Voluntary Carbon Markets (VCM): Social and Environmental Perspectives (ID: 1368)

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Abstract

The Voluntary Carbon Market (VCM) is one approach falling under the concept of Nature Based Solutions. VCM is a decentralised market where private organisations and individuals voluntarily buy and sell certified carbon credits as a means to remove or reduce greenhouse gases linked to human activities. Each credit sold, representing one tonne of CO2 reduction/removal, is meant to support climate-positive projects. Investment in the VCM and carbon credit issuance has grown rapidly since 2016 with demand for credits potentially outstripping supply. At the same time, VCM is an unregulated market with a host of competing standards and certification bodies. From one perspective the VCM mobilises funds into practical on-the-ground action to manage climate change, build resilience, support sustainable development and deliver net benefits for people and biodiversity. Another perspective questions the VCM's legitimacy including accusations of greenwashing and a new source of human rights violations.

Introduction

This paper examines the deficiencies within the voluntary carbon market (VCM), the associated standards frameworks, and the issues in applying these standards when attempting to avoid and mitigate social and human rights impacts. The paper proposes that to avoid these potential negative impacts and human rights violations the carbon project must reply on the participation of affected communities and stakeholders, including rights holders. Their livelihoods and activities are expected to change to manage the carbon in the landscape resulting in an impact. Project outcomes can deliver sustainable livelihoods, other benefits, and quality carbon credits if this approach is fully understood and integrated.

Voluntary carbon markets (VCM) can drive climate action and benefit local communities, including sustainable livelihoods. Standards for validating carbon credits aim to meet certain requirements (Thomas & Finely-Brook, 2011). However, recent scandals raise doubts about VCM projects' ability to manage social impacts and human rights (Cabello, 2025), despite their commitment to net beneficial social and environmental outcomes.

Fundamentally, successful outcomes of VCM projects focused on natural resources and land are dependent upon the affected rightsholders and stakeholders who are custodians and users of the land and resources that will generate the carbon credits. Avoidance or minimisation of negative social impacts and avoidance of human rights harm, alongside creation of social benefit should, in principle, be hardwired into VCM projects.

Methods

This paper was compiled following a review of current publications covering social and human rights issues associated with VCM projects. Figure 1 was informed by a review of social and human rights requirements incorporated within current published VCM Standards. In addition, the analysis and discussion were further informed by the authors practical experience of working on VCM projects, alongside input from a small number of additional social performance and human rights practitioners with direct experience in the VCM arena. Finally, the paper includes feedback from discussion of the authors' presentation at the IAIA Conference 2025, *Embracing Nature: From Grey Solutions to Nature-Based Solutions*.

VCM History and Trends

According to the World Bank 'State and Trends of Carbon Pricing 2024' Report, the global voluntary carbon market was worth an estimated USD\$104 billion dollars (World Bank 2024). This is expected to increase in the coming years. For this reason, it is important to understand the appeal of a market-based approach and the economics of demand and supply as an option to managing carbon emissions. In the case of the VCM, its origins can loosely be traced back to the 1980s when the World Resources Institute recommended that Applied Energy Services plant trees to offset emissions from a U.S. coal plant (Carbon Brief). The concept of a Global Carbon Market was more formally introduced at the Kyoto Summit in 1997 (UNFCC). The formalization of the voluntary carbon market was solidified at the Paris Climate Conference (UNFCC). The inherent appeal of a voluntary carbon market vs. Government intervention (such as a tax) to the corporate sector lies in its provision of options to achieve net-zero emissions, particularly where unavoidable emissions are present (WRI). Unlike other methods that compel companies to avoid and reduce emissions, such as taxes and heavy government intervention, the market model is more attractive to companies.

Box 1: Introduction to Voluntary Carbon Market

The voluntary carbon market illustrates a decentralized system wherein individuals or organizations purchase credits to voluntarily offset their carbon footprint. These carbon credits are termed "voluntary" because their use for emission reduction is neither legally mandated nor regulated. While the voluntary nature of these actions, coupled with market dynamics, is commendable, it also introduces specific vulnerabilities and challenges within the voluntary carbon market.

The voluntary carbon market presents numerous opportunities and advantages for addressing climate change and assisting companies in achieving net-zero emissions. These advantages include the mobilization and release of capital to fund nature-based solution projects. Unlike compliance markets, which are governed by specific regulations, the voluntary carbon market (VCM) offers greater flexibility, enabling companies and individuals to invest in a diverse array of projects. These projects encompass community-based initiatives, renewable energy, reforestation, and carbon capture technologies, thereby fostering innovation and the development of novel solutions. It is argued that as the voluntary carbon market evolves and refines its standards, it provides incentives for governments, industries, and individuals to alter their behaviors and promotes innovation aimed at achieving net-zero emissions.

Human Rights and Social Challenges of VCM projects

The human rights harm and social challenges associated with VCM projects, both verified as well as allegations (Madhuri 2023) including:

- Livelihood displacement and resettlement (physical and economic)
- Community security (area patrols and/or government security forces activities)
- Community conflict
- Labour rights including child labour (workforce involved in NBS)
- Community and workforce health and safety (e.g. pesticide use)
- Unfair benefit sharing
- Corruption and bribery
- Grievance mechanism / remedy effectiveness
- Heightened negative impacts on vulnerable, marginalized groups including indigenous peoples

Underlying causes

The claims of greenwashing and human rights violations within the carbon offset industry can potentially be attributed to three main areas. Firstly, the rush to achieve initial carbon offsets has led to compromised standards and practices (Michaelova 2019, Liverman 2010). Secondly, the nascent nature of the carbon offset industry necessitates time for maturation and correction (Kanwalroop et al, 2011). Thirdly, there is a priority focus on achieving the carbon component of the project at the expense of considering the broader environmental and community implications (Allgood et al, 2024). Additionally, there is a lack of understanding that carbon projects are inherently grounded in communities, necessitating the involvement of practitioners with appropriate skills and perspectives. This weakness in the application of VCM standards may inadvertently be a new source of negative social impacts and human rights violations, thereby questioning the quality and credibility of carbon credits (Larson et al, 2017). The VCM standards are also undermined by weaknesses in their application and implementation, including in relation to the assurance processes (Wawrzynowicz et al, 2023).

VCM Standards

Standards play a critical role in maintaining and driving the integrity of the voluntary carbon market (Climateseed 2024). In the VCM, standards are essential for ensuring integrity and credibility, as they provide the frameworks and methodologies necessary to certify and issue carbon credits while also promoting environmental and social co-benefits (Climateseed 2024). For a project to issue carbon credits within the VCM, it must undergo certification by an internationally or nationally recognized standard. These standards are established to ensure compliance and integrity throughout the lifecycle of carbon projects, offering methodologies that define how carbon credits are generated and recorded in designated standards registries (academy sustain).

The VCM operates with a multitude of standards, which can present challenges for market participants and project affected stakeholders. The diversity of standards may lead to confusion, particularly since not all standards maintain the same level of quality or rigor. Moreover, various standards within the voluntary carbon sector are aligned with distinct safeguards, such as the Cancun safeguards for REDD+ projects, while others adopt a focus more consistent with international financial mechanisms. However, references to the United Nations Guiding Principles on Business and Human Rights and the United Nations Sustainable Development Goals remain notably limited. The overall credibility of the voluntary carbon sector is fundamentally dependent on the strength and integrity of these standards, underscoring the necessity for comprehensive and coherent alignment with globally recognized frameworks.

While the VCM is governed by these various standards and certification bodies, recent events have underscored inconsistencies, inefficacies, and inadequate practices in the application of these standards. These inconsistencies are often linked to carbon accounting methodologies, such as whether the credit genuinely results in emissions reductions (Gifford, 2020). However, the quality and credibility of a carbon credit is also questioned when human rights are not considered. Carbon credits frequently fail to incorporate benefits for impacted communities, leading to negative social impacts and potentially exacerbating harm, including human rights violations (Allgood et al, 2024).

A brief analysis of the most used independent standards was conducted to identify whether key social and human rights criteria were incorporated.

| VCM Standards | The REDD+ Environmental Excellence Standard (TREES) (Aug 2021) | Verra Climate, Community and Biodiversity (CCB) Standards (June 2017) | Verra Sustainable Development Verified Impact Standard (Jan 2019) | Gold Standard (Dec 2024) | Core Carbon Principles including Sustainability Safeguards (Assessment Framework, Jan 2024) | Amercian Carbon Registry (ACR Standard, July 2023) |
|--|---|--|---|--|---|--|
| Level | Sub-national & national | Project | Project | Project | Project | Project |
| Groups | Indigenous Peoples and Local Communities (IPLC's) and 'equivalent' | IPLCs & communities with values / livelihoods derived from the area | Stakeholders (any person potentailly affected by the project) | IPLCs, affected stakeholders | IPLCs | affected communities and other stakeholders |
| Legal / Standards references | Cancun Safeguards (UNFCCC RED+ safeguards), includes UNDRIP; REDD+ Social & Environmental Standards (SES) | Cancun Safeguards (UNFCCC RED+ safeguards), includes UNDRIP; Land, territories and resources rights - ILO 169, UNGPs. | SDGs; ILO Core Labour Conventions; UNDRIP; ISO 14064:3 (2006) | Based upon IFC PS (2012), UNDP SES (2021), UNEP ESSF (2020), FAO FESM (2022), National legislation, UN Charter, ILO, UDHR | Builds on best-in-class standards including WB, IFC, UNDP, UNDRIP, UNEP, Cancun, ILO, applicable international human rights law, UNESCO conventions | UNFCCC Paris Agreement; Compliance with local, national, and international laws, regulations, conventions and agreements |
| SDGs | No | Partial (can useMilliennium Development Goals) | Yes | Yes | Yes | Yes |
| Cancun Safeguards | Yes. | Yes | No | No | Yes | No |
| Gender | No | Yes | Yes | Yes | Yes | Yes |
| Impact Assessment | No | No (IA manual reference given but no explicit requirement) | Partial (preliminary impact assessment only) | Partial (EIA as suggested form of evidence re. compliance with Standard) | No | Yes |
| Human Rights | Partial (land and resource related rights) | Partial (land and resource related rights) | Partial (workers rights, land/property/resources & FPIC) | Yes (refers to core human rights conventions / treaties) | Yes (refers to core human rights conventions / treaties) | Partial (no specific reference standards) |
| IPLC's rights under international law | Partial (no uniform standard; no indicators for rights) | Yes (per UNFCCC; addresses FPIC & rights to land & resources) | Yes (refers to UNDRIP, ILO 169) | Yes (refers to UNDRIP, ILO) | Yes (refers to UNDRIP, ILO) | Partial (no mention of requirements) |
| Land & Resource Rights | Partial (no uniform standard) | Yes | Yes | Yes | Yes | Yes |
| Carbon Rights | No | No | No | No | No | No |
| FPIC | Partial (No procedural guidance) | Yes (with indicators for IPs and LCs) | Yes | Yes (refers to UNDRIP, ILO) | Yes (for IPs & LCs) | Partial (when relevant) |
| Cultural Heritage | Partial (Tangible only) | Yes (no detail) | Yes (no detail) | Yes (tangible and intangible) | Yes (tangible and intangible) | Yes |
| Labour & Working Conditions | No | Yes (worker relations) | Yes | Yes | Yes | Yes (remit not specified) |
| Community Health & Safety | No | No | No | Yes | Yes | Yes (remit not specified) |
| Formal benefit sharing mechanism | No (benefit distribution follows international conventions & nationa/subnational legal frameworks) | No (optional) | No (benefit sharing part of standard but no formal mechanism) | No (part of managing full range of impacts) | Partial (requirement for transparency about the sharing of benefits with affected parties) | Partial (include discussion of robust benefit sharing arrangements) |
| Formal grievance mechanism | Partial (must provide "access to dispute reolution mechanisms", no mention of UNGP / effectiveness criteria) | Yes (no mention of UNGP / effectiveness criteria) | Yes (few details, no mention of UNGP / effectiveness criteria) | Yes (no mention of UNGP / effectiveness criteria) | Yes (no mention of UNGP / effectiveness criteria) | Yes (ACR's own GM including process details - criteria / principles seem pretty aligned to UNGPs, but few futher details) |

While the voluntary carbon market has been transformative, bringing much-needed capital and professional resources, it also exhibits significant flaws and gaps (Miltenberger et al, 2021). The voluntary nature of the market implies that the application of standards and the integrity of the carbon offsets it generates are optional. This has led to accusations of greenwashing and the emergence of new sources of human rights violations.

Flaws in the Voluntary Carbon Market

Several flaws have been identified in the voluntary carbon market and these include but are not limited to the overestimation of emissions reductions, the prevalence of 'junk' credits—credits that have not demonstrated any reduction in emissions—the concept of 'additionality,' where emissions reductions would have occurred regardless of the project's implementation, and complex issues such as the distinction between avoidance and removal of carbon, as well as the overall quality of the offsets (Miltenberger et al, 2021). These all relate to the carbon accounting model yet some of the less well understood flaws are associated with the negative social impacts.

Time is of the essence

The rush to achieve initial carbon offsets has numerous parallels with other industrial moments characterized by sudden booms or influxes of interest. This phenomenon is evident in the extractive sector, where large mining and oil and gas projects have significant negative impacts on communities. Additionally, the carbon offset industry is susceptible to the concept of the resource curse 'Dutch disease' (Li et al, 2023), wherein a boom in one sector leads to a decline in another. Consequently, the foundations of projects are often inadequately understood and established, resulting in communities being disadvantaged, excluded, or marginalized.

Prioritization of emissions reduction

Offset projects primarily focus on emissions reduction, developing projects based on the most effective carbon accounting methodologies. Consequently, the emphasis on emissions reduction often comes at the expense of other critical aspects, such as environmental and community impacts. For instance, a conservation project aimed at meeting additionality and reduction targets might invest in a former logging plantation. This plantation may employ numerous local community members. Transitioning to a conservation project poses a significant risk of job loss for these community-based employees.

Further complexity arises with illegal logging. While halting illegal logging may seem beneficial, it is important to recognize that even illegal logging provides essential employment for local community members. The displacement of these employees can lead to severe implications, including loss of livelihood and potential human rights violations if military or police forces are deployed to remove illegal loggers. Additionally, there are connections to organized crime, further complicating the situation (Roberedo, 2023).

Lack of social and human rights specialists

The extractives sector has recognized the significance of subject matter expertise provided by social scientists in mitigating adverse effects and potential human rights violations associated with their projects. By integrating insights from social science disciplines, industry stakeholders can implement more robust strategies to safeguard communities, ensuring that development initiatives align with ethical and socially responsible practices (Kemp et al, 2020). Carbon offset projects often fail to adequately recognize the importance of community impacts, as evidenced by the insufficient engagement of social science subject matter experts. Social scientists or social performance practitioners provide critical expertise that directly addresses the impacts of carbon projects on communities. Similar to resource extraction projects, carbon offset initiatives have the potential to displace and marginalize communities. In response, standards have been updated to address these concerns, necessitating the implementation of robust grievance mechanisms, comprehensive community engagement, and adherence to principles such as Free, Prior, and Informed Consent (FPIC) with the same rigor and integrity.

Recommendations

The **increasing scrutiny and questioning of the quality of carbon offsets**, particularly concerning human rights, have prompted a review and strengthening of standards. The establishment of the Integrity Council for the Voluntary Carbon Market (ICVCM) represents a significant step towards enhancing these standards. However, further measures are necessary to ensure the protection of human rights within the voluntary carbon market.

Enhancing the capacity of affected communities and project developers is a key approach to addressing deficiencies in the comprehension of rights and obligations, as observed in the high level analysis of the standards. The analysis states that most standards necessitate the integration of social and human rights considerations into project development documents. Incorporating capacity-building measures targeting these aspects among communities and project developers significantly increases the likelihood of avoiding and where not possible mitigating any potential human rights issues. For instance, the <u>Conservation Coast</u> project highlights the effectiveness of this approach. Prior to initiating discussions on the carbon project, the proponent dedicated two years to extensive community engagement. This preparatory effort ensured that the community developed a thorough understanding of the project's requirements and implications. Furthermore, it enabled the project team to gain deeper insights into the community's profile, thereby facilitating the effective application of social and human rights considerations.

Carbon credit rating agencies hold significant potential in addressing the social and human rights implications of carbon projects. These agencies have recently entered the market to evaluate the quality of carbon credits at the project level. Their assessments aim to differentiate between high-quality carbon credits and those failing to fulfill their claimed benefits, thereby enabling them to exert substantial influence on market dynamics. Furthermore, the agencies assert their commitment to enhancing market transparency, ensuring independence, and promoting equitable pricing.

Agencies such as <u>Calyx Global</u> periodically publish reports that critically analyze the quality standards within the voluntary carbon market. In their most recent report, one prominent issue identified was the insufficient inclusion of social and environmental safeguards to mitigate negative impacts. While the

presence of "do no harm" requirements was acknowledged, the report highlighted the inadequacy of guidance and information necessary to prevent adverse social impacts and potential human rights violations.

Given the growing scrutiny surrounding low-quality carbon credits and the increasing focus on avoiding greenwashing, corporations dedicated to achieving genuine emissions reductions are actively seeking high-quality carbon credits. Carbon credit rating agencies play a crucial role in assisting these corporations by identifying credits that meet rigorous standards, which should inherently include measures to prevent negative social impacts and uphold human rights.

Ensuring the **involvement of qualified practitioners and subject matter experts** is essential for the effective application of human rights impact assessments in carbon projects. Professionals with extensive experience in social performance and human rights considerations possess the adaptability to address the diverse dynamics of various project models. Despite the positive environmental intentions of carbon projects, including conservation initiatives, these projects may introduce changes that adversely affect the affected communities.

Lessons from renewable energy projects (and extractive and agricultural sectors) demonstrate that a project's perceived climate and environmental benefits do not necessarily translate into widespread acceptance, nor do they guarantee the absence of negative social impacts (Finley Brook and Thomas 2011). For instance, forest conservation projects may restrict land-connected peoples from accessing sites of cultural significance or vital food sources, leading to cultural and social dislocation. Additionally, the prohibition of illegal logging activities within conservation zones can create economic displacement for community members who rely on logging as a source of income to support their families.

Therefore, the engagement of practitioners and experts with a deep understanding of broader social impacts is critical. Their specialized skills and technical expertise allow them to identify, assess, and mitigate negative social consequences at the earliest stages of project development, ensuring that human rights considerations are adequately addressed and upheld throughout the project's lifecycle.

An arguably contentious yet valuable recommendation involves deriving lessons from the resources and extractive industries. While this approach may initially appear misaligned with the objectives of carbon projects—considering that fossil fuels are a principal contributor to climate change—the resource sector has developed critical insights through its own history of scandals and controversies. These past shortcomings have catalyzed the establishment of frameworks such as the Voluntary Principles on Security and Human Rights (Hale et al 2011, alongside the foundational work of John Ruggie on Business and Human Rights (Ruggie, 2017).

Key lessons emerging from these historical challenges include the development of academic programs, specialized training courses, comprehensive guidance notes, and the accumulation of deep subject matter expertise. The professionals cultivated through these initiatives bring extensive, practical experience that equips them to effectively identify, evaluate, prevent, and address human rights impacts in a manner that is both objective and technically rigorous.

Conclusion

As with any nascent industry, where regulations are unclear and inconsistent, much of the product's integrity relies on adherence to a voluntary code. Consequently, there remains significant work to be done. The numerous reports, studies, and investigative media articles exposing human rights violations necessitate a collaborative effort between the voluntary carbon market and standards bodies to enhance the application of these standards. Applying the recommendations along with rigorous auditing and assessment of projects to identify and address human rights violations will be crucial.

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