large footprint in challenging environments. There are reported incidences of VCCs being found to be of questionable quality[5] and fraudulent.[6] However, research for this paper identified only three convictions involving bribery or money laundering relating to a VCM project.[7] Allegations of bribery and money laundering are also relatively uncommon, when compared with accusations of fraud or poor quality projects. Interviews conducted for this paper revealed that industry stakeholders had mixed experiences regarding to what extent they had encountered corruption.

4. COP29, 'COP29 Achieves Full Operationalisation of Article 6 of Paris Agreement - Unlocks International Carbon Markets', 23 November 2024, <https://cop29.az/en/media-hub/news/cop29-achieves-full-operationalisation-of-article-6-of-paris-agreement-unlocks-international-carbon-markets>, accessed 2 July 2025.
5. See, for example, Greenpeace, 'Shell's Scandal in China Highlights the Greenwashing and Climate Risks of Carbon Offset Credits', 13 April 2023, <https://www.greenpeace.org/eastasia/blog/7910/shells-scandal-in-china-highlights-the-greenwashing-and-climate-risks-of-carbon-offset-credits/>, accessed 3 April 2025.
6. See, for example, Jason Pan, 'Couple Convicted for Carbon Credits Scam', *Taipei Times*, 26 August 2022, <https://www.taipeitimes.com/News/taiwan/archives/2022/08/26/2003784196>, accessed 3 April 2025; England and Wales Court of Appeal (Criminal Division) Decisions, 'Byrne & Ors v R (Rev 1)', 3 February 2021, <https://www.bailii.org/cgi-bin/markup.cgi?doc=ew/cases/EWCA/Crim/2021/107.html>, accessed 3 April 2025.
7. A review of the 91 cases since January 2020 returned by a search for 'carbon credit' within the World Legal Information Institute case law databases found only two cases involving money laundering convictions: one case where a carbon credit project may have played a minor role in a drugs operation; and one for corruption (using a public position for theft), where carbon credits did not play a meaningful role. Many more cases of fraud were found. An identical search of the South African Legal Information Institute databases revealed only six cases, none of which alleged criminality relating to carbon credits.

To date, there has been no systematic analysis of corruption risks in VCMs. Research has focused on particularly challenging parts of the market, such as REDD+ projects (reducing emissions from deforestation and forest degradation in developing countries and sustainable management and conservation of forests),[8] or been subsumed into wider discussions on integrity, which include environmental and social best practice and thorny methodological issues such as 'additionality'.[9] VCMs have been addressed in research into corruption in larger emissions trading schemes,[10] but these markets are structurally different from VCMs and the challenges are therefore distinct. Regulators and agencies such as the US's Commodity Futures Trading Commission (CFTC) and the Securities and Exchange Commission (SEC) are paying closer attention to VCMs, but with a broader focus.[11]

This is the first of three papers in RUSI's project Interrogating Corruption Risk in Voluntary Carbon Markets, which aims to fill a gap in the literature by addressing the following research questions:

- Is corruption more prevalent in VCMs than in other transnational markets?
- What features of VCMs are associated with corruption risk?
- What measures might be taken to reduce corruption risk and increase confidence in the market?

This paper provides an initial scoping review of the structural and operational features of VCMs that expose the market to corruption risk, by examining existing literature on corruption in VCMs to date and hypothesising market features that might help or hinder stakeholder efforts to mitigate corruption risks. Subsequent papers will build an evidence base to establish whether there are, in fact, associations between market features and corruption.

The paper has five sections. The first section outlines the structure of VCMs, including the VCC supply chain, and examines how this might create or prevent opportunities for corruption. The second section analyses the geographical and industrial composition of VCM projects and implications for corruption risk. The third section assesses changing market dynamics

8. Aled Williams, Kendra Dupuy and Fiona Downs, 'REDD Integrity: An Evidence Based Approach to Anti-Corruption in REDD+', Christian Michelsen Institute, U4, Issue No. 7, March 2015, <https://www.cmi.no/publications/5419-redd-integrity-an-evidence-based-approach-to-anti>, accessed 3 March 2025.
9. The purpose of the market is to create revenue streams for projects to remove or reduce emissions that would not otherwise have gone ahead – a concept known as 'additionality' – which is often a source of controversy.
10. Interpol, 'Guide to Carbon Trading Crime', June 2013, <https://globalinitiative.net/wp-content/uploads/2017/12/EUROPOL-Guide-to-Carbon-Trading-Crime-2013.pdf>, accessed 1 April 2025.
11. International Organization of Securities Commissions (IOSCO), 'Voluntary Carbon Markets', November 2024, <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD774.pdf>, accessed 1 April 2025.

and their impact on corruption risk. The fourth and fifth sections explore prominent corruption cases and assess how the market characteristics of VCMs both potentially create fertile ground for corruption and fail to effectively manage corruption risk in high-risk operating environments. The conclusion proposes directions for future research.

METHODOLOGY

Research for this paper began with a literature review of academic, industry, NGO and media reports published between 2009 and 2024. This identified a notable evidence gap on the prevalence of corruption in VCMs and the conditions that enable it. Data from VCM registries was analysed to supplement these findings. The project's advisory board – private sector, NGO and academic professionals – validated these findings in October 2024. The desk-based research was supplemented by seven interviews with industry stakeholders and academics specialising in VCMs and corruption that were conducted between December 2024 and February 2025.

DEFINITIONS AND SCOPE

VCMs are largely unregulated, making their legal definition ambiguous. Interviewees differed on the definition of the voluntary market, with one disputing the relevance of the term.[12] The literature uses various definitions of VCMs. Perhaps the most common definition defines VCMs as the voluntary purchase of credits outside formal regulation.[13] This paper extends the definition to include credits which are generated by projects traded under Article 6 of the Paris Agreement or in compliance or quasi-compliance markets, on the basis that these credits experience similar challenges mitigating corruption risk.

'Corruption' is also challenging to define. This paper uses the *Dictionary of Corruption* definition: 'The abuse of **entrusted power** for **private gain** which harms the **public interest**, typically breaching laws, regulations, and/or **integrity** standards'.[14]

The definition implies a public nature to corruption through the emphasis on 'entrusted power' and the 'public interest'. The definition does not require

12. Author interview with an official at an exchange, online, 27 January 2025.
13. Peter Newell and Matthew Paterson, *Climate Capitalism: Global Warming and the Transformation of the Global Economy* (Cambridge: Cambridge University Press, 2010); Anja Kollmuss, Helge Zink and Clifford Polycarp, 'Making Sense of the Voluntary Carbon Market: A Comparison of Carbon Offset Standards', WWF Germany, Stockholm Environment Institute and Tricorona, March 2008, <https://www.sei.org/mediamanager/documents/Publications/SEI-Report-WWF-ComparisonCarbonOffset-08.pdf>, accessed 22 May 2025; author interview with the chief executive of VCC project developer, online, 13 January 2025.
14. Robert Barrington, Elizabeth David-Barrett and Rebecca Dobson-Phillips (eds), *Dictionary of Corruption* (Newcastle upon Tyne: Agenda Publishing Limited, 2024), p. 88. Emphasis in original.

that an action is illegal for it to be corrupt. It may, for example, involve the abuse of entrusted power which violates ethical or environmental standards – its 'integrity' – for private gain. This definition does have scope for interpretation. The paper does not examine fraud per se, except to illustrate risk or where fraud is part of wider corruption. Corruption in regulated emissions trading schemes – that does not directly relate to certified credits produced by projects – is not covered here.

RUSI's Interrogating Corruption Risk in Voluntary Carbon Markets project only considers credit production in countries eligible to receive official development assistance (ODA).[15]

MARKET STRUCTURE

Understanding corruption risk in VCMs, as in other markets, requires a holistic approach that accounts for the interaction of market drivers and the local context of projects. This section outlines how credits are created, sold and retired and identifies structural features that might drive or mitigate corruption risk.

A CARBON CREDIT

VCCs are defined as 'digital assets' which 'represent a verified emission reduction or removal'.[16] One VCC represents 1 tonne of CO_2 equivalent removed from the atmosphere, for example, through carbon sequestration, (or avoided – for example, through renewable energy generation) – which is validated through a process determining adherence to a set of methodological standards held by private registries or, in some cases, public bodies. The purpose of the market is to create revenue streams for projects to remove or reduce emissions that would not otherwise have gone ahead – a concept known as 'additionality', which is often a source of controversy.[17]

Rights associated with the production, ownership and use of carbon credits (for example, for sale in VCMs and transfer under Article 6) differ depending on jurisdiction.[18] Legal and regulatory uncertainty in many countries can

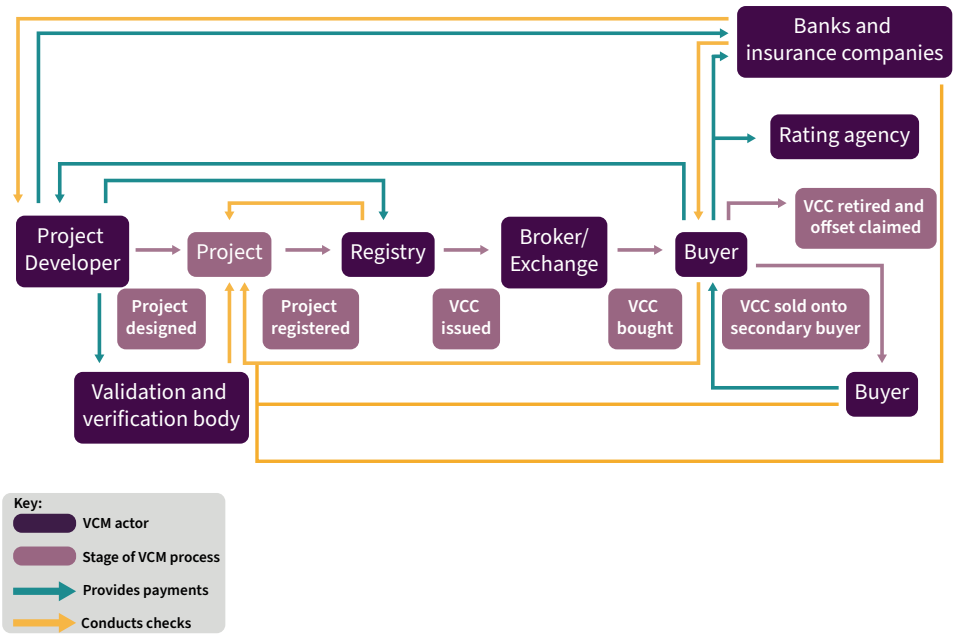
15. A list of ODA eligible countries is available at OECD, 'ODA Recipients: Countries, Territories, and International Organisations', <https://www.oecd.org/en/topics/sub-issues/oda-eligibility-and-conditions/dac-list-of-oda-recipients.html>, accessed 1 April 2025.
16. Gold Standard Foundation and EY Law, 'Carbon Credit Rights Under the Paris Agreement', November 2022, <https://goldstandard.org/sites/default/files/documents/carbon_credit_rights_under_the_paris_agreement_november_2022.pdf>, accessed 15 January 2025.
17. Annalise Downey, 'Additionality Explained', Sylvera, 27 November 2022, <https://www.sylvera.com/blog/additionality-carbon-offsets>, accessed 11 February 2025.
18. IOSCO, 'Voluntary Carbon Markets', p. 29; Gold Standard Foundation and EY Law, 'Carbon Credit Rights Under the Paris Agreement'.

weaken oversight and affect recourse for buyers and communities impacted by corrupt projects. However, the absence of public bodies from the process until recently may also have reduced opportunities for corruption.

STAKEHOLDERS AND LIFECYCLE

As a 'digital asset' typically purchased for environmental or corporate social reasons, it is important that there is confidence that the projects producing VCCs are driving a physical change in emissions. Concerns over integrity therefore have the potential to undermine VCC value to a greater extent than for a commodity or a financial product. However, corruption does not end with credit production and is also possible in the trading and retirement of credits.

Figure 1: Lifecycle of a VCC



Source: The authors.

The production process begins with a project developer, generally an NGO or private company, which identifies an opportunity to generate emissions reductions or removals, selects an appropriate registry standard, draws up technical plans to comply with the standard, and secures rights to develop the project and sell the resulting VCCs.

Project development of any sort can be exposed to corruption risk, particularly in jurisdictions with political instability and weak governance, where there may be issues such as contested land tenure, community rights and resettlement, solicitation of bribes during permitting, poor environmental management and involvement of politically exposed persons.

Banks may be involved in financing the project, or the credit purchase. However, insurers have been much less visible and currently provide cover to only a very small portion of the market, although the formalisation of parts of the carbon credit market is attracting more insurers and financing, adding another layer of due diligence. Furthermore, schemes such as Article 6 and the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) require insurance protection against double claiming, increasing the number of projects subject to due diligence.[19]

Regulatory treatment varies, with some regulators treating VCMs as charitable activities and others as financial markets or intangible goods.[20] This limits oversight in some markets, although it also reduces the scope for the corruption of public officials. Countries such as Colombia have enacted regulatory frameworks specific to VCMs[21] – this is expected to become more common as new market opportunities arrive.

The major registries maintain methodologies for calculating the number of credits a project can register as well as registries of credits that have been issued. The registries also set procedures for project validation and credit verification and maintain lists of companies approved to undertake validation and verification for projects wanting to be listed on their registries – these are known as validation and verification bodies (VVBs).

The American Carbon Registry (ACR), the Climate Action Reserve (CAR), Gold Standard (GS) and Verra (VCS) account for 'almost all' of the world's carbon offset projects.[22] Of these, only Gold Standard and Verra – the largest registry – register projects in countries eligible for ODA and so are the focus of this paper.

19. Ecosystem Restoration Standard, 'Avoiding Double Claiming', 5 July 2024, <https://docs.ers.org/avoiding-double-claiming-v1.1.pdf>, accessed 27 May 2025.
20. Author interview with VCC project developer chief executive, online, 13 January 2025; Gold Standard Foundation and EY Law, 'Carbon Credit Rights Under the Paris Agreement'.
21. Gold Standard Foundation and EY Law, 'Carbon Credit Rights Under the Paris Agreement', p. 15.
22. Barbara K Haya et al., 'Voluntary Registry Offsets Database v11', Berkeley Carbon Trading Project, University of California, March 2024, <https://gspp.berkeley.edu/faculty-and-impact/centers/cepp/projects/berkeley-carbon-trading-project/offsets-database>, accessed 2 February 2025.

Data sharing between registries is limited and market digital infrastructures can be basic, historically relying on Excel documents. Cross-debarring of developers or VVBs, common in development finance, does not occur. While there have been discussions on such initiatives, there are ongoing concerns about data privacy and legal exposure.[23] Blockchain has been proposed as a solution – with the World Bank Group supporting the technology to avoid double counting – but is only used by a handful of exchanges and none of the major registries.[24] More generally, there is a clear need for more investment in more robust digital systems and suspicious activity monitoring.

When a developer wants to register a project, they must first validate that the project design is technically compliant with the relevant registry standard. Notably, this includes a baseline against which emissions reductions are measured (for example, surveys, sensor data and satellite imagery). Additionally, registries require checks on compliance with local laws and regulations and that 'no local stakeholders experience negative repercussions because of the project'.[25] This is carried out by a VVB.

The validation process might create corruption risk. One interviewee cited the issue of corrupt VVBs underestimating baselines to secure more credits, particularly during the 2000s.[26] There is limited ongoing monitoring of VVB performance, with Verra the only registry to establish a formal monitoring programme. Interviewees stated that performance was variable and quality has been impacted by falling fees.[27]

Registries require identification information for developers to open registry accounts and may require further information as part of an internally run know-your-client (KYC) process involving background checks.[28]

23. Author interview with registry official, online, 22 January 2025.
24. Lucas Belenky, 'Carbon Markets: Why Digitization Will be Key to Success', World Bank, 16 August 2022, <https://blogs.worldbank.org/en/climatechange/carbon-markets-why-digitization-will-be-key-success>, accessed 3 March 2025; Joe Lo, 'World Bank Backs Carbon Credit Blockchain Registry to Attract Crypto Investors', *Climate Home News*, 19 August 2022, <https://www.climatechangenews.com/2022/08/19/world-bank-launches-carbon-credit-blockchain-registry-to-attract-crypto-investors/>, accessed 3 March 2025.
25. Verra, 'Verified Carbon Standard', <https://verra.org/programs/verified-carbon-standard/#how-it-works>, accessed 17 February 2025.
26. Author interview with insurance company officials, online, 17 February 2025.
27. Author interview with registry official, online, 22 January 2025; author interview with VCC project developer chief executive, online, 13 January 2025.
28. Verra, 'Terms of Use: Verra Registry', October 2024, p. 5, <https://verra.org/wp-content/uploads/2024/10/Verra-Registry-TOU-October-2024.pdf>, accessed 17 February 2025.

KYC checks appear to be run by small teams within the registries and do not typically use specialist independent providers.[29] The quality of investigations may vary.

While lack of transparency has been flagged as a risk factor for VCMs,[30] several interviewees argued that VCMs have become more transparent over time and are now more transparent than many other markets.[31] Information on project methodology and location are publicly available. However, information on stakeholders, financing, pricing and chain of custody are not published as standard. This might be contrasted, for example, with multilateral development finance institutions. Such institutions often publicly release information on the ownership and financing of projects with which they are involved.[32]

Once a project has been validated by an authorised VVB, emissions reductions are verified using a variety of methods. Monitoring is typically conducted by the developer and audited – 'verified' – by the VVB, which checks that the methodology has been correctly applied. At this point, verified VCCs are issued and listed in the registry.

Incidences of fraud or alleged fraud have been reported in verification, most recently in the high-profile C-Quest investigation by the CFTC and SEC (discussed in 'Creating New Opportunities for Corruption').[33] Corruption is similarly a risk, such as bribery of VVBs or other stakeholders.

29. Author interview with registry official, online, 22 January 2025.
30. Trishant Dev, 'Discredited: The Voluntary Carbon Market in India: Do People and Climate Benefit?', Centre for Science and Environment, 2023, <https://www.cseindia.org/discredited-the-voluntary-carbon-market-in-india-11885>, accessed 23 June 2025.
31. Author interview with insurance company officials, online, 17 February 2025; author interview with chief executive of VCC project developer, online, 13 January 2025; Oliver Miltenberger, Christophe Jospe and James Pittman, 'The Good is Never Perfect: Why the Current Flaws of Voluntary Carbon Markets are Services, Not Barriers to Successful Climate Change Action', *Frontiers in Climate* (Vol. 3, 2021).
32. See, for example, World Bank, 'Project Appraisal Document: Nachtigal Hydropower Project', Report No. 122876-CM, 22 June 2018, <https://documents1.worldbank.org/curated/en/677811532921465831/pdf/Nachtigal-PAD-final-clean-mark-up-para-105-002-07242018.pdf>, accessed 6 March 2025.
33. SEC, 'C-Quest Admits to $250 Million Offering Fraud', 2 October 2024, <https://www.sec.gov/enforcement-litigation/administrative-proceedings/33-11315-s>, accessed 17 February 2025; SEC, 'Order Instituting Cease-And-Desist Proceedings', Release No. 11315, 2 October 2024, <https://www.sec.gov/files/litigation/admin/2024/33-11315.pdf>, accessed 17 February 2025.

Certified credits may have been presold through an offtake agreement or might be traded in the spot market bilaterally, via an auction or request for proposal process, an intermediary (including unregulated digital platforms) or using futures on a regulated exchange. The buyer may choose to retire the credit, allowing it to take financial responsibility for its physical emissions, make an offset claim or sell the credit on. Brokers play an important role connecting buyers and sellers for bilateral trades and in price setting. Most unregulated digital platforms – where certified emissions reductions can be traded – are small-scale with limited infrastructure. There is a growing role for larger regulated futures exchanges. One such example is the Intercontinental Exchange, which lists futures for carbon credits issued by government and private carbon crediting programmes – including for the airline sector programme CORSIA – alongside carbon allowances and energy attribute certificates.

Recording transactions and ownership of credits has historically been a challenge for VCMs. They are hampered by limited market infrastructure that does not have the same level of security as that used for financial or energy markets, for example.[34] This makes VCCs a potential vehicle for money laundering and bribery.

There is a range of buyers of project-based carbon credits. In voluntary markets, buyers include intermediaries, companies, universities, NGOs and individuals. A substantial premium is paid by end-users compared with intermediaries: 33% in 2024.[35] Intermediaries are unsurprisingly more price sensitive than end-users and may, in some cases, have incentives to collude with corrupt projects.

The lack of benchmark prices, combined with the lack of standardised contracts and a fragmented market with limited infrastructure, makes monitoring suspicious transactions more challenging. New markets have the potential to create benchmarks but may also undermine the premium that higher-quality projects are currently able to charge.

End-user purchases have often been driven by the availability of discretionary budgets – such as during periods of economic growth – and the prevalence of net zero commitments made by companies.[36] Reputational damage is a concern, but some buyers, particularly smaller buyers, have limited incentive to carry out additional checks on credits to protect against corruption. This

34. Author interview with insurance company officials, online, 17 February 2025.
35. Alex Procton, 'State of the Voluntary Carbon Market 2024: On the Path to Maturity', Ecosystem Marketplace, 2024, <https://www.ecosystemmarketplace.com/publications/2024-state-of-the-voluntary-carbon-markets-sovcm/>, accessed 3 April 2025.
36. Author interview with VCC project developer chief executive, online, 13 January 2025; author interview with industry association lawyer, online, 4 February 2025; author interview with insurance company officials, online, 17 February 2025.

'charitable' dimension of credit investing appears to be a driver for corporate buyers investing in credits produced in countries where they would not normally do business, exacerbating corruption risk.[37]

Buyers often conduct their own due diligence on projects to manage reputational risk, with particular interest in social and environmental safeguards, carbon accounting and project developer integrity. Buyers use rating agencies such as Sylvera and BeZero to fill information gaps, particularly where technical expertise is required.[38]

> The market has, to date, operated on a largely 'buyer beware' basis. Buyers have few options for recourse to reclaim losses from corrupt projects, particularly in countries where the judicial system can be unpredictable. Lack of standardisation in contracts can leave some buyers lacking protection against corruption and reputational damage, and enforcing contracts can be challenging.

New buyers are entering the market, purchasing credits as part of compliance or industry schemes. These buyers are typically less concerned with the source of the credits, instead buying as a commodity for business purposes. This shifts the anti-corruption onus away from the buyer towards the standard setters, governments and insurers, changing the dynamic in a market that has relied heavily on buyer precautions.

VCM fragmentation hinders industry self-policing. This puts pressure on registries as the only actors that might be described as structurally central. The registries have been reluctant to take on a more formal policing role and, as discussed, current efforts are hampered by lack of data sharing between registries to allow cross-debarment. Verra does publish rejection letters for projects which do not meet quality control standards, but their deterrent value is unclear.[39] Limited self-policing therefore leaves stakeholders vulnerable to corruption where governance is weak.

37. Author interview with academic, online, 22 January 2025; author interview with industry association lawyer, online, 4 February 2025.
38. Kelley Hamrick and Kim Myers, 'Offsets as Ordered: Buyer Due Diligence to Ensure Carbon Credit Quality', Nature Conservancy, February 2023, <https://www.nature.org/content/dam/tnc/nature/en/documents/Offsets_as_Ordered_Buyer_Due_Diligence_to_Ensure_Credit_Quality.pdf>, accessed 23 June 2025.
39. Verra, 'Verra Rejects China Rice Cultivation Projects, Sanctions Auditing Firms and Project Proponents', 28 August 2025, <https://verra.org/verra-rejects-china-rice-cultivation-projects-sanctions-auditing-firms-and-project-proponents/>, accessed 1 April 2025.

ANATOMY OF THE MARKET

Table 1: Share of VCCs Issued by Major Carbon Offset Standards, as of May 2024

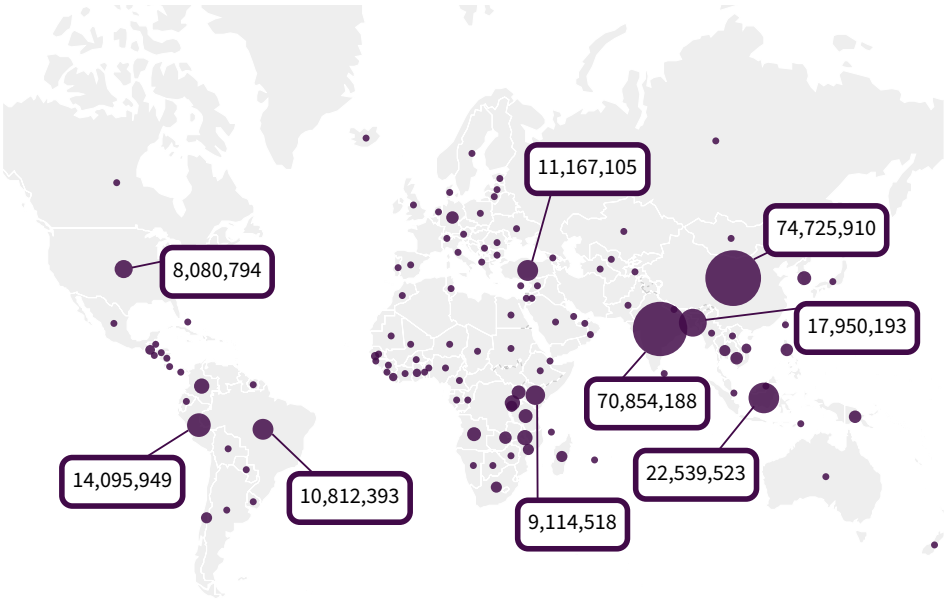
Carbon offset Standard	Name of VCCs Issued	Number of Projects	Share of Projects	Number of VCCs Issued	Share of VCCs Issued
Verra (VCS)	Verified Carbon Units (VCUs)	4,138	45.5%	1,290,566,461	63.2%
Gold Standard (GS)	Verified Emissions Reductions (VERs)	3,308	36.4%	322,389,039	15.8%
Climate Action Reserve (CAR)	Climate Reserve Tonnes (CRTs)	904	9.9%	184,741,252	9.0%
American Carbon Registry (ACR)	Emission Reduction Tonnes (ERTs)	739	8.1%	244,979,604	12.0%

Note: Share (%) equates to share of projects verified and VCCs issued by the four major carbon offset standards, rather than all VCCs issued to date. VCCs issued by other registries are not accounted for in the database.

Source: Barbara K Haya et al., 'Voluntary Registry Offsets Database v11'.

The location of projects and type of projects producing credits strongly influence how corruption is likely to operate. Verra and Gold Standard account for the largest number of projects and Verra dominates credit issuance. Both registries are based in developing countries, reflecting the origins of VCMs in the UN's Clean Development Mechanism, which aimed to create new revenue streams for climate change mitigation outside developed economies.

Figure 2: Estimated Annual Credit Production from Projects Registered by Verra, as of May 2024



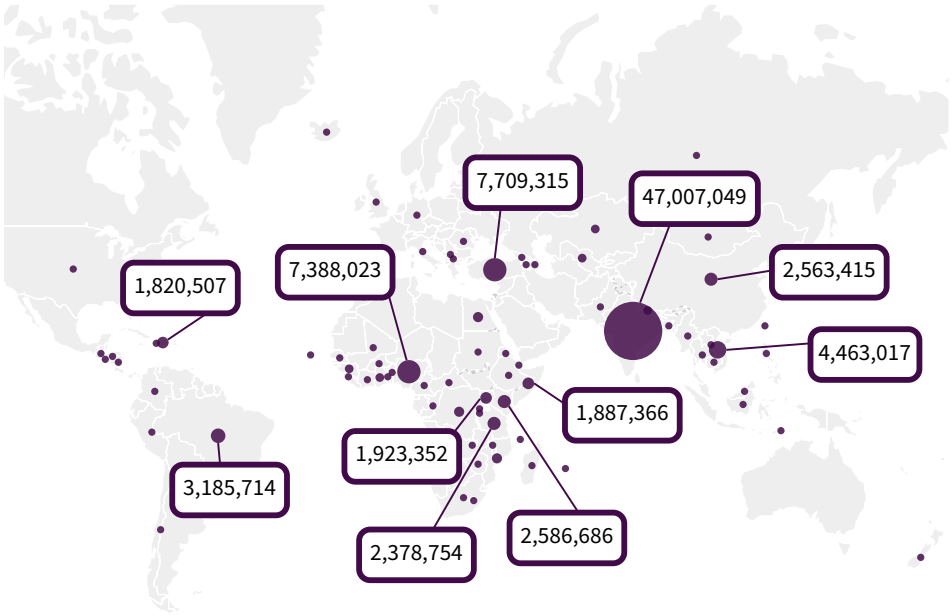
Source: Barbara K Haya et al., 'Voluntary Registry Offsets Database v2025-04', Berkeley Carbon Trading Project, University of California, 2025, <https://gspp.berkeley.edu/research-and-impact/centers/cepp/projects/berkeley-carbon-trading-project/offsets-database>, accessed 14 March 2025.

Verra is highly exposed to the specific market and corruption dynamics of China and India. While projects with credits registered with Verra span 94 jurisdictions, China and India account for 41% of all credits issued up to May 2024 (China 21%, India 20%), followed by Indonesia (6%), Bangladesh (5%) and Brazil (3%). Projects are spread thinly over the rest of the world, complicating in-country due diligence. Investigations in these countries have largely focused on fraud and additionality, rather than corruption.[40]

Similarly, while Verra includes many project types, three categories dominate registrations: energy projects, such as renewable energy (35%); agriculture, forestry and other land use (25%); and energy demand, often clean cooking projects (23%). Corruption risk is therefore relatively concentrated in these industries in China and India. In China, 60% of credits are from energy production, accounting for more than 10% of all credits registered with Verra. In India, 80% of credits are from energy production.

40. Dev, 'Discredited'.

Figure 3: Estimated Annual Credit Production from Projects Registered by Gold Standard, as of May 2024

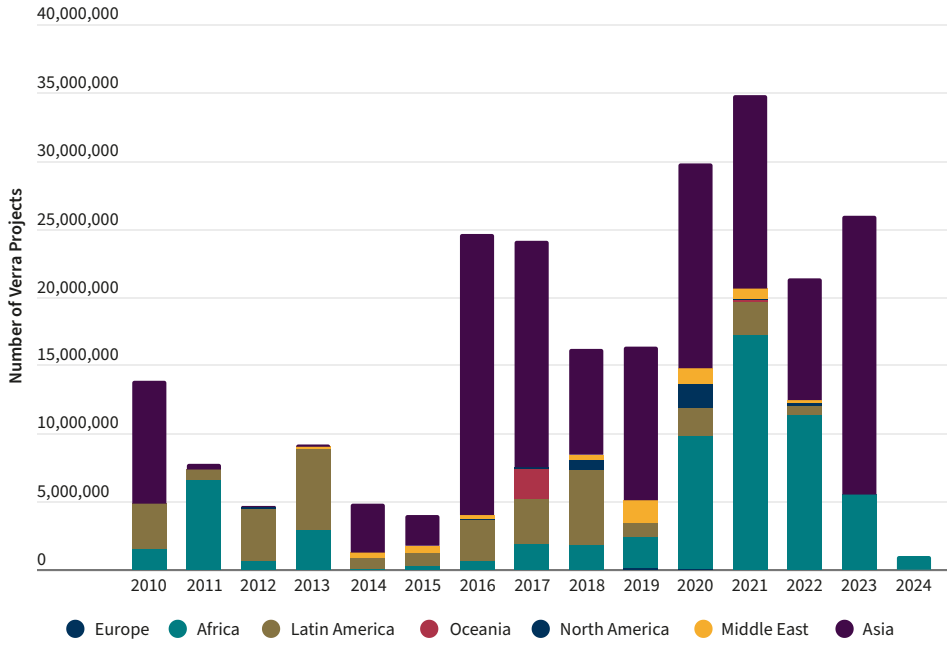


Source: Haya et al., 'Voluntary Registry Offsets Database v2025-04'.

Gold Standard is heavily concentrated in India, which accounted for 45% of estimated annual credit production from listed projects, as of May 2024. The Indian market is itself highly concentrated. Although 53 developers have listed credits, one developer – Hindustan Unilever Limited – accounts for 57% of all listed credits. In India, 55% of projects are categorised as energy efficiency; domestic, typically clean cookstoves that reduce emissions by reducing charcoal use or substituting another fuel for charcoal are categorised as such. Anti-corruption measures must therefore engage a limited number of large companies and a large number of very small and distributed companies. Such measures reflect the need for varied policy toolkits for different contexts. The next largest countries were Turkey and Nigeria (both 7%) and Vietnam (4%). Notably, Gold Standard does not issue credits for REDD+, citing enduring methodological issues and risk of 'leakage', whereby trees are cut down elsewhere to compensate for avoided deforestation in the project area.[41]

41. Sarah Leugers, 'The Importance of Trust in the Carbon Market', Gold Standard, 21 June 2024, <https://www.goldstandard.org/news/the-importance-of-trust-in-the-carbon-market>, accessed 13 March 2025.

Figure 4: Estimated Annual Emissions Reductions by Start of Crediting Period and Country, Verra



Source: Haya et al., 'Voluntary Registry Offsets Database v2025-04'.

There have been discernible shifts in the geography of the market. Asia (largely China and India) emerged as Verra's dominant region in the mid-2010s, while Latin America has declined and the supply of credits from Africa has been highly variable. This adds another layer of complexity to efforts to design corruption safeguards that work across diverse political and regulatory systems.

MARKET DYNAMICS

Market dynamics can create the conditions for corruption. As the market evolves or goes through spells of growth or retrenchment, market actors face pressures that can reduce the funding available for anti-corruption activities or increase the pressure to cut corners or behave dishonestly.[42]

Pricing volatility of VCCs driven by fluctuating demand may drive governance challenges in the sector:

As the market evolves or goes through spells of growth or retrenchment, market actors face pressures that can reduce the funding available for anti-corruption activities or increase the pressure to cut corners or behave dishonestly.

42. Helen Clark, 'Does the Potential for Corruption in the Mining Sector Threaten a Just Energy Transition?', World Economic Forum, 20 April 2023, <https://www.weforum.org/stories/2023/04/corruption-in-the-mining-sector-threatens-a-just-energy-transition/>, accessed 7 April 2025; UN Office on Drugs and Crime, 'Causes of Private Sector Corruption', <https://www.unodc.org/e4j/en/anti-corruption/module-5/key-issues/causes-of-private-sector-corruption.html>, accessed 7 April 2025.

- Low prices for credits produced by REDD+ and clean cooking projects may drive a 'race to the bottom' on standards, reducing funds available for due diligence and anti-corruption safeguarding.[43] VCM prices averaged $6.53/tonne in 2023.[44] These credits can sell as low as a few dollars per tonne.
- There has been a downward trend in fees paid to VVBs.[45] Fees of around $10,000 to assess a project are insufficient for both detailed technical and compliance checks and due diligence.[46] Low fees have caused some of the larger and more capable VVBs to leave the market. The gap has been filled, to an extent, by a cottage industry of smaller companies of varying capability.[47]
- Similarly, registration, verification and validation review fees of $2,500–5,000 at Verra[48] and Gold Standard[49] are insufficient for adequate due diligence.

Figure 5: The Reputational Impact of Corruption and Integrity Challenges on VCMs

Source: The authors.

43. Author interview with academic, online, 22 January 2025.
44. Procton, 'State of the Voluntary Carbon Market 2024'.
45. Author interview with chief executive of VCC project developer, online, 13 January 2025.
46. *Ibid.*
47. *Ibid.*
48. Verra, 'Verra Program Fee Schedule', 16 October 2024, <https://verra.org/wp-content/uploads/2024/10/Verra-Program-Fee-Schedule-v1.0.pdf>, accessed 9 March 2025.
49. Gold Standard, 'Gold Standard Fee Schedule, Version 3.0', 5 December 2024, <https://globalgoals.goldstandard.org/fees/>, accessed 9 March 2025.

New routes to market for project-based credits will fundamentally alter the corruption profile of the sector.[50] More compliance markets are allowing project-based credits to be traded. Examples include Singapore and other countries that allow eligible project-based credits to offset carbon taxes, and the California Air Resources Board's (CARB) Compliance Offset Program, where eligible project-based credits can be used to offset emissions trading scheme commitments. In parallel, sector-wide schemes – such as CORSIA – are scaling up and are based on project-based credits. The operationalisation of Article 6 of the Paris Agreement at COP29 will add another route to market whereby eligible credits purchased internationally can be used to meet Nationally Determined Contributions (NDCs).

These two developments bring governments much more heavily into VCMs. Governments may want to assert control over whether credits are used towards their own NDCs, those of other governments, industry schemes or VCMs.[51] Article 6.2 and CORSIA projects both require government approval. These developments contribute to both the formalisation and commoditisation of project-based credits, while creating competition between sources of demand (VCMs, Article 6, compliance and sector-based). This is likely to have several consequences for corruption risk.

- While lack of regulation has been a corruption risk due to lack of oversight, it has also reduced risks of public corruption. Several interviewees expressed concern that increased government involvement in VCMs may result in more corruption.
- Markets such as CARB and CORSIA can reduce awareness of the projects generating credits. For example, buyers will not know the source of credits in futures contracts until delivery, which can also be the case in some offtake contracts. This can prevent or disincentivise buyer due diligence.
- On the other hand, these new sources of demand may increase liquidity, which should, in turn, increase the funds available for KYC/anti-money laundering (AML) checks. They are also based on much more robust market infrastructures. These market operators have more sophisticated monitoring capabilities and experience managing large-scale markets.
- The process of formalisation and commodification may attract more institutional investors. New insurance products are being offered, for example, which require the typical third-party KYC/AML checks carried out by regulated insurers.[52]

50. Dan Marks, 'What Changes to the Carbon Market Landscape Mean for Corruption Risks', Governance & Integrity Anti-Corruption Evidence Research Programme, 24 February 2025, <https://giace.org/what-changes-to-the-carbon-market-landscape-mean-for-corruption-risks/>, accessed 9 March 2025.
51. Gold Standard Foundation and EY Law, 'Carbon Credit Rights Under the Paris Agreement'.
52. Author interview with insurance company officials, online, 17 February 2025.

CREATING NEW OPPORTUNITIES FOR CORRUPTION

The features identified in the previous sections create unique challenges for VCMs, potentially creating new opportunities for corruption and fraud. Some VCM projects, such as preservation or management of primary forests, monetise sectors which may not previously have been considered assets; others, such as cookstove projects, can target populations vulnerable to sharp selling and debt traps.

Amid the VCM market expansion in the early 2010s[53] were reports of so-called 'carbon cowboys', opportunistic actors who posed as responsible investors in REDD+ and reportedly deceived or bribed communities into transferring land rights, embezzled funds instead of sharing them with local communities, or unduly captured REDD+ finance by manipulating data.[54] Increased REDD+ finance therefore seemingly created incentives for political and business elites to secure undue access to land and exploit the methodological difficulties of measuring offsets.

In this same period, market expansion and lack of sophistication and controls allowed opportunistic actors to defraud buyers. In 2021, the Crown Court convicted the directors of UK-based company Enviro Associates Ltd for fraudulently selling 'worthless' VCCs to inexperienced investors at an inflated markup of 1,000% between 2011 and 2014, with the proceeds laundered through a third-party company, Carbon Neutral Investments Ltd.[55] UK authorities had previously investigated MH Carbon Limited for similar activities.[56] In both cases, the fraud was facilitated by the opaque role of intermediaries in VCM transactions and lack of pricing transparency, and the original source of credits was unclear.

VCM market dynamics and dependence on reporting for credit production can drive malpractice. The case of CQC Impact Investors LLC and its subsidiaries ('C-Quest'), exemplifies this.[57] C-Quest rapidly expanded during a VCM boom

53. Procton, 'State of the Voluntary Carbon Market 2024'.
54. Williams, Dupuy and Downs, 'REDD Integrity'; Wil de Jong, Dennis del Castillo Torres and Ángel Alejandro Salazar Vega, 'Carbon Cowboys in Peru and the Prospects of Local REDD Governance', *Portes* (Vol. 8, No. 16, 2014).
55. Crown Court at Southwark, 'Rex vs Luke Ryan', EWCA Crim 1347, 28 September 2022; City of London Police, 'Investment Fraudsters Found Guilty of £2m Scam after Eight-Year-Long Investigation', 12 May 2021, <https://www.cityoflondon.police.uk/news/city-of-london/news/2021/may/investment-fraudsters-found-guilty-of-2m-scam-after-eight-year-long-investigation/>, accessed 3 April 2025.
56. Chris Lang, 'Five Men Found Guilty in £13 Million Essex and London Properties Ponzi Scheme. Including Jeffrey Razaq, Director of Carbon Scam Company MH Carbon', REDD-Monitor, 27 April 2022, <https://reddmonitor.substack.com/p/five-men-found-guilty-in-13-million>, accessed 16 June 2025.
57. US Attorney's Office, Southern District of New York, 'U.S. Attorney Announces Criminal Charges in Multi-Year Fraud Scheme in the Market for Carbon Credits', press release, 2 October 2024, <https://www.justice.gov/usao-sdny/pr/us-attorney-announces-criminal-charges-multi-year-fraud-scheme-market-

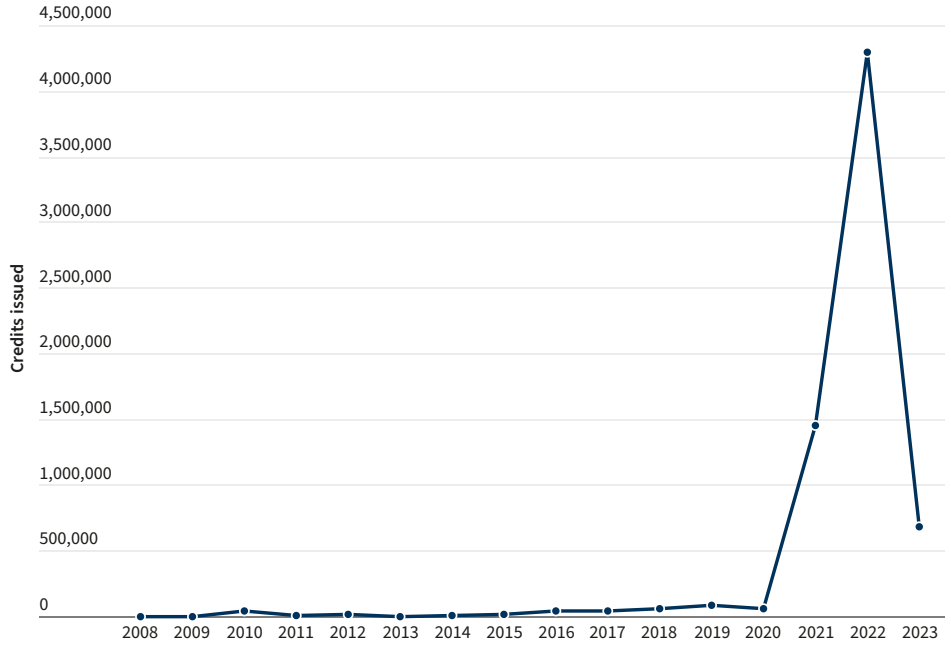
in the early 2020s,[58] scaling up operations across multiple countries in sub-Saharan Africa to meet investor expectations.[59] The company's credit issuances increased by 2,188%, from 63,537 in 2020 to 1,453,915 in 2021.[60] Having invested in the stock of cookstoves and distribution partnerships, C-Quest found its rapid expansion had resulted in much less effective implementation and consequently fewer credits than forecast. [61] Under pressure to deliver results to maintain its financial position, the company falsified survey results to show higher use of cookstoves and therefore allow more credits to be produced and sold.[62]

The US Attorney's Office for the Southern District of New York laid criminal charges against three of C-Quest's former top management,[63] for allegedly 'orchestrating a scheme to manipulate and inflate' the amount of credits generated from 27 cookstove projects in Africa, Asia and Central America by about 30% 'to hit contrived carbon credit numbers'.[64] At the time of publication of this paper, investigations were ongoing. In parallel civil cases, the CFTC and SEC concluded that these false projections had misled investors on the profitability and sustainability of C-Quest's carbon projects.[65] While the C-Quest case was fraud rather than corruption – lacking a public element – it illustrates how credit intangibility can create the conditions for malpractice, while market volatility creates the incentive.[66]

carbon-credits>, accessed 16 June 2025; CFTC, 'CFTC Charges Former CEO of Carbon Credit Project Developer with Fraud Involving Voluntary Carbon Credits', press release, 2 October 2024, <https://www.cftc.gov/PressRoom/PressReleases/8994-24>, accessed 16 June 2025; SEC, 'C-Quest Admits to $250 Million Offering Fraud'.

58. The value of VCMs grew from $534 million in 2020 to $2.1 billion in 2021. See Procton, 'State of the Voluntary Carbon Market 2024'.
59. Author interview with chief executive of VCC project developer, online, 13 January 2025.
60. Barbara K Haya et al., 'Voluntary Registry Offsets Database v2025-04'.
61. Author interview with chief executive of VCC project developer, online, 13 January 2025.
62. US Attorney's Office, Southern District of New York, 'U.S. Attorney Announces Criminal Charges in Multi-Year Fraud Scheme in the Market for Carbon Credits'; SEC, 'Order Instituting Cease-And-Desist Proceedings', Release No. 11315.
63. Rohini Krishnamurthy, 'Discredited Again', *Down to Earth*, 19 November 2024, <https://www.downtoearth.org.in/climate-change/discredited-again>, accessed 27 February 2025.
64. SEC, 'Order Instituting Cease-And-Desist Proceedings', Release No. 11315.
65. *Ibid.*
66. Author interview with chief executive of VCC project developer, online, 13 January 2025; author interview with industry association senior adviser, online 4 February 2025.

Figure 6: Number of Credits Issued Under C-Quest Projects, 2008–23



Source: Haya et al., 2025, 'Voluntary Registry Offsets Database v2025-04'.

VVBs and the project developer do not act independently – the former is contracted by the latter. As such, VVBs are essentially 'marking their own homework' with limited accountability.[67] Notably, most of the C-Quest projects under scrutiny were audited by one India-based VVB, Carbon Check, creating risk of undue influence in the verification process.[68] This potential conflict of interest and the reliance of registries on credit issuances as a principal source of revenue have been identified as a key vulnerability of VCMs. Market complexities that make it difficult for buyers without technical expertise to identify and punish inflated credits exacerbate such challenges.[69]

Some programmes, such as CARB, attempt to reduce this risk by requiring approval from two VVBs – one conducting the standard checks, the second, a desk audit of the first VVB – for some project types, such as REDD+. Elsewhere, third-party rating agencies and insurance companies are emerging to provide another layer of checks. However, the effectiveness of these initiatives in detecting corruption and fraud in VCM projects remains underexplored.

67. Author interview with registry official, online, 22 January 2025; Interpol, 'Guide to Carbon Trading Crime'; IOSCO, 'Voluntary Carbon Markets Consultation Report'; author interview with lawyer active in VCMs, online, 4 February 2025.
68. Krishnamurthy, 'Discredited Again'.
69. Vittoria Battocletti, Luca Enriques and Alessandro Romano, 'The Voluntary Carbon Market: Market Failures and Policy Implications', *University of Colorado Law Review* (Vol. 95, No. 3, 2024), pp. 519–73.

MANAGING CORRUPTION RISK IN HIGH-RISK ENVIRONMENTS

Managing corruption risk in VCMs is especially challenging in weak governance contexts, where land rights are contested, rules and enforcement are inconsistent, and stakeholders often lack local familiarity. In such contexts, commodity markets based on natural resources are exposed to high risk, given that often only a piece of paper – such as a miner's licence or logging permit – is needed to demonstrate legality, which can be procured from a corrupt government official with relative ease.[70] The same risk is true of VCMs, for example where project developers must show proof of a land title to register a new project.

For this reason, nature-based projects such as REDD+ have been frequently criticised for their high perceived corruption risk.[71] While REDD+ projects are designed to attribute economic value to forests and disincentivise logging and land conversion,[72] complex political economies are at play and opportunities for public scrutiny of local authorities in remote forested areas is limited.[73]

Operation *Greenwashing* in Brazil illustrates how corruption can manifest in VCMs and highlights certain market features that impact supply-side corruption risk. On 5 June 2024, the Brazilian Federal Police reported that a criminal group had sold about 180 million real ($31 million) in VCCs from illegally invaded land in the Apuí, Lábrea and Nova Aripuanã municipalities of Amazonas state for more than 10 years.[74] According to the report, the group had seized 538,000 hectares of public land through the 'duplication and falsification of property titles' obtained from public officials who allegedly accepted bribes in exchange for land titles.[75]

Managing corruption risk in VCMs is especially challenging in weak governance contexts, where land rights are contested, rules and enforcement are inconsistent, and stakeholders often lack local familiarity.

70. Channing Mavrellis, 'From Timber to Tungsten: How the Exploitation of Natural Resources Funds Rogue Organizations and Regimes', written testimony delivered to House Committee on Financial Services Subcommittee on National Security, International Development, and Monetary Policy, 4 November 2021.
71. Survival International, 'Blood Carbon: How a Carbon Offset Scheme Makes Millions from Indigenous Land in Northern Kenya', March 2023; Williams, Dupuy and Downs, 'REDD Integrity'.
72. UN Framework Convention on Climate Change, 'What is REDD+?', <https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd>, accessed 7 March 2025.
73. Merrin Layden, 'The Status of Information on Corruption in the Forestry Sector', Transparency International, U4 Helpdesk, January 2010.
74. Brazilian Ministry of Justice and Public Safety, 'PF deflagra Operação Greenwashing para investigar venda irregular de créditos de carbono' ['PF Launches Operation Greenwashing to Investigate Irregular Sale of Carbon Credits'], 5 June 2024, <https://www.gov.br/pf/pt-br/assuntos/noticias/2024/06/pf-deflagra-operacao-greenwashing-para-investigar-venda-irregular-de-creditos-de-carbono>, accessed 25 February 2025.
75. *Ibid.*

On 13 June 2024, Verra announced that it had suspended and launched a formal review into the Verra-certified projects implicated in the operation, namely the REDD+ projects Evergreen (2539), Fortaleza Ituxi (1654) and Unitor (2508).[76] Ricardo Stoppe Jr, the biggest individual seller of carbon credits in Brazil, owned all three projects alongside other ranch owners in the project areas, and Carbonext, Brazil's largest carbon credit provider, designed and developed them. The VVBs included Italian company RINA Services S.p.A and US company S&A Carbon.[77]

Unitor and Fortaleza Ituxi planned to avoid 660,598 metric tonnes of CO_2 emissions per year through sustainable forestry management plans that prevented unplanned deforestation.[78] However, satellite imagery analysed by the Center for Climate Crime Analysis (CCCA) indicated that the project proponents had likely fraudulently used Forest Origin Documents (used to trace the origin of felled trees) to harvest timber from protected areas outside the project area.[79]

CCCA also found that Élcio Aparecido Moço – the owner of one of the project proponents for Unitor, Green Forest Carbon, and Rio Negro, a company responsible for supervising Fortaleza Ituxi's forest management plans – had been sentenced for timber laundering in 2017 and charged for allegedly bribing public officials to obtain a forest management licence in 2019.[80] Despite this, Fortaleza Ituxi and Unitor were registered by Verra in 2020 and 2022 respectively, highlighting the limitations of KYC processes in VCMs.[81]

It is unclear how rigorous KYC checks are in practice, and who is responsible for conducting them. The projects' registration documents stated that VVBs had verified land titles and proof of free, prior and informed consent from local stakeholders to ensure there were no disputes over land tenure or ownership. However, it is unclear how rigorously the VVBs verified these documents, and their risk assessments neglected to account for the possibility that legal documents can be fraudulently attained through corrupt facilitators in Brazil.[82] Furthermore, there is no evidence of due diligence conducted on the project proponents themselves, such as checks

76. Verra, 'On Verra's Formal Review of Projects Implicated in Brazil's Operation Greenwashing', 13 June 2024, <https://verra.org/on-verras-formal-review-of-projects-implicated-in-brazils-operation-greenwashing/>, accessed 25 February 2025.
77. Verra Registry, 'Verified Carbon Standard: Project and Credit Summary', <https://registry.verra.org/app/search/VCS/All%20Projects>, accessed 13 March 2025.
78. Fernanda Wenzel, 'Top Brands Buy Amazon Carbon Credits from Suspected Timber Laundering Scam', Mongabay, 21 May 2024, <https://news.mongabay.com/2024/05/top-brands-buy-amazon-carbon-credits-from-suspected-timber-laundering-scam/>, accessed 25 February 2025.
79. *Ibid.*
80. *Ibid.*
81. Verra Registry, 'Verified Carbon Standard'.
82. *Ibid.*

for criminal records, adverse media or business records. Such checks do not appear to be a requirement of VVBs or registries in the verification process.[83]

In the research interviews, insurance companies were the only market participant that claimed to systematically conduct in-depth due diligence checks for projects – a regulatory requirement for insurers – which had led them to flag projects that were later exposed for corruption.[84] However, insurance currently covers only a limited number of registered projects. Checks will be conducted on buyers and sellers on the CORSIA auction platform, but not on participants of the main marketplace.[85]

There are also potential issues for the on-the-ground validation and verification of projects in high-risk environments. According to interviewees, VVBs may not necessarily speak the local language or understand the local context, and therefore may find themselves at a disadvantage and in risky situations while conducting inspections, potentially influencing the outcome of their assessment.[86]

KYC checks on VCM projects therefore appear to be neither systematic nor adequate to manage corruption risk in high-risk environments, although it remains unclear to what extent VCMs perform better or worse than other commodity markets in such contexts.

CONCLUSION

VCMs are particularly vulnerable to concerns about their integrity. As intangible assets whose demand has historically been driven by institutional climate targets, reputation and integrity are particularly important to the creation and maintenance of value of VCCs. This is still more the case as VCMs have been controversial since their inception, with concerns that they distract from efforts to reduce greenhouse gas emissions at source or that they are not truly 'additional'. Integrity has therefore become a key – and perhaps disproportionate – reputational risk for VCMs.

This paper finds that there is not sufficient evidence in the literature to make firm conclusions about whether corruption is more prevalent in VCMs than in other markets, particularly in high-risk environments. However, the paper shows how the market volatility of VCMs creates fertile ground for corruption and identifies deficiencies in KYC and AML processes in the market. Such deficiencies constrain the market's ability to deal with corruption risk,

83. Author interview with VCC registry official, online, 22 January 2025.
84. Author interview with insurance company officials, online, 17 February 2025.
85. Author interview with exchange official, online, 27 January 2025.
86. Author interview with chief executive of VCC project developer, online, 13 January 2025; Markus Kröger, 'Land-Grabbing Mafias and Dispossession in the Brazilian Amazon: Rural–Urban Land Speculation and Deforestation in the Santarém Region', *Globalizations*, 21 February 2024, pp. 1–19.

particularly as declining validation and verification fees reduce capacity for thorough checks. Ambiguous regulatory treatment and limited participation by regulated financial institutions mean it is unclear who is responsible for conducting thorough due diligence checks. In the future, this may be worsened by new routes to market that increase dissociation between VCC buyers and producers.

The challenge of corruption, or at least the perception of corruption, is recognised in the industry. Several current initiatives aim to improve the probity of the market, including protecting against corruption: notably, publication of the Integrity Council for the Voluntary Carbon Market's Core Carbon Principles and the Voluntary Carbon Markets Integrity Initiative's Claims Code of Practice. VCMs have also attracted scrutiny from civil society, for example through Transparency International's Climate Governance Integrity Programme,[87] and increasingly from regulators, such as through the International Organization of Securities Commissions' 2024 report.[88] However, limited evidence of corruption risks in VCMs may hamper the effectiveness of measures designed to tackle the problem.

Subsequent papers in RUSI's VCM programme will seek to produce more systematic evidence on corruption in VCMs. This paper has identified the need for strengthened evidence of the prevalence of corruption risk in VCMs to understand whether the risk is higher than other markets, and to what extent this correlates with industry and communities' perceptions of corruption risks in VCMs. Furthermore, the paper identifies a need for in-depth case studies that shed light on how global market drivers interact with local contexts to create corruption risk, map how corruption manifests in practice, and inform which market failings enable it to occur.

This research will be used to recommend practical regulatory solutions for policy and industry stakeholders that support efforts to prevent corruption in the market, thereby restoring confidence in its integrity. Without clearer evidence and stronger safeguards, VCMs may never scale effectively, putting plans for 'net' zero in jeopardy.

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87. Transparency International, 'Climate Governance Integrity Programme', <https://www.transparency.org/en/projects/climate-governance-integrity-programme>, accessed 2 April 2025.
88. IOSCO, 'Voluntary Carbon Markets'.

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