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The Future of the Voluntary Offset Market: The Need for Corresponding Adjustments

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Abstract

The voluntary carbon market is growing rapidly, in part due to the large number of companies and other non-state entities setting net zero targets. However, at the same time the voluntary carbon market also faces a new challenge, namely because all countries have reduction targets under the Paris Agreement there may be nowhere to generate offset credits that reduce emissions below what would happen anyway. One potential solution is to implement 'corresponding adjustments' whereby countries that host offset projects adjust their GHG accounts so that they do not also claim the reductions caused by projects. The need for corresponding adjustments has been highly contested by standard-setters, commentators, and participants in the voluntary carbon market, and this paper aims to move the debate forward by providing a clear statement of the problem and an analysis of the arguments made against the need for corresponding adjustments. We find that the arguments against corresponding adjustments do not address the fundamental requirement that voluntary offsets must achieve a lower level of emissions than would have happened anyway, and we suggest that attention should now focus on how corresponding adjustments can be implemented in a fair and efficient way. We also highlight that the need for corresponding adjustments only arises if carbon credits are used to make offsetting claims, and that an alternative option is to develop the market for 'contribution' claims, which do not require corresponding adjustments.

Policy Insights

- There is considerable disagreement within the voluntary carbon market on the need for corresponding adjustments.
- The arguments against the need for corresponding adjustments do not address the fundamental requirement that voluntary offsets must achieve a lower level of emissions than would have happened anyway.
- The voluntary carbon market should now focus on implementing corresponding adjustments in a fair and efficient way.
- The voluntary carbon market can provide credits for offsetting, which necessitate corresponding adjustments, and credits for making 'contribution' claims, which do not.



1. Introduction

The voluntary carbon market is growing rapidly, with an increase of 309% in market volume between 2017 and 2020, and a 144% increase in credit retirements (Ecosystem Marketplace, 2021). This growth is driven to a large extent by the number of companies and other non-state entities setting net zero emission targets (Michaelowa, Espelage and Müller, 2020). For example, over 20% of the world's largest 2,000 companies have committed to such targets, and the majority intend to use offset credits (IETA and PwC, 2021). The growth in the voluntary carbon market is also supported by other initiatives, notably the Taskforce for Scaling the Voluntary Carbon Market, which predicts the market will expand at least 15-fold by 2030 (TSVCM, 2021).

However, at the same time a new challenge faces the voluntary carbon market, namely because almost all countries have reduction targets under the Paris Agreement there may be nowhere to generate offset credits that reduce emissions below what would happen anyway through governments meeting their commitments (Hermwille and Kreibich, 2016; Lang, Blum and Leipold, 2019; Kreibich and Hermwille, 2021). One proposed solution to this problem is the implementation of what are called 'corresponding adjustments', whereby countries that host offset projects adjust their GHG accounts so that they do not also claim the reductions caused by projects. Countries are able to make such adjustments under the Article 6 rule book agreed at COP26 in Glasgow (UNFCCC, 2021a), but it remains a decision for voluntary market certification bodies and the buyers of offset credits as to whether they require corresponding adjustments.

This issue, of whether corresponding adjustments are needed to support voluntary carbon offsetting claims, has been actively debated and contested by offset certification providers, industry bodies, and NGO commentators, but there remains considerable disagreement (ICROA, 2020; Gold Standard, 2021; Streck, 2021; Verra, 2021). This commentary paper aims to move the debate forward by clarifying the challenge created by the Paris Agreement (Section 2), and by identifying and analysing the main arguments from those contending that corresponding adjustments are not necessary (Section 3). The concluding section sets out recommendations for resolving this contentious issue.

2. Clarifying the Problem for the Voluntary Carbon Market

The problem of whether voluntary offset credits are possible when all countries have reduction targets can be broken-down into the following separate components:

1. *Offsets must reduce emissions below what would happen anyway.* The verb 'to offset' means to counteract a burden by having an equal and opposite force or effect. In the case of carbon offsetting, the entity claiming to have offset their own emissions must have caused a compensatory change (i.e. a reduction in emissions, or enhancement of removals), outside their GHG inventory boundary. If the offset activity does not achieve a lower level of emissions, below what would have happened anyway, then no compensation has taken place, and the emission within the inventory boundary has not been offset. Reducing emissions below what would happen anyway is an essential feature of a carbon offset.
2. *If offset activities count towards country targets they do not achieve lower emissions than would happen anyway.* If the reduction represented by an offset credit contributes to a country's



emission reduction target (called a Nationally Determined Contribution (NDC) under the Paris Agreement), and that reduction target would have been fulfilled anyway, e.g. through the implementation of alternative policies and actions, then the offset project does not achieve a level of emissions below what would have happened anyway. Therefore, no compensatory outcome has been achieved, and no offset has been generated. The offset project might achieve a lower level of emissions at the specific source targeted by the project, but overall emissions to the atmosphere will not be lower if the project displaces alternative abatement policies and actions.¹

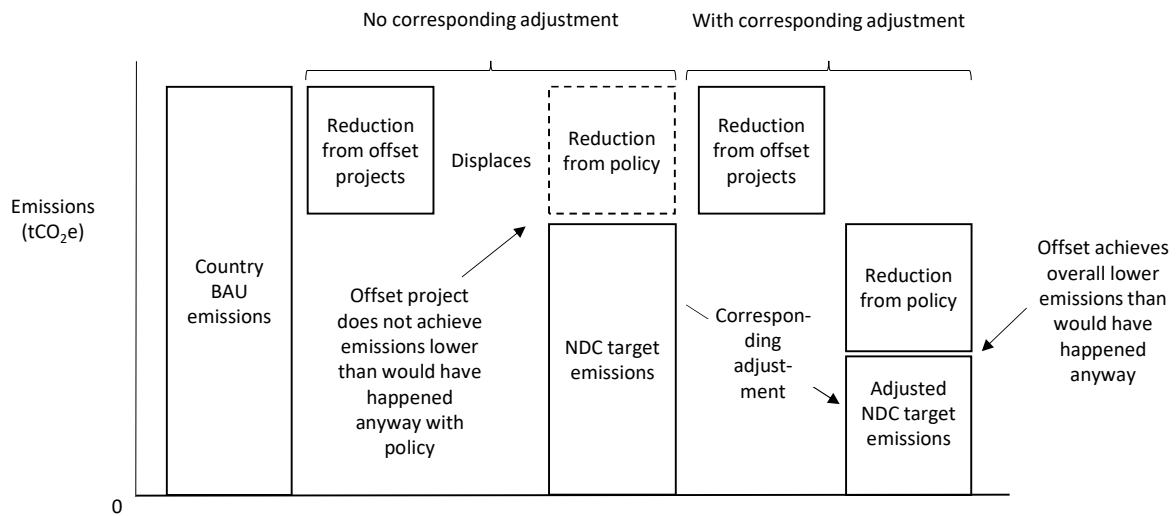
As noted above, one proposed solution to this problem is to implement corresponding adjustments to the GHG accounts of the host country, i.e. the country where the offset project is located. In essence, this would mean the country agrees not to count the mitigation achieved by an offset project towards the achievement of its NDC pledge (which is equivalent to increasing the NDC target reductions by the same amount). Strictly speaking this is an 'adjustment' rather than a 'corresponding adjustment' as there is no corresponding downward adjustment by another country, but we use the term 'corresponding adjustment' in this paper as it is used ubiquitously in the debate on this issue. The rationale for corresponding adjustments can be stated as follows:

3. If a corresponding adjustment is made to the GHG accounts of the host country this means that additional alternative policies/actions will still be required to meet the NDC target, and overall emissions will be lower than what would have happened without the offset activity, and therefore the activity will generate genuine offsets credits.

The points presented in 1., 2. and 3. are illustrated in Figure 1. Voluntary offset projects may replace alternative policies or actions, and therefore not achieve a level of emissions below what would have happened anyway. A corresponding adjustment would ensure that offset projects do not replace alternative actions.

Figure 1. Clarifying the problem and rationale for corresponding adjustments

¹ Note that this is not an issue for domestic regulatory offsetting programmes, which are designed to enable alternative compliance actions that contribute to a country's NDC. These programmes effectively reallocate where mitigation occurs in service of NDC achievement. Such reallocation cannot, however, be used to substantiate a global, voluntary carbon neutrality claim.



It is worth noting that the problem for the voluntary offset market and the rationale for corresponding adjustments are often expressed in terms of ‘double counting’, i.e. that two entities (the company purchasing the offset and the host country) are claiming the same emission reduction (Lang, Blum and Leipold, 2019; Kreibich and Hermwille, 2021). However, framing the problem in this way can be open to misinterpretation, and this appears to be the basis for some of the arguments that challenge the existence of the problem. As per the explanation above, the fundamental issue is whether an offset project reduces emissions below what would have happened anyway, rather than double-counting per se. Double-counting is relevant as it is the mechanism via which projects fail to reduce emissions below what would have happened anyway, i.e. because if countries count the reduction then they will not implement alternative policies, but double-counting is not the problem itself. Understanding the structure of the problem is important for analysing the arguments discussed below.

3. Analysis of Arguments Against the Problem or Need for Corresponding Adjustments

This section presents the main arguments that have been made against the problem outlined above, and/or against the need for corresponding adjustments. These arguments were identified from published documents including public consultations, position statements from voluntary carbon market certification bodies, and blog posts by industry commentators or environmental NGOs. A brief explanation and critique of each argument is provided in the sub-sections below.

3.1. *Corresponding adjustments are not needed for other forms of voluntary mitigation action*

Argument. When a company undertakes voluntary direct emissions abatement, such as through energy efficiency or fuel switching etc., the reductions are counted within the company’s GHG inventory and within the country’s GHG inventory, and therefore towards the NDC target. This double-counting is not problematic, and corresponding adjustments are not required for direct voluntary abatement actions, and so corresponding adjustments should not be required for voluntary offsetting either (ICROA, 2020; Aalders and Steen, 2021; Verra, 2021).



Critique of argument. This argument rests on treating GHG inventory accounting and accounting for offsetting as the same. However, the requirements and claims associated with inventories and offsets are different. Reporting a reduction in an inventory does not require that the level of emissions achieved must have been caused by the entity whose inventory is reported, or that only one entity can claim the level of emissions achieved within its inventory. In contrast, an offset entails that the entity making the offsetting claim must have caused a compensatory change, i.e. achieved a lower level of emissions than would have otherwise been the case. As per point 2. above, for an offset to have occurred there must be a compensatory change.

This critique also addresses the point noted above, that the problem for the voluntary offset market is not fundamentally about doubling-counting per se. Double counting is not problematic in the context of nested GHG inventories, but it is problematic in the case of offsetting as it results in the offset activity failing to lower overall (global) emissions below what would have happened anyway (which is a fundamental requirement for voluntary offsets).

3.2. *Additionality tests ensure a lower level of emissions is achieved*

Argument. Offset certification standards require the use of additionality tests to prove that the offset project would not have happened anyway, e.g. by showing that the project would not have been financially viable in the absence of revenue from the sale of offset credits, or are not already required by regulation (ICROA, 2020). This means that offset projects go beyond what would have happened anyway, and therefore corresponding adjustments are not necessary.

Critique of argument. This argument disregards the difference between whether a specific project would have happened anyway and the overall level of emissions achieved. Additionality tests provide evidence that a specific offset project would not have happened anyway, but not that overall (global) emissions are lower than they otherwise would be. For example, an additionality test may show that a specific coalmine methane flaring project would not have occurred in the absence of revenue from offset credits, but such a test does not show that the host country government would not have implemented alternative mitigation in order to meet its NDC.

3.3. *Corresponding adjustments would distort the accounting for the Paris Agreement*

Argument. Voluntary offset credits are not counted by the country where the purchasing company is located. If there were a corresponding adjustment to the host country's GHG accounts then the reduction achieved by the offset project will not be counted by any country, and will be missing from the Paris Agreement's accounting system (Streck, 2021). This 'throws the accounting under the Paris Agreement out of balance' (ICROA, 2020, p. 8), and means that reported emissions will not equal actual emissions.

Critique of argument. Under the accounting rules for the Paris Agreement countries are required to submit national GHG inventory reports, which reflect GHG emissions and removals without any adjustments (UNFCCC, 2019), and these reported emissions equal actual emissions. This reporting is completely unaffected by corresponding adjustments for voluntary offsets. It is only when reporting progress towards NDCs that countries provide an adjusted GHG emissions balance (UNFCCC, 2019). A possible implicit extension to the argument above is that all emission reductions should contribute to NDC fulfilment (or other sectoral targets, e.g. for international aviation), and corresponding adjustments for voluntary offsets would deviate from this. However, it is not clear why all reductions



must count towards NDCs (or international sectoral targets), and the Paris Agreement supports precisely the opposite of this via the concept of 'overall mitigation in global emissions' (OMGE), which are reductions under Article 6.4 that do not count towards NDCs/international sectoral targets (UNFCCC, 2021b). As with OMGE, information on corresponding adjustments for voluntary offsets must be reported to the UNFCCC by the country making the adjustment, ensuring full transparency within the Paris Agreement's accounting system (UNFCCC, 2021a).

3.4. *There is no double counting to the UNFCCC*

Argument. Similar to the premise for 3.3 above, voluntary offset credits are not counted by the country where the purchasing company is located, and so only the host country reports the reductions to the UNFCCC. There is no double-counting to the UNFCCC, and therefore corresponding adjustments are not needed (I4CE, 2014; ICROA, 2020; Verra, 2021).

Critique of argument. This argument rests on the assumption that the reason corresponding adjustments are needed for voluntary credits is to avoid double-counting to the UNFCCC (possibly on the basis that this is often the reason given for corresponding adjustments when mitigation outcomes are transferred between governments). However, this is not the reason for corresponding adjustments for voluntary offset credits, rather it is that offsets must achieve a level of emissions below what would have happened otherwise.

This critique also relates to the point above, that the problem for the voluntary offset market is ultimately about whether the offset project achieves a level of emissions below what would have happened anyway, rather than about double-counting per se.

3.5. *Corresponding adjustments will limit the growth of the voluntary carbon market*

Argument. Host countries may refuse or be unable to make corresponding adjustments, and this will restrict the supply of offset credits (Choudhury, 2021). In addition, the uncertainty around whether or which countries will agree to make corresponding adjustments will hold back investment in offset projects. Host countries may also levy a fee for making corresponding adjustments, which would add to the price of offsets and reduce demand.

Critique of argument. This argument is correct in suggesting that there may be constraints in the supply of offset credits due to the requirement for corresponding adjustments. However, this does not alter the fact that offsets must achieve lower emissions than would have otherwise occurred. Just because a requirement for environmental integrity will constrain supply does not mean that the requirement for integrity can be dispensed with. Moreover, the long-term sustainability of the voluntary offset market is dependent on its integrity, and any near-term increases in market volume through dispensing with environmental integrity are likely to be short-lived and counter-productive.

3.6. *Requiring corresponding adjustments is patronising to developing countries*

Argument. It is patronising to suggest that developing countries will hold back on mitigation policies to meet their NDCs if they think their targets will be met by voluntary offset projects (Choudhury, 2021).

Critique of argument. This argument suggests that corresponding adjustments are only required for developing countries. The rationale for corresponding adjustments applies to any country, and there



is no differentiation between developed and developing countries. Any country might predict that it is on track to meet its NDC (and may or may not be aware that this is because of voluntary offset projects within the country), and therefore hold back on additional mitigation policies, perhaps because they are expensive or politically unpopular. Arguably it is patronising to developing countries to suggest they are not capable of implementing corresponding adjustments – indeed, developing country representatives have indicated the importance they see in being able to oversee and authorize voluntary market claims (Partnership for Market Readiness, 2021). Whether patronising or not the argument does not obviate the necessity that offsets must achieve a level of emissions below what would have happened anyway.

3.7. Corresponding adjustments are not required if the offset and the emission to be offset occur in same country

Argument. Corresponding adjustments are not required if the offset project is in the same country as the emission that it is intended to offset (Verra, 2021). Often connected to this argument is the further point that because most demand for voluntary offset credits is from companies located in developed countries this will favour projects in those countries, to the detriment of developing countries.

Critique of argument. Corresponding adjustments are required even if the offset is used in the country where the project is located (Trove Research, 2021). Any voluntary offset project must achieve a level of emissions that is lower than would have occurred anyway, and therefore the argument for corresponding adjustments applies, regardless of the location of the emission that is intended to be offset.

3.8. Helping countries to meet their NDCs will accelerate ambition

Argument. If corresponding adjustments are not required then the offset project will help host countries to meet their NDCs, and host countries will then be able to set more stringent NDCs and accelerate their ambition (Streck, 2021; Verra, 2021). If this happens then offset projects will achieve a level of emissions lower than would have happened without the offset projects.

Critique of argument. This argument is highly dependent on host countries setting more ambitious NDCs, and although this is possible it is also uncertain. There is no guarantee that the host country would set more ambitious targets in direct proportion to the amount of offset credits issued, so although this could be a real beneficial effect achieved through voluntary climate finance it cannot be the basis for offsetting claims. The only way to guarantee an increase in ambition in direct proportion to the offset credits issued, in a way that is provable at the time of credit issuance, would be through the use of corresponding adjustments.

3.9. The atmosphere sees the same reduction with or without a corresponding adjustment

Argument. There is no difference between a carbon credit with or without a corresponding adjustment in terms of emissions to the atmosphere (Verra, 2021). In both cases 'a company makes a claim about the emission reduction and the host country can use that emission reduction to meet its target under the PA [Paris Agreement]' (Verra, 2021, p. 6).

Critique of argument. If there is a corresponding adjustment then the host government cannot use the emission reduction achieved by the offset project towards its target and therefore has to



implement other measures to reduce emissions. These measures are in addition to the reduction achieved by the offset project and overall emissions to the atmosphere are lower if there is a corresponding adjustment (as illustrated in Figure 1.).

3.10. Too much emphasis is put on the integrity of offsetting claims at the expense of climate change mitigation action

Argument. Debating the need for corresponding adjustments is a preoccupation of the global north, whereas for the global south there is an urgent need for climate finance. The 'integrity of private sector involvement has become more important than the issue of climate action itself with an overzealous investigation on claims and methodologies' (Choudhury, 2021, p. 5).

Critique of argument. This argument makes the case that mobilising financial flows to developing countries is more important than the integrity of the offset claims made by purchasers of carbon credits. There are two problems with this argument. Firstly, if the claims made by purchasers do not have integrity then demand for credits and the associated financial flows are unlikely to be sustained. Secondly, offset claims based on credits that do not reduce emissions below what would happen anyway are not benign. They give the impression that residual emissions have been offset, and that no further abatement action is required, whereas further action is required to genuinely achieve net zero.

3.11. Unfair if developed countries gain the benefit of voluntary action but developing countries do not

Argument. Most of the companies purchasing offset credits are located in developed countries, and if the requirement for corresponding adjustments restricts the supply of offset credits then companies will switch away from offsets and undertake more direct abatement within the developed countries where their operations are located. It is not fair if developed country governments, who can better afford to pay for climate change mitigation, should also benefit more from voluntary corporate action on climate change (Streck, 2021).

Critique of argument. This argument does not obviate or resolve the requirement for offsets to achieve a lower level of emissions than would have happened anyway. It may be unfair for developed countries to benefit more from voluntary corporate action, but the solution to this should not be to allow a market for credits that purport to offset emissions, but in fact do not. There are alternative options for increasing flows of climate finance to developing countries, such as the 'contribution' claims option (Fearnehough *et al.*, 2020; Broekhoff, 2021a), which is discussed below.

3.12. Host countries will not be able to make corresponding adjustments for the voluntary carbon market

Argument. Host countries, particularly least developed countries who require support with climate change mitigation the most, will not be able to make corresponding adjustments because they lack the institutional capacity to do so (Streck, 2021).

Critique of argument. Many countries will develop their capacity for implementing corresponding adjustments in order to participate in the cooperative approaches under Articles 6.2 and 6.4 of the Paris Agreement (UNFCCC, 2021a), and the same institutional arrangements can be used for making adjustments for voluntary offsets. The argument above does not obviate the requirement for offsets



to achieve a lower level of emissions than would have happened anyway, but does suggest a real practical challenge for some developing countries. Attention should be given to building the institutional capacity for corresponding adjustments in developing countries, including strong governance, rather than attempting to ignore the necessity of corresponding adjustments.

Conclusions

The voluntary carbon market could experience rapid expansion over the coming decades, but at the same time the market needs to resolve its relationship with national-level emission reduction targets under the Paris Agreement. This paper provides an analysis of the problem facing the voluntary carbon market, and also an analysis of the main arguments against the existence of the problem and/or the need for corresponding adjustments.

In general, the arguments against the need for corresponding adjustments do not stand up well to scrutiny, and none address the fundamental necessity that offsets must achieve a level of emissions below what would have happened anyway. Despite the challenges and uncertainties associated with implementing corresponding adjustments, this nevertheless appears to be the only way to ensure the integrity and long-term viability of the voluntary offset market. Arguably it is important for all market participants to recognise this necessity as soon as possible in order to move forward and focus attention on implementing corresponding adjustments in a fair and efficient way.

The requirement for corresponding adjustments for compliance credits under Article 6.2 and 6.4 of the Paris Agreement (UNFCCC, 2021a) means that many countries are likely to develop their capacity for corresponding adjustments in any case, but additional support may be needed for least developed countries. Specific guidance for governments on how to interact with the voluntary carbon market may also be needed, in terms of issuing agreements for future adjustments, establishing share-of-proceeds or share-of-issuance arrangements, and encouraging particular project types, such as higher cost abatement options to avoid the voluntary market taking the lower hanging fruit (Partnership for Market Readiness, 2021).

A final point to note is that the problem discussed in this paper arises when carbon credits are used to make offsetting claims, as this entails that the level of emissions achieved must be lower than would have happened anyway. An alternative use of carbon credits is to make 'contribution' claims (Broekhoff, 2021a; Leining and White, 2021; Salway and Streck, 2021), i.e. a claim to have supported climate change mitigation activities outside of one's own GHG inventory boundary (but not to claim to have offset emissions). This type of claim is more akin to making a philanthropic donation and does not require a corresponding adjustment. It is yet to be seen whether there would be demand for such credits, as current demand is predominantly driven by net zero claims. A potential advantage to developing a market for 'contribution' claims is that the level of support a company can provide is not limited to the size of its own residual emissions. It is worth noting that this is not an 'either or question' for the voluntary carbon market (Broekhoff, 2021b), which could provide both offset credits, which necessitate corresponding adjustments, and contribution credits which do not.

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