Accounting Approaches for the Voluntary Carbon Market

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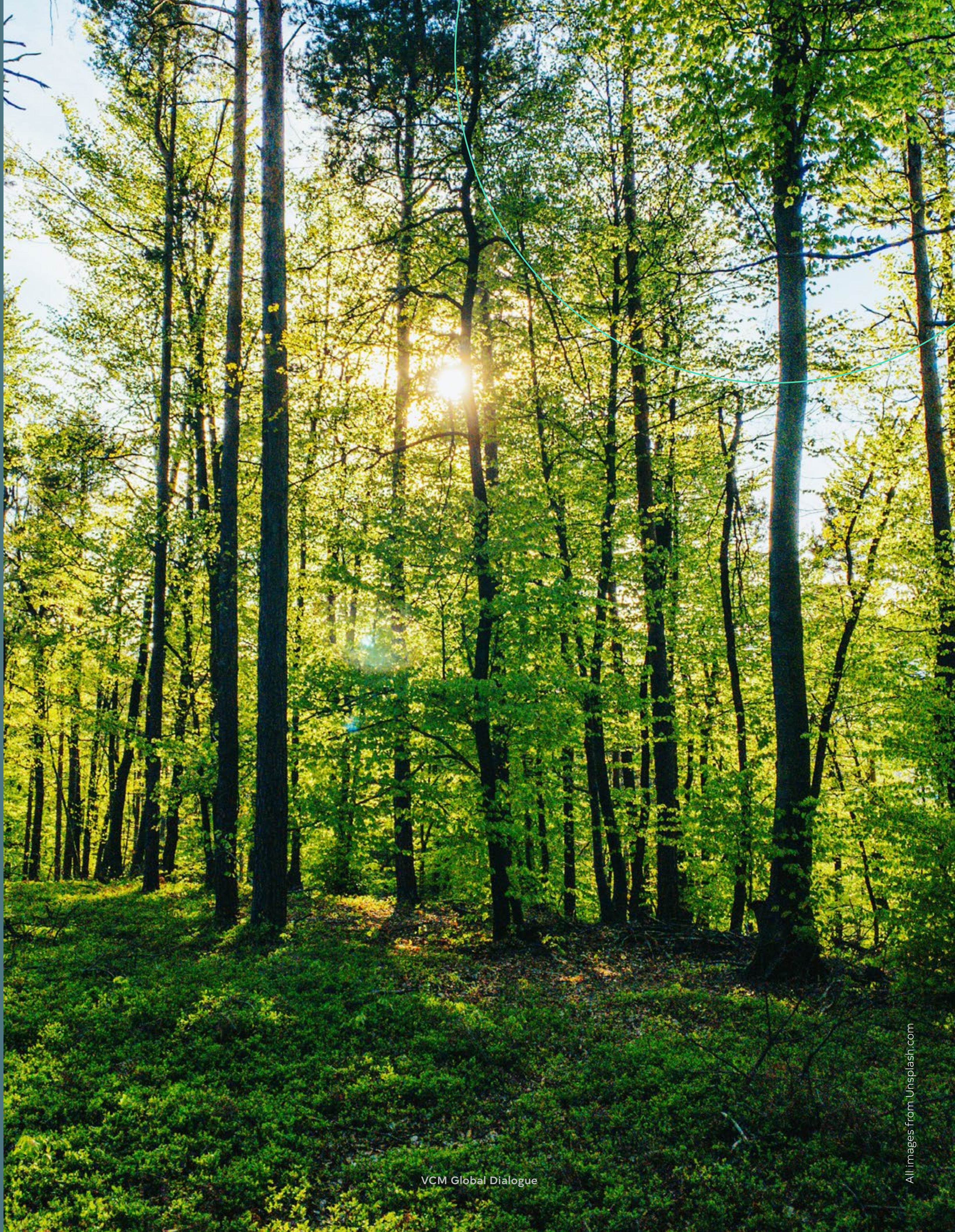
Fulfilling the promise of the Paris Agreement will require the widespread adoption of more ambitious mitigation commitments and significantly scaled-up flows of finance, technology, and capacity to developing countries. Well-designed voluntary carbon markets can help to achieve both aims.

The Voluntary Carbon Markets Global Dialogue helps to identify how voluntary carbon markets can drive mitigation activities that support national climate plans, local priorities with additional benefits for communities and businesses, unlock greater levels of private investment, and help motivate more corporates to reduce their emissions and to neutralize their remaining emissions. The Global Dialogue team is led by Climate Focus, the Indonesia Research Institute for Decarbonization (IRID), SouthSouthNorth (SSN), and Transforma, with assistance from an inclusive team of leading carbon market experts and analysts, and with the support of Verra.



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Accounting Approaches for the Voluntary Carbon Market

By Andrew Howard and Sandra Greiner

The question of whether carbon credits under the voluntary carbon market (VCM) should be accounted for in the context of the Paris Agreement has received much attention and given rise to polarized views. Some worry the trade in voluntary credits could undermine the environmental integrity if not complemented by corresponding adjustments under Article 6 of the Paris Agreement. Others fear that the challenges in securing government commitments to corresponding adjustments will be cumbersome and undermine the potential of the VCM, thereby depriving the world of private sector initiative and finance that are so necessary to reach the Paris Agreement temperature goals.

Driven by these two interconnected concerns, the debate has divided stakeholders across the VCM community and governments negotiating international cooperation under the Paris Agreement.

In keeping with the overall objective of the VCM-GD, this paper seeks to bring the views of developing country stakeholders to the fore. The consultations revealed however that, while interest is high, many are still grappling with the complexities of the topic and a particular developing country perspective has not yet emerged. This seems due, at least in part, to many debates on this topic taking place among potential buyers and stakeholders where developing country voices are underrepresented.

The approach taken in this paper therefore is one of unpacking the technical arguments in the debate to make the underlying drivers and assumptions of accounting transparent and examine them in light of developing country interests to benefit from the VCM. The elaboration of the paper was informed by two virtual consultations held with stakeholders from developing countries in which concepts were introduced and discussed. The stakeholder consultations took place on 14 July 2021 and were attended by 43 participants from Asia, Latin America and Africa. Means of soliciting views included the use of break-out discussions and polls. The paper is, however, ultimately the authors' interpretations of the debate.

Main findings

The voluntary carbon market (VCM) contributes essential investment and support for global mitigation and helps countries achieve conditional pledges in their nationally determined contributions (NDCs). This support is urgently needed by many developing countries if they are to increase their mitigation impact and grow their NDC ambition. Clarity is needed on who the mitigation should be accounted towards. This needs to accurately reflect the actual mitigation impact and legitimate corporate claims of participants but must also preserve sufficient workability and incentive for investors and developers to engage.

Corporate and national carbon accounting are conducted separately and independently. Corporate accounting is based on a company's scope of responsibility for greenhouse gas emissions while countries report their emissions based on what happens within their borders. As emissions are reported in both corporate and national inventories, emission reductions achieved by VCM projects also show up in both books. This "double claiming" of such impacts is commonplace, however it only seems to be considered problematic when it occurs in the context of international VCM transactions. There needs to be more consideration of the equity implications of such treatment.

VCM projects have mitigation impacts beyond the core emission reductions and removals that are measured and issued as credits. As a result, the actual mitigation impact of VCM projects can be higher or lower than what is credited. On the positive side, mitigation can be multiplied through spillover effects outside the project boundaries and new capacity, finance and technology can help host countries accelerate their progression towards more ambitious NDCs. This can be strengthened if countries can implement policy to leverage projects or gather resources for use towards other mitigation or sustainable development purposes. On the negative side, there is a risk that mitigation from VCM projects may relieve some of the pressure exerted on a host country by its NDC, with the result that projects might displace some of the mitigation effort that the host country would have otherwise implemented.

The balance of these mitigation impacts from VCM projects is overwhelmingly positive but measures may be needed in time to preserve this. Host countries can support the selection of strong mitigation opportunities that offer meaningful support within their mitigation strategies. Effective collaboration among developers and governments can strengthen the positive mitigation impacts of projects through host countries. Realistic concerns for levels of mitigation being displaced by the VCM, on the other hand, are not likely to be significant for most developing countries needing support from the VCM.

The diversity of country circumstances, investment needs and policy goals suggests that multiple accounting approaches can legitimately co-exist in the VCM context. Four approaches are discussed:

- **Offset claims with no adjustments.** This describes the historical VCM accounting approach, in which emission reductions and removals are used by companies as offsets against their emissions and the lower emission levels in host countries help them meet national emission targets.
- **Offset claims with adjustments.** Companies can use the credits towards voluntary goals and host countries make accounting adjustments under Article 6. The mitigation benefit lies solely with the investing companies and not with the host country.
- **Non-offset claims (mitigation contributions).** Companies claim only to provide financial support to host countries' mitigation action but the mitigation benefit remains with the host country.
- **Enhanced transformative investment.** Measures are implemented to accentuate positive multiplier effects on mitigation across the host country and accelerate its progression towards higher mitigation ambition in subsequent NDCs.

Main findings

Improved understanding and guidance can help assess what accounting approaches are most suited to different host country and NDC circumstances. Avoiding a one-size-fits-all approach does not suggest there should be no principles or guidance. As host countries' NDCs and climate action strengthen over time, the balance of positive and negative impacts can also change. Investors may increasingly seek out accounting measures with added assurance that the mitigation impact of VCM projects remains positive.

In the regional consultations, stakeholders held different views on whether a displacement of host country mitigation or an increase in NDC ambition would dominate. A majority of participants considered that mandatory corresponding adjustments for VCM transactions would be counterproductive as the cure might be worse than the disease. The most favored short-term accounting measure was enhancing transparency through the linking of VCM registries and national accounting systems.

Recommendations

- **No one-size-fits-all accounting solution.** The diversity of country circumstances, investment needs and policy goals suggests that multiple accounting approaches can legitimately co-exist in the VCM context. Developed countries acting as VCM hosts should take the lead in pioneering accounting approaches to assure their mitigation efforts do not fall in the presence of successful VCM projects, such as through the use of accounting adjustments. Guidance is needed to improve understanding in the VCM of when different accounting approaches are appropriate, especially as this may change over time.
- **Be mindful of equity implications.** Care should be taken to not single out particular types of voluntary action for stronger accounting treatment than other, equivalent mitigation measures. Making accounting adjustments mandatory for all international VCM transactions, for example, would ignore that double claiming can lead to displacement risk in domestic VCM applications and corporate actions to reduce their internal or value chain emissions. Singling out international VCM transactions with such mandatory treatment would drive investment away from the developing countries that are most in need of international support through the VCM.
- **Transparency is key and can align incentives for a "race to the top".** Full transparency is needed throughout standards, processing and reporting for the VCM on which accounting approaches are selected for projects and host countries, together with the rationale for their selection. Transparency can enable higher credit prices to be paid for VCM projects with stronger multiplier effects, greater impacts on NDC ambition, or where complemented by stronger accounting measures.
- **Direct VCM investments to where the transformative impact is greatest**. Host countries should identify the activities, sectors and technologies where they would particularly benefit from VCM projects. They should engage with investors to implement measures and policies that accentuate the positive impacts of the VCM to ensure they outweigh any negative displacement risks.

1. Introduction

How companies and governments should account for Voluntary Carbon Market (VCM) transactions is a controversial and technically complex topic. Accounting refers to how the impact of mitigation actions on emissions and removals are measured and used to claim progress in reducing contributions to climate change or towards meeting specific emission or removal goals. Against a backdrop of countries' mitigation efforts under the Paris Agreement – and in the midst of a vigorous debate on what claims can legitimately be made by VCM participants – views among stakeholders are starkly divergent.

This paper seeks to unpack the technical arguments in the debate to make the underlying drivers and assumptions of accounting transparent and to examine them in light of developing country interests in benefiting from the VCM. In doing so, it discusses which accounting measures for the VCM can enjoy the confidence of its participants and the public while at the same time safeguarding and growing the tangible and effective support the VCM provides to developing country hosts.

Section 2 begins with an examination of the relationship between mitigation carried out at the company and country levels, including the relationship of the VCM and the nationally determined contributions (NDCs) that countries set out under the Paris Agreement. Section 3 examines different impacts of VCM projects on mitigation before Section 4 considers alternative approaches for accounting treatment in the VCM. Finally, Section 5 discusses implications and considers how the VCM can move forwards.

2. National and corporate mitigation

2.1 The relationship of the VCM and NDCs

The VCM has historically built upon the wish of companies to go beyond levels of mitigation required by regulation by using emission reductions and removals achieved elsewhere to offset their own emissions. North American investors have relied mostly on projects in domestic markets while European investors have favored projects in developing countries, providing them with urgently needed mitigation finance.[1] This market has been separate from government policy and largely motivated by the private sector filling in a gap in mitigation ambition left open by governments (see Box 1).

Despite recent increases in ambition under the Paris Agreement, the need to go beyond regulatory obligations is unlikely to end soon.

Any use of emission reductions or removals in this way needs to be distinguished from action that companies take to reduce emissions for which they are responsible. The GHG Protocol – the benchmark inventory standard for emissions from private and public sector operations and value chains – requires companies to report any offsets separately from their emission inventories. Some standards for setting targets, such as the Science Based Targets initiative (SBTi), limit the way offsets may count towards targets in order to prioritize emission reductions in companies' own operations and value chains.

Countries use NDCs under the Paris Agreement to communicate their intended climate action and any emission or removal targets to which they commit themselves. Unlike the Kyoto Protocol, the Paris Agreement sets a universal expectation on both developed and developing countries to commit to climate action through the submission of NDCs. Each NDC update, to be sent every five years, is to represent a progression in terms of ambition and a move towards full economy-wide emissions coverage.

The NDCs of many developing countries are clear that much of the mitigation impact they wish to contribute will only be possible with the provision of international finance, technological or capacity support. These "conditional" NDC pledges represent mitigation potential that will not be realized if international support from countries or companies is not forthcoming.

Emission reductions and removals from VCM projects can help implement these conditional pledges. The debate starts, however, with whether the reductions or removals may be counted against the emissions of the countries hosting these projects or the investors that finance them, or both.

[1] Forest Trends' Ecosystem Marketplace (2021).

Box 1.

Companies have a history of taking action

Companies have been strengthening and broadening their climate action in parallel to the development of government policy. Efforts to establish consistent and credible reporting frameworks saw the GHG Protocol publish its first corporate accounting standard in 2001.

Significant momentum has recently built around company commitments to reduce their carbon footprints and achieve "net-zero" emissions. These range from companies making their products and services carbon neutral (e.g. Nestlé, Volkswagen) or decarbonizing their broader operations (e.g. Google). More than 1,000 companies are working with the Science Based Targets initiative (SBTi) to establish net-zero targets and reduce their emissions in line with climate science (e.g.Unilever, Ikea).

These developments reflect that companies are increasingly being held responsible – by their employees, civil society and investors – to align their activities with the goals of the Paris Agreement. A prominent divestment campaign seeks to shift corporate investments away from fossil fuels and climate activist investors are getting on to company boards (e.g. Exxon).

In a landmark ruling, a Dutch court recently ordered Shell to reduce its net carbon emissions by 45% compared to 2019 levels by 2030, extending to both direct emissions and the emissions from product sales, on the basis of human rights. These examples show that the drivers of corporate climate pledges reach far beyond national policies.

Other initiatives have recently emerged among proponents of the VCM to explore how it should evolve, such as the Task Force on the Voluntary Carbon Market (TSVCM) and the Voluntary Carbon Markets Integrity Initiative (VCMi).

2.2 National versus corporate emissions accounting

Global emissions may be cut and sliced in different ways. At a country level under the UNFCCC and the Paris Agreement, national emission inventories work on a territorial basis by determining the emissions that occur within countries' physical borders. A country's inventory does not count emissions caused by one of its companies if they occur abroad.

In contrast, corporate accounting covers any emissions that may be attributed to the activities of a company, regardless of where they occur. This attribution is considerably more complex. The GHG Protocol includes direct emissions from sources owned or controlled by a company (scope 1) and indirect emissions from generating the electricity it consumes (scope 2). Inventories may optionally include other indirect emissions that are a consequence of the company's activities but arise outside its activities and control, including the upstream production and transport of materials and downstream emissions from products and services that the company sells (scope 3). These scopes are referred to as emissions from a company's "value chain". A company's emission inventory may therefore include emissions emitted by others and in countries other than where their operations are located.

Figure 1 offers a simplified illustration of national and corporate accounting and where concerns arise for mitigation outcomes being used more than once in the context of international transactions. The upper part shows the entirety of national emissions from two countries. Internationally transferred mitigation outcomes (ITMOs) between these countries are the clear realm of Article 6, for which double counting towards multiple NDCs must be avoided by applying "corresponding adjustments" to each country's record of its emissions. The transferring country must add the ITMO volume to its reported emissions, whereas the acquiring country may subtract the amount from its reported emissions. [2]

[2] The Article 6 rules are the last component of the Paris Agreement rulebook (https://unfccc.int/process-and-meetings/the-paris-agreement/katowice-climate-package) and are to be agreed at the UN Climate Change Conference in Glasgow, United Kingdom, 31 October to 12 November 2021 (COP 26, https://ukcop26.org).

Without such double-entry bookkeeping, the climate action that countries undertake to achieve their NDCs would be lower and the Paris Agreement temperature goal would be shifted further out of reach.

The lower part of Figure 1 shows the emissions of several companies, to the degree these fall within the borders of the two countries. As emissions are attributed to companies on a different basis than to countries, there is no expectation that the company-level estimates will sum to the emissions estimated for the country as a whole. This is especially the case when some companies optionally include their scope 3 emissions, as these will overlap with the emissions of other companies and other countries.

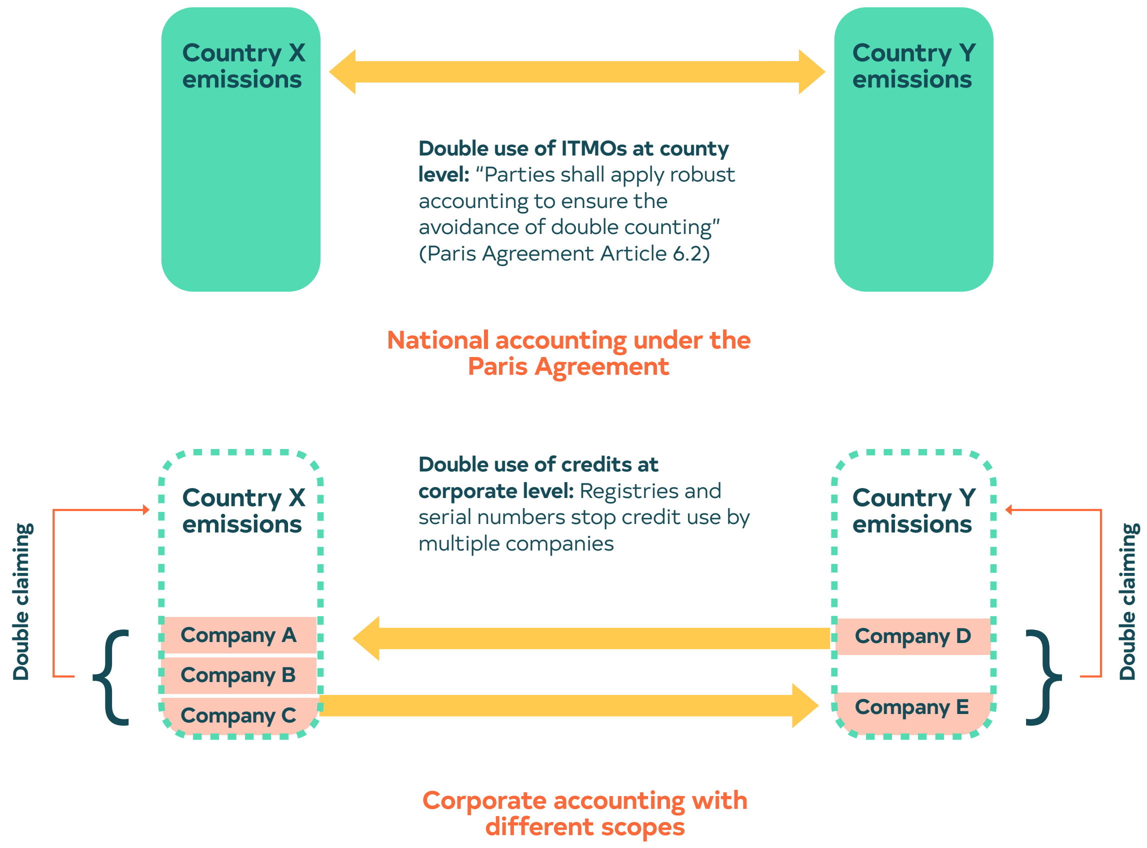
It is evident that both companies and countries count these emissions in their inventories, as a consequence of both undertaking reporting, and that the two accounting frameworks operate separately and independently.[3] Furthermore, any reductions or removals these companies make within their internal or value chain emissions will be counted at both the corporate and national levels, with both claiming them against their carbon footprints or towards their emission or removal goals.

This is commonly referred to as the "double claiming" of reductions and removals – once by the company and again by the country – and it is quite normal between national and corporate accounting. [4] It is shown in Figure 1. Double claiming is not limited to international transfers of credits but applies equally to domestic market transfers, as well as abatement within a company's operations or value chain emissions. It arises not only in cases of deliberate reductions and removals but also in cases of an inadvertent nature, such as a cool year with less air conditioning or the return of economically marginal pasture to shrubland. This raises important equity issues if accounting methods are selected that single out only international VCM transactions while not addressing other cases of double claiming.[5]

[3] Verra (2021).
[4] The term "claim" at the country level is somewhat misleading as it suggests an act by the country to lay claim to the emission reductions, when in practice it only records a lower level of emissions in its inventory due to VCM projects.
[5] Verra (2021).

The risks of "double use" of the same ITMO or credit against multiple footprints or targets are relevant at the national and corporate levels, respectively, but are independent of each other. In the context of the VCM specifically, credits are only transferred at the corporate level – they are not counted towards the buying company's NDC and are not considered in the national accounting of either country. As a result, the VCM does not lead to any risk of double use of ITMOs under Article 6.

Figure 1: National and corporate accounting



Although the term "double claiming" has become commonplace and offers a convenient shorthand, its downside is that it carries negative connotations by suggesting there is always a negative impact on mitigation associated with it. As is discussed in Section 3, this is not necessarily the case. This contrasts with the "double use" of mitigation outcomes by two countries under Article 6, which is the form of double counting addressed by corresponding adjustments, which clearly needs to be avoided in all cases in order that the collective emissions of the two countries are not increased.

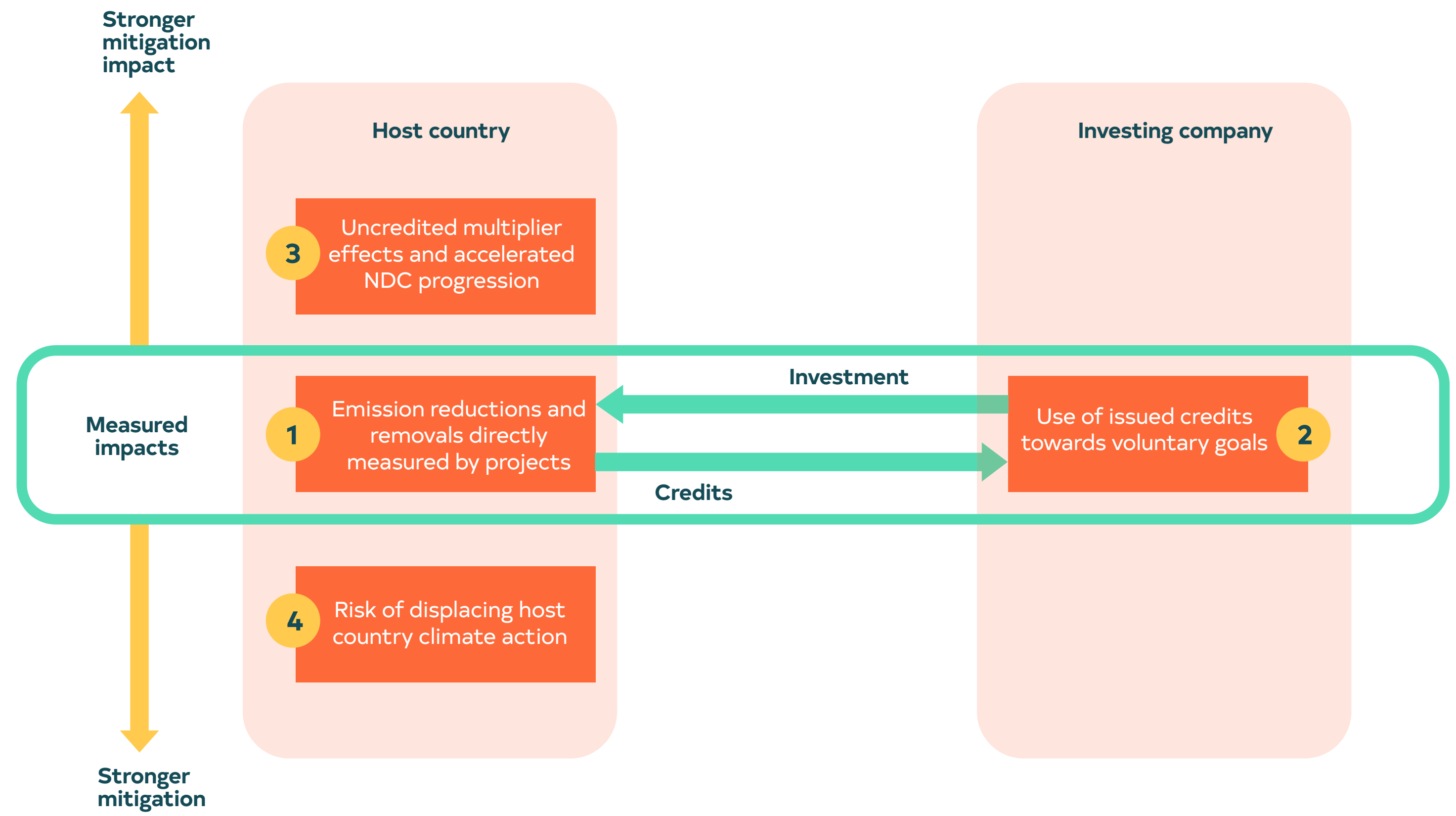
3. Diverse mitigation impacts

VCM projects have a variety of mitigation impacts, some directly measured and others less quantifiable or attributable to specific projects. These are illustrated in Figure 2. The presence of unmeasured mitigation impacts – both positive and negative – brings uncertainty for the overall mitigation effect and allow for different views on which impacts to give most attention. Should we prioritize the positive mitigation impacts of the VCM in helping host countries meet their NDCs or the negative impacts that may let these countries off the hook by reducing their need to reduce emissions themselves?

The core emission impact of VCM projects is what is measured and ultimately issued as credits (impact 1 in Figure 2). These are verified emission reductions or removals, measured against a baseline that corresponds to the activity, geographical and temporal boundaries of a project. The lower emissions or higher removals may be counted by the host country towards its NDC or the issued credits may be used by the investing company towards a voluntary emissions goal (impact 2), or potentially both.

Outside the project boundaries are other unquantified mitigation impacts. The essential role that projects have in trialing and learning from new mitigation opportunities can implant transformative capacity and technology outside project boundaries that affect a far greater range of economic activity. Projects gather information on abatement costs and put previously ignored mitigation opportunities on the radar screens of governments. Such "secondary" or "multiplier" effects of the VCM can be significant in helping to shift developing countries towards low emission development paths and yet they remain uncredited and ignored by accounting. Over time, by enhancing mitigation capacity and lowering projections of future emissions, these impacts can be expected to help accelerate policy development and the progression of host countries towards deeper and broader emission pledges in successive NDC updates (impact 3).

Figure 2: Mitigation impacts of VCM projects



VCM projects can also crucially contribute to sustainable development in host countries, in particular in developing countries, and provide much-needed finance and support to local communities and ecosystems. Here, the VCM may be seen not only as facilitating climate projects but also as a financing vehicle for much broader initiatives. Host countries can influence how great such benefits will be, for example through providing guidance on what and how VCM projects should proceed or through seeking to raise resources from projects that can be applied to other sustainable development purposes.

These positive mitigation impacts suggest it is urgent to get mitigation initiatives kick-started, as their impact will grow over time and can be built upon by further climate action in host countries.

Conversely, there may be a risk that VCM projects can displace other mitigation action that investing companies or host countries might have otherwise undertaken. Initiatives such as the SBTi seek to minimize this risk among companies by ensuring their efforts to reduce internal and value chain emissions are prioritized. Regarding host country climate action, lower emissions due to VCM projects may appear as an unexpected, windfall emissions benefit in sectors or activities covered by the NDC and may reduce pressure to undertake further mitigation measures. This could "displace" domestic mitigation action that host countries would otherwise have needed to implement to meet their NDCs (impact 4).[6]

This possibility of displacement risk arises from double claiming between corporate and national accounting (see Section 2.2). Meeting two targets with the same tonnes of reduction or removal can lead both the company and host country to consider their targets met and to refrain from implementing further mitigation actions, while in fact they have undertaken less collectively than was originally intended under their individual targets. If such displacement were in practice to occur at scale, this could result in lower levels of mitigation that reduce or even reverse the emission gains made through the original VCM projects.

However, the presence of double claiming does not equate to VCM projects displacing the mitigation effort of host countries. For projects to prompt host countries to lower their mitigation effort, several assumptions need to be met:

- The VCM projects are in sectors covered by the **scope** of the host country's NDC. If the projects are outside the NDC sectors, they would not reduce emissions that are associated with the NDC.
- The host's NDC pledges are **unconditional**. If NDC pledges are conditional and reliant on international support, mitigation could not be assumed to proceed without the VCM projects.
- The host's NDC **quantifies** how many tonnes will be reduced. If there is no clear number, the size of the emission gap cannot be a precise driver of the level of mitigation policy or actions.
- The host country has sufficient **capacity and finance** to implement its NDCs. If it does not, there is little or no autonomous mitigation action in the country that may be displaced.
- Climate policy in the host country is sufficiently sophisticated to allow **modification** in response to fine differences in emission levels. If climate policy is not calibrated precisely to the size of the emissions gap, a reduction in the gap will not drive policy change.

In practice, these assumptions are not realistic for many of the countries that stand to benefit from VCM projects. Many developing countries depend almost entirely on international support for their mitigation actions so there may be little autonomous mitigation effort to displace. The NDCs of developing countries are often not quantified and not economy-wide in their scope. These characteristics suggest that the practical risk of displacement occurring is currently low for many NDCs and developing country hosts and that it cannot be generalized that displacement will take place.

What can be said, however, is that there is a wide diversity of host countries in the VCM and they are likely to score very differently on the above assumptions. In other words, a "one-size-fits-all" approach to VCM accounting is unlikely to be appropriate and should not be pursued. While it is fair to expect these factors to lessen over time as host countries grow their capacity and deepen and broaden their future climate action in line with expectations set through the Paris Agreement, different countries will move at different speeds and this should be considered in any accounting framework.

[6] Doda et al (2021), Fearnehough et al (2020), Gold Standard (2021), Howard (2021).

4. Accounting measures for the VCM

Arriving at suitable accounting measures for the VCM is challenging given the range of positive and negative mitigation impacts. Host countries in the VCM cannot be assumed to be the same, given the possibilities for both developed countries and the wide diversity of developing countries to host projects. In addition, if double claiming and possible displacement risks are the concern, it must be remembered that these also arise from domestic VCM transactions and action on value chain emissions. Without international transactions to draw attention, these seem to avoid being labelled as double claiming.

Nevertheless, to mobilize the full mitigation potential of the VCM, it is desirable to establish a common understanding of what accounting measures are needed to ensure transparency and integrity while maximizing the emission effects of VCM activities. Several measures are being discussed for accounting in relation to the VCM, with each addressing positive and negative mitigation impacts differently.[7]

Approach 1. Offset claims with no adjustments

This describes the historical VCM accounting approach, in which mitigation outcomes are used by companies as offsets against their voluntary emission goals and the lower emission levels in host countries help them meet any national emission goals (as they now have in their NDCs).

Double claiming would be accepted under this approach. Negative displacement risks may be considered small for countries under this accounting approach, perhaps due to the conditional or non-quantified nature of NDCs or a low level of autonomous mitigation action by the host country, or positive mitigation impacts through multiplier effects and accelerated NDC progression may be considered too strong to risk losing.

As a result, there may be a reluctance to choose an accounting approach focused narrowly on displacement risks, especially given that such risks do not receive accounting treatment when they arise in domestic VCM markets or abatement within operations and value chains.

This approach does not deny that displacement risk exists, but it takes a view that these are outweighed for some host countries by positive mitigation impacts and the significance of sustainable development benefits. This underpins the importance of understanding the specific circumstances of host countries and NDCs. The acceptability of this approach may however evolve with time – as discussed already – as the risk of displacing host country mitigation may become stronger over time and practical concerns with other accounting approaches can be expected to lessen.

Approach 2. Offset claims with adjustments

This approach would see VCM buyers use the mitigation outcomes as offsets and host countries incorporate the transactions into their accounting under Article 6. There is no buying country in the VCM context so the only accounting adjustment would be to add the quantities of credits transacted to the emission levels of host countries to ensure they are not counted towards their NDCs.[8]

Companies would not make these corresponding adjustments themselves, as they are a matter of national accounting. However, companies would need upfront commitments from host countries that they will make the adjustments when they report their Article 6 accounting under the Paris Agreement.

[7] The nature of the VCM means there is no decision-making body with jurisdiction over its participants. The TSVCM seeks to address this gap with its recent establishment of a governance body (https://www.iif.com/tsvcm/Main-Page/Publications/ID/4586/New-Governance-Body-Formed-to-Ensure-Integrity-of-Voluntary-Carbon-Markets).
[8] For this reason, these are referred to in this paper as "accounting adjustments" rather than "corresponding adjustments. This would be similar to the expected accounting for credits used towards airlines' surrender obligations under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), where an adjustment would be made by a host country but with no equivalent adjustment made by a buying country.

Accounting adjustments would mean the mitigation outcomes are claimed only by investing companies and not a second time by host countries. The adjustments serve to tighten NDCs to counter the impact of VCM projects having reduced or removed emissions. This approach therefore prioritizes full assurance that double claiming and possible displacement risks are avoided over the presence or encouragement of positive mitigation impacts.

While full assurance may be attractive from the perspective of eliminating risk, there are concerns regarding the applicability of this approach. Adjustments work by assuming one hundred percent of transacted credits will eventually displace mitigation effort by the host country, but this assumption is not realistic for many developing country hosts (see Section 3).

This approach would also apply a very high standard of full assurance in relation to international VCM transactions while installing no controls or even expectations for domestic VCM projects or companies' own internal or value chain mitigation actions. This would unfairly hinder international VCM investments and drive investment away from the developing countries that are most in need of international support through the VCM.

Another concern is that Article 6 accounting may require adjustments from transferring countries even when the mitigation arises in sectors or activities outside the host country's NDC, meaning they would need to find further mitigation opportunities within the scope of their NDCs to compensate.[9]

Market participants also raise practical concerns that requiring them to obtain commitments from host country governments to undertake adjustments will have a chilling effect on the VCM by blocking projects and passing up valuable mitigation opportunities. They fear that few host countries are willing to commit to corresponding adjustments and that project developers typically do not have the time or political capital to persuade them. This makes market participants dependent on government processes and timelines, which can have major impacts on project finance and viability.

This is likely to be exacerbated by the lack of government processes, infrastructure and capacity to approve projects, track reductions and removals, authorize non-national uses of mitigation outcomes and undertake the Article 6 accounting. Given these challenges, requiring accounting adjustments may disproportionately restrict access to the VCM and investment by smaller local actors and lesser developed countries, contrary to the need for international support and principles of climate justice.[10]

Approach 3. Non-offset claims ("mitigation contributions")

Companies investing in projects under this accounting approach would not use acquired carbon credits to offset their emissions. The mitigation benefits would instead remain in host countries and enable them to achieve their NDCs without risk of double claiming. Companies would instead be able to claim they have made a "mitigation contribution" to support host countries.

This approach puts the burden of avoiding double claiming on the demand-side corporate claims, rather than requiring host countries to forgo the mitigation benefits of the projects. It addresses concerns that any double claiming of mitigation impacts from VCM projects could result in a displacement of abatement effort that companies would otherwise have made.

This accounting approach presents a neat fix of the double claiming issue by avoiding it altogether. The approach has however received mixed reviews from buyers. Some companies find non-offset uses of credits less tangible and less attractive than offsets they can count on their own "books" to claim lower emissions or claim their products and services to be low carbon or carbon neutral. They may however be of more interest where a company's carbon footprint is relatively small or its indirect scope 3 emissions are large.

[9] This requirement would be to counter any incentive created by Article 6 to keep sectors outside the scope of future NDCs. It would however further increase the difficulties involved in including VCM transactions under Article 6 accounting.
[10] Choudhury (2021).

Approach 4. Enhanced transformative investment

This approach would not involve accounting adjustments but would implement other measures to strengthen uncredited multiplier effects and NDC progression. This could be achieved through implanting transformative finance, capacity and technology outside the boundaries of the VCM projects.

Measures would seek to accentuate the positive impacts of the VCM in host countries to ensure they outweigh any negative impacts. Regulation or guidance could direct projects towards activities that introduce and spread new technologies or practices. This project selection could be supported through host country processes for registering projects. Benefit sharing or tax arrangements can generate resources that may be further invested in other mitigation actions.

Measures like these would need to be context specific as they would inevitably impact on preferred types of projects and technologies. It would most likely require an assessment of transformative technologies and projects at a regional level or ideally conducted by host countries directly.

Strong engagement by host countries would be needed under this approach. Collaboration with investors and developers can provide greater assurance that the VCM projects lead to a substantial and positive net mitigation impact. It could be tied to other host country initiatives to elaborate how international support can best serve the host country's needs and NDC implementation, notably the elaboration of NDC implementation plans and the identification of areas and technologies that are most in need of international support in the form of finance, technology or capacity building.

Some countries are undertaking such assessments to identify suitable areas for voluntary cooperation under Article 6 of the Paris Agreement, which should be equally suitable for guiding investments under the VCM. Such initiatives are themselves often in need of international support and capacity building.

5. Reframing accounting for the VCM

VCM projects offer a ready-made infrastructure for companies to contribute investment and support for global mitigation action and to help enable host countries in achieving their conditional NDC goals. The accounting for mitigation through the VCM needs to accurately reflect the actual mitigation impact and legitimate corporate claims of participants but must also preserve sufficient workability and incentive for investors and developers to engage in the market.

All four accounting approaches discussed in this paper and summarized in Figure 3 offer a range of pros and cons. Host countries will often want to use emission reductions and removals to demonstrate they have fulfilled their conditional NDCs. They may wish to specifically offer commitments of accounting adjustments to attract priority investments and high carbon prices. In other cases, non-offset claims or contributions to sustainable development may be enough to draw in the engagement of companies. Extra measures can also be implemented in projects and host countries to strengthen projects' transformative impact.

1 Offset claims with no adjustments

- Accrual of mitigation benefit - Host countries and investing companies
- NDC characteristics (host) - Non-economy-wide, actions, qualitative
- Readiness status (host) - Incomplete tracking and reporting
- Prioritized mitigation impacts - Multiplier effects and NDC progression

2 Offset claims with adjustments

- Accrual of mitigation benefit - Investing companies
- NDC characteristics (host) - Unconditional, broad-based, quantitative
- Readiness status (host) - Strong capacity, systems, processes
- Prioritized mitigation impacts - Displacement risk

3 Non-offset Non-offset claims (mitigation contributions)

- Accrual of mitigation benefit - Host countries
- NDC characteristics (host) - Any
- Readiness status (host) - Any
- Prioritized mitigation impacts - Displacement risk

4 Enhanced transformative investment

- Accrual of mitigation benefit - Host countries and investing companies
- NDC characteristics (host) - Non-economy-wide, actions, qualitative
- Readiness status (host) - Incomplete tracking and reporting
- Prioritized mitigation impacts - Multiplier effects and NDC progression

However, the host countries of the VCM exhibit great differences and a "one-size-fits-all" approach would not appropriately cater to these. Some countries will be more reliant on support from others to make a contribution to global mitigation action – for these, the mitigation impacts of VCM projects will be overwhelmingly positive and a key lever for accelerating NDC progression over time, while realistic concerns for autonomous levels of mitigation being displaced by the VCM would be limited. Investors in VCM projects in developed countries, on the other hand, may prefer accounting measures that guard more strongly against the potential to displace mitigation actions that the host country should be doing itself.

Avoiding a one-size-fits-all approach does not suggest there should be no principles or guidance. It would be helpful to better understand how the positive and negative mitigation impacts of VCM projects are applicable to different host country and NDC circumstances, such as those elaborated in very brief terms in Figure 3. It would also be useful to understand how these may evolve over time as NDCs become more ambitious and increase their emissions coverage, and as host countries build their capacity and install systems and procedures for tracking and accounting for VCM projects and their mitigation results. Over time, investors may increasingly prefer accounting measures that avoid the possibility of negative displacement, such as through non-offset claims (approach 3), or that address concerns that such risks might overwhelm the projects, such as through accounting adjustments (approach 2) or enhancing their transformative impact (approach 4).

Four key recommendations emerge regarding the reframing of accounting in the VCM:

- **No one-size-fits-all accounting solution.** The diversity of country circumstances, investment needs and policy goals suggests that multiple accounting approaches can legitimately co-exist in the VCM context. Developed countries acting as VCM hosts should take the lead in pioneering accounting approaches to assure their mitigation efforts do not fall in the presence of successful VCM projects, such as through the use of accounting adjustments. Guidance is needed to improve understanding in the VCM of when different accounting approaches are appropriate, especially as this may change over time.

- **Be mindful of equity implications.** Care should be taken to not single out particular types of voluntary action for stronger accounting treatment than other, equivalent mitigation measures. Making accounting adjustments mandatory for all international VCM transactions, for example, would ignore that double claiming can lead to displacement risk in domestic VCM applications and corporate actions to reduce their internal or value chain emissions. Singling out international VCM transactions with such mandatory treatment would drive investment away from the developing countries that are most in need of international support through the VCM.

- **Transparency is key and can align incentives for a "race to the top".** Full transparency is needed throughout standards, processing and reporting for the VCM on which accounting approaches are selected for projects and host countries, together with the rationale for their selection. Transparency can enable higher credit prices to be paid for VCM projects with stronger multiplier effects, greater impacts on NDC ambition, or where complemented by stronger accounting measures.

- **Direct VCM investments to where the transformative impact is greatest.** Host countries should identify the activities, sectors and technologies where they would particularly benefit from VCM projects. They should engage with investors to implement measures and policies that accentuate the positive impacts of the VCM to ensure they outweigh any negative displacement risks.

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