

Can REDD+ generate high-integrity carbon credits and support the achievement of the Paris Agreement targets?

The world is facing a twin crisis both in climate change and the loss of biodiversity, which are interconnected. There is general consensus that valuing the environmental services provided by initiatives such as REDD+¹ is key to promoting an economic transition in tropical forest countries, leading to the development of innovative approaches and sustainable businesses that aim to conserve threatened forests and ecosystems and improve local livelihoods.

According to the Global Forest Watch platform (GFW), from 2002-2020, the world lost over 64M hectares of primary tropical forests, an area of the size of France and the equivalent of an estimated 23GtCO₂ tonnes of carbon². Promoting a rapid transition towards sustainable landscapes, that reverse deforestation trends and recover degraded lands will be essential to mitigate climate change and secure the achievement of the 1.5° target by the end of the century. The achievement of this complex goal will also require mobilising much-greater investment now and over the coming years towards nature-based solutions, including REDD+ activities.

REDD+ is an incentive framework recognized by the UNFCCC and adopted as a key element under the Paris Agreement. The main goal of the REDD+ mechanism is to finance positive actions that manage to avoid and reduce deforestation and forest degradation trends in natural ecosystems.

Financing opportunities for reducing deforestation and leveraging local and sustainable enterprises may come from a wide variety of sources, including market and non-market approaches. Recent corporate net-zero pledges may be a main opportunity for attracting much needed additional investment at scale to protect and recover degraded ecosystems. The current Taskforce on Scaling Voluntary Carbon Markets (TSVCM) estimates that annual global demand for carbon credits could reach up to 1.5-2 GtCO₂ by 2030, which could represent a market size between USD\$5-30 billion in 2030 (depending on different price scenarios and underlying drivers).

However, there are legitimate concerns arising from the increasing appetite of corporates to purchase carbon credits from nature-based solutions (including REDD+) as part of their net-zero commitments. In a nutshell, some of the questions raised about the voluntary carbon market include:

1. Could the use of offsets be a potential 'free-pass' for corporates to keep polluting?;
2. Is the additionality and permanence of carbon credits robust enough?;
3. Is there a transparent and comprehensive framework for assessing the net-zero commitments assumed by major corporations, in terms of ambition, scale and speed?.

¹ Reducing Emissions from Deforestation and Forest Degradation, including the role of sustainable forest management and enhancement of forest carbon stocks
² http://www.fundoamazonia.gov.br/export/sites/default/pt/galleries/documentos/fundoamazonia/Documento_de_Projeto_Fundo_Amazonia_fev_2013.pdf

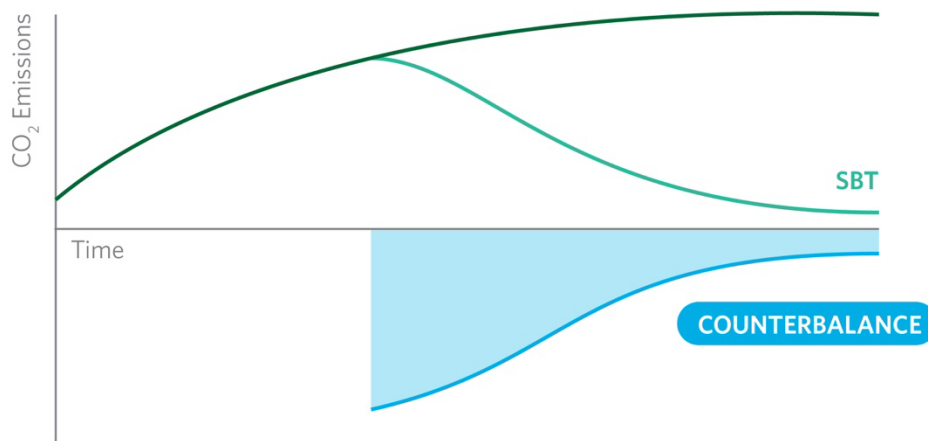
If not answered and implemented properly, these questions could undermine the potential of the voluntary carbon market to enable a cost-effective solution to reduce GHG emissions and accelerate the transition to a low-carbon economy in the next decade.

Due to the fast-growing rate of the voluntary carbon market, there is a clear need for market players (project proponents, investors, corporates, etc) to engage and agree upon a set of criteria aimed at establishing more transparent and ambitious net-zero targets (on the demand side) and accurate and conservative carbon credits estimates and issuance (from the supply side).

This document aims to contribute to this debate and present a potential set of principles that could address the main concerns and dilemmas surrounding the voluntary carbon market, in terms of both demand and supply.

As a starting point, nature-based solutions can play an important role and provide an interim compensation pathway within the next years towards achieving net-zero targets, when connected to a broader strategy that also includes cutting operational and supply chain emissions at scale. In this way, REDD+ credits can be part of the transition to net-zero, compensating residual emissions and accelerating overall emissions reductions, and not an incentive or excuse to delay emissions reductions within the company's operation and supply chain.

FIGURE 1 The role of forest carbon offsets in the pathway towards net-zero (WRI, 2021)



The role of REDD+ under net-zero targets

The essence of the REDD+ mechanism is to comprehend the causes of deforestation and the different levels of interventions that need to be deployed in order to stop and reverse tropical forests loss. Hence, REDD+ can be adopted in different ways, with nation-wide strategies for reducing deforestation, including sub-national approaches and project-level initiatives, under a 'nested' or integrated framework.

A main benefit provided by a nested approach is to promote greater coordination among public and private efforts towards dealing with a wide set of drivers of deforestation in tropical forest countries. Nesting local projects within jurisdictional programs and baselines can be a positive approach to align government-led efforts with local initiatives coordinated by communities,

farmers and the private sector, adopting transparent and validated assumptions for developing and monitoring a forest carbon project.

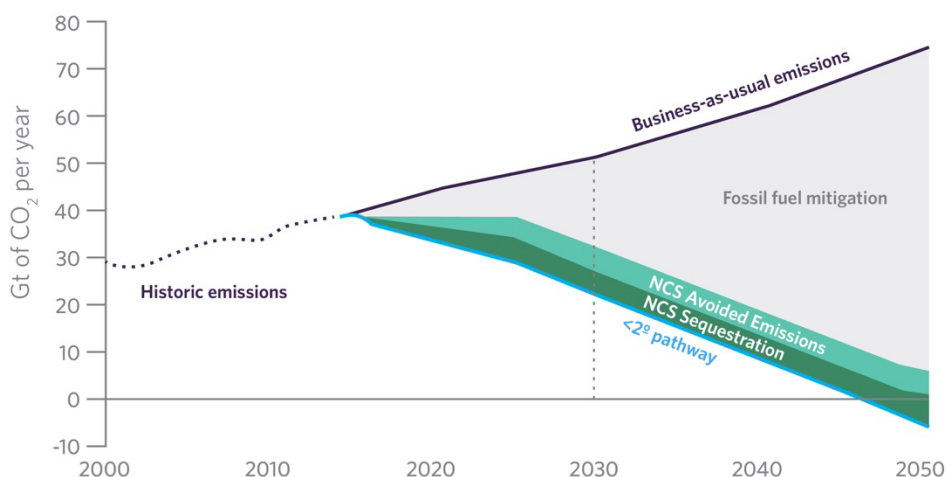
If well implemented, REDD+ could play a major role in fostering a new generation of positive incentives for reducing deforestation and developing sustainable livelihoods for local communities. REDD+ projects and programmes should therefore provide effective, transparent, additional and conservative results, ensuring the allocation of private capital efficiently towards innovative strategies for protecting threatened forests.

Within the natural climate solutions agenda, REDD+ and Afforestation/Reforestation (ARR) activities (including of tropical forestlands, wetlands, mangroves) could create a balanced portfolio for companies committed to halting their GHG emissions and achieving net-zero.

Whilst excellent opportunities for natural restoration and recovery do exist in locations where cleared land has been abandoned, an increased use of monoculture plantation initiatives in net-zero commitments could provide a greater risk to natural ecosystems and to climate change mitigation efforts. Thus, ecological restoration and sustainable agroforestry systems need to be leveraged and prioritized as additional and climate-positive initiatives, rather than expanding monocultures plantations with exotic species.

Hence, a science-based strategy for mitigating climate change while providing a series of benefits (such as ecosystem and biodiversity conservation) would view ecological ARR activities as an important and complementary strategy working hand-in-hand with the conservation of natural ecosystems and REDD+ initiatives. These benefits should be core to the activity and designed in from the start.

FIGURE 2 Land-based sinks in 1.5 pathways (Griscom et al., 2017)



Monitoring solutions for REDD+ initiatives

Effective monitoring is absolutely essential to ensuring high-quality REDD+ initiatives. Under current standards, deforestation monitoring is an expensive and time-consuming annual task, and poses a barrier to many projects that suffer from a lack of capacity or financing. Annual monitoring also brings about risks to the project as it delays a response to potential illegal activities.

However, with the emergence of improved remote sensing technologies, these nature-based projects can enjoy real-time monitoring systems that are cheaper, less time-intensive and which can assess the scale of the deforestation threat and the exact location of the drivers, thus ensuring threats are tackled effectively. This type of monitoring allows for:

- community-based responses that specifically target forest areas under threat;
- identification of the scale of the deforestation 'spikes' months in advance of the annual monitoring reports, facilitating the development of targeted mitigation strategies;
- more constructive engagement with governments, police and other law enforcement agencies (e.g. narcotics teams), due to improved evidence available.

Technological advancements will exponentially improve the monitoring, verification and validation of REDD+ initiatives, as well as increase transparency from projects. REDD+ initiatives are already seeing the benefits of innovative new monitoring solutions. The Internet of Things (IoT), for example, is enabling improved restoration tracking by providing more frequent and accurate updates on water table levels. LiDAR technology used alongside remote sensing data to produce high-resolution imaging of forest carbon stocks and changes. Satellite imaging combined with machine learning is being explored to measure carbon captured in forests, a process which could be used for remote verification and monitoring of projects. Not only is this increasingly important due to the COVID-19 pandemic, but provides a new standard of assurance around the impact of investments into natural climate solutions.

Corporate net-zero targets: Commitment to greater ambition and transparency

There is also a clear need to establish a more comprehensive and transparent framework for corporates to register and monitor their emission reductions targets and results achieved. Companies setting robust targets and ambitious commitments to reduce GHG emissions can play a major role in the transition to a net-zero economy, by scaling up efforts to cut internal emissions and also helping to fill the climate finance gap³ by offsetting residual emissions through the purchase of carbon credits.

³ <https://www.cdp.net/en/articles/forests/how-do-carbon-offsets-fit-into-a-net-zero-future>

FIGURE 3 The four pillars of corporate climate stewardship (Gold Standard, 2018)



Market players (such as investors and corporates) have a clear role to play in selecting and assessing high-quality REDD+ projects, aiming to generate high-standard environmental assets compatible with the current climate and biodiversity emergency. The section below suggests overall principles that could be adopted by corporates and investors when assessing a potential REDD+ or forest carbon offset opportunity.

Key-criteria for assessing and channelling private capital / carbon finance towards REDD+ and forest carbon initiatives:

Supply of forest offsets (projects/programmes)

1. Demonstrate a clear **'Theory of Change'** that presents the current scenario and the activities that will be developed aiming to tackle the deforestation drivers and promote economic alternatives for local stakeholders;
2. Demonstrate a clear **comprehension about the land-use context and deforestation dynamics** in a specific region or landscape (country, state, project area);
3. Promote a legitimate process to ensure the **local communities' engagement and consultation** (FPIC), including establishing a fair

Demand for forest offsets (corporates/companies)

1. Companies committed to net-zero targets should demonstrate a **broader strategy for reducing emissions from operations / financed emissions and supply-chains**, aligned to net-zero, and that activities have already begun for cutting emissions at scale;
2. Companies should commit to **reporting and validating internal emissions** (scopes 1, 2, 3) on a frequent basis, including demonstrating how its internal targets for reducing and compensating carbon emissions are being achieved;

- benefit sharing model among the project's beneficiaries;
4. Pursue a **route to integrating (or nesting) the project** accounting model within a broader jurisdictional REDD+ framework;
 5. Establish a clear **process for engaging the local governments and forest authorities** and coordinate the efforts and interventions necessary to achieve the expected results (including assessing nesting potential);
 6. Establish a **robust monitoring plan** capable to demonstrate how the REDD+ initiative has led towards real and measurable results related to reducing deforestation and forest degradation and promoting economic solutions for improving local livelihoods;
 7. Pursue **international standards and recognized methodologies** for the project development and certification;
 8. Establish an **SDG baseline** (including for social and biodiversity benefits) and measure and report **specific outcomes and impacts** generated by the project;
 9. Present a long-term strategy for ensuring the project's **financial sustainability** after project end date.
3. Companies investing in / purchasing carbon offsets should set **science-based targets** to establish key parameters for demonstrating the level of ambition their corporate climate strategies and commitments to cut emissions;
 4. Companies should adopt **clear methods for reporting their emissions** and commit to global templates established by CDP and GHG Protocol, for example;
 5. Companies should demonstrate that they have **climate competence amongst their leadership, including at Board level**, with clear accountability set out as part of their climate governance framework. Climate change performance should be part of the incentive package offered to employees alongside business performance;
 6. Companies should engage their **staff, suppliers, customers** and wider stakeholders in the transition journey and give them opportunities to participate;
 7. Companies should ensure that there is consistency in their **advocacy strategies and political lobbying activities** between different business streams and regions;
 8. Companies should ensure that their **investment plans align with their climate change goals** and are not conditional upon government policy, using an internal price of carbon and appropriate tests for marketplaces that are delivering net-zero where relevant to stress test investments;
 9. If companies are using offsets, the information on the emissions and the **compensation methods and costs** should be clearly communicated to consumers, alongside information on how to reduce or avoid these emissions.

Conclusion

Carbon offsets can play a key role in compensating emissions that cannot be reduced immediately while contributing to a broader framework and strategy for cutting and stabilising GHG emissions. By prioritising offsets within the natural climate solutions space, the biodiversity and nature loss crisis can be tackled in tandem. Corporate commitments to net-zero can play a crucial role in financing an economic transition in tropical forest countries, aiming to foster a new generation of sustainable businesses and social enterprises that connects the forest biodiversity to regional and global markets, creating a long-term financial strategy for protecting and recovering natural forests and degraded ecosystems. Whilst corporates make the transition to zero emissions, offsets introduce a price of carbon in the economy and can help deliver wide-ranging benefits that can actually accelerate emissions reductions globally and so should be encouraged and supported, as long as they are part of a clear roadmap and commitment to achieve the overall emissions reductions that are scientifically required.

Although voluntary carbon markets have been operational for more than 15 years, there is still a clear educational piece to be filled among a new generation of carbon buyers and investors. The first step could be establishing general principles that could be adopted (by investors and carbon buyers) to raise the bar over the quality of carbon offsets, while establishing a more comprehensive assessment framework related to the current 'level of ambition' of the emission reduction pledges assumed by major companies.

About the authors

This paper is a collaboration between Ecosphere+ and the Althelia Climate Fund. Ecosphere+ brings to market best-in-class natural climate solutions, helping its leading client base to take action on climate change through the purchase of carbon credits. As the downstream arm of an integrated natural capital finance platform, Ecosphere+ builds end-to-end solutions for clients as part of the Althelia Climate Fund, a €100 million impact investment fund. The Althelia Climate Fund launched Ecosphere+ at the end of 2016 with a mandate to build the market for voluntary carbon credits and scale up natural climate solutions. By 2019, Ecosphere+ represented a 26% share of the voluntary carbon market based on issuances from the VCS and today works to push for greater credibility, transparency and fairness in the voluntary carbon market, having set the standard as part of the Althelia Climate Fund on best practice for properly financing high-quality natural climate solutions.