Carbon offsetting: best practices

A Whitepaper for Businesses Addressing Sustainability in 2021

planA





Foreword

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Companies looking at reducing their impact on the environment inevitably come across offsetting. As part of the business sustainability landscape since the 90's, offsetting has provided a fast, pain-free alternative to carbon reduction activities for a lot of companies.

In 2021, however, the rules are changing. The very existence of offsetting and the meaning of the word itself are being questioned. Yet, the global carbon offsets market will top the \$200 billion (€163 billion) mark by 2050¹. As a mechanism, it has proved useful to create a carbon market and provide funds to much-needed climate action. This demonstrates the importance of clarifying the concept, defining best practices and how to engage with offsetting correctly, as the market grows and solidifies.

Plan A's mission is to enable businesses to take control of their sustainability journey. Offsetting is only one step of this multifaceted journey. We hope the takeaways outlined in this paper will help your organization to define and execute a coherent and science-based sustainability strategy, and look forward to bringing you more insights to empower your journey, throughout this year and beyond.

There's no plan B for the planet,

Get in touch with Plan A today to assess and

- address your sustainability needs.



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Additionality

A project is 'additional' if it reduces greenhouse gas (GHG) emissions below the level that would have occurred in the business-as-usual scenario.

Carbon sequestration

The process of capturing and storing atmospheric carbon dioxide

CDM

Clean Development Mechanism

CER's **Certified Emissions Reductions**

GHG Greenhouse Gases

IET International Emissions Trading

Permanence

To be effective, sequestration projects must ensure that carbon dioxide emissions are kept out of the atmosphere for a reasonable time. In the tree planting case, trees must be planted permanently.

UNFCCC

United Nations Framework Convention on Climate Change

VER's Voluntary Emissions Reductions







Introduction to carbon offsetting

sold. Despite being held under tight scrutiny, carbon offsetting has grown into a The early '90s weren't just pivotal for questionable fashion choices - they were also the years in which we advanced our global understanding of climate change. \$0,6 Billion market in 2019⁴. This paper sets out to explain carbon offsetting, the underlying debates asso-Within the international scientific community, a broad consensus emerged that ciated with the practice, and ultimately determine if offsetting can be an integral the increasing volume of CO2, and other greenhouse gases in the Earth's atmosphere, were the root causes of climate change². The scientific community's unitpart of transitioning to a low-carbon economy. To consider if offsetting can be a part of the solution, we will explore the world of carbon offsetting, how it came ed approach in stressing the need to limit emissions led to the first international agreement to reduce greenhouse gases, The Kyoto Protocol, in 1997³. The deal about after global commitments to climate action were made, and how to navigate an exponentially growing market. was signed by 197 countries, endeavouring to set emission reductions to 5% less than 1990 levels, using various mechanisms, including the introduction of a carbon market. Offsetting was born.

Carbon offsetting allows individuals and companies to invest in environmental projects globally to compensate for their carbon footprint. In other words, offsetting means buying carbon credits equivalent to one's carbon impact. If carbon reduction is equivalent to an activity's total carbon footprint, it is "carbon-neutral". Creating a carbon market allowed emissions to be quantified and regulated in the current economic system, meaning offsets could be traded or





² IPCC (1992) "The Scientific Assessment Report".

³ United Nations (1998) Kyoto Protocol to the United Nations Framework Convention on Climate Change.

^₄ SP Global (2020) "Global carbon offsets market could be worth \$200 billion by 2050".

3 The carbon market explained

The carbon market is how carbon credits are retailed and traded to offset GHG emissions to achieve carbon neutrality. The Kyoto Protocol created three market mechanisms to achieve these emissions reductions: the International Emissions Trading (IET), the Joint Implementation, and the Clean Development Mechanism (CDM).

The objective was to push the markets' development to achieve the maximum emissions reductions at the lowest possible cost. Through credit creation, it turned emissions into an economically scarce resource. What hides behind these technical terms and how have these mechanisms contributed to reducing emissions and project finance?

International emissions trading 3.1

The International emissions trading (IET) mechanism upholds the principle of capping and trading emissions reductions. Governments under the Kyoto protocol have agreed to reduce emissions within their respective countries. Governments can quantify emissions caused by industrial activities within these countries and set a cap on these emissions. These caps incentivise industries to reduce their

emissions by investing in green technologies or investing in compliance-based carbon offsetting schemes. Suppose companies can reduce their emissions to their allowed amount. In that case, they can sell the surplus in carbon credits to other companies unable to meet their reduction targets.

3.2 Joint implementation

The joint implementation mechanism was put in place so that countries in the developed world unable to reduce emissions could invest in emissions reduction projects in other countries. By investing in the developing world's sustainability, countries would earn carbon credits applied to their emissions targets.









3.3 The clean development mechanism and certified emission reductions

The Clean Development Mechanism (CDM) was put in place to let emission-reduction projects in emerging countries earn certified emission reduction (CER) credits, each equivalent to one metric tonne of CO2 equivalent. These CERs encourage sustainable development and help industrialised countries seek more flexibility to meet their emission targets under the Kyoto Protocol. These certifications address the compliance market of offsetting, that is to say the market that concerns industries and companies that are required by law to limit their footprint.

The voluntary market 3.4

The voluntary market for carbon offsetting functions outside of, but parallel to, the compliance market. It emerged as the global consensus around climate change grew, giving rise to market pressure and public opinion surrounding corporate

social responsibility. The voluntary market serves businesses, organisations and individuals that wish to offset with no regulatory obligation. Carbon credits generated under the voluntary market (VER's) cannot be used to meet governmental compliance measures set out in the Kyoto Protocol.







Carbon offsetting projects

Thus, several mechanisms and markets operate in parallel for businesses to reduce and compensate their total carbon footprint. By creating scarcity and a market for it, demand for carbon credits at the lowest possible price grew, giving rise to several controversial practices. The ethics, implementation, monitoring and effectiveness of project development were soon called into question. What distinguishes a good offsetting project from a bad one? Why are there varying prices for carbon credits? Can offsetting be done right in the first place? What should be looked for to adopt offsetting properly?

Project development,

To maximise these projects' social, economic and environmental benefits, local 4.1 communities' needs and the project's maintenance have to be taken into account. In the development and implementation phases of the project, community conimplementation and monitoring sultation and adequate leakage checks (how much carbon are you not capturing?) The first challenge for offsetting projects is to provide a precise estimate of the need to be observed to ensure that offsetting projects create more good than impact in terms of carbon emissions (and other metrics such as community harm. The pricing of the emissions reductions also needs to include the entire cost impact). Technologies have been introduced to reduce or avoid emissions that of the project so that the local community can reap the benefits of these projects, well after commencing. generate carbon credits. Leading project technologies include renewable energy, forest conservation and energy-efficient cooking stoves. These technologies, al-

though being able to provide a fairly reliable CO2e number, do not integrate key issues to take into account like community impact, long-term viability or intrinsic relevance for local development. As projects can only produce credit when the carbon has already been captured or avoided, this also creates a complex timing question where a company actually buys a credit for a project that can already be done.

Project ethics 4.1.1











RENEWABLE ENERGY

Traditionally people in this community cook indoors on an open wood fire which causes harmful smoke and emits CO2 through burning wood for fuel. Installing biogas units means that energy can be generated through organic matter and transitions the community to utilise indoor gas stoves. Changing biogas-powered stoves reduces CO2 and harmful smoke released in the atmosphere, clears up organic waste, and saves households wood, and time. One example of a quantified technology used by offsetting projects.

Clean cooking with biogas by Fair Climate fund



4.1.2 **Project Technology Effectiveness**

Renewable energy projects are one of the most effective forms of generating carbon credits. This is because they address climate change's core issue - our reliance on fossil fuels for energy. Projects converting waste into energy, for example, are readily used to reduce the dependence of communities on forest firewood for heating and cooking. This technology works by introducing biogas digesters into communities that can use animal and food waste to generate biogas energy.

Wind and solar farms are also types of technology that are used to create emissions reductions. However, these projects are relatively large and lack a core community and the socially driven element. In regards to creating emissions reductions, they tend to be very reliable. Still, if purchasing emissions reductions are caused by an interest in creating social benefits on a community level, it is best to stick to smaller projects developed in consultation with communities.







ENERGY EFFICIENCY

In the Indian region of Raichur, there is a severe shortage of wood due to deforestation. Moreover, the traditional way of cooking causes increased harmful smoke indoors, and women must spend a lot of time gathering wood. Together with local partner Samuha, FairClimateFund has been providing households that are a member of the local community organisation Janara Sam uha Mutual Benefit Trust (JSMBT) - with cleaner cookstoves, or Chulikas, since 2011. The projects reduce CO2 emissions and improve living conditions.



by Fair Climate fund



Energy efficiency projects are often the most ethical and socially beneficial form of offsetting because they are typically associated with improving living standards and health – irrespective of the carbon savings they create. The most popular types of these projects are improved cookstoves and water filtration projects. The places where they are typically implemented are emerging countries relying on wood cookstoves to boil clean drinking water and cook food. Indoor air pollution from cookstoves is responsible for around 4 million deaths⁵ per year.

These projects also tend to involve a substantial amount of community consultation in developing and implementing the project. In the project's development phase, communities are often consulted to determine the best course of action depending on their needs and living conditions.





⁵ World Health Organization (2018) "Household air pollution and health".



TREE PLANTING AND FOREST CONSERVATION

Kariba is a community-based project, administered by the four local Rural District Councils (RDCs) of Binga, Nyaminyami, Hurung we and Mbire. As such, the project supports a range of activities beyond environmental protection, promoting these communities' independence and well-being. Improved clinic amenities provide better healthcare, infrastructure including new roads and boreholes improve daily life, and school subsidies are offered to the population's poorest quartile. Project activities in conservation agriculture, community gardens, beekeeping training, fire management, and ecotourism create jobs and facilitate sustainable incomes, benefiting the entire region.





Tree planting, although one of the most effective carbon capture mechanism, has Gold Standard has several complex and strict validation practices that ensure become one of the more criticised forms of offsetting project, as the permanence that a third party verifies a project to have a full audit trail. All projects certified by the standard also need to prove that the emissions reductions are 'additional'. is often debated. Tree planting was initially a popular means of reducing carbon emissions through the carbon sequestration benefit that trees offer. Trees act as Additionality ensures that the project would not have been made possible withtemporary forms of carbon storage because they continue to absorb CO2 as they out the sale of carbon credits. Projects also need to be assessed to ensure that grow and reach their maximum size. For the carbon savings to be permanent, they leakage is avoided, meaning that emissions would not be moved elsewhere or need to remain intact. Increasing competition for land resources has seen trees other environmental issues would spike due to implementing a project. Projects must also be permanent so that the emissions reductions can be continually valfrom these planting projects removed to make way for other land-use types. idated and sustained over time. The most effective way to use trees as a form of carbon reduction technolo-

gy is to purchase carbon credits from paying landowners or communities, to In a bid to prevent the double-counting of emissions reductions, the Gold maintain and protect forests that are already existing. These projects can have Standard introduced a registry that tracks each credit after being generated to a more considerable impact on the neighbouring communities as they give them ensure that one carbon credit cannot be retailed twice. Overall, the Gold Standard a source of income. They also ensure these ecosystems are preserved to harness is a complicated validation process that provides maximum impact and transparthe clean air and water that the community ultimately benefits from. ency in the development, implementation, monitoring, and sale of carbon credits generated by the emissions reductions in carbon offsetting projects.

Certification standards 4.2

In 2003 an alliance of non-governmental organisations such as the World Wildlife Fund established the "Gold Standard" to ensure that carbon reduction projects implemented under the CDM and the Voluntary market would feature the highest level of environmental integrity and contribute to sustainable development. The

⁶ Cf. Glossary

⁷ Cf. Glossary









Can businesses avoid 'greenwashing' when offsetting?

'Greenwashing' is the practice of falsely conveying environmentally friendly behaviour to capitalise on the growing demand for corporate sustainability. Carbon offsetting has been criticised as a mechanism that facilitates greenwashing because it allows companies to claim "carbon neutrality" through the purchase of carbon offsets, although their levels of emissions often still remain very high. In other words, offset credits can be construed as a license to pollute, whilst masking the real issue (being the total emissions actually produced, not the net balance between emissions and their economic compensation). Instead of a business deploying structural and behavioural changes that contribute to decarbonisation, a separate entity is responsible for the carbon reductions and the polluting business does not address the source of the problem.

In that sense, outsourcing carbon reductions through carbon offsetting does not contribute to internal emissions reductions. Instead, it places the responsibility of reductions elsewhere. To avoid greenwashing, it is essential that carbon offsetting remains a supplementary action to compensate for emissions alongside active steps to reduce a business' emissions internally. Under such a trajectory, a company would eventually reduce the need to offset to a minimum, having reduced its emissions as much as possible.





Goats grazing beneath disused garbage bins in the government township of Tel Sheva. Source: Rebecca Manski, Bustan Archives.





CASE STUDY: CARBON OFFSETTING IN THE AVIATION SECTOR

An example of this carbon offsetting practice is that airlines such as EasyJet, Air New Zealand, Air Canada and British Airways have introduced carbon offsetting for their flights. Carbon credits are then purchased to neutralise the impact of GHG emissions from planes. This carbon offsetting practice has not caused a decrease in GHG emissions from the industry. Commercial flights' carbon footprint has increased 70% faster than previously, has predicted the International Council on Clean Transportation⁸.



⁸ ICCT, Graver, Rutherford and Zheng (2019) "CO2 emissions from Commercial Aviation".

6 Improving offsetting with renewed best practices

What, then, is the way forward for a company to compensate its emissions? Offsetting Plan A's approach to carbon offsetting projects ensures that community needs should come as part of a coherent effort from a company to first understand the size and climate data drive them, and that companies partaking are able to drive an ambitious reduction agenda. of its footprint, then reduce it and finally compensate what cannot be avoided. This requires collecting data related to economic activities, translating them into CO2 Plan A's offsetting portfolio supports projects in emerging economies to maximequivalent measurements, analysing this data to identify main emissions categories, ise the transferring of technologies that promote a holistic approach to sustainable focusing efforts on reducing emissions where it matters, and then finding projects development. Working with project developers that certify their projects through that respect all the aforementioned specifications for an offsetting project to be the Gold Standard ensures projects create ethical, verified, additional and permatruly on point. nent emissions reductions that uphold the UN Sustainable Development Goals and Plan A has developed a software to centralise this methodology. Businesses can the Paris Agreement targets. The Gold Standard retirement system also ensures measure and monitor their carbon emissions with little prior knowledge of the susthat carbon offsetting credits are only used once and are not double-counted. tainability field. The Carbon Manager provides companies with tailored emissions

reduction plans and offsetting opportunities for what cannot be removed. Offsetting becomes a part of a combination of actions ensuring that companies partner with substantial projects while achieving emissions reduction over time, following the most advanced standards of reporting.







The benefits to businesses offsetting their carbon

With reduction and offsetting, businesses can actually go beyond the somewhat Carbon offsetting and the carbon market allow businesses, governments and intainted objective of 'net-zero'. Becoming carbon negative, that is to say removing dividuals to have a measurable way to act on climate change. Carbon offsetting more carbon than a company emits, brings about not only well-deserved notopresents many benefits critical to the climate transition because it allows for imriety (as exemplified by Microsoft's announcement in 2020) but also reinforces mediate steps to be taken globally. Offsetting, when done right, ensures that funds the solidity of a company. Best-in-class examples have reported benefiting from generated from the sale of carbon credits go towards impactful projects that enahigher value customers, a rise in customer loyalty and leaps in employee engageble sustainable development, whilst also making emission reductions. ment. Sustainability, if done right, goes far beyond benefits in marketing.

Expanding impact scope 7.1

Companies and organisations utilising offsetting as a way to reduce their carbon Reducing carbon emissions implies that an organisation tracks various indicafootprint have a direct impact on populations and regions that are of economic, tors of performance and strives to optimise each step of each of its processes social or cultural importance to them. Having the possibility to support comso as to minimize the need for offsetting. With this quest for optimisation and munities abroad or in the vicinity reinforces the sense of purpose and esprit de waste reduction, companies can implement sweeping change and empower their corps. From the offsetters to the beneficiaries, both ends of the bargain come teams to do more, spend less and create more value for themselves, the planet out with tangible benefits. and their wider organisation.

Accessing carbon negativity 7.2

Embedding a reduction mindset 7.3







Offsetting carbon can be a great path to advancing global emissions reductions; however, it can act as a direct line to greenwashing when approached incorrectly, creating risk for companies approaching this topic from an incomplete perspective. Best practices in carbon offsetting arise with projects that create additionality and permanence in their emissions reductions. They are developed in close collaboration with communities on the ground and are ultimately part of a larger sustainability strategy that ensures emissions reductions are planned internally. Carbon Offsetting, with this in mind, will ensure that your company's sustainability strategy is aligned with the SDG's and the targets of the Paris Agreement.





B Where to begin?

Whilst including sustainability in key objectives is becoming more and more common, the way to reaching these goals is not always clear. All companies must take action to reduce their environmental footprint. If we limit global warming to a socially and economically viable level, all companies (including ours) should do everything possible to control their carbon footprint. Easier said than done. Without the tools, expertise, and know-how, becoming sustainable can be a complex challenge.

That's what Plan A has set out to do: provide businesses with the assets they need to drive sustainability at every level of their company, and reap the benefits they deserve from taking an active part in climate action. With a new world to work with in 2021, we offer an opportunity to begin the journey together.





Climate change is everyone's business

Discover how you can make a difference today, using Plan A to take control of your emissions.

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