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Executive summary

Relying on carbon offsets to meet climate targets is risky and unsustainable. Carbon credits can have low environmental integrity, and they will become increasingly difficult to source as countries need to “keep” their reductions to meet domestic targets.

When companies purchase a carbon credit generated in a country that also has a climate target, this does not always deliver an additional reduction. For example, as the voluntary market reductions enable it to meet its target, the host country might decide to not adopt a planned policy. The voluntary support will have replaced public policies, rather than supported extra reductions. Under such a scenario, there is little difference between a non-additional credit under the Kyoto Protocol, and a non-adjusted credit under the Paris Agreement. As a precautionary measure, all carbon offsets sold through the voluntary market should be subject to corresponding adjustments.

Alternatively, credits could be used to measure the financial contribution provided by a company to a country. The company’s emissions would not be “compensated”. This would make companies’ claims more accurate, recognizing that the achieved emission reductions could actually be displacing host country action, and could, inter alia, be non-permanent. Beyond a change in rhetoric, this would protect consumers from false advertising which misleads them into believing that certain products and services have no impact on the climate.

“Practice-based credits” could also constitute an alternative for companies to finance climate action. Instead of paying for results which can sometimes be non-permanent, overestimated, or simply displacing other actions, companies would pay for practices. This is particularly suited for activities where the achieved results are likely to be non-permanent, e.g. in the land-use sector, as it would make clear that benefits can only be guaranteed as long as practices are sustained.

Finally, an important benefit of a contribution claim or a practice-based credit is that it will ensure that countries can benefit from all the reductions taking place on their territory. If the cheapest and easiest reductions are sold out of the Global South countries, it may become more difficult for these countries to meet their own objectives.

Recommendations:

- Carbon credits should not be used to compensate emissions but rather to contribute to host country climate action
- If offsets are used, the host country should apply corresponding adjustments
- Companies and programmes should consider creating “practice-based credits”, rewarding changes in practices rather than paying for results that can be hard to quantify and guarantee over the long term
Preamble

This briefing is a sequel to “Carbon Markets 101: the ultimate guide to global offsetting mechanisms” which sets out the basics of how carbon markets function, and how the different global systems are connected. This briefing focuses in more detail on offsetting post-2020, and proposes alternative ways of financing climate action and sustainable development.

In this briefing, we discuss some of the ways offsets can contribute to or undermine climate action, and explain the ongoing debate regarding the risk of “double counting” in the voluntary carbon market. We propose some alternative ways for private and public financiers to support climate action and sustainable development through crediting and non-crediting mechanisms.

PART 1: The problem - Carbon offsets still in a legitimacy crisis

How do offsets interact with climate action?

Offsetting and climate action

Buying offsets as opposed to reducing one’s own emissions is an uncertain climate strategy.

Offsets are more risky than domestic reductions in the short term, because domestic reductions are real, while offsets only generate real reductions if the credits have high environmental integrity. In a way, they simply postpone the buyer’s problem to the future, because absolute domestic emissions will eventually need to be drastically cut, everywhere. While it is impossible to prove that the use of offsets necessarily leads to weaker climate action, the precautionary principle supports the idea that countries should reduce their own emissions rather than rely on international credits.

In the medium term, offsets can lead to lock-in to high-carbon and stranded assets. In the long-term, there will be no more supply of offsets from emission reductions/avoidance as countries reach net-zero emissions targets. Only carbon dioxide removal (CDR) projects - if done correctly - might be able to generate “reductions”. However, CDR projects that can guarantee environmental integrity will be in very short supply.

Proponents of offsets often justify using them as a substitute for investments in expensive internal reductions by saying that this leads to cost savings that are reinvested into further climate action. Whether the use of offsets leads to more emission reductions overall in this way strongly depends on each company’s or country’s level of climate ambition, and use of such cost savings. There is little evidence to prove that cost savings are reinvested into more action, and there is currently no definitive answer to this question.

There is also little evidence from research to support the claim that companies would use offsets to go beyond what they are already doing to reduce their own emissions. At the same time, there are clear sector-wide trends that tend to confirm the “excuse for inaction” argument. For example, companies in the oil and gas and the aviation sectors have announced climate targets that rely heavily on offsetting. At the same time, oil companies continue to explore new fossil fuel reserves and airlines continue on a high emissions and high growth path with insufficient sustainability improvements.

1 Oil Change International (2020): “Assessing oil and gas company climate plans”
Offsetting and carbon pricing

Pricing pollution can be a very important part of climate policy. It can be both fair and efficient. But offsets are possibly the worst way of doing this. The very objective of offsets is to put the lowest possible price on greenhouse gases (GHGs), by seeking the cheapest reductions wherever they can be found.

In climate policies which use a combination of offsetting requirements and other mandatory regulations, offsets are always meant as a way to lighten the burden on private companies. This is the case under the Colombian and South African carbon taxes, under the Korean emissions trading scheme, the California cap-and-trade and the EU carbon market (which will ban the use of international offsets from 2021). Industry groups consistently support this relaxation of the rules and approach offsetting as a way to avoid more stringent climate regulations.

Attempting to price carbon through offsets can be harmful in other ways. For example, it can mask the size of the climate challenge. It does this by offering a cheap solution and giving the impression that it is possible to solve the climate crisis with little effort. In reality, a rapid and deep transformation in all sectors is needed, as outlined by the Intergovernmental Panel on Climate Change (IPCC). Offering an “easy way out” can strengthen resistance to more drastic measures which are urgently needed.

The voluntary market

A new paradigm post 2020

With the end of the Kyoto Protocol era, and the start of the Paris Agreement, new carbon market-related risks arise. One in particular is the possibility of two entities counting the same emission reduction, which could have implications for the voluntary market.

Deep dive into the voluntary market “double counting” problem

Under the Paris Agreement, the issue of double counting is relatively easy to explain. Given that all countries have climate targets under the agreement, and need to collectively reduce their emissions to net zero, it should not be possible for two countries to count the same emission reduction towards their respective national targets. Otherwise their aggregate “net zero” would actually not be accurate, but just an accounting loophole.

To avoid this, a so-called “corresponding adjustment” should be applied. This means that, when a country sells a reduction to another country, it should adjust its own levels of emissions to account for the fact that some of the achieved reductions have been used by another entity. For example, if a country emits 100tCO\textsubscript{2}e in year 1, and 80tCO\textsubscript{2}e in year 2, but has sold 5tCO\textsubscript{2}e reductions to another country in year 2, it should report 85tCO\textsubscript{2}e in year 2. It is adjusting in a way that corresponds to how many reductions were sold.

A key question on the voluntary market is whether or not countries should apply such corresponding adjustments also when selling reductions to private companies.

When it comes to private companies offsetting on the voluntary market, the question is more complex. Countries, taken all together, must reach net zero emissions as soon as possible. Companies’ emissions are included in the measurement of countries’ emissions, but are not separately accounted for to demonstrate achievement of a national climate pledge (Nationally Determined Contribution, NDC). For example, if BMW reduces its emissions from a German factory, this will count towards both BMW’s “target” and Germany’s official progress towards meeting the Paris Agreement objective. The reduction is claimed by both BMW and Germany, but this does not create a problem, nor a disincentive to reduce emissions anywhere.

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See more discussions on this also in the following papers: "Envisioning the future of the voluntary carbon market post-2020" (Working group convened by Gold Standard, 2020), "Future role for voluntary carbon markets in the Paris era" (NewClimate Institute & Lambert Schneider, 2020) or "Credibility and feasibility of the voluntary carbon market post-2020" (Hermwille & Kreibich, 2020)
But let’s assume that BMW, instead of reducing its emissions at a German factory, decides to purchase carbon offsets from Peru. Now BMW reports lower net emissions, Germany reports no change, and Peru reports lower emissions. As in the previous example, both a company (BMW) and a country (Peru) claim to have reduced their emissions, while only one mitigation activity has actually happened (in Peru). This is the same situation as in the previous example, where the double claiming was not a problem. Therefore, some market actors have argued that this form of double claiming is not a problem either. BMW does not report its emissions to the UNFCCC, and the levels reported by Germany and Peru will accurately reflect the real reductions achieved, i.e. no (BMW driven) reduction in Germany, and some reductions in Peru.

However, there is a crucial difference between the first and second example. The concept of additionality – the requirement that emissions reductions achieved through the carbon market go beyond what would have happened without the market – needs to be considered under a new lens in light of the Paris Agreement. Any support received by a country to reduce its emissions could simply replace what the host country has committed to achieving anyway. This will not always happen. For example, Peru could decide to nevertheless implement all the policies it had planned, and thereby potentially over-achieve its NDC target. However, there are clear and realistic scenarios under which the reductions achieved through the voluntary market will simply reduce a country’s, in our example Peru’s, own efforts, and hence replace what would have happened anyway.

If BMW finances an additional climate project, it will help Peru reduce its emissions and could contribute to the country’s national climate target. If many other companies decide to finance similar projects in Peru, this significantly contributes to Peru’s climate efforts. The Peruvian government could then decide that it does not need to for example implement its planned carbon tax, because it has met its target already, thanks to the many carbon offset buyers which financed projects in the country.

This would be in fundamental opposition to what the buyer of the carbon offset will claim, which is that they have financed an “extra” emission reduction which would not have happened otherwise. This system therefore allows for example BMW to claim to have reduced emissions, when in reality there could be absolutely no change compared to what should have happened anyway.

One could argue that this scenario is equivalent to one where BMW would have voluntarily reduced its emissions in Germany, where it is based. Had it done this, the reduction would have contributed to Germany’s target, and Germany could have decided to not implement a specific policy as a result, just like in our example above with Peru. Whether BMW buys Peruvian offsets or reduces emissions in Germany, both countries will meet their NDC targets, and either Germany or Peru will have been helped by BMW to do so.

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3 This is a completely fictional example for the sake of argument and does not reflect the real climate plans of BMW, Peru or Germany.
4 See for example ICRAA’s 2020 position paper
5 For a summary of different possible scenarios, see table on page 47 of NewClimate Institute and Lambert Schneider (2020) “Future role for voluntary carbon markets in the Paris era”
Considered from this angle, the problem is therefore related to the truthfulness of the company’s claims. The company is not delivering extra reductions, rather, it is helping a country meet its target. The two are not mutually exclusive, i.e. BMW could be financing “extra” reductions, which will enable the country to meet its target, for example because the country was otherwise going to miss its target. But it is also plausible that the reductions financed by the company will simply replace other reductions which the host country had planned anyway.

If BMW reduces its own emissions and this leads to the German government doing less on climate, the company can still claim to have a lower climate impact. But if instead of reducing its own emissions, BMW buys offsets from Peru, and this leads the Peruvian government to make less efforts, then the company’s claim is no longer accurate. This is because it would simply have replaced host country action, while its own emissions are not lowered.

This means that there could be no difference between financing a non-additional project through the voluntary market during the Kyoto Protocol period, and financing a non-adjusted reduction through the voluntary market under the Paris Agreement. A cautious approach would hence be to require corresponding adjustments for all credits.
An alternative way of understanding the problem - the double counting lens

Another problem created by this “double claim” is that it opens the door to “double monetisation”, whereby a single emission reduction generates two carbon credits. This was a problem identified by carbon market standards already under the Kyoto Protocol. Countries with a target under the Protocol could issue a carbon credit on the voluntary market, but the underlying emission reduction would also contribute to them reaching their objective. Hence they would need one less AAU (the emission permits under the Kyoto Protocol) and could sell this AAU to another country, which would as a result increase its own emissions. Therefore, through a single emission reduction, two carbon credits could be used: a voluntary credit, and an AAU. To prevent this, standards like the VCS and Gold Standard both required the cancellation of an AAU in order to issue a voluntary credit6.

The situation under the Paris Agreement is not very different. An emission reduction used to issue a credit under the voluntary market, if not adjusted, could contribute to the host country’s NDC, perhaps allowing the country to overachieve its target. With this overachievement, the host country could sell reductions from any project, because they have “extra reductions” to sell and can hence meet their target while still applying a corresponding adjustment for the reductions sold.

<table>
<thead>
<tr>
<th>Situation under the Kyoto Protocol</th>
<th>Situation under the Paris Agreement</th>
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<tbody>
<tr>
<td>Emission reduction sold</td>
<td>Voluntary carbon credit</td>
</tr>
<tr>
<td>Risk of double monetisation</td>
<td>The voluntary reduction “liberates” an AAU which allows a country to sell an AAU while still meeting its target</td>
</tr>
<tr>
<td>Measure proposed by standards</td>
<td>Countries must cancel an AAU before a voluntary credit can be created</td>
</tr>
</tbody>
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Under the Kyoto Protocol, the importance of additionality was widely acknowledged, if not always respected. Offset programmes invested great amounts of resources into developing methodologies to attempt to prove that their projects would not have happened anyway. Today, some standards promote the idea that it is no longer a problem for a company to claim a reduction that might have been delivered by a country anyway7.

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7 By stating that double claiming in the VCM is not a problem, see for example ICROA’s position paper
PART 2: The solutions – From compensation to finance, leaving the net-zero (sum) game

How can integrity be maintained?

Two credible options emerge for the voluntary carbon market:

- A “contribution claim” model, whereby emissions are reduced and no corresponding adjustment is applied, but the buyer company does not claim to be carbon neutral or to have financed “extra” reductions. Instead, the company claims to have supported the host country in its efforts towards meeting the Paris Agreement goals. This could easily be combined with internal carbon pricing policies, adopting a “levy and fund” approach whereby internal emissions are priced, and the revenues from this levy are used to fund mitigation or research projects.
- A crediting model with corresponding adjustment: The host country would not count the reductions towards its own target.

These two models will likely be useful on different timescales. The first one could be applied from today and indefinitely going forward, while the second would most likely not be suitable in the long term given that countries will need to “keep” their reductions for achieving their own targets.

The crediting model is relatively well understood, as “compensation” credits are already widely used. In the next section, we therefore zoom in on the contribution claim model.

The contribution claim

An alternative to offsetting is to contribute to countries’ efforts towards meeting their climate targets under the Paris Agreement. To many companies, this sounds less attractive, mostly because it is not as easy to communicate to their customers. However, contributing to countries’ efforts can have other benefits. It can strengthen the relationship between companies and countries, and it makes companies’ commitments more credible. It positions the company as a contributor to a global effort, rather than an individualistic actor seeking to address its own impact in isolation from national strategies. In the long term, it will also shield companies from reputational risks if they find themselves struggling to meet their “net zero” targets as offsets become increasingly difficult to find.

The situation might be different for companies who, in line with science-based targets initiative principles, are reducing their emissions on a Paris-compatible trajectory, and purchasing offsets to “go beyond” that. For example, a company which is investing in renewable energy to reach absolute zero by 2030, might be able to rely on credible offsets until then to demonstrate their further commitment. However, even this approach raises practical questions. It will likely be challenging for voluntary market projects to obtain corresponding adjustments, in particular in the short term. Therefore, companies might not be able to credibly rely on the compensation claim even in the short term.

Challenges of the contribution claim

However, the contribution claim doesn't fix all the shortcomings of the carbon crediting model. In fact, it still relies on credits which does have some drawbacks.

First, depending on the type of project, the Monitoring Reporting and Verification (MRV) costs can be high. Buyers will therefore “waste” some of their contributions to fund consultants and advisors – typically in rich countries – setting up methodologies and verifying the exact impact of reductions. Having a clear account of the impacts achieved can be beneficial, e.g. to improve

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8 Largely based on NewClimate Institute & Lambert Schneider (2020): “Future role for voluntary carbon markets in the Paris era”
legitimacy or track efforts over time. On the other hand, some of this money could be used to finance more projects and more reductions. And since the objective is not to claim “neutrality”, the measurement of impacts might not need to be as accurate as for the offsetting model. For example, verifiers could focus on verifying that projects have been implemented correctly, and are additional, but without monitoring every single tonne of CO₂.

Another problem that would persist with a contribution claim is the fact that many projects require continued financial transfers to be sustained. While some projects can guarantee their own subsistence after an initial period, e.g. if they can offer a commercially viable product, this is not the case for many types of climate projects. Typically, projects which aim to transition from one state to another through initial investments, e.g. from fossil-based energy generation to renewables, or from combustion engine-based to a battery-powered transport system, will be viable under a carbon crediting mechanism, although some of them might not pass the additionality test. But projects which require a continuous adaptation of practices, while the option of going back to previous ways is always accessible, will not survive under a crediting system which inevitably terminates at some point, due to fixed crediting periods. This would be the case for example for many sustainable agricultural practices, or land-management types. For these cases, another type of finance is needed.

Some finance programmes have tried to reconcile the need for long-term funding with the clear measurements of results-based payments systems. For example, the German government has financed industrial gas destruction projects, which lead to significant emission reductions, on the condition that host countries would pass policies or implement programmes to continue these efforts once the payments end. This is a good way of trying to solve the temporal problem, but it can be difficult to implement for a company, which does not necessarily have the same legitimacy to negotiate long-term policies with a government. In fact, in some cases, a private company making its financial support conditional on a government passing specific policies could legitimately attract strong criticism.

Selling a new concept

While it has its shortcomings as described above, the new “contribution” model is a sensible alternative to the current practice. Not only is it viable in the long run, but it can also be implemented today, with no change to the market infrastructure.

The main hurdles to the mainstreaming of this model are in fact not technical but rather linked to marketing. In return for their investments, companies generally want to be able to green their own image, and say that their operations are “climate neutral”. But they should look beyond this, as using the existing carbon market infrastructure to disburse climate finance can have several of the benefits which offsets provide, while avoiding some of the pitfalls. For example, measuring and verifying the mitigation impacts of projects helps companies track how effective their financial contributions are in supporting climate action. In addition, this approach carries great potential to allow smaller contributors, such as private individuals or small companies, to finance large projects, similarly to the idea of crowdfunding. At the same time, this approach is more transparent as companies will not simply report a single “net” number. This can shield companies from reputational risks which could materialise when offsetting claims are found to be fraudulent.

One way of selling this new approach to customers would be simply to explain that as offsetting is not enough to stop the climate crisis, the company in question wants to go beyond that. Instead of using its financial contributions as an excuse to continue polluting, it reduces its own climate impact while helping drive the change we need globally.

Beyond just a change in rhetoric, switching from a “compensation” to a “contribution” model has concrete implications. For example, under the contribution model, companies would no longer advertise a product as “carbon neutral”, or claim to offer products and

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9 See the work done by the Nitric Acid Climate Action Group
10 However, there is a dire need to improve many of the existing methodologies and processes which have resulted in the generation of millions of non-additional carbon offsets
11 For a more detailed discussion, see NewClimate Institute (2020): Results-Based Finance in the Paris Era – Considerations to Maximise Impact
services compatible with reaching the goals of the Paris Agreement without demonstrating sufficient internal reductions first. The new model will help companies build their green credentials on transparent reporting, and financial support for developing countries’ climate initiatives. This will go a long way to prevent greenwashing and shield companies from reputational risks.

An alternative way of rewarding climate action - practice-based credits

An alternative model to results-based payments – either relying on a contribution or a compensation claim – is that of an “effort-based credit” or “practice-based credit”. These could be designed, so that individuals and project developers are financed for implementing specific practices, rather than for achieving specific results. Of course, a list of which practices are beneficial to the climate would need to be established, and this list would likely vary according to regions.

Through a practice-based credit system companies would claim to finance positive practices, without claiming that this cancels out their own climate responsibility, or falsely advertising that it permanently absorbs all the CO₂ emissions they released.

This model would be particularly useful for land-based projects, where permanence is very difficult – and often impossible – to demonstrate. By financing practices – rather than results – it makes it clear that the benefits can only be guaranteed as long as the practice continues to be financed, e.g. better forest protection. The benefits might be sustained beyond that, but there is no guarantee of this. In contrast, a one-off payment for avoided deforestation incurs the risk that the stored carbon will be released in the near future.

Reconciling climate action and development needs

A further dynamic which must be taken into account when using carbon markets is how to reconcile the need to reduce emissions and that of ensuring the sustainable development of poor countries. This is particularly relevant with regards to two aspects of carbon markets: the delivery of “co-benefits” and the dynamic between supporting countries versus exporting their emission reductions. Both of these can benefit from the proposed alternative claims models.

On the first point, it has been a longstanding concern that carbon offsets focus primarily, and often exclusively, on their GHG impacts. What is measured and valued are the tonnes of CO₂e reduced. While some have tried to give more visibility to projects which promote sustainable development, and some buyers have been willing to pay for this, a large share of credits purchased today do not focus on such co-benefits. This is a logical adverse effect of the “least-cost abatement” rationale of offsets, although these preferences are slowly evolving.12

New claims could contribute to shifting the perspective and reinforce the importance of sustainable development benefits. For example, if the objective is no longer to be able to claim carbon neutrality, but rather to provide a financial contribution to a host country’s effort, the objective of seeking the cheapest reductions loses its appeal. A company might wish to finance reductions which have a clear benefit to people and the environment. Indeed, this could be a major contribution in helping to make these claims attractive in the absence of the “carbon neutrality logic”. Companies would no longer build their image on the – inaccurate – idea that they have delivered extra reductions which make them carbon neutral, but rather on the fact that they have supported climate action in a poor country which not only reduces emissions but also has tangible positive impacts for people and the environment.

The second angle that needs to be considered is to avoid that using carbon markets accidentally makes it more difficult for a developing country to reach its climate target. This could happen if a company finances reductions in a country and wishes to use these to claim carbon neutrality. In this case, the country should not be allowed to use the reductions towards its own target (see discussion in section 1), and must reduce elsewhere. If a company finances very cheap reductions through such a system, then there is a risk that the cheapest abatement options will no longer be available for the host country to use towards its own target. This is why it is very important for host countries to have full authority over which projects can “export” their emission

reductions and which cannot. It would be advisable for such countries to only authorise the exportation of “high hanging fruits”, i.e. reductions which are difficult to achieve and which the country was not planning to deliver in the short term. This could be because the reductions are expensive, or because they rely on technologies which the country does not possess – but which the company financing the reductions could potentially develop.

Note that this situation, even with the financing of high hanging fruit, does not solve the potential additionality problem which would materialise if the host country did not apply a corresponding adjustment. While the activity itself might be additional, because it is “out of reach” for the host country, the reduction itself may have already been planned under the country’s target.

Until now, there hasn’t been a significant number of carbon offset projects in the least developed parts of the world. This is often due to a lack of structures needed to implement the complex methodologies, but also in part due to the fact that least developed countries tend to have very low emissions. Therefore, there is little scope for large mitigation projects which benefit from economies of scale to generate carbon credits. By simplifying the structure of the market, for example by relying on “practice-based credits”, more countries could seek access to finance as the transaction costs will be lower. Furthermore, more small scale projects could be implemented, e.g. projects that provide direct finance for farmers to evolve their agricultural practices, without the need to establish complex monitoring systems.

Conclusions

Relying on offsetting to meet climate targets is risky for various reasons. Carbon credits can be of questionable quality and they will become increasingly scarce as all countries need to reduce their own emissions. Sustainable development is currently too often simply an afterthought as the focus is on the amount of reduced emissions. Offsetting can also replace domestic climate action if a host country government decides to not take action because others are paying for projects that help the country achieve its targets.

Companies should adopt new ways of financing climate action. Instead of claiming climate neutrality while using offsets to justify their own continued pollution, they should both reduce their own emissions and provide much needed finance to good climate projects around the world. The existing voluntary market structures can be used to implement this; more than a technical issue, it is a matter of changing the narrative.

In order to put the above into practice, Carbon Market Watch makes the following recommendations:

- Carbon credits should not be used to compensate emissions but rather to contribute to host country climate action
- If offsets are used, the host country should apply corresponding adjustments
- Companies and programmes should consider creating “practice-based credits”, rewarding changes in practices rather than paying for results that can be hard to quantify and guarantee over the long term

The Paris Agreement marks a new era for global climate action. It is time we moved beyond the outdated (at best) zero-sum game of offsetting and ramped up the financial support for climate action that reduces emissions and drives sustainable development.