How to navigate the grey and murky world of offsetting

Our take on the role of offsets and the implications of relying on them to achieve climate change mitigation goals.

8 September 2022 - Emilien Henrotte

Synopsis

As offsets are wrongfully becoming a deceiving tool to delay corporate climate action, Ocean Bottle sets out a real path to global net neutrality by focusing efforts and funding on reducing emissions internally, before looking at financing carbon sinks.

In short, we aim to move away from using individual carbon neutrality terminology, as companies either emit or absorb CO_2 through their activity, so the use of its terminology cannot be simplified by just equating carbon emissions to offset purchases. We instead contribute to global net neutrality by implementing emission reductions through our supply chain, avoiding emissions in our value chain, and developing carbon sinks by protecting natural ecosystems outside of our value chain.

1. The climate challenges businesses face

Offsetting, as defined in the Cambridge Dictionary, is referred to as *balancing one influence against an opposing influence*. In today's world of unregulated climate change action, it's a term used to describe the purchase of credits to counteract a company or an individual's environmental footprint. While this behaviour theoretically applies to any environmental metric, it's most commonly used today for carbon dioxide (CO_2) emissions.

The world came together in Paris in 2015 to acknowledge that Planet Earth was getting hotter as a result of human activity, releasing greenhouse gases (GHGs) into our atmosphere at an astounding rate. Scientists and governments agreed that to combat this, we must do everything we can to prevent emissions of GHGs from heating the earth more than 2ºC over the next decades (ideally limiting it to 1.5ºC in fact), a threshold which would render it unlivable for humankind. We must as a planet halve our 1990 emissions by 2030, and achieve "net zero emissions" by 2050.

As the first decade counter on this timeline is fast approaching, companies in particular are facing growing public pressure to measure, strategize and act on their carbon reduction initiatives to keep the world in line with the Paris Agreement. However, while the tools to measure emissions (e.g. The GHG Protocol) are widely agreed across the planet, the reporting and reduction strategy enforcements vary from country to country, but are, for the most part, only voluntary. This means that sub-par efforts and greenwashing by the world's largest emitters will largely go unpunished.

Because enforcing climate mitigation is internationally unregulated, so are its mechanisms. For that reason, the majority of companies to date have followed this pattern:

1. Measure carbon emissions following the GHG protocol
2. Offset the measured emissions
3. Claim carbon neutrality
4. Repeat

While this might seem like a good start to reach global net neutrality, it actually completely misses the main goal of measuring carbon emissions in the first place: **reduction**. This not-so-inconspicuous loophole to claim so called carbon neutrality is extremely appealing, with the world pouring about $3B in carbon offsets in 2020 (and some estimates even predict a factor 15 increase in its market value by 2030[1]), while successful reduction strategies have failed to make any notable headlines.

Offset credits either fund technological interventions such as wind farm installations, or nature-based solutions. The former measures carbon *avoided* as compared to the status quo, slowing of CO_2 concentration growth in the atmosphere, and the latter utilises trees and other living organisms that actually sequester carbon over their lifetime, reducing the net level of carbon in the atmosphere. Because of nature's carbon "superpower" and the added storytelling benefits associated with nature protection or regeneration, these offset projects have largely stolen the show and received the majority of funding to date.

An important thing to keep in mind is that at the base of any offset credit is the concept of additionality, meaning that the offset must guarantee environmental mitigation that *wouldn't* materialise without it

2. The problem with offsetting

This sudden demand hike in nature protection and restoration as a simple way to offset took NGOs and protection organisations by surprise. As demand still vastly surpasses supply[2], forcing certifying bodies to constantly play catch up with this fast moving "industry", offsetting as it stands creates a lot of negative externalities.

Firstly, let's start with one of the most popular offsets: tree planting, or reforestation. Trees are on paper one of the most effective ways to sequester carbon from the atmosphere. Essentially, when they breathe, they capture carbon and store it in their bodies through

[1] A blueprint for scaling voluntary carbon markets _ McKinsey.pdf
[2] A blueprint for scaling voluntary carbon markets _ McKinsey.pdf

their lifetime. So plant a tree = carbon stored. Easy. However, There is actually a 10 to 20 year timeline before a tree can build enough biomass to capture notable amounts of carbon[3]. That is of course if the tree remains healthy (or doesn't burn[4] or get cut down) until then, a future promise impossible to keep for an offset credit sold today. It's like selling your chickens before they've hatched. A dead tree also releases all the carbon it's stored back into the atmosphere, turning the carbon credit associated with it into a "double debit".
Some trees are cheaper to plant than others, and it's easier to plant the same tree over and over again. This has led to the creation of gigantic monoculture fields, which are prone to disease and hugely detrimental to wildlife biodiversity, a fallout which will get exacerbated as demand for offsets continues to grow.

Nature-based carbon sequestration, as you might already realise, is hard to actually quantify on a large scale, kind of like trying to measure how much air the residents of your street breathe everyday. Because this carbon calculation is difficult to track and to prove wrong, it leads some carbon credit sellers to overclaim their carbon offer, leading multiple corporates to claim the same offset credit[5].

Proving additionally is also an issue. Let's say you have a forest next to your house, those trees will sequester carbon. Would suddenly measuring how much carbon they absorb change their ability to sequester carbon? The answer is no. However, a lot of nature-based carbon credits fund the protection of existing patches of biodiversity. Whilst this is needed, the only thing actually achieved in this process is a more accurate measurement of carbon capture capacity, not an offset[6].

Most importantly, environmental injustice is inherent with offsets. Carbon, plastic, whatever you are trying to offset, has likely been emitted/produced somewhere different from where it's being "offset". The socio-economic implications of this mean people have to clean up your mess for you, which distances you from the problem, and corporations from extended producer responsibility.

Offset credits are unfortunately today largely an excuse for big corporations to delay a change in their business strategies. Imagine if Shell invested what they spend on offsetting, up to $2B per year[7], in decarbonising their operations...

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[3] Greenpeace rejects the one trillion trees campaign: "Treewashing the climate crisis with promises of large tree plantations" | REDD-Monitor
[4] Bootleg Fire is burning up carbon offsets | CNN

[5] Critics take aim at 'wild west' carbon offset market _ Financial Times.pdf
[6] Carbon Neutral is like being Garbage Neutral – An Analogy.pdf
[7] Shell pushes green credentials with "carbon neutral" driving scheme | Reuters

3. Where to focus instead, think global neutrality

Luckily for everyone, fixing the issue is actually a lot easier than it sounds.

The concept of Net Zero itself is misused. At its origin it was created to bring the *world* on a path to emissions neutrality. The world, as explained earlier, has the capacity to generate and absorb CO_2. A company however, doesn't have such powers. A company that sells products or services will emit CO_2 unless their business model is precisely to absorb it, such as *Climeworks*. Thus, by definition a company cannot be carbon neutral. A better terminology which companies and individuals should follow, as suggested by independent think tank Carbone 4[8], is to *contribute* to global neutrality with the purchase of offsets and other mechanisms. Not being able to trumpet about self-proclaimed neutrality will instantly deter most companies from relying on questionable offsets to remain marketable.

Any net zero concept follows this simple logic: it's easier to clean up a small mess than a big mess. Therefore, the goal of "neutrality" is to reduce the mess before looking at cleaning it, also what is sometimes referred to as "insetting". Because the latter brings a band aid solution, it doesn't incentivise you to change your habits (both as individuals and companies). In reality, it also spotlights the offsets themselves and not *what* you are offsetting; it renders invisible the actual value of emissions[9], which directly goes against the goal of the net zero initiative.

Following these two principles will change the way we use offsets. When they become a last resort (as they rightfully should be), it will be easier to regulate, rate, verify and allocate them.

Conclusion

As perfectly explained by Friends of the Earth[10] offsetting is "based on the premise that we have the luxury of causing environmental harm in one place by reducing harm in another. We no longer have this luxury".

In an offset credit context reminiscent of the gold rush, where demand is largely overcoming supply and regulation, why not apply the same problem-solving philosophy as with everything else? Why not focus on finding the root of the problem instead of dwelling on its effects? If your sink was overflowing…

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[8] Carbone 4 Net Zero Initaitve - Guidelines.pdf
[9] Carbone 4 Net Zero Initaitve - Guidelines.pdf
[10] A dangerous distraction Why offsetting will worsen the climate and nature emergencies

“Growth for the sake of growth is the ideology of the cancer cell.” - Edward Abbey