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CONFLICTED GOVERNANCE IN THE VOLUNTARY CARBON MARKET

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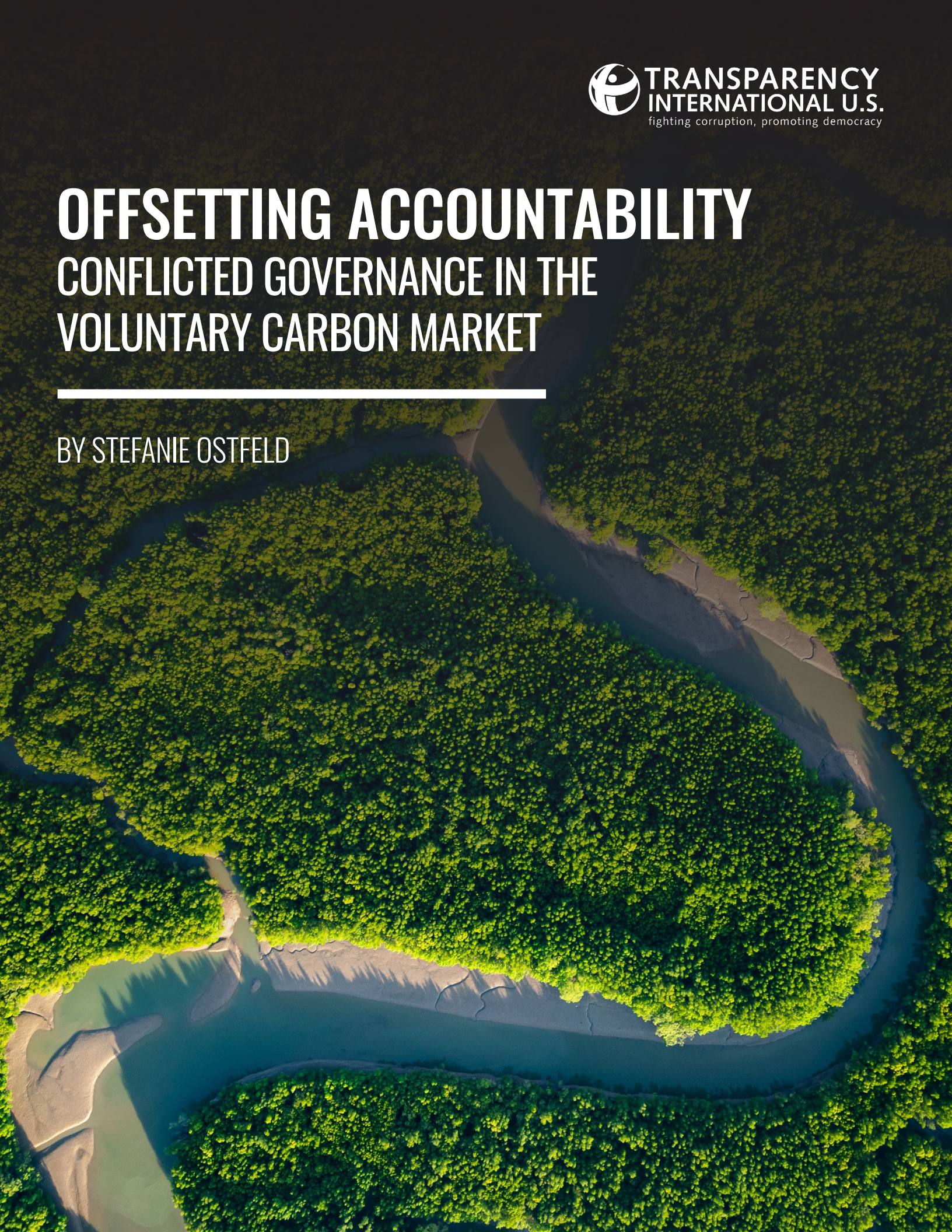

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INTRODUCTION

Carbon markets, including the Voluntary Carbon Market (VCM), have long been promoted as flexible, market-based tools to address climate change by offsetting carbon emissions in one location through emissions reductions in another location. But conflicted interests throughout the lifecycle of the credit process may undermine the efficacy of the market. In the absence of strong, independent decision-making and meaningful public oversight, carbon markets have developed in ways that consistently fail to deliver tangible, additional, or permanent emissions reductions.

For more than two decades, the creation and sale of carbon offset credits has allowed market participants, particularly in the extractive sector, to signal climate ambition without altering their core business models. While private sector engagement is not inherently problematic, the market has been shaped by conflicted self-interested actors. Despite its prominence in global climate strategies, growing evidence from academic research, investigations, internal audits, and ratings agencies shows that many carbon offset initiatives are fundamentally flawed as a result of structural deficiencies in the development, issuance and auditing processes.

The VCM has been rocked by scandals, most notably revelations that the vast majority of offset credits issued by major registries are not reducing carbon emissions.[1] These findings triggered a sharp decline in demand for credits and eroded public trust. Even before these scandals broke, industry leaders anticipated growing scrutiny and launched initiatives like the Integrity Council for the Voluntary Carbon Market (ICVCM) to reinforce and strengthen the legitimacy and integrity of the system. Yet these efforts are still heavily influenced by conflicted actors, including major players in the oil and gas sector, who have a vested interest in keeping offsets part of the global climate response, so they will not have to alter existing practices to meaningfully reduce their own emissions.

At its core, the VCM suffers from deep structural conflicts of interest. Credit issuers, auditors, and project developers all rely on one another for revenue. This financial interdependence creates strong incentives to prioritize the volume of credits over their environmental integrity.

This paper explores the architecture of the VCM, focusing on how conflicted decision-making impacts the lack of meaningful reductions in emissions. The paper also raises important questions around the purpose of constructing markets that now appear to serve more as unregulated platforms for performative carbon trading than science-based and accountable mechanisms for reducing carbon emissions.

OFFSET MARKETS EXPLAINED: HOW THE SYSTEM WORKS AND WHO BUILT IT

What are Carbon Markets and Carbon Offsets?

Carbon markets were designed to help mitigate climate change by assigning a financial value to greenhouse gas (GHG) reductions or removals. They were created to enable companies, governments, and individuals to emit GHGs and then purchase carbon credits from projects that either prevent the release of emissions or remove carbon dioxide (CO_2) from the atmosphere to offset their emissions. One carbon credit represents the reduction or removal of one metric ton of CO_2 or its equivalent in other GHGs from the atmosphere. The core idea behind carbon markets was to create a cost-effective way for companies and other entities to offset their emissions by supporting climate projects in other locations.[2]

There are two main types of carbon markets: Compliance and Voluntary.

Compliance Carbon Markets are established by regulatory frameworks at the national or regional level. Emissions Trading Systems (ETS), also known as cap-and-trade arrangements, are the most common type. These systems set a cap on allowable emissions for covered entities and distribute or auction allowances accordingly. Entities that exceed their cap must purchase additional allowances or credits to comply. Examples include the European Union's Emissions Trading System and California's Cap and Trade program. Some compliance markets allow the purchase of offset credits from VCMs.

VCMs operate outside of regulatory mandates. Companies, organizations, and individuals choose to participate in these markets to meet climate targets, support environment or social co-benefits, or demonstrate leadership in the issue area. The voluntary market is facilitated by private registries and standard-setting bodies that certify projects and issue tradeable credits. Some of the main standard-setting bodies are Verra, Gold Standard, and American Carbon Registry.

This paper focuses on VCMs, while recognizing their growing overlap and interaction with compliance carbon markets. While there are challenges across VCMs, Transparency International U.S. (TI US) chose to focus on Verra, as it is the largest standard setter in the world and based in the U.S.

How Offsets are Created: From Projects to Credits

Carbon credits are generated by projects that reduce or remove GHG emissions. Project types include renewable energy, forest conservation (REDD+ [3]), soil carbon improvement, and direct carbon capture, among others.

The project lifecycle includes:

1. Project development – A developer designs a project based on a methodology approved by a standard-setting organization. This includes identifying the baseline scenario, which is a projection of what would happen in the future if there was not a financial incentive to develop carbon credits through conservation or other mitigation efforts at the project site.
2. Validation – A third-party auditor, which can be the same one that later verifies and certifies the project's progress, assesses whether the project meets the rules and requirements of the standard-setting registry and that it is capable of meeting the stated carbon reduction goals.
3. Implementation and activities – The project developer implements the project and reports on reductions or removals.
4. Verification and Certification – A third-party auditor, which can be same one that validated the project, reviews the developer's monitoring reports and verifies that the project is meeting its stated GHG reductions. A registry then certifies this and issues carbon credits for the emission reductions.
5. Sale and Retirement – Credits can be used by the project developer or sold to buyers, which may include intermediaries, and ultimately retired (taken out of circulation) to be used to offset emissions.

Industry at the Helm: Kyoto, IETA, and the Market's Origins

The present-day carbon market finds its origins in the Kyoto Protocol from 1997, the first international climate agreement to set binding emissions reduction targets for industrial nations. The U.S. delegation to Kyoto, led by then-Vice President Al Gore, threatened to walk away from negotiations if market instruments weren't included.[4] Kyoto established three such mechanisms, including the Clean Development Mechanism (CDM), which allowed companies in the Global North to invest in emission reduction and other energy efficiency projects in the Global South.[5]

A carbon market was included in the final agreement as a compromise with those seeking direct carbon emissions reduction targets. However, it is worth noting that forest conservation projects, which have been at the center of numerous carbon offset scandals, were not included in the Kyoto Protocol.[6] The ability to buy and trade offsets was intended to reduce compliance costs for business, incentivize voluntary climate finance, and encourage participation by countries and companies that favored market-based approaches over regulations.[7] According to Cullenward, Badgley, and Chay, "carbon offsets were designed to introduce flexibility in where emission reductions occur in order to lower the cost of meeting initial climate targets and accommodate political opposition to legally binding climate policy."[8]

At the same time, industry opposition to climate regulation was well organized and well-funded. The fossil fuel sector had formed the Global Climate Coalition in 1989 to explicitly block meaningful international action on climate change, with a particular focus on obstructing Kyoto.[9] Once carbon markets were established, industry shifted its focus to shape their structure.

In 1999, BP and other large producers of carbon emissions launched the International Emissions Trading Association (IETA), the first "purely business" coalition dedicated to building carbon trading systems. According to IETA's website, "a visionary group of international companies and business associations" founded the group "to achieve climate objectives with minimal economic harm."[10] IETA soon developed some of the earliest standards for the VCM, which emerged alongside the formal compliance systems of Kyoto.

Following the end of Kyoto's first commitment period

in 2012, there was a decline in support for its second commitment period and a drop in carbon price; global climate policy entered a transitional phase. In the absence of a global framework to address climate change, VCMs gained momentum. This momentum was later reinforced by the Paris Agreement of 2015, which included Article 6, reestablishing the legitimacy of international trading mechanisms in the new framework. Industry actors also played a key role in shaping this outcome; Shell, working through IETA, later took credit for helping to secure the inclusion of Article 6 during the Paris Agreement negotiations.[11]

The Paris Agreement seeks to stabilize temperatures, keeping the global average to 1.5°C above pre-industrial levels, which is significantly more ambitious than Kyoto. According to Cullenward et al, "Outsourcing reductions can save costs when most parties are looking to reduce their emissions on the margin, as was contemplated under the Kyoto Protocol, but planetary temperature stabilization under the Paris Agreement requires global CO_2 emissions to fall to near-net-zero levels."[12]

Today's carbon markets remain deeply influenced by their origins. The reliance on offsets and the emphasis on cost-efficiency, flexibility, and a deregulated, free market reflect the priorities of governments and companies seeking to avoid more stringent emissions cuts.

The VCM has expanded rapidly in recent years, driven by growing corporate commitments to net-zero goals. However, the rapid growth has focused greater attention on the credibility and effectiveness of the standards that govern carbon credits. To understand these dynamics, it's important to examine the key organizations that set and manage these standards, with Verra being the largest and most influential.

VERRA AND THE INDUSTRY FOUNDATIONS OF THE VOLUNTARY CARBON MARKET

Verra, a non-profit headquartered in Washington, DC, is the largest and most influential standard setter in the VCM. It oversees the Verified Carbon Standard (VCS), which accounts for the majority of carbon credits issued and retired globally. In 2024, 64% of all credit retirements were from Verra-certified projects.[13] Verra certifies projects across sectors, including forestry (REDD+), renewable energy, carbon capture, and more.

However, Verra's roots reflect deep market participant involvement. The VCS, formerly known as the Voluntary Carbon Standard, was set up in 2005 by IETA, the World Economic Forum, and the Climate Group, all of which had strong ties to entities in high-emitting sectors.[14] Their goal was to create a voluntary standard that could stimulate private finance in the absence of binding regulation. In 2007, the Verified Carbon Standard Association was formed to manage the VCS, and it rebranded as Verra in 2018.[15] Several members of Verra's original board had previously served on the VCS steering committee.[16]

Understanding Verra's industry-driven origins is key to understanding how it operates today. It reflects a broader trend: in the absence of government coordination, the private sector may step in to create frameworks that align with its own interests.

A SYSTEM BUILT ON CONFLICTS OF INTEREST

How Financial Dependencies Undermine Market Integrity

Conflicts of interest appear to be central to the VCM's structural failures. Financial dependencies between standard setters, project developers, and auditors create a systemic race to the bottom. The market is built on the premise of incentivizing private sector actors to purchase low-cost carbon credits to offset their emissions. However, all major players are financially interdependent and collectively incentivized to maximize the number of credits issued, often at the expense of environmental integrity.[17]

Project developers pay standard-setting bodies such as Verra to oversee the project certification process

that enables them to generate and sell credits. Verra is responsible for approving methodologies, accrediting auditors, and issuing Verified Carbon Units (VCUs), while collecting fees at every stage of the process. A key source of revenue is the issuance fee charged for every VCU generated.[18] In 2023, these fees made up nearly 80% ($23 million) of Verra's total revenue.[19] This creates a clear financial incentive to approve more credits.

Standard setters oversee the rules and methodologies used to assess project validity, however, according to experts interviewed for this paper, project developers can write and submit their own methodologies, which are then frequently approved by the same standard setters, typically paying a fee in the process.

Project developers also hire and pay independent auditors to verify compliance. These auditors must be accredited by the standard setter and pay registration fees, adding another layer of financial dependency.[20]

In addition, as noted above, standard setters compete for market share which further incentivizes the approval of developer-friendly methodologies that generate more credits.[21] The result is a system that is incentivized to prioritize volume over verifiable climate impact.

These incentives aren't just operational. They are also embedded in the governance of the system itself.

Governance Conflicts within Verra

Structural conflicts of interest in the VCM extend to governance and decision-making within Verra itself. Verra's Board of Directors and advisory committees include representatives from project developers, buyers of Verra-issued carbon credits, and other market participants with direct financial interests in the system. Some committee members are from companies that are major purchasers of credits. For example, in 2024, a representative of Volkswagen ClimatePartner was on the VCS Program Advisory Group,[22] and according to Carbon Market Watch, Volkswagen is the seventh largest buyer of carbon credits of all time.[23] Thus, some of the same actors who benefit from Verra's methodologies and credit issuance rules also help to shape them.

This overlap introduces an institutional bias toward decisions that sustain credit issuance volumes and market growth, even when questions about offset integrity persist. It also undermines public trust in the market's ability to serve as a neutral gatekeeper for climate claims.

Methodologies: A Race to the Bottom

These financial dependencies extend into the design and approval of the very methodologies used to determine what counts as a valid carbon offset. Market competition favors methodologies that prioritize credit volume over environmental integrity. Project developers often select among competing options, including across registries, and tend to favor those that are easier to implement or yield more credits relative to cost.

For the same project type, multiple methodologies may exist. If one carbon registry takes a more conservative approach to calculating a carbon credit, resulting in fewer credits, project developers are likely to opt for an alternative that generates more. One study of several forest offset methodologies found that the same project could produce up to 14 times more credits depending on the methodology used.[24] The more permissive methodologies can be favored because they generate more credits, not because they produce stronger offsets, fueling their widespread use and approval. This dynamic creates incentives for a race to the bottom. Registries and standard setters have little incentive to revise or reject these methodologies, since doing so could reduce their market share and revenue.

Research has shown that carbon offset projects frequently overestimate the number of credits they generate.[25] Methodologies often give project developers significant flexibility in defining project baselines, estimating risk, and accounting for leakage. Yet baseline setting is inherently uncertain as it involves predicting what would happen in the absence of mitigation, a counterfactual scenario that can never be directly observed or verified. Standard setters like Verra require project developers to make conservative estimates when uncertainty exists. However, a study, by Haya et al, of four Verra forest methodologies found:

> *"Despite Verra's requirement that they treat uncertainty with conservativeness, project developers often made use of the flexibility allowed by Verra to make choices that generated high rather than conservative quantities of credits."*[26]

In November 2023, Verra released an updated methodology (VM0048) that, according to the same researchers, improved upon baseline calculations, permanence risk assessments, and safeguard standards, which were some of the issues contributing to high levels of over-crediting identified in the study. However, they found the new methodology still failed to account for international and market leakage, and underestimated the risk of reversal, which could continue to lead to over-crediting. They also noted that:

> *"The worst instances of over-crediting and poor safeguarding from VCS REDD+ projects registered under previous methodologies were not from the written requirements themselves but from their poor implementation by developers and poor verification by auditors in practice."*[27]

THE KARIBA CARBON PROJECT

The Kariba Carbon Project, a forest conservation project in Zimbabwe and one of the largest carbon offset projects in the world, commenced in 2011. But investigations in 2023 uncovered serious flaws, including that it had vastly overstated the carbon credits it would generate for preventing deforestation. According to The New Yorker, the project's developer, South Pole, initially estimated Kariba would generate approximately 52 million credits. But after applying one of Verra's approved forest offset methodologies (VM9), that estimate jumped to nearly 200 million credits (i.e., 200 milion metric tons of carbon dioxide or other GHG).[28] Even after South Pole became aware of major issues with the project, Verra's rules didn't require the baseline scenario to be reassessed for ten years.[29] In other words, the project's inflated projections remained unchallenged for a decade. The system was effectively designed to delay recognition of failure until long after the damage was done. On September 23, 2025, Verra announced that it was cancelling excess credits and is requesting compensation for 15 million excess credits; there will be no change to retired credits.[30]

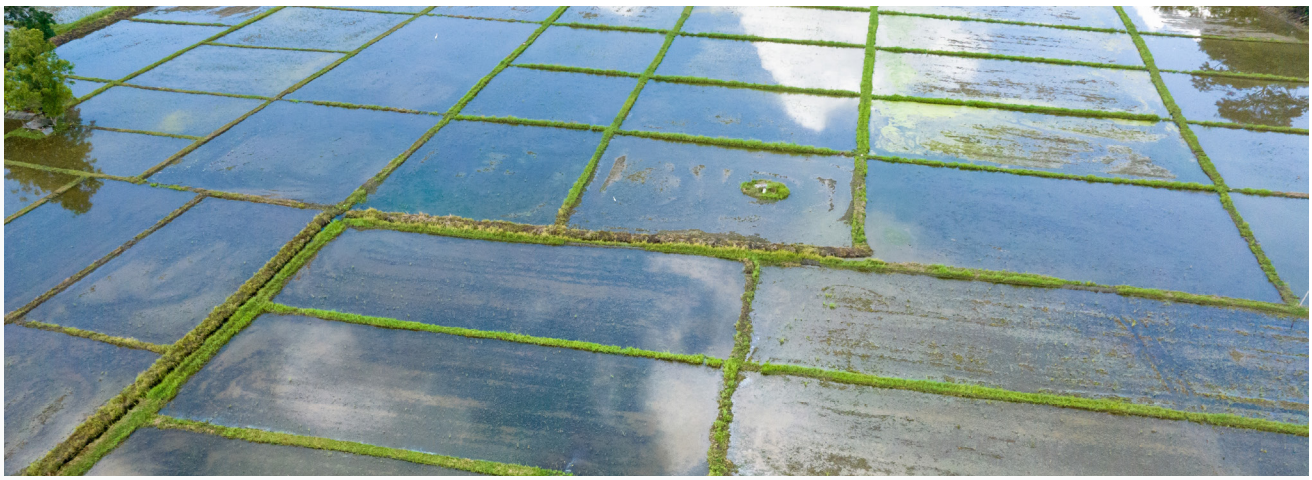
According to an expert interviewed for this paper, project developers can write and submit their own methodologies to standard setters. For example, the Verra website states: "Per the Methodology Development and Review Process (MDRP), interested parties may submit proposals for Verra to develop a new or revise an existing methodology, module, or tool. Please note that all draft methodologies and proposed changes are subject to extensive reviews by Verra and independent experts and stakeholder consultation to determine (1) if they meet the rules and requirements of the Verified Carbon Standard (VCS) Program and (2) whether the development process can proceed."[31] However, the financial incentives described in this paper and conflicted leadership as described in the example of C-Quest Capital below introduce an elevated risk of bias into the rules that determine what counts as an offset, undermining credibility from the start.

C-QUEST CAPITAL

The case of C-Quest Capital illustrates how the structural weaknesses of the VCM can be exploited by outright fraud. In 2024, the U.S. Department of Justice indicted former CEO Ken Newcombe, a longtime stalwart of the carbon market and former head of the World Bank's Carbon Finance Unit, for allegedly falsifying emissions data to generate and sell tens of millions of junk carbon credits tied to cookstove projects in Africa, defrauding investors of more than $100 million.[32] C-Quest played a central role in developing the cookstove methodology used for its own projects—a methodology that was approved by Verra while Newcombe served on its board (2007–2023).[33] This overlap underscores how standard-setting bodies can potentially be compromised when market participants both design and benefit from the very rules intended to ensure market integrity.

These failures are not theoretical or rare. They have played out repeatedly across project types and geographies. One of the clearest examples comes from China, where the collapse of dozens of projects intending to offset emissions in rice farming exposed the compounding effects of flawed methodologies, weak oversight, and misaligned incentives.

A SYSTEM BUILT TO FAIL: LESSONS FROM CHINA'S RICE OFFSET COLLAPSE



The collapse of 37 rice cultivation projects in China offers a striking example of how these structural weaknesses undermine the integrity of VCMs.[34]

The projects were designed for small-scale rice farmers to adopt water-saving irrigation practices that reduce methane emissions. Verra's methodology could only be used by projects classified as "small-scale," defined as those claiming annual emissions reductions below a certain threshold; projects exceeding that threshold were not eligible for crediting. Project developers exploited this constraint by splitting large operations into dozens of near-identical sub-projects that came in just under the limit. Many of these were approved on the same day, authored by the same consultancy, and covered overlapping or neighboring rice fields.[35]

Investigations revealed deeper issues. Some projects claimed to introduce irrigation techniques that were already widely used in China, violating the principal of additionality (i.e., projects with carbon reduction impacts that would not have happened without the interventions). Others lacked credible evidence that any new practices had been implemented at all. Interviews with farmers suggested they were unaware of the projects entirely.[36]

Shell, which was the largest known buyer of carbon credits in 2023, acted as the "authorized representative" for at least nine of the projects.[37] The company played multiple roles in their design and crediting. While not the initial project developer, Shell assumed full rights and responsibilities under Verra's rules after the projects were registered.[38] It also acted as a broker, facilitating the sale and transfer of credits, and used nearly two million of them to offset emissions from its own liquified natural gas (LNG) shipments.[39] Despite its central role, Shell faced no consequences when the projects were revoked. Shortly after Verra ordered compensation, Shell terminated its agreement with the Chinese developer, effectively sidestepping accountability.[40]

Auditing firms failed to catch these problems. Verra has since suspended four of them from certifying agriculture and forestry projects, marking the first suspension by Verra of an auditor despite irregularities raised across other projects and in previous years. The lack of prior action highlights the role of weak oversight in the project's breakdown.[41] According to Dialogue Earth, an environmentally-focused news outlet, one carbon trading expert in China shared, "[I]t was an open secret that auditors would work to find ways for projects to 'meet' the requirements of the crediting body."[42]

The above case illustrates how structural vulnerabilities such as conflicts of interest, financial dependence, and corporate influence translate into real world failures in carbon markets. It underscores the need for robust methodologies, increased transparency, enforceable accountability mechanisms, independent governance, and public oversight to ensure carbon markets deliver meaningful climate benefits.

Third Party Audits – Oversight in Name Only

The China rice project demonstrates how flawed methodologies can pass through multiple layers of oversight without challenge. This is in part because the safeguards designed to catch such problems, particularly third-party audits, are themselves structurally compromised.

Third-party auditing is often promoted as a critical safeguard for carbon market integrity. The ICVCM describes it as "a key tool for accuracy, consistency, transparency, and integrity in the voluntary carbon market."[43] However, a recent academic study by Coglianese and Giles found systemic problems, including misaligned incentives with the use of third-party auditors in VCMs, ultimately undermining the market's credibility and integrity.[44] The authors analyzed 95 Verra-registered projects that were later found to have significantly inflated the number of offset credits generated. Of the 33 Verra-approved auditors active as of December 2024, 21 (64%) had validated these projects, suggesting a structural failure in the system of independent verification.

At the core of this failure is a pervasive conflict of interest. In most VCMs, project developers—not registries—select and pay their own auditors. This financial dependency undermines auditor independence and creates an incentive to produce favorable assessments to retain business. In an industry where academic research and investigations consistently reveal widespread over-crediting,[45] auditors that decline to validate a significant share of those credits would likely struggle to stay in business.[46]

> **"In one example, environmental auditors paid by their client reported pollution levels up to 70% lower than independent auditors."**

To underscore the depth of the problem, Coglianese and Giles compared the carbon auditing context to similar dynamics in other sectors. Studies show that third-party auditors exhibit unconscious bias when they are selected and paid by the entities they assess. In one example, environmental auditors paid by their client reported pollution levels up to 70% lower than independent auditors. The researchers argue, "Auditors in carbon offset markets operate in what researchers have found to be circumstances that can make this bias most pronounced."[47]

This conflict is amplified by the subjective, assumption-laden nature of carbon accounting. Core concepts such as additionality, permanence and leakage are not directly measurable and rely on counterfactual modeling. Despite current methodologies calling for conservative assumptions when there is uncertainty, in practice, project developers have strong incentives to submit models that maximize credit generation. Auditors, in turn, are asked to make qualitative judgments with little incentive, and often insufficient information, to rigorously challenge inflated projections.[48]

Weak external enforcement is also undermining the market. The ICVCM, created to strengthen integrity in the VCM, does not accredit or monitor individual auditors. It defines high-integrity criteria and global benchmarks for carbon credits, but its authority is limited to assessing and approving crediting programs and methodologies. Carbon credit projects that meet the recently adopted ICVCM's Core Carbon Principles still rely on the same compromised audit infrastructure used across the voluntary market, among other potential conflicts.

Registries like Verra have suspended auditors involved in a particularly egregious case[49] (see China Rice Offset Collapse) and updated select methodologies in response to scandals. Despite these actions, many of the same firms that verified flawed projects remain active, and the credits generated under old methodologies remain on the market. There is also a disconnect between how auditors and other market actors view the role of auditors.[50] Auditors hired to verify Verra projects, known as Validation/Verification Bodies (VVBs), are contracted by project developers to assess whether projects comply with approved methodologies and accurately quantify emission reductions. According to the latest VCS Program Guide v4.7 (2024), VVBs are responsible for procedural compliance, not for independently validating whether the project delivers climate benefits.[51] However, Verra states that VVBs "conduct thorough assessments to ensure that a project's climate impacts are real and permanent," contributing to market perceptions of auditors as guarantors of climate outcomes—a disconnect between their formal scope and advertised function.[52] There is reason to believe this is a concern across the VCM as multiple registries have similar third-party audit set-ups where auditors verify whether a project complies with the standard setter's methodology.

C-QUEST CAPITAL: A CASE STUDY IN AUDITOR FAILURE TO DETECT FRAUD

While C-Quest allegedly orchestrated the fraud that led to the indictment of its former CEO, the case also highlights a failure in the verification system. Multiple C-Quest projects were validated and verified by Verra-accredited third-party auditors, including Carbon Check (India) Private Limited and Earthood Services Private Limited—firms contracted and paid directly by C-Quest, consistent with common practice in the VCM.[53] Despite what prosecutors describe as systematic falsification of project data, these auditors did not detect or report irregularities. While they have not been accused of criminal wrongdoing, their failure to uncover the alleged fraud raises serious questions about the ability of financially dependent auditors to provide independent oversight.

The C-Quest case is a reminder that while fraud is criminal, auditor failure is structural. Independent verification is essential to market credibility, but it can fail when auditors are incentivized to approve projects rather than scrutinize them. To date, Verra has not taken public action against the auditors involved, and the broader audit model across the VCM remains unchanged.[54]

CERTIFICATION AND PREMIUM OFFSETS: A CASE OF SOCIAL BENEFIT FAILURE

Verra offers certification programs for carbon offset projects that claim to deliver additional environmental and social benefits. These certifications, such as the Climate, Community and Biodiversity (CCB) Standard and the Sustainable Development Verified Impact Standard (SD VISta), allow project developers to charge a premium for their carbon credits by aligning with sustainable development goals and community co-benefits.[55]

The South Cardamom REDD+ Project in Cambodia was awarded both certifications, enabling it to market its credits at higher prices. However, an investigation by Human Rights Watch (HRW) determined that the project violated the rights of Indigenous communities and failed to meet the basic principles expected under these certification schemes.[56]

Lack of Free, Prior, and Informed Consent (FPIC)

One of the issues uncovered was the failure to obtain Free, Prior, and Informed Consent (FPIC) from local communities, a core safeguard in responsible climate and development projects, as well as the ICVCM's Core Carbon Principles. According to HRW, the first project audit conducted in 2018 stated that activities began in January 2015 but documented no community consultation until August 2017—31 months later.

Although project documentation claimed that community meetings were part of the FPIC process, this timeline directly contradicts the principle of "prior" consent. A later 2021 audit from a different auditor even acknowledged that "several communities reported high numbers of persons with no knowledge of the REDD+ project." The lack of community consultation is an issue that comes up often in carbon projects.[57]

Despite these red flags, Verra did not take any corrective action until after HRW shared their preliminary findings in May 2023. One of the auditors admitted to HRW that the timing of FPIC activities fell outside the scope of their audit. This is a serious limitation given the weight Verra's standards place on community engagement.[58]

Wider Human Rights Concerns

HRW's investigation also revealed a pattern of human rights violations associated with the project, including forced evictions and loss of Indigenous livelihoods. These violations were not documented in project audits, raising questions about the efficacy of the certification and verification process itself.

Systemic Oversight Failures

This case illustrates not just a reported failure of one project, but broader systemic weaknesses in the VCM. While researchers and journalists have documented that offset audits often fail to prevent over-crediting of emissions reductions, oversight is even weaker when it comes to verifying social and environmental co-benefits.

The South Cardamom REDD+ Project's use of Verra's high-integrity labels to charge a premium, despite what HRW found to be a lack of basic FPIC and credible community engagement, exposes a critical accountability gap in carbon markets.

These overlapping financial dependencies and weak safeguards have produced a system where the rules are written, implemented, audited, and enforced by actors who all benefit from issuing more credits, regardless of their climate impact. Until these structural conflicts and misaligned incentives are addressed, the VCM will continue to overpromise and underdeliver on its climate goals.

INDUSTRY INFLUENCE AND CAPTURE

The VCM was created to channel private capital into climate action. But over time, the very industries it was meant to hold accountable, particularly fossil fuel and other high-emitting sectors, have helped shape nearly every aspect of its design and function. From generating and purchasing credits to influencing technical standards and lobbying policymakers, these actors have entrenched themselves in the market's architecture. This influence has allowed them to delay deep emissions cuts while maintaining the appearance of climate responsibility.

Offsets as a Shield: How Fossil Fuel Companies Use the Voluntary Market to Delay Real Change

The fossil fuel sector is deeply embedded across multiple facets of the VCM, leveraging its position to perpetuate a system that delays genuine emissions reductions.

Buying Credits: Extractives companies are among the largest purchasers of carbon credits. By buying offsets, they claim progress toward net-zero targets without significantly reducing fossil fuel extraction or consumption, effectively using the market to shield their core business model.[59]

Developing Projects: Many fossil fuel firms also develop offset projects, especially in nature-based solutions like forestry and land use that generate credits. This dual role as credit creators and buyers creates conflicts of interest, allowing companies to benefit financially while continuing to emit and shape the supply side of the market.

Influencing Standards: Fossil fuel interests actively participate in the governance bodies of standard setters and others involved in creating and monitoring carbon markets. The involvement of these conflicted market participants can push for weaker rules and less stringent verification processes, increasing credit supply but undermining market integrity.

Lobbying and Influencing Policy: Through extensive lobbying, fossil fuel companies promote carbon markets as central to climate policy, diverting attention from direct emissions reductions or shifts away from fossil fuels. This political influence has embedded VCM credits within regulatory frameworks (e.g., California cap and trade accepting VCM credits) despite increasing criticism of their effectiveness.

By controlling multiple points—from credit generation and certification to governance and policy—fossil fuel companies reinforce a market structure prioritizing offsetting over reducing their own emissions.

From Scandal to Standstill and the Industry-Led Push to Restore Credibility

A wave of academic research and investigative reporting has cast serious doubt on the integrity of the carbon offset market.[60] In January 2023, The Guardian reported that more than 90% of rainforest carbon offsets issued by Verra were likely 'phantom credits' that did not represent actual emissions reductions.[61] Nature analyzed the offset portfolios of the top twenty companies that retired credits between 2020 and 2023, and found that the majority of credits retired were low-quality, with an estimated 87% unlikely to deliver real or additional emissions reductions.[62] In November 2024, Nature published a follow-up analysis based on multiple studies, which together assessed 20% of all offset credits issued to date. It found that fewer than 16% of the projects covered had demonstrably reduced emissions.[63]

These findings led to a collapse in confidence in the market. In 2023, VCM transactions fell 61% from $1.9 billion in 2022 to $723 million in 2023. The average price of forestry (REDD+) credits, which are the most widely used, fell 23 percent.[64] Market contraction was attributed to the media reports of these scandals and credit buyers waiting for integrity initiatives to issue guidance and for problematic methodologies to be updated.[65]

> **"More than 90% of rainforest carbon offsets issued by Verra were likely 'phantom credits' that did not represent actual emissions reductions."**

MARKET RESPONSE

In the wake of these reported scandals, collapsing prices, and declining demand, a new generation of governance initiatives emerged to restore trust and stabilize the market. These efforts aim to improve credit quality, tighten standards, and reassure buyers that carbon offset credits can deliver real climate benefits. However, many of these efforts are deeply intertwined with the same corporate and financial interests that helped shape, and in many ways compromise, the current system.

ICVCM: Market Reform from Within

The Integrity Council for the Voluntary Carbon Market (ICVCM) is one of the most prominent efforts seeking to improve market integrity. Established in 2021, it grew out of the Task Force on Scaling the VCMs, an industry-led initiative backed by major financial institutions and fossil fuel interests.[66] Although it was originally focused on scaling the market, the ICVCM recognized that poor credit quality was undermining trust and hindering growth, and sought to raise standards across the system.

To that end, ICVCM created the Core Carbon Principles (CCPs), a set of criteria for what constitutes a high-quality offset. Using its Assessment Framework, ICVCM evaluates whether carbon crediting programs and their methodologies meet these standards. Credits that pass receive a CCP label, intended to signal high quality.[67]

Notably, Verra resisted ICVCM's push to independently review methodologies, reportedly out of concern that many of its credits would not meet the new standards, potentially threatening its reputation and its dominant market share.[68]

ICVCM's focus on stronger methodologies is a step forward, but it leaves untouched some of the market's most critical weaknesses. It does not reform the carbon market's structurally compromised audit process, including the practice of developer-paid verification, and the ICVCM relies on existing registries and auditors to assess project performance, despite the well-documented disconnect between what carbon credit methodologies prescribe and what occurs on the ground.[69] This omission leaves some of the system's core weaknesses unaddressed. And although ICVCM presents itself as an independent integrity body, its Governing Board includes individuals with ties to the fossil fuel sector, international financiers of extractive industries, and major offset buyers, raising questions about whether it can truly operate at arm's length from the market it aims to oversee.[70]

These concerns were amplified in November 2024, when ICVCM approved three controversial REDD+ methodologies for the Core Carbon Principle label, including two from Verra, despite longstanding concerns about over-crediting and weak baselines in such projects. The decision prompted two members of the ICVCM expert panel to resign, highlighting internal tensions and the influence of dominant registries on the standard-setting process.[71]

SBTi: Science-Based Targets Under Pressure

The Science Based Targets initiative (SBTi) has become one of the most influential frameworks guiding corporate climate action. More than 8,000 companies have had their climate targets validated by SBTi, giving it significant sway over what counts as legitimate climate leadership in the private sector.[72]

Until recently, SBTi did not allow the use of carbon credits to meet near-term emission reduction targets,

particularly Scope 3 emissions, which are indirect emissions from a company's supply chain and often make up the bulk of its climate footprint. SBTi has long emphasized that only high-quality carbon credits should be used, and only to offset a limited portion of emissions that are the most difficult to eliminate.[73] This restriction reflected growing concerns that carbon credits were being used to delay real decarbonization.

In April 2024, however, SBTi's board released a surprise statement, opening the door to the use of carbon credits for Scope 3 emissions.[74] The move followed a private convening reportedly organized by the Bezos Earth Fund and sparked immediate controversy.[75] According to Bloomberg, staff initially thought the website was hacked and took the statement down. When they realized the statement was official, it triggered internal revolt with staff calling on the CEO and Board members who supported the statement to resign.[76] SBTi staff issued a public letter demanding accountability, warning that the announcement bypassed established governance process and risked undermining SBTi's credibility.[77] In the wake of the backlash, SBTi leadership clarified that no policy change had yet been made and that any use of offsets would be subject to stringent criteria and stakeholder consultation.[78]

Critics argue that the Board's initial move was influenced by growing pressure from corporations with large Scope 3 emissions and limited decarbonization options, like oil and gas, agriculture, and consumer goods. BloombergNEF estimated that SBTi relaxing its rules could lead the market to grow to $1 trillion by 2050.[79] The controversy also drew renewed attention to SBTi's evolving governance structure. Originally, it was a collaboration between the United Nations and non-governmental organizations (NGOs). It is now an independent entity with a board that includes market participant representatives, raising concerns about industry influence over what presents itself as a science-based authority.

This episode once again underscores the deeper problem: efforts to maintain or reform the efficacy of the VCM are shaped by the very actors that benefit most from less stringent standards. As a result, reforms risk reinforcing, rather than correcting, the system's core failures.

TRANSPARENCY AND ACCOUNTABILITY FAILURES

Despite its growing role in global climate strategies, the VCM suffers from limited transparency and fragmented oversight. Key aspects of project design, validation, financing, and monitoring remain largely opaque, making it difficult to assess whether these mechanisms deliver real climate or social benefits.

Opaque and Incomplete Project Data

> **"This opacity makes it difficult or impossible for independent actors to replicate or verify credit quality."**

A major barrier to accountability is limited public access to technical data needed to assess credit integrity. A Carbon Market Watch report found the four major standard setters do not require full public disclosure of key documentation needed to check credit calculations, while others fail to enforce disclosure requirements.[80] Although Verra ranks higher than some of the other main standard setters according to third party analyses with regard to transparency, no standard setter provides full public disclosure of all project documentation. Available data is often located in non-standardized PDFs that vary across registries and are difficult to analyze at scale.[81]

A quality assessment of REDD+ projects found that key inputs related to forest carbon accounting were frequently missing from project documentation, rendering them inaccessible to independent reviewers. As the authors noted:

> *"Offset registries do not require release of the data needed for independent analysts to fully reproduce credit calculations…Much of the data and assumptions used by developers to estimate project baselines, carbon in preserved forests, and total credits generated were not publicly available for independent evaluation."*[82]

This opacity makes it difficult or impossible for independent actors to replicate or verify credit quality. Verra has recently announced plans to digitize its methodologies and project lifecycle data, which could help address some of these issues.[83]

Lack of Transparency in Audit Outcomes

Validation and verification audits are essential to project integrity, yet failed audits are rarely disclosed. Carbon Market Watch reviewed the four major registries and found many missing project documents, including verification reports, indicating inconsistent publication of audits, including failures.[84] A separate analysis revealed 64% of Verra-approved auditors had worked on projects later found to have over-credited. Even today, there is no market-wide mandatory standard to publicly flag or publicly review these audit failures.[85]

This prevents the public from knowing how many projects fail, why, or whether similar flaws recur across the market, creating a misleading picture of credit quality. Without access to audit failure data, it is impossible to evaluate the robustness of the validation, verification, or registry credibility.

These audit-related gaps, combined with other transparency failures, significantly undermine the credibility of carbon credit claims and limit the ability of stakeholders to ensure climate finance is both effective and reaches its intended beneficiaries.

Limited Lifecycle Visibility in Secondary Markets

Even after credits are verified, opacity continues in how they are traded and resold. Once a carbon credit is issued, its movements, such as the resale through brokers, exchanges, or digital platforms, are rarely visible to buyers or external observers. Credits can pass through multiple intermediaries before retirement, but registries usually record only issuance and retirement, not intermediary transfers or buyer identity.

Most trades in the VCM are through private negotiations rather than public exchanges, with prices and deal terms rarely disclosed. Information on these transactions is limited, often delayed, and relies on voluntary reporting, making it difficult to track individual credit sales or independently determine fair market value.[86] Buyers often lack clarity about the origin and authenticity of the credits they purchase, making it difficult to assess their quality. The concern is acute enough that a new services industry offering to identify quality credits has been created. According to one such company, "There are two primary complicating factors that make it hard to buy carbon credits. First, the carbon market lacks a unified marketplace where buyers and sellers transact, requiring buyers to interact with numerous sources to get pricing and information. Second, not all carbon credits are credit equal, which makes purchasing decisions more difficult."[87]

Financial Opacity Throughout the Crediting Chain

Beyond credit provenance, buyers also may be in the dark about how their payments are distributed across the crediting chain. The financial flows behind carbon credit transactions remain largely opaque. Data on how much of the purchase price flows to project developers, intermediaries, communities, or auditors is unavailable publicly. Analysts estimate that as much as 60 to 90% of the revenue from carbon credit sales is captured by developers and intermediaries, leaving only a small fraction for local stakeholders.[88] A Carbon Market Watch investigation found that 90% of intermediaries in the market do not disclose their fees or profits.[89]

In the Kariba project referenced earlier, a shell company incorporated in Guernsey was used to obscure how much money reached the community. Reportedly, this allowed the project developer to exaggerate benefit sharing claims and ultimately walk away from the project without legal repercussions.[90]

Without financial transparency, buyers and analysts lack confidence in knowing whether credits support real climate action or enrich intermediaries.

Limited Community Participation and Oversight

Beyond opacity in technical and financial data, local communities that are most directly affected by carbon projects are frequently excluded from meaningful governance roles and decision-making. Free, Prior, and Informed Consent (FPIC) is inconsistently applied, and grievance mechanisms are usually controlled by project developers or registries rather than independent entities. This lack of genuine community oversight means social impacts, benefit sharing, and potential harms often go largely unmonitored or unaddressed, calling into question the equity and legitimacy of projects.[91]

This exclusion is compounded by asymmetries of information. Project developers and auditors possess far more detailed technical knowledge about project design, emissions calculations, and financial flows than local communities. Without transparent, accessible information, affected communities cannot meaningfully engage in oversight or challenge project claims, deepening power imbalances and undermining social accountability.

Absence of Consequences for Methodological Failures

Even when serious issues like non-additionality (the emission reduction would have happened anyway), inflated baselines, or other integrity problems are identified, registries rarely suspend credit issuances or remove projects from the market. Projects using discredited methodologies often continue to sell credits long after independent reviews expose flaws. While registries can take corrective actions, such interventions are uncommon.

When a methodology is found to be flawed and subsequently updated or discontinued, project developers may choose to participate in Verra's voluntary requantification process, but this is not mandatory. Verra maintains credits "issued under previous methodology versions remain fully valid and reflect the robust program requirements and scientific understanding at the time the VCUs were issued."[92]

This policy allows outdated and potentially junk credits to persist in circulation, weakening trust in overall market quality.

Growing Regulatory Concern: California's Offset Transparency Law

Recognizing systemic transparency issues in carbon markets, regulators are beginning to intervene. In 2023, California passed a law requiring increased public disclosure for offsets, including from the VCM, sold into its state-regulated cap-and-trade system,

and it mandates publication of key project data, including credit calculations, methodologies, and compliance with other standards.[93] The first disclosures were required to be online by January 1, 2025. While compliance has yet to be assessed, this represents one of the first legislative efforts to mandate transparency that affects voluntary markets.

This move is significant because some offsets certified by voluntary registries, including Verra, are now being used to meet compliance obligations in California's program. As credits from voluntary standards begin to be used to meet legally binding climate targets, concerns around environmental integrity and public accountability become more pressing.

The California law demonstrates that voluntary and compliance markets are becoming increasingly intertwined, and that voluntary offset claims can have real public consequences. It reinforces the case for consistent, enforceable transparency standards across all carbon markets.

Taken together, these transparency and accountability failures create a fragmented system that undermines trust in carbon markets and hinders effective climate finance. The following section proposes key reforms to reduce conflicts of interest, improve market governance, strengthen transparency and accountability, and ensure climate finance achieves its intended impact.

FINAL RECOMMENDATIONS: BREAKING THE CYCLE OF MARKET FAILURE

Despite years of reform efforts, the VCM has been plagued by the same structural failures: pervasive conflicts of interest; corporate capture of oversight bodies; opaque credit and financial flows; weak, if any, public engagement or oversight; and a persistent lack of accountability. This has enabled the proliferation of low-quality credits, eroded public trust, and diverted attention from the urgent need to reduce emissions at the source.

These are not isolated technical issues, but symptoms of a system reflective of perverse incentives. Real reform requires shifting to a model grounded in transparency, independence, and climate accountability.

Beyond Offsetting: Toward a Climate Contribution Model

The current implementation of offsetting, which treats carbon credits as interchangeable with actual emissions reductions, has, to date, proven unworkable. It creates enormous challenges as offsetting requires deconflicted and unbiased science-based decision-making just to maintain the status quo.

An emerging alternative is a climate contribution model, which reframes carbon finance as a way to support mitigation efforts without displacing companies' own decarbonization obligations.[94] This model removes the incentive to seek the cheapest possible credit, aligns better with climate justice principles, and encourages real emissions reductions.

Emerging Alternatives: Toward Independence and Scientific Integrity

Isometric is one example of an emerging registry attempting to rebuild trust by fundamentally redesigning how credits are verified and issued. Unlike traditional registries, which are typically paid by project developers and whose revenues increase with the volume of credits issued, Isometric is paid solely by credit buyers. Its revenue is entirely independent of how many credits are certified, and it is not paid by the entity it is certifying. This shifts the incentive structure: because buyers bear the reputational risk if credits turn out to be low-quality, they have the strongest motivation to demand rigorous verification.[95]

Buyers pay a flat fee based on the type of carbon removal project. This fee is set independently of the number of credits issued or the price per ton. It also covers the full cost of verification. By removing the financial relationship between the project developer and the auditor, Isometric mitigates the incentive to inflate project claims.[96]

Isometric methodologies are developed by in-house scientists, and all underlying data is publicly available from issuance to retirement.[97] Isometric also focuses on carbon removal and excludes REDD+ projects, which have faced persistent concerns over credibility and measurement.

Isometric-like models would remove financial dependencies and embed scientific integrity and transparency to carbon markets. While researchers for this paper did not fully evaluate Isometric's practices and impact, the approach suggests an alternative blueprint for a more accountable and evidence-based carbon market.

RECOMMENDATIONS

The following structural reforms are needed to strengthen integrity in the VCM.

1. Eliminate Conflicts of Interest

- All standard setters must establish and publicly disclose a robust conflict of interest policy that clearly defines what constitutes a conflict, outlines procedures for identification and disclosure, and mandates recusal or mitigation measures to ensure impartiality in decision-making. The policy should be easily accessible and regularly reviewed.
- Prohibit financial relationships between project developers, credit buyers, and standard setters that reward credit volume over quality.
- Certifiers must rely on revenue streams not tied to per-credit issuance fees.
- Verifiers must be independent third parties, randomly selected from a qualified pool, and not paid directly by project developers.
- Verifiers should be incentivized to identify problems, and each project should be verified in detail by one verifier and then presented to another, or a pool of verifiers, to review and validate the project. [98]
- Methodology development must be independent. Project developers should not write or control the standards against which they are evaluated.
- Require disclosure of all funding sources, governance ties, and potential conflicts of interest for all market oversight bodies.

2. Decentralize Governance and Reduce Corporate Control

- Reduce corporate dominance over standard-setting and oversight bodies. Ensure at least a majority representation on the boards of standard setters from:
  - Independent academics and scientific experts
  - Civil society and Indigenous communities
- Prohibit board seats or voting power for companies or entities with a direct financial stake in the issuance or sale of carbon credits.
- Establish clear public interest mandates and accountability mechanisms for all oversight bodies to ensure decisions prioritize climate integrity over market growth.

3. Enforce Transparency and Accountability

- Standard setters must ensure meaningful participation of affected communities and enable public oversight of every stage of the process, from design and approval to project implementation and oversight.
- Require public access to all project documentation, including what is submitted to verifiers.
- Mandate disclosure of credit ownership history, pricing, and intermediary markups. As a first step, the volume and price of initial credit sales from a project developer to another party should be made public by the standard setter to improve transparency and prevent misuse, such as the use of shell companies in the Kariba case to divert community benefits.[99]
- Develop unified, open-access registries that track credits from issuance to retirement.
- Require brokers and resellers to disclose their fees and profit margins.
- At a minimum, sunset credits issued under flawed or discredited methodologies that are still on the market.

4. Support the Transition to Contribution-Based Models

- Encourage governments, standard setters, and buyers to shift away from offsetting claims and toward contribution-based frameworks.

CONCLUSION: REFORM OR REPLACE

The VCM, in its current form, is not working. It is failing the climate, failing frontline communities, and failing to uphold public trust. The path forward must be built on systemic reform, not incremental improvement. This means breaking the financial and governance dependencies that compromise integrity, reducing corporate influence over the standard-setting bodies and oversight, shifting from offsetting to contribution, and placing scientific evidence and accountability at the center of market design. Without serious reform, the VCM will continue to fall short of its climate promises.

ENDNOTES

[1] Patrick Greenfield, "Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows," The Guardian, January 18, 2023, available at https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe and Benedict S. Probst, et al., "Systematic assessment of the achieved emission reductions of carbon crediting projects," Nature, November 14, 2024, available at https://www.nature.com/articles/s41467-024-53645-z
[2] Majid Asadnabizadeh & Espen Moe, "A review of Global Carbon Markets from Kyoto to Paris and beyond: the persistent failure of implementation," frontiers, July 1, 2024, available at https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2024.1368105/full
[3] "What is REDD+?" United Nations Climate Change, available at https://unfccc.int/topics/land-use/workstreams/redd/what-is-redd
[4] Joanna Cabello & Ilona Hartlief, "Regulation to reduce CO2 emissions is the most effective way to address climate change," SOMO, October 9, 2024, available at https://www.somo.nl/myth-carbon-pricing/
[5] Aruna Chandrasekhar, "Timeline: The 60-year history of carbon offsets," CarbonBrief, September 24, 2023, available at https://interactive.carbonbrief.org/carbon-offsets-2023/timeline.html
[6] Tin Fischer & Hannah Knuth, "Phantom Offsets and Carbon Deceit," Die Zeit, January 19, 2023, available at https://www.zeit.de/wirtschaft/2023-01/co2-certificates-fraud-emissions-trading-climate-protection-english/komplettansicht
[7] Danny Cullenward, Grayson Badgley, & Freya Chay, "Commentary: Carbon offsets are incompatible with the Paris Agreement," One Earth, September 15, 2023, available at https://www.cell.com/action/showPdf?pii=S2590-3322%2823%2900393-7
[8] Ibid
[9] Giuliana Gentile & Joyeeta Gupta, "Orchestrating the narrative: The role of fossil fuel companies in delaying the energy transition," Volume 212, Renewable and Sustainable Energy Reviews, January 20, 2025, available at https://www.sciencedirect.com/science/article/pii/S1364032125000322
[10] "About," International Emissions Trading Association (IETA), available at https://www.ieta.org/about
[11] Kate Aronoff, "Shell Oil executive boasts that his company influenced the Paris Agreement," The Intercept, December 8, 2018, available at https://theintercept.com/2018/12/08/shell-oil-executive-boasts-that-his-company-influenced-the-paris-agreement/
[12] Danny Cullenward, Grayson Badgley, & Freya Chay, "Commentary: Carbon offsets are incompatible with the Paris Agreement," One Earth, September 15, 2023, available at https://www.cell.com/action/showPdf?pii=S2590-3322%2823%2900393-7
[13] "The State of Carbon Credits: The Carbon Market Numbers You Need to Know Heading Into 2025," Sylvera, January 8, 2025, available at https://www.sylvera.com/blog/the-state-of-carbon-credits-the-carbon-market-numbers-you-need-to-know-heading-into-2025
[14] "Verified Carbon Standard (VCS)," Blue Carbon Projects, available at https://bluecarbonprojects.org/faq-items/verified-carbon-standard-vcs/ and Tin Fischer & Hannah Knuth, "Phantom Offsets and Carbon Deceit," Die Zeit, January 19, 2023, available at https://www.zeit.de/wirtschaft/2023-01/co2-certificates-fraud-emissions-trading-climate-protection-english/komplettansicht
[15] "VCS Turns 10! Celebrating our History and Looking to the Future," Verra, November 30, 2017, available at https://verra.org/vcs-turns-10-celebrating-our-history-and-looking-to-the-future/
[16] "Verified Carbon Standard (VCS)," Blue Carbon Projects, available at https://bluecarbonprojects.org/faq-items/verified-carbon-standard-vcs/
[17] Barbara K. Haya, et al., "Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting.pdf
[18] Ilona Hartlief & Joanna Cabello, "The offset industry, riddled with conflicts of interest, is not fixable," SOMO, October 15, 2024, available at https://www.somo.nl/myth-flaws-carbon-offsetting-can-be-fixed/
[19] "Annual Report 2023," Verra, October 2024, available at https://verra.org/wp-content/uploads/2024/10/verra-annual-report-2023-ar23.pdf
[20] Ilona Hartlief & Joanna Cabello, "The offset industry, riddled with conflicts of interest, is not fixable," SOMO, October 15, 2024, available at https://www.somo.nl/myth-flaws-carbon-offsetting-can-be-fixed/
[21] Barbara K. Haya, et al., "Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting.pdf
[22] "VCS Governance and Development," Verra, available at https://verra.org/programs/verified-carbon-standard/governance-development/
[23] Edoardo Pavia, "Behind the green curtain: big oil and the voluntary carbon market," Carbon Market Watch, February 12, 2025, available at https://carbonmarketwatch.org/2025/02/12/behind-the-green-curtain-big-oil-and-the-voluntary-carbon-market/
[24] Thales A.P. West, Barbara Bomfim, & Barbara K. Haya, "Methodological issues with deforestation baselines compromise the integrity of carbon offsets from REDD+," Volume 87, Global Environmental Change, June 10, 2024, available at https://www.sciencedirect.com/science/article/pii/S0959378024000670
[25] Benedict S. Probst, et al., "Systematic assessment of the achieved emission reductions of carbon crediting projects," nature communications, November 14, 2024, available at https://www.nature.com/articles/s41467-024-53645-z
[26] Barbara K. Haya, et al., "Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting.pdf
[27] Barbara K. Haya, et al., "Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting.pdf
[28] Heidi Blake, "The Great Cash-For-Carbon Hustle," The New Yorker, October 16, 2023, available at https://www.newyorker.com/magazine/2023/10/23/the-great-cash-for-carbon-hustle
[29] "VCS Standard v4.7, Section 3.2.5," Verra, April 16, 2024, available at https://verra.org/wp-content/uploads/2024/04/VCS-Standard-v4.7-FINAL-4.15.24.pdf
[30] "Verra Acts on Kariba Project: Cancels Excess Credits, Advances Independent Review," Verra, September 23, 2025, available at https://verra.org/verra-acts-on-kariba-project-cancels-excess-credits-advances-independent-review/
[31] "VCS Program Methodologies," Verra, available at https://verra.org/program-methodology/vcs-program-standard/develop-new-methodology/
[32] "U.S. Attorney Announces Criminal Charges in Multi-Year Fraud Scheme In The Market For Carbon Credits," U.S. Attorney's Office (Southern District of New York), October 2, 2024, available at https://www.justice.gov/usao-sdny/pr/us-attorney-announces-criminal-charges-multi-year-fraud-scheme-market-carbon-credits and "Commodity Futures Trading Commission v. Kenneth Newcombe," U.S. District Court for the Southern District of New York, October 2, 2024, available at https://admin.climatecasechart.com/wp-content/uploads/case-documents/2024/20241002_docket-124-cv-07477_complaint.pdf
[33] Ibid. See also: Chico Harlan, "He helped offset companies' planet-warming pollution. Now he's accused of fraud." The Washington Post, October 3, 2024, available at https://www.washingtonpost.com/climate-environment/2024/10/03/carbon-offsets-ken-newcombe-indicted/
[34] Shi Yi, "'Phantom' rice projects expose voluntary carbon market failings," Dialogue Earth, December 19, 2024, available at https://dialogue.earth/en/climate/phantom-rice-projects-expose-voluntary-carbon-market-failings/

[35] Matteo Civillini, "Revealed: How Shell cashed in on dubious carbon offsets from Chinese rice paddies," Climate Change News, March 28, 2023, available at https://www.climatechangenews.com/2023/03/28/revealed-how-shell-cashed-in-on-dubious-carbon-offsets-from-chinese-rice-paddies/
[36] Matteo Civillini, "Revealed: How Shell cashed in on dubious carbon offsets from Chinese rice paddies," Climate Change News, March 28, 2023, available at https://www.climatechangenews.com/2023/03/28/revealed-how-shell-cashed-in-on-dubious-carbon-offsets-from-chinese-rice-paddies/
[37] Natasha White & Will Mathis, "Shell Aims to Sell Majority Stake in Carbon Offsets Business," Bloomberg, November 13, 2024, available at https://www.bloomberg.com/news/articles/2024-11-13/shell-aims-to-sell-majority-stake-in-carbon-offsets-business?embedded-checkout=true
[38] Matteo Civillini, "Verra axing of Shell's rice-farming carbon credits in China fuels integrity fears," Climate Change News, August 30, 2024, available at https://www.climatechangenews.com/2024/08/30/verra-axing-of-shells-rice-farming-carbon-credits-in-china-fuels-integrity-fears/
[39] Matteo Civillini, "Shell dodges paying compensation for sham carbon credits in China," Climate Change News, January 31, 2025, available at https://www.climatechangenews.com/2025/01/31/shell-dodges-paying-compensation-for-sham-carbon-credits-in-china/
[40] Matteo Civillini, "Shell dodges paying compensation for sham carbon credits in China," Climate Change News, January 31, 2025, available at https://www.climatechangenews.com/2025/01/31/shell-dodges-paying-compensation-for-sham-carbon-credits-in-china/
[41] "Verra Rejects China Rice Cultivation Projects, Sanctions Auditing Firms and project Proponents," Verra, August 28, 2024, available at https://verra.org/verra-rejects-china-rice-cultivation-projects-sanctions-auditing-firms-and-project-proponents/ and "Verra Suspends VVBs Involved in Rice Cultivation Projects in China," Verra, March 25, 2025, available at https://verra.org/verra-suspends-vvbs-involved-in-rice-cultivation-projects-in-china/
[42] Shi Yi, "'Phantom' rice projects expose voluntary carbon market failings," Dialogue Earth, December 19, 2024, available at https://dialogue.earth/en/climate/phantom-rice-projects-expose-voluntary-carbon-market-failings/
[43] "Section 3: Summary For Decision Makers," The Integrity Council for the Voluntary Carbon Market, April 2024, available at https://icvcm.org/wp-content/uploads/2024/05/CCP-Section-3-V3-FINAL-10May24.pdf
[44] Cary Coglianese & Cynthia Giles, "Third-Party Auditing Cannot Guarantee Carbon Offset Credibility," No. 25-28, University of Pennsylvania Carey Law, July 9, 2025, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5345783
[45] Barbara K. Haya, et al., "Executive Summary: Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting-EXECUTIVE-SUMMARY.pdf
[46] Cynthia Giles & Cary Coglianese, "Auditors can't save carbon offsets," Volume 389 Issue 6756, Science, July 10, 2025, available at https://www.science.org/doi/10.1126/science.ady4864
[47] Cary Coglianese & Cynthia Giles, "Third-Party Auditing Cannot Guarantee Carbon Offset Credibility," No. 25-28, University of Pennsylvania Carey Law, July 9, 2025, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5345783
[48] Ibid
[49] "Verra Suspends VVBs Involved in Rice Cultivation Projects in China," Verra, March 25, 2025, available at https://verra.org/verra-suspends-vvbs-involved-in-rice-cultivation-projects-in-china/
[50] Cary Coglianese & Cynthia Giles, "Third-Party Auditing Cannot Guarantee Carbon Offset Credibility," No. 25-28, University of Pennsylvania Carey Law, July 9, 2025, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5345783
[51] "VCS Standard v4.7, Section 3.2.5," Verra, April 16, 2024, available at https://verra.org/wp-content/uploads/2024/04/VCS-Standard-v4.7-FINAL-4.15.24.pdf
[52] "Investing in Carbon Projects: What You Need to Know in 2025," Verra, January 3, 2025, available at https://verra.org/verra-views/investing-in-carbon-projects-what-you-need-to-know-in-2025/
[53] Project documentation submitted to Verra lists Carbon Check and Earthood as the Validation/Verification Bodies (VVBs) for C-Quest's cookstove projects. Payment structure follows standard industry practice as outlined in Verra's VCS Program Guide v4.7 (2024) available at https://verra.org/wp-content/uploads/2024/04/VCS-Standard-v4.7-FINAL-4.15.24.pdf
[54] No public suspension or investigation of involved VVBs has been announced by Verra as of July 2025. See also: "Facing the facts: carbon offsets unmasked," SOMO, available at https://www.somo.nl/facing-the-facts-carbon-offsets-unmasked/
[55] "Climate, Community & Biodiversity (CCB) Standards v3.1," Verra, July 2024, available at https://verra.org/wp-content/uploads/2024/07/CCB-Standards-v3.1_ENG.pdf and "Sustainable Development Verified Impact Standard," Verra, available at https://verra.org/programs/sd-verified-impact-standard/
[56] "Carbon Offsetting's Casualties: Violations of Chong's Indigenous People's Rights in Cambodia's Southern Cardamom REDD+ Project," Human Rights Watch, February 2024, available at https://www.hrw.org/sites/default/files/media_2024/02/cambodia0224web_1.pdf
[57] Alice Stevens & Anoukh de Soysa, "Beyond Transparency: Meaningful and Inclusive Public Participation to Counter Land Corruption in Carbon Markets," Land Portal, June 4, 2024, available at https://landportal.org/blog-post/2024/06/beyond-transparency-meaningful-and-inclusive-public-participation-counter-land
[58] Ibid
[59] Edoardo Pavia, "Behind the green curtain: big oil and the voluntary carbon market," Carbon Market Watch, February 12, 2025, available at https://carbonmarketwatch.org/2025/02/12/behind-the-green-curtain-big-oil-and-the-voluntary-carbon-market/
[60] Joseph Romm, Stephen Lezak, & Amna Alshamsi, "Are Carbon Offsets Fixable?" Vol. 50:649-680, pp. 649-690, Annual Review of Environment and Resources, October 2025, available at https://www.annualreviews.org/content/journals/10.1146/annurev-environ-112823-064813
[61] Patrick Greenfield, "Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows," The Guardian, January 18, 2023, available at https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe
[62] Gregory Trencher, et al., "Demand for low-quality offsets by major companies undermines climate integrity of the voluntary carbon market," Nature, August 10, 2024, available at https://www.nature.com/articles/s41467-024-51151-w
[63] Benedict S. Probst, et al., "Systematic assessment of the achieved emission reductions of carbon crediting projects," nature communications, November 14, 2024, available at https://www.nature.com/articles/s41467-024-53645-z
[64] Alex Procton, "State of the Voluntary Carbon Market 2024," Ecosystem Marketplace, May 30 2024, available at https://3298623.fs1.hubspotusercontent-na1.net/hubfs/3298623/SOVCM%202024/State_of_the_Voluntary_Carbon_Markets_20240529%201.pdf
[65] "Report: The Voluntary Carbon Market Contracted in 2023, Driven by Drop-off in Transactions for REDD+ and Renewable Energy," Forest Trends, May 30, 2024, available at https://www.forest-trends.org/pressroom/report-the-voluntary-carbon-market-contracted-in-2023-driven-by-drop-off-in-transactions-for-redd-and-renewable-energy/

[66] "About Us," Taskforce on Scaling Voluntary Carbon Markets (TSVCM), available at https://www.iif.com/tsvcm and Corporate Accountability, Friends of the Earth, & Global Forest Coalition, "Conflicted beyond credibility: An analysis of Big Polluter ties to prominent 'net zero' initiative," November 8, 2022, available at https://corporateaccountability.org/wp-content/uploads/2022/11/08-FoEI-CA-net-zero-ties-rpt-ENG-mr.pdf
[67] "The Core Carbon Principles," The Integrity Council for Voluntary Carbon Market (ICVCM), available at https://icvcm.org/core-carbon-principles/
[68] Danny Cullenward, et al., "Verra's broadside against the Integrity Council props up the status quo," CarbonPlan, September 29, 2022, available at https://carbonplan.org/research/verra-integrity-council
[69] Cary Coglianese & Cynthia Giles, "Third-Party Auditing Cannot Guarantee Carbon Offset Credibility," No. 25-28, University of Pennsylvania Carey Law, July 9, 2025, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5345783
[70] Corporate Accountability, Friends of the Earth, & Global Forest Coalition, "Conflicted beyond credibility: An analysis of Big Polluter ties to prominent 'net zero' initiative," November 8, 2022, available at https://corporateaccountability.org/wp-content/uploads/2022/11/08-FoEI-CA-net-zero-ties-rpt-ENG-mr.pdf
[71] Lambert Schneider, "Statement on the withdrawal from the ICVCM expert panel," Oeko-Institut, December 10, 2024, available at https://www.oeko.de/en/news/latest-news/statement-on-the-withdrawal-from-the-icvcm-expert-panel/ and
[72] "Target Dashboard," Science Based Targets Initiative (SBTi), available at https://sciencebasedtargets.org/target-dashboard
[73] Alastair March, "How One of the Most Revered Climate Groups Descended Into Chaos," Bloomberg, May 29, 2024, available at https://www.bloomberg.com/news/articles/2024-05-29/inside-the-sbti-scope-3-scandal-how-the-group-is-rethinking-carbon-offsets?embedded-checkout=true
[74] "Statement from the SBTi Board of Trustees on use of environmental attribute certificates, including but not limited to voluntary carbon markets, for abatement purposes limited to scope 3," Science Based Targets Initiative (SBTi), April 9, 2024, available at https://sciencebasedtargets.org/news/statement-from-the-sbti-board-of-trustees-on-use-of-environmental-attribute-certificates-including-but-not-limited-to-voluntary-carbon-markets-for-abatement-purposes-limited-to-scope-3
[75] Simon Mundy, "'The whole institution is boiling': Revolt inside a key climate target group," Financial Times, April 12, 2024, available at https://www.ft.com/content/841a7eef-3400-4b5a-ac2d-b24251b8eba3
[76] Alastair March, "How One of the Most Revered Climate Groups Descended Into Chaos," Bloomberg, May 29, 2024, available at https://www.bloomberg.com/news/articles/2024-05-29/inside-the-sbti-scope-3-scandal-how-the-group-is-rethinking-carbon-offsets?embedded-checkout=true
[77] "SBTi Staff Response to the Board of Trustees April 9 Statement," Science Based Targets Initiative (SBTi), April 9, 2024, available at https://www.dropbox.com/scl/fi/gvjkqr4k4cdtt57qit9s6/SBTi-Staff-Response-to-the-Board-of-Trustees-April-9-Statement.pdf?rlkey=o38yubknqezjqzim44wjtk5fb&e=3&dl=0
[78] Mark Segal, "SBTi Clarifies that 'No Change Has Been Made' to Use of Carbon Credits in Net Zero Plans Following Backlash," ESGToday, April 16, 2024, available at https://www.esgtoday.com/sbti-clarifies-that-no-change-has-been-made-to-use-of-carbon-credits-in-net-zero-plans-following-backlash/
[79] Alastair March, "How One of the Most Revered Climate Groups Descended Into Chaos," Bloomberg, May 29, 2024, available at https://www.bloomberg.com/news/articles/2024-05-29/inside-the-sbti-scope-3-scandal-how-the-group-is-rethinking-carbon-offsets?embedded-checkout=true
[80] Inigo Wyburd & Gilles Dufrasne, "Lost in Documentation: Transparency in voluntary carbon market registries," Carbon Market Watch, March 28, 2024, available at https://carbonmarketwatch.org/wp-content/uploads/2024/04/CMW-Lost-in-Documentation-Transparency-in-voluntary-carbon-market-registries.pdf
[81] Jodie Caston, et al., "Carbon Markets Reimagined: Scale, Resiliency, and Transparency through Digital Assets," JPMorgan Chase, June 24, 2025, available at https://www.jpmorgan.com/kinexys/documents/carbon-markets-reimagined-digital-assets.pdf
[82] Barbara K. Haya, et al., "Quality Assessment of REDD+ Carbon Credit Projects," The Goldman School of Public Policy at Berkeley, September 15, 2023, available at https://gspp.berkeley.edu/assets/uploads/page/Quality-Assessment-of-REDD+-Carbon-Crediting.pdf
[83] "Verra and Hedera to Accelerate Digital Transformation of Carbon Markets," Verra, May 28, 2025, available at https://verra.org/verra-and-hedera-to-accelerate-digital-transformation-of-carbon-markets/
[84] Jodie Caston, et al., "Carbon Markets Reimagined: Scale, Resiliency, and Transparency through Digital Assets," JPMorgan Chase, June 24, 2025, available at https://www.jpmorgan.com/kinexys/documents/carbon-markets-reimagined-digital-assets.pdf
[85] Cary Coglianese & Cynthia Giles, "Third-Party Auditing Cannot Guarantee Carbon Offset Credibility," No. 25-28, University of Pennsylvania Carey Law, July 9, 2025, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5345783
[86] "Remarks by Under Secretary for Domestic Finance Nellie Liang on voluntary Carbon Market Integrity," U.S. Department of the Treasury, September 25, 2024, available at https://home.treasury.gov/news/press-releases/jy2614
[87] Pankaj Tanwar, "Why Is It So Hard to Buy Carbon Credits?" CarbonBetter, September 28, 2022, available at https://carbonbetter.com/story/buy-carbon-credits/
[88] "Fixing Verra," Renoster, July 2024, available at https://drive.google.com/file/d/1286twFSBBvYQxqH0ZFBvaBlYNwgmW3ma/view
[89] Gilles Dufrasne & Jonas Fuchs, "Secret Intermediaries: Are carbon markets really financing climate action?" Carbon Market Watch, February 2, 2023, available at https://carbonmarketwatch.org/wp-content/uploads/2023/02/CMW-briefing-on-intermediaries-1.pdf
[90] Fixing Verra," Renoster, July 2024, available at https://drive.google.com/file/d/1286twFSBBvYQxqH0ZFBvaBlYNwgmW3ma/view
[91] Alice Stevens & Anoukh de Soysa, "Beyond Transparency: Meaningful and Inclusive Public Participation to Counter Land Corruption in Carbon Markets," Land Portal, June 4, 2024, available at https://landportal.org/blog-post/2024/06/beyond-transparency-meaningful-and-inclusive-public-participation-counter-land
[92] "Verra Releases Methodology Change and Requantification Procedure," Verra, October 16, 2024, available at https://verra.org/verra-releases-methodology-change-and-requantification-procedure/
[93] "Assembly Bill No. 1305, Chapter 365," California Legislature, September 7, 2023, available at https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240AB1305
[94] Libby Blanchard, et. al, "Funding forests' climate potential without carbon offsets," Vol. 7 Issue 7, One Earth, July 19, 2024, available at https://www.sciencedirect.com/science/article/pii/S2590332224002987
[95] Lukas May, "Aligning Incentives," Isometric, December 8, 2023, available at https://isometric.com/writing-articles/aligning-incentives
[96] Ibid
[97] Eamon Jubbawy, "A new era for carbon removal," Isometric, April 22, 2024, available at https://isometric.com/writing-articles/a-new-era-for-carbon-removal
[98] Fixing Verra," Renoster, July 2024, available at https://drive.google.com/file/d/1286twFSBBvYQxqH0ZFBvaBlYNwgmW3ma/view
[99] Ibid

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