



INVESTING IN CARBON MARKETS: CLEARED FOR TAKE-OFF



Bloomberg

WELCOME

2023 has been a landmark year for the planet. Temperatures have reached unprecedented levels and extreme floods, storms, wildfires and melting sea ice portend an ominous future if global warming continues unchecked.

These events also serve to remind us that tackling climate change is the singular investment need and opportunity of our lifetimes.

With this backdrop in mind, it has never been more important to bring more clarity and shared understanding to a critical piece of the climate solution puzzle: carbon markets. To that end, the whitepaper you are reading is aimed at the ‘carbon curious’: those who may be aware of carbon markets, but who don’t yet have the knowledge they need to participate in them. It aims to bolster understanding among those keen to know more but who are put off by the often highly technical approach to, and language used to describe, climate change action.

The whitepaper is not a deep-dive into climate science, nor a technical analysis of the carbon market’s often complex system and structures. Rather, it provides an overview of the carbon market, including some simple advice for companies and investors keen to take action and delivers a clear position on why we believe carbon prices can only go in one direction in the short-to-medium term if we are to meet the climate challenge head-on.

And finally, a word on nomenclature: throughout this document, you will read the words ‘voluntary’ in relation to some sections of the carbon market. At Carbon Growth Partners, we believe that this branding, while commonplace, is a misnomer: reducing and offsetting greenhouse emissions is no longer a ‘voluntary’ act; it is an ethical, social and commercial imperative for any business, or business leader who wishes to be taken seriously as a responsible corporate actor.

We are delighted to be partnering with Bloomberg on the publication of this report. We wish you – and the planet – well as you join us on the journey to a safe, equitable and prosperous net zero future.



Rich Gilmore, CEO
Carbon Growth Partners



This document is a collaboration between
Bloomberg and Carbon Growth Partners.

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INVESTING IN CARBON MARKETS: CLEARED FOR TAKE-OFF

Growing demand from hard-to-abate sectors like aviation, steelmaking and manufacturing, supported by clear integrity standards, is drawing responsible companies and intelligent investors into carbon markets. The likely outcome will be higher carbon prices, providing a win for the climate and investors alike.

KEY TAKEAWAYS

- Global temperatures are on track for 3°C of warming this century¹. More action, more quickly, from governments, businesses and NGOs is required to limit global warming to 1.5°C
- Carbon markets are endorsed by the United Nations as an essential part of achieving the world's climate targets; achieving the world's 2030 climate goals requires a 15-fold scale-up of voluntary offsetting in 2030 compared to 2019²
- Carbon prices are expected to rise dramatically as ambitious emissions reduction commitments are met, and disparate markets converge
- Accessing carbon credits has never been easier either as an investor or for use as offsets. New safeguards are being put in place to bolster confidence in the carbon market
- Investors – including some of the world's largest asset managers, family offices and High Net Worth Individuals – are taking steps to enter the carbon market
- Early adoption is the key to success: organisations who take a 'wait and see' approach could face significantly increased carbon prices, higher risk and lower returns

1 United Nations Framework Convention on Climate Change: *Technical dialogue of the first global stocktake. Synthesis report by the co-facilitators on the technical dialogue.* <https://unfccc.int/documents/631600> (2023)

2 Taskforce on Scaling Voluntary Carbon Markets: *Final Report* (2021).

INTRODUCTION

“Our world needs climate action on all fronts: everything, everywhere, all at once.”

– UN Secretary General António Guterres

HERALDING A GRIM FUTURE

In March 2023, the United Nations Intergovernmental Panel on Climate Change (IPCC) released its Sixth Assessment Report (AR6) on the state of climate action. It makes for grim reading.

Synthesising the findings from more than 1,000 climate change scientists, AR6 summarises the state of knowledge of climate change, its widespread impacts and risks, and priorities to arrest climate change.

Despite efforts so far, Earth remains on track for more than 3°C of warming this century. This is well above the 1.5°C target and has the potential to make our planet uninhabitable. 2023 has shown us what our future looks like: floods in Africa, Asia and Europe; unprecedented wildfires in Canada and Hawaii; runaway sea ice melt; and ocean temperatures at never-before-recorded levels.

The chances of keeping the global temperature rise to less than 1.5°C – the point above which extreme flooding, drought, wildfires and food shortages become commonplace – are incredibly small unless governments and businesses act now to keep the promises they have made over the past two decades.

THE SOLUTION: EVERYTHING, EVERYWHERE, ALL AT ONCE

Limiting global warming to 1.5°C means quickly deploying every known climate solution at a planetary scale. Financing that deployment will require a massive expansion of global carbon markets.

Carbon markets are the ‘net in net zero’. They accelerate climate action by capitalising on the marginal cost of abatement: emissions that are difficult or expensive to reduce in one place may be less so in another, and investment should flow to where pollution is least costly to reduce and where emissions reductions are most immediate. Carbon markets complement, but do not replace, government regulation and the efforts of companies to reduce emissions from within their operations and value chains.

The United Nations, individual governments, corporations, NGOs and society at large all agree on the need for massively increased investment in the world’s two main emissions reduction pathways: *technological* solutions and *ecological* solutions. In total, technological solutions have the largest potential to reduce emissions by transitioning society away from fossil fuels and into clean sources of energy. Of these technologies, wind and solar alone have the potential to reduce annual emissions by more than 20% – or 8 billion tonnes – by 2030³.

Ecological solutions, including the prevention of deforestation, carbon sequestration in agriculture and ecosystem restoration, hold even more potential than wind and solar: together ecological, or ‘nature-based’ solutions as they are known, can deliver as much as 30% of the annual emissions reductions needed by 2030⁴.

While the deployment of technological and ecological solutions at scale holds great promise, financing is a challenge, particularly in the developing world. Filling this financing gap is where carbon markets play an essential role.

3 United Nations IPCC: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647 (2023)

4 Griscom, Bronson W., et al: ‘Natural climate solutions.’ Proceedings of the National Academy of Sciences 114.44 (2017): 11645-11650 (2017)



CARBON MARKETS 101

Carbon markets accelerate the reduction or removal of greenhouse gas (GHG) emissions from the atmosphere by delivering outcomes-based finance to carbon abatement projects, particularly in the developing world.

Carbon credit-generating projects fall into five broad categories:



1. ENERGY SUPPLY: Projects in which renewable energy sources displace fossil fuels. These projects are particularly important in the world's least developed countries, where grid-connected electricity is not universal and where new fossil fuel generation is still the norm.



2. ENERGY DEMAND: Investments in more efficient household devices, such as cleaner burning cookstoves, renewable biogas, and the avoidance of methane emissions from landfill and livestock. These projects can accelerate emissions reductions while improving air quality as well as human health and wellbeing.



3. NATURE CONSERVATION: Includes the protection of natural ecosystems and the implementation of improved agricultural practices. The largest and most readily scalable solution is to reduce emissions from deforestation and forest degradation (known as REDD+) especially among the forests, mangroves and grasslands of South-East Asia, Africa and Latin America.



4. NATURE RESTORATION: Referred to as ARR (afforestation, reforestation and revegetation), this includes the restoration of degraded natural areas, working forests, farmlands as well as coastal ecosystems (mangroves, seagrasses and saltmarshes). Soil carbon and biochar also hold promise but are generally earlier stage opportunities.



5. TECHNOLOGICAL SOLUTIONS: This category includes early-stage concepts such as geo-engineering or altering ocean alkalinity. Technological solutions also include direct air capture and storage (DACS), as well as bioenergy with carbon capture and storage (BECCS) which involves capture and permanent storage of CO₂ from processes where biomass is converted into fuels or directly burned to generate energy.

AN EVOLVING MARKET

Carbon markets have been in effect for more than 25 years, and have continued to evolve:



CARBON MARKET 1.0: Was born out of the Kyoto Protocol, United Nations climate policy framework adopted in 1997. Article 12 of the Protocol saw the creation of the first carbon credits. Known as Certified Emission Reductions they could be used by industrialised countries and companies to meet part of their emission reduction targets, including countries' obligations under the Kyoto Protocol.



CARBON MARKET 2.0: Emerged in the early-to-mid 2000s, with the creation of standard-setting bodies that sought to bring quality assurance and oversight to voluntary emissions offsetting. The largest of these, the US-based non-profit Verra, was founded in 2007. Others include the Gold Standard Foundation, Climate Action Reserve and the Colombia-based CERCarbono. By the late 2010s and 2020s these bodies were joined by third-party ratings agencies, carbon trading platforms, data providers and specialist investment managers seeking to bring more quality, liquidity and transparency to the market.



CARBON MARKET 3.0: The current phase. Began to take shape following the UN climate summit in Glasgow in 2021. It recognises the roles and responsibilities of all actors in meeting global climate goals and will see the co-existence of voluntary and compliance markets as well as common frameworks for measurement, accounting and reporting. This should lead to a hundred-fold expansion of the market and a dramatic rise in carbon prices as more ambitious emissions reduction commitments are met and markets converge.



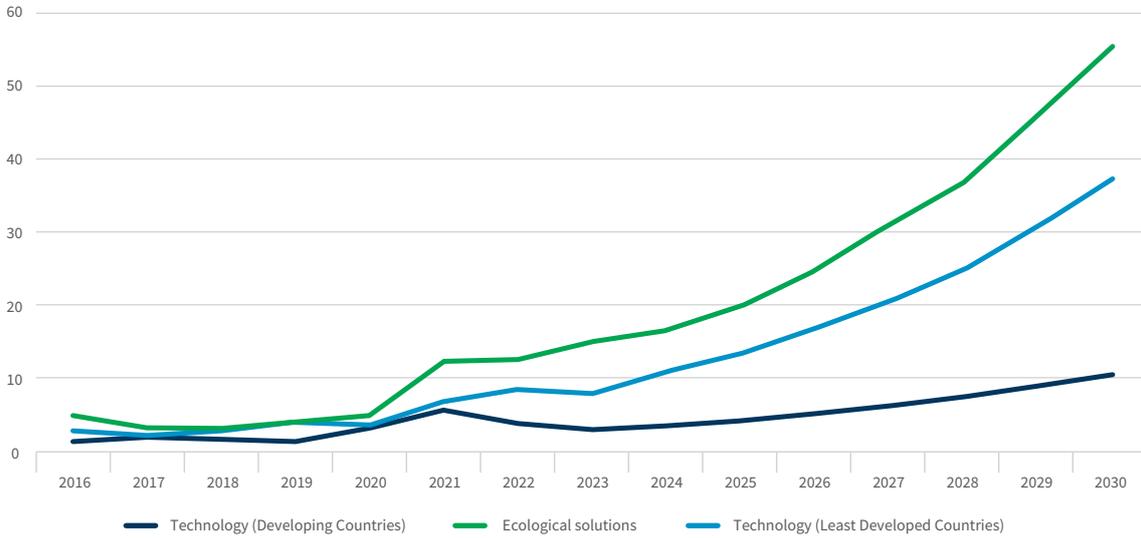
MARKET FUNDAMENTALS – AN ASYMMETRICAL UPSIDE CASE

Carbon prices are expected to rise significantly as more ambitious emissions reduction commitments are made and met, and the supply of carbon credits is constrained.



While 2023 has been a challenging year for carbon prices, strong fundamentals of growing corporate demand, combined with new rules that will make it harder to generate carbon credits, could flip market conditions from oversupplied to undersupplied in the near term. This would put significant upward pressure on prices, especially for sought-after, nature-based credits.

VCM price forecasts – tCO₂e (USD)

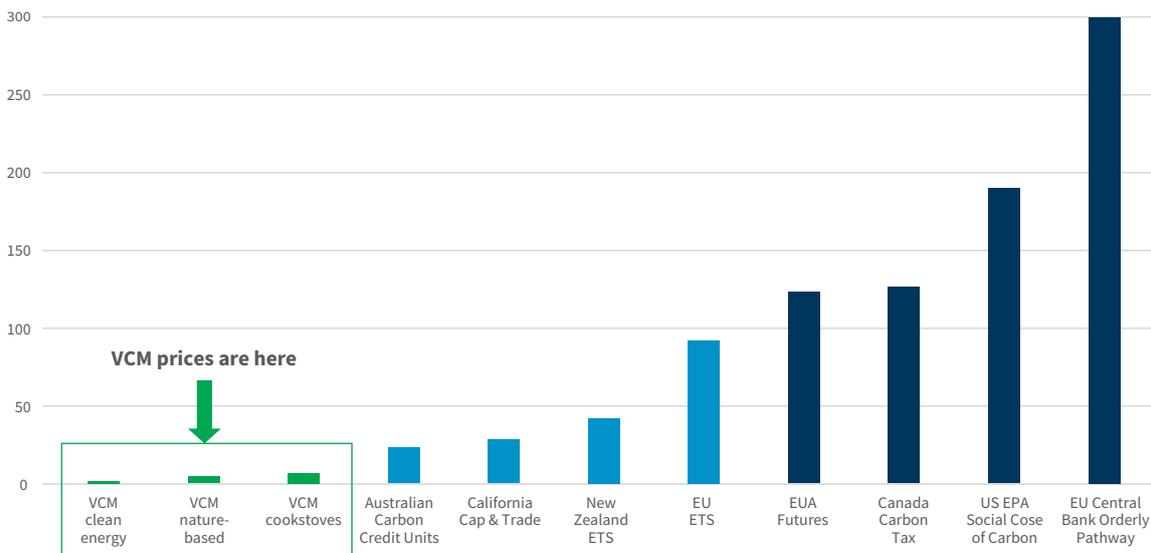


Source: ClearBlue Markets Voluntary Carbon Market Supply and Demand Report, July 2023. (<https://www.clearbluemarkets.com/>)

Note: Demand estimates are based on a probabilistic simulation that takes, among other things, corporate pledges and actual retirements by sector. CORSIA demand is taken from ICAO's estimates. Supply side is similarly based on simulation that looks on most likely yields per project type. High forecast adds one standard deviation from simulated outputs

The convergence of voluntary markets with national cap-and-trade markets and Paris Agreement markets could see prices rise even faster and even more quickly.

Global carbon markets – spot and forecast prices (USD)

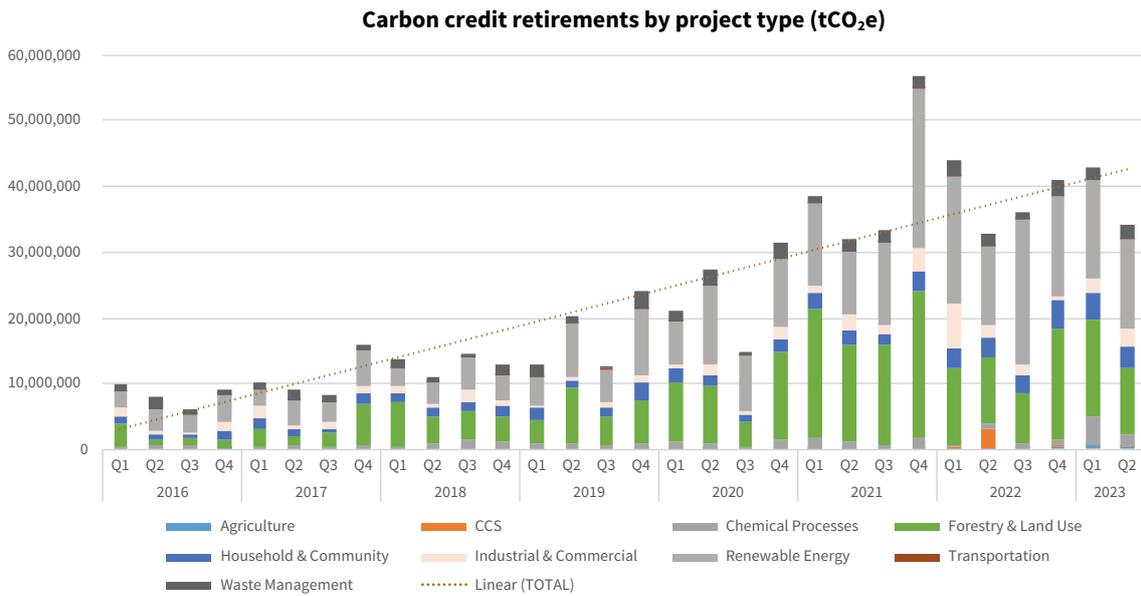


Source: Carbon Growth Partners, using publicly available data correct as at October 2023

DEMAND FOR CARBON CREDITS – A KEY TOOL FOR CLOSING THE EMISSIONS GAP

Annual carbon credit retirements – the use of carbon credits as an emissions offset – have increased by 350% since 2016⁵. Significant further growth in offsetting will be needed to close the emissions gap.

Limiting global warming to 1.5°C requires cumulative emissions reductions of 150 billion tonnes of CO₂e by 2030, to 45% below 2019 levels. The investment required in renewable energy alone over that period is expected to exceed US\$44 trillion by 2030⁶.



Source: Carbon Growth Partners, using data provided by Clear Blue Markets, <https://www.clearbluemarkets.com/> (2023)

5 Publicly available retirement data.

6 IRENA: World Energy Transitions Outlook 2023: 1.5°C Pathway, Volume 1, International Renewable Energy Agency, Abu Dhabi (2023)



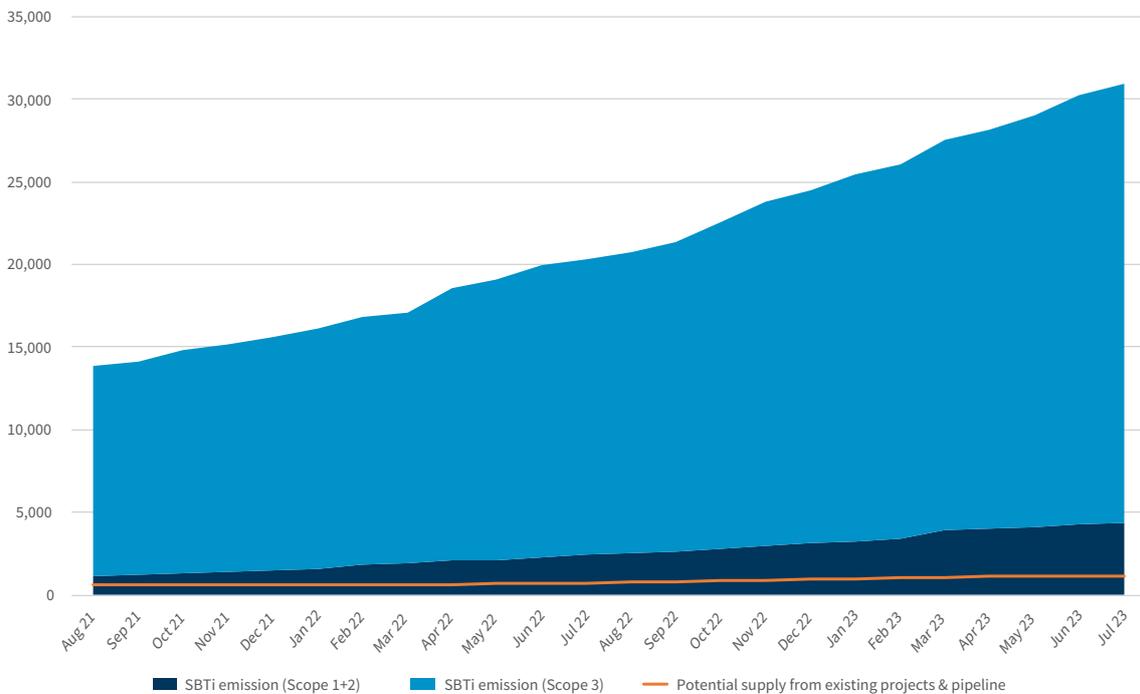
However, higher borrowing costs and competition for scarce capital combined with slowing economic growth and inflationary concerns mean the investment needed to drive companies’ internal decarbonisation is likely to be scaled back or deferred. Already, the global mining giants Rio Tinto and BHP have declared they are unlikely to meet their near-term decarbonisation goals⁷.

This reality will drive a sharp increase in corporate demand for carbon credits as a complementary measure throughout the rest of this decade. Many companies are stepping up the scale of their commitments with 6,323 companies taking action under the Science-Based Targets Initiative⁸. These companies alone emit some 31 billion tonnes of GHG pollution annually via Scope 1, 2 and 3 emissions⁹.

The scale of these commitments implies immense potential demand for credits, even under a modest action scenario. If companies with an approved SBTi target choose to offset 20% of their emissions – the lowest required under the VCMi Claims Code of Practice (see page 11) – near term annual demand for credits would be six times more than the total annual supply from existing *and* pipeline projects. Not all SBTi companies will also join the VCMi, and SBTi does not yet mandate the near-term use of credits. However, given the scale of the potential demand, and the sensitivity of carbon pricing, even a modest uplift in corporate ambition and action could prices higher.

7 <https://www.mining.com/rio-tinto-to-miss-2025-emissions-cuts-targets/>
<https://www.miningweekly.com/article/bhp-would-need-carbon-credits-to-meet-net-zero-target-2023-06-21>
 8 Science Based Targets Initiative (<https://sciencebasedtargets.org/companies-taking-action>). Correct at 19 October 2023.
 9 Trove Research, <https://trove-research.com> (2023)

Annual emissions from companies with SBTi commitments and pledges vs potential supply from current projects and pipeline (MtCO₂e)



Source: Carbon Growth Partners using data provided by Trove Research, <https://trove-research.com> (2023)

SUPPLY OF HIGH INTEGRITY CREDITS – A CONSTRAINT THAT WILL FURTHER TIGHTEN

The supply of high-quality carbon credits is constrained and price inelastic. Every carbon credit in existence across the four largest crediting standards could offset global emissions for just eight days.

Several key drivers will coalesce to constrain supply for the rest of this decade and beyond:



AS TECHNOLOGIES MATURE, THEY CEASE TO EARN CARBON CREDITS:

As technologies mature and their costs fall, the need for a carbon market subsidy diminishes and these technologies cease to be eligible to earn carbon credits. For example, the 2022 revision to the Verified Carbon Standard, Version 4.3, made new renewable energy projects ineligible to earn carbon credits in all but the world's Least Developed Countries. This could have the effect of eliminating more than 40% of the future credit supply under the standard.¹⁰



CARBON CREDIT METHODOLOGIES EVOLVE OVER TIME: In addition to the ineligibility of technological solutions as they mature, the carbon accounting methodologies that underpin projects are subject to regular review. Reviews are currently underway of the REDD+ forest protection and clean cookstoves methodologies, with fewer credits expected to be issued to existing and new projects developed under these methodologies.



TREES TAKE TIME TO GROW: Nature-based carbon projects are often complex, time consuming and expensive to implement. Trees must be planted, survive and take time to grow; soils accrete carbon slowly; mangrove restoration efforts need to address erosion and coastal development. All of these are limiting factors on the pace of growth.



COMMUNITIES MUST BE CONSULTED: Many carbon projects are based on lands that are held communally, or over which tenure is uncertain or contested. Many are located on indigenous owned and managed lands. Community consultation takes time and if done well will not be sped up by rising carbon prices.



SUPPORTIVE POLICIES NEED TO BE IN PLACE: Several carbon credit-generating countries, notably India, Indonesia, Kenya, PNG, Brazil Zimbabwe and Ghana have taken, or announced plans to take, steps to regulate the operation of the voluntary carbon markets within their borders. While this increased level of engagement is consistent with most other commodities and will provide certainty in the longer-term, the short-term effect may be to slow investment in new projects.



THE INTEGRITY BAR IS NOW HIGHER: Increased public scrutiny and the implementation of the Integrity Council for the Voluntary Carbon Market's Core Carbon Principles (CCPs) may see some carbon credits ineligible to satisfy a credible carbon offsetting claim. As many as half of the existing credits in the market will be ineligible for CCP labelling either at all, or without significant changes to their methodologies and governance.¹¹



THERE HAS BEEN A HISTORICAL LACK OF INVESTMENT: Carbon projects can take from between two and five years to start generating credits. Prolonged downturn in project investment driven by COVID-19, inflation and recession fears, a dearth of available capital and uncertainty in carbon markets is extending this period.

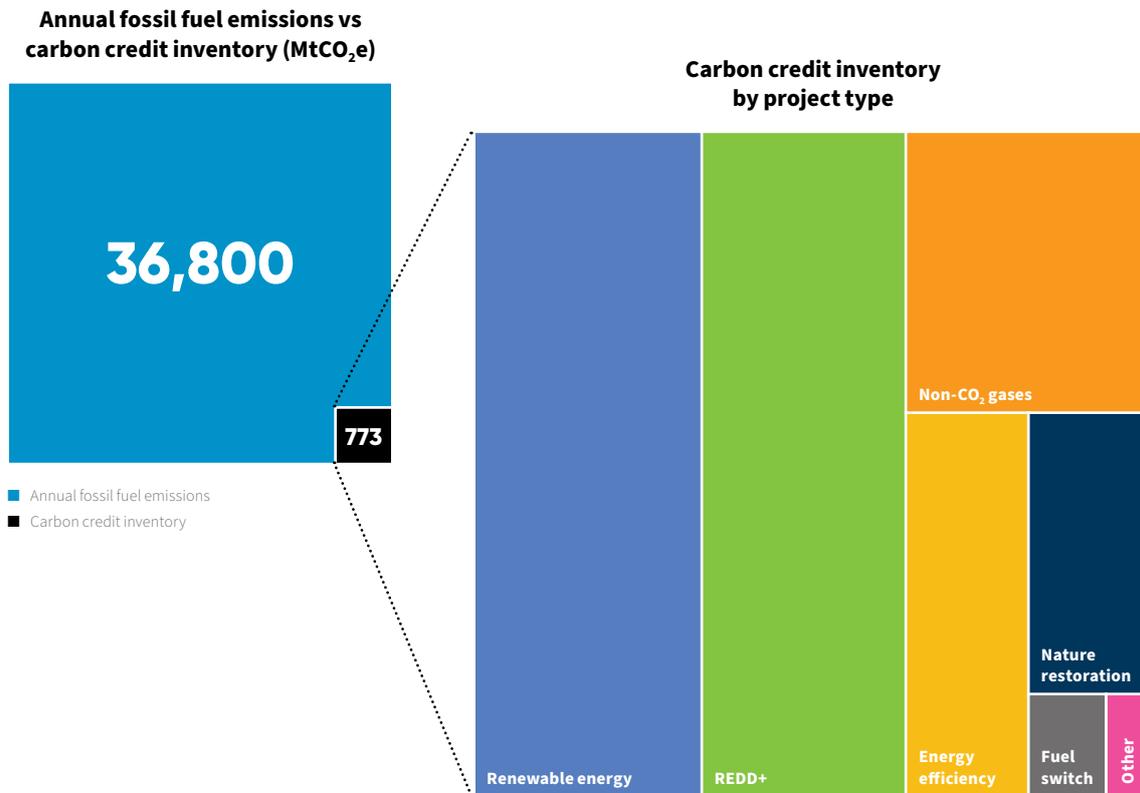
¹⁰ ClearBlueMarkets: www.clearbluemarkets.com (2023)

¹¹ ClearBlueMarkets: www.clearbluemarkets.com (2023)

Many of the factors constraining supply will, once overcome, drive longer-term confidence in the market and help it to achieve scale. In the near-term however, they are likely to contribute to a widening supply gap and upward price pressure.

The number of carbon credits held in inventory across the major crediting standards – Verra, Gold Standard, American Carbon Registry, Climate Action Reserve and Cercarbono is less than 800 million tonnes.

This is equivalent to eight days of global fossil fuel emissions. As corporate net zero commitments convert into demand for offsets, this inventory will likely be depleted faster than it can be replenished, adding to the upward pressure on carbon prices.



Sources: Carbon Growth Partners, IEA: CO₂ Emissions in 2022, IEA, Paris <https://www.iea.org/reports/co2-emissions-in-2022>, License: CC BY 4.0 (2023)

AN EMERGING SOURCE OF DEMAND: INVESTORS

The positive outlook for carbon markets is drawing in a new and growing source of demand for carbon credits: intelligent investors.

While institutional investor participation has been limited in scale to date, interest has been growing and many increasingly recognise the opportunity to generate financial returns while financing solutions where climate change is hitting hardest. These investors recognise the short- and long-term opportunities that present themselves in a maturing market and see that prices are likely to increase as government and business pledges to reduce carbon emissions begin to take effect.

Those beginning to act include some of the biggest names in the capital markets: Citi Group, one of the world's largest financial institutions with more than US\$20 trillion under custody, has announced that it will begin to invest in carbon credits from its own balance sheet. Citi said it expects the current decline in carbon prices to be temporary and that the VCM is 'here to stay'¹². The move by Citi followed a \$200 million dollar commitment to carbon removal credits from JP Morgan announced in May 2023.

In April 2023, State Street announced that it will become the first major asset servicing firm to provide carbon asset fund administration and depositary services for carbon credits. This will allow asset managers, asset owners and other financial institutions to facilitate the integration of carbon-related assets, including voluntary carbon credits, into investment portfolios and will help to overcome one of the main barriers to scale. Relatedly, State Street published new research¹³ on carbon as an asset class and found that:

- **The asset class has sufficient diversity to warrant exploring how adding CCMs and VCMs to a portfolio of traditional and alternative assets may enhance risk adjusted returns; and**
- **There is compelling evidence that adding carbon assets can enhance portfolio diversification and efficiency for both ESG-focussed and non-ESG focussed investors.**

Other institutional investors are also entering the market. Temasek, the Singapore sovereign wealth fund has made investments in carbon project developers, technologies and funds through its climate investment subsidiary, GenZero. The French insurance giant AXA and Canadian pension manager CPP Investments have invested directly to generate forest carbon credits in Brazil, while the private equity firm TPG has committed more than US\$600 million to REDD+ forest protection projects through its majority-owned business Anew Climate¹⁴.

While institutional investor participation is still relatively nascent, these investors will become increasingly attracted to carbon markets as a way to generate uncorrelated financial returns, deliver positive climate outcomes and hedge against the carbon liability exposure of their portfolios.

12 Carbon Pulse: Citigroup eyes carbon credit investments in wake of JPM 'signal', despite demand drop <https://carbon-pulse.com/211423/> (2023)

13 State Street: *Carbon Assets - Growth Strategies and What Comes Next* (2023)

14 Reuters: *TPG-owned Anew Climate invests up to \$640 mln in Terra Global*, www.reuters.com (2023)

THE EVOLVING DYNAMICS OF CARBON MARKETS

Investor confidence – driven by clear standards of transparency, quality and integrity– is key to realising the market’s potential. A number of initiatives already exist to provide that confidence.





Demand for carbon credits has grown significantly over the 25 years in which the carbon market has functioned.

Market growth stalled in 2023, driven largely by negative media reporting in a small number of news outlets. This reporting was principally based on two lines of argument. Firstly, that carbon offsetting delays direct decarbonisation. While a legitimate concern if true, multiple studies have shown that in fact the opposite is the case. One of those studies, an October 2023 report by Ecosystem Marketplace, which studied 7,400 companies worth US\$110 trillion, found that companies who use carbon credits are 1.8 times more likely to be successfully decarbonising compared those who don't use carbon credits¹⁵

Secondly, some have raised concerns about the efficacy and integrity of carbon offset projects and their role in the global pathway to a safe climate.

¹⁵ Forest Trends' Ecosystem Marketplace: *All in on Climate: The Role of Carbon Credits in Corporate Climate Strategies*. Washington DC: Forest Trends Association (2023)

Prior to this negative reporting, three key initiatives were already underway with the aim of ensuring the quality and integrity of carbon markets, catalysing more supply of and demand for high quality carbon credits and providing clarity for companies looking to engage in carbon markets:

1. THE SCIENCE BASED TARGETS INITIATIVE (SBTi)

The SBTi aims to drive ambitious climate action in the private sector by enabling organisations to set science-based emissions reduction targets aligned with the 1.5°C temperature goal. The SBTi is seeing accelerated uptake; there has been an increase of operational emissions covered under its oversight of 82% and covers 31 billion tCO₂e. (See page 24 for more detail on the SBTi).

2. THE VOLUNTARY CARBON MARKET INTEGRITY INITIATIVE (VCMI)

The VCMI was created to standardise and regulate the claims that companies make about internal decarbonisation and their use of carbon credits. Released in 2023, the VCMI's Claims Code of Practice¹⁶ is a rulebook on how companies can make voluntary use of carbon credits as part of a credible, science-aligned pathway to net-zero, and make emissions reduction claims related to that pathway.

There are three tiers of claims that companies can make, in addition to demonstrated progress towards carbon reduction targets:

- **VCMI Silver:** requires the purchase and retirement of high-quality credits equal to or greater than 20%, and less than 60%, of a company's remaining emissions;
- **VCMI Gold:** requires the purchase and retirement of high-quality carbon credits in an equal to or greater than 60%, and less than 100%, of a company's remaining emissions; and
- **VCMI Platinum:** requires the purchase and retirement of high-quality carbon credits equal to or greater than 100% of remaining emissions.

Carbon offset claims under the VCMI need to be made using carbon credits approved by the Integrity Council for the Voluntary Carbon Market's Core Carbon Principles (see below).

3. THE INTEGRITY COUNCIL FOR THE VOLUNTARY CARBON MARKET (ICVCM)

The Integrity Council for the Voluntary Carbon Market Integrity Council is an independent governance body established to set and enforce a definitive global threshold for high-quality carbon credits. In 2023, ICVCM published the Core Carbon Principles (CCP) Assessment Framework which provides a credible and rigorous means of identifying high-integrity carbon credits.

The principles are organised into three core categories: governance, emissions impact and sustainable development. For more detail, please see page 24.

The ICVCM is reviewing categories of credits against the CCP criteria and will make recommendations on which categories should be fast tracked for approval. The group will also identify which credits raise more complex issues and require deeper assessment, and which credits should not be considered for the CCP label.

9 Voluntary Carbon Market Integrity Initiative: <https://vcmintegrity.org/vcmi-claims-code-of-practice/>

CORE CARBON PRINCIPLES

The Integrity Council for the Voluntary Carbon Market (Integrity Council) lays out a definitive global threshold for high-quality carbon credits built around 10 core principles:

 GOVERNANCE	 EMISSIONS IMPACT	 SUSTAINABLE DEVELOPMENT
<ul style="list-style-type: none">• Effective governance• Tracking• Transparency• Robust independent third-party validation and verification	<ul style="list-style-type: none">• Additionality• Permanence• Robust quantification of emission reductions and removals• No double counting	<ul style="list-style-type: none">• Sustainable development benefits and safeguards• Contribution to net zero transition



In addition to the above voluntary frameworks that are regulating best practices in the VCM, financial market players and regulators are also getting involved. In 2015 the Financial Standards Board established the Task Force on Climate-related Financial Disclosures (TCFD) as a voluntary set of recommendations for managing corporate climate risk and disclosure. Since that beginning it's now embedded into regulatory framework in the European Union, Singapore, Canada, Japan, South Africa, New Zealand and the United Kingdom. The US Securities and Exchange Commission will release guidelines soon that are also based on the TCFD recommendations.

Mandatory transparency around corporate emissions and mitigation strategies is another major driver of demand in the VCM. The TCFD, other efforts like the Glasgow Financial Alliance for Net Zero and the Taskforce on Nature-related Financial Disclosures, the national regulatory structures that have followed, and public pressure on businesses to act are all combining to create an increasingly accountable and transparent global system for carbon emissions reduction. For instance, the regulatory approaches have all codified the use of carbon markets into their reporting requirements, including the type, project and price of credits used in fulfilment of corporate decarbonisation plans. While not a direct requirement to use carbon credits, these disclosure requirements, make backsliding on those corporate plans a risk for regulatory enforcement and fines.



PARIS AGREEMENT ARTICLE 6 – A UNIFYING GLOBAL FRAMEWORK

The Paris Agreement, the international treaty on climate change adopted by 196 countries in 2015, enshrines the role of carbon markets in achieving the world’s legally binding climate change goals.

Under the agreement, each country is committed to contributing to the collective global effort to reduce GHG emissions and is charged with its own emissions reduction contribution. The details of this commitment are documented in each country’s ‘Nationally Determined Contribution’ (NDC) which is submitted to the United Nations and for which the country is accountable.

A key mechanism in achieving the emissions reduction targets set out in these NDCs is the trading of emissions reductions between countries enabled by ‘Article 6’ of the agreement which allows the transfer of carbon credits earned from reduced greenhouse gas emissions from country to country and from countries to companies. Article 6.2 allows GHG emission reductions to be traded across borders through bilateral or multilateral agreements while article 6.4 establishes a mechanism for trading credits for GHG emissions reductions creating a global carbon market that can be used by countries, companies, NGOs or even individuals.

THE COMING CONVERGENCE

International carbon credit markets, regulated cap-and-trade schemes and Article 6 markets are expected to converge, resulting in greater interoperability and more trade between these markets.

One of the most significant market developments is the convergence of government-led regulatory cap-and-trade schemes – which compel businesses to address their emissions – and the voluntary markets, where businesses act of their own accord. The increased willingness of governments to act is borne out in the World Bank’s most recent report on the state and trends of carbon pricing, revealing that the share of global emissions covered by carbon taxes and emissions trading schemes has grown from around 7% in 2013 to around 23% in 2023¹⁷.

The convergence is already underway. In Singapore, for example, the country’s National Carbon Tax, covering around 80% of national emissions, allows companies to use high quality international carbon credits to offset up to 5% of their taxable emissions from 2024.

The level of the carbon tax is scheduled to rise from SGD 25 (USD18.50)/tCO₂e in 2024 to SGD 50-80 (USD 37-59)/tCO₂e by 2030¹⁸, meaning the implementation of the policy should put upward pressure on prices in the VCM as companies’ willingness to pay increases in lockstep with the tax.

Elsewhere, the Australian Government’s Carbon Credit Unit (ACCU) system is a national scheme to encourage farmers, landholders, businesses, local councils and even state governments to create projects that avoid emissions or store carbon in vegetation or the soil. ACCUs issued to carbon abatement projects can be used either for voluntary offset claims or can be used for compliance obligations under the country’s Safeguard Mechanism which will force Australia’s most carbon-polluting facilities to reduce emissions by 205 million tonnes by 2030¹⁹.

10 World Bank: State and Trends of Carbon Pricing 2023. © <http://hdl.handle.net/10986/39796> License: CC BY 3.0 IGO (2023).

11 National Climate Change Secretariat, Singapore: <https://www.nccs.gov.sg/singapores-climate-action/mitigation-efforts/carbontax/> (2023).

19 Australian Government: *Safeguard Mechanism one step closer to Parliamentary passage*, [dcceew.gov.au](https://www.dcceew.gov.au) (2023)



AUSTRALIA'S CLIMATE ACTIVE PROGRAM: CARBON OFFSETS IN ACTION

Australia's Climate Active program demonstrates how government and voluntary schemes can work in harmony through a single, united framework.

It is a partnership between government and businesses that reflects the role both have in addressing climate change. The scheme is run by Australia's national government (through the Department of Climate Change, Energy, the Environment and Water) providing guidance and governance for how businesses can meet their carbon neutral goals, including the use of carbon credits.

Businesses can apply for third party certification of their decarbonisation progress. Businesses are able to use carbon credits to offset the balance of their emissions using approved carbon credits, known as Eligible Offset Units.

The resulting Climate Active stamp allows the community to recognise brands that are making real progress in their climate journeys. Climate Active It provides a simple and integrated set of guidance for business on their decarbonization journey: quantify emissions, develop (and implement) a decarbonization strategy both through internal direct action and use of carbon credits, and use high quality carbon credits from both domestic and international standards to offset remaining emissions. In this way, Climate Active provides a blueprint for how science-based targets, the VCMI and ICVCM can come together to provide a consistent and coherent approach to corporate climate action.

In line with best practice, the Australian Government will review Offset Unit eligibility and corporate claims through the remainder of 2023.

Like Singapore and Australia, other governments including China, Korea, Japan, Colombia, India, Indonesia, Taiwan, California and South Africa have or are considering, the use of voluntary carbon markets within their regulatory schemes; more countries are likely to follow.

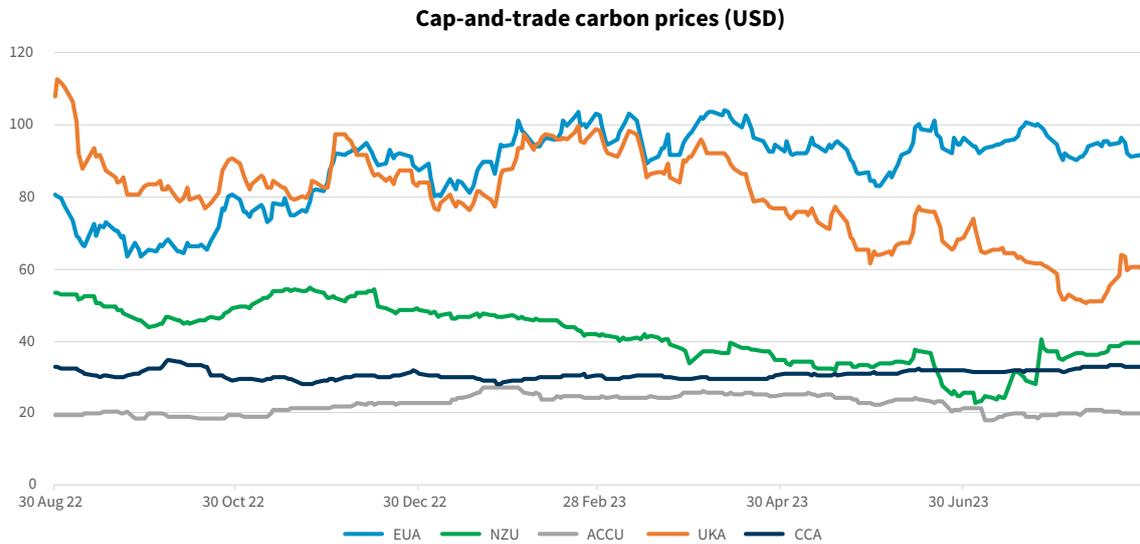


Figure 1: Cap and trade have moved largely sideways in 2023.
Source: Carbon Growth Partners, using publicly available trading data



The increased convergence of cap-and-trade schemes, the voluntary markets and Article 6 will help to create demand for high-quality carbon credits and catalyse the development of well-functioning and well-regulated carbon markets.

PARTICIPATING IN THE MARKET

Alongside the growth of the voluntary carbon market, the number and type of participants looking to access the market has also expanded rapidly. However, the timing and mechanics of joining can seem intimidating.

Companies participating in the carbon market are typically drawn from one, or both, of two types: those seeking to offset their GHG emissions, and those seeking to generate a financial return.

While offset endusers are still the dominant participants in the market, there is increasing participation from:

- **Financial traders and investors with dedicated investment funds**
- **Governments who want to use the voluntary carbon market as a proxy for policies they have yet to develop**
- **Capital providers looking to be involved in the development and supply of carbon projects**
- **Exchanges, trading platforms, intermediaries and third-party rating agencies.**

The complexity of the market has made some potential participants wary. The recent initiatives from the VCM and the ICVCM (see above and below), however, have helped bring clarity which in turn breeds confidence for companies, investors and other participants to enter the market. These initiatives deliver greater transparency about workings of the market, the projects themselves and the benefits they deliver while also creating greater diversity in the way participants can access the market.

Historically, companies that wanted to compensate for, or offset, their emissions had to perform their own due diligence on many individual projects or engage a consultant to do so on their behalf. Carbon projects are often located in remote locations, deploying technologies and nature conservation programs that are unfamiliar. Carbon project operators are often small start-up operations that lack the experience of dealing with big companies. As a result, some companies responded by staffing up internally to do that due diligence – a significant cost hurdle for all but the largest organisations. Fortunately, the last couple of years have seen significant progress in lowering the barrier to entry for accessing high quality credits.

A number of third-party consultancies and ratings agencies like Sylvera, Bezero, Calyx and Clear Blue Markets offer project assessments. Other intermediaries, including Evolution Markets, ACT Commodities, Anew Climate or Rubicon Carbon act as brokers and project qualifiers and can help advise companies on meeting their goals on project quality, though there can be a conflict of interest. Some of the emerging carbon exchanges like Air Carbon, CBL and CME offer standardised products as well as futures wrapped around those products. The Singapore Government-backed Climate Impact X exchange provides access to curated baskets of high quality nature-based credits.

It is also possible to invest via a fund that offers a whole-of-market approach though they do not provide access to credits themselves and have limited quality guarantees. Finally, a few specialised investment managers, like Carbon Growth Partners and Respira, provide deep due diligence and ongoing monitoring of a diverse portfolio across projects. This approach helps assure future supply and price certainty to companies that are looking for either returns or retirement of credits or both.

MAKING IT EASY

The introduction of new accountability and integrity initiatives has created a set of ‘safe harbours’ for corporate climate action. With these initiatives in place, and gathering widespread market acceptance, companies can participate in carbon markets in an effective, cost-effective and reputationally safe way:



- 1. Set a science-based target, through the SBTi or elsewhere** to ensure emissions reductions are consistent with best practice (understand the sources of emissions, quantify those emissions and set an emissions reduction target with a strategy to meet this target);
- 2. Sign up to VCM Claims Code of Conduct** to ensure any claims made can withstand scrutiny (on the journey to meet an emissions reduction target, both decarbonisation and use of carbon credits will be necessary, and are appropriate); and
- 3. Offset 20%-100% of remaining emissions** using ICVCM Core Carbon Principle-approved carbon credits.

The Core Carbon Principles will take some time to be implemented in full; some nature-based projects may not be onboarded until 2025. In the meantime, companies should still take immediate action. At a minimum, companies should use only credits from carbon standards like VERRA or Cercarbono that are endorsed by the International Carbon Reduction and Offsetting Accreditation scheme (ICROA), and that are dated 2016 or later, so they are aligned with the start date of the Paris Agreement.

IN ADDITION, HERE ARE SIX FURTHER SAFEGUARDS COMPANIES SHOULD CONSIDER WHEN THEY INVEST IN CARBON CREDITS:

1. Identify whether to focus on a specific type of project, a single project itself or to spread investments across multiple projects;
2. Geography matters too, for many reasons. Some companies like to invest in places that overlap with their operations and supply chains. Others are looking for the best impact on sustainable development in the Global South;
3. Corporate management of political and execution risk is difficult with small project developers working in less developed countries, where much of the carbon market work occurs. But companies can reach higher clarity and certainty by investing in risk assessment by external consultants and brokers or by using portfolio managers. New types of insurance products are coming to market to help mitigate these risks;
4. Choose credits with an investment grade rating from the ratings agencies. For example, to retire REDD+ forest protection credits, companies should choose credits with a BBB or higher rating from Sylvera, the leading nature-based carbon project ratings agency;
5. Select an investment manager or adviser to help design a portfolio. Investing through a seasoned fund manager like Carbon Growth Partners can help mitigate upfront and ongoing risks; and
6. Finally, in-house due diligence, while often inefficient and beyond the scope of a company’s expertise, can give a stronger sense of buy-in and engagement for company leadership and employees.

LEADING THE WAY: CORPORATE BEST PRACTICE

Carbon credits should be part of every organisation's response to the climate crisis. Credits are not only a way to speed up the transition to a low carbon economy but they can also save businesses significant investment costs. A study by EY's Net Zero Centre found that credits can lower the cost of decarbonisation by 50% - 80% in scenarios consistent with the Paris Agreement, compared to internal decarbonisation only.

Critical steps for businesses of all types are:



1. ACT NOW: Not only is the climate warming by the day, but pressure to act is also growing. Business leaders need to recognise that the status quo they face today could quickly change, driven by factors and stakeholders outside of their control. Do not wait to take action; start planning today.



2. TALK LATER: There is more scrutiny on net zero claims than ever before and in some markets, businesses are being sued for over-eagerness in their marketing campaigns. Put in place genuine decarbonisation programs and measure their effectiveness. Use results judiciously when communicating with stakeholders.



3. LOOK FAR AND WIDE: Look across the organisation, examining every single process for ways to decarbonise. These could be micro-actions – changing the settings on air-conditioning and heating, for example – to rethinking the company's entire business model.



4. GO BEYOND ZERO: Net zero commitments are the minimum needed to keep the planet safe. Plan to arrive at a carbon negative position in the long term because every additional tonne of CO₂ abated will help the climate.



5. MOVE QUICKLY: Carbon credits are relatively low priced today. Buying credits now will cost organisations less, freeing up capital in the medium- and long-term for other uses.

These five points should be enough to encourage even the most reticent business leader to take action. But in the complicated world of carbon credits, how does one get started? Here is a suggestion:



1. ALIGN PURPOSE: While securing high-integrity credits will direct money to the parts of the world most in need, there is no reason for this not to be a win-win. That process starts by examining why companies want to buy credits and there can be numerous reasons from an internal, carbon neutrality goal to being able to tell a story externally.



2. PARTNERS MATTER: Carbon projects are highly complex and sometimes take place in low governance, high-risk environments. Consequently, choose a partner that understands the political and social issues intimately and can providing practical support such as local language skills and a deep understanding of the carbon values of each project.



3. BALANCE THE PORTFOLIO: Some companies opt to put all of their focus on a single project type, or a single country. While this level of engagement can reap benefits through deeper understanding, it carries risk. Ensure the mix of projects aligns to the business's purpose and its risk management strategy.



4. INTEGRATE THE FINANCE TEAM: With carbon prices at current levels, it makes business and financial sense to buy high-integrity credits while they are affordable. If the company's decarbonisation goals are met faster than expected, the credits will be an asset that can be sold. Ensuring the finance team is embedded with the decision-making is key.

LEADING THE WAY: NATIONS

Positive steps have been taken by Singapore and Australia and there are other success stories too in Norway, Switzerland, Japan and Korea. China's recent establishment of a national level domestic carbon market that includes voluntary carbon projects also bodes well for the world's largest carbon emitter.

These examples, though, are to be expected in countries that have the ability to invest heavily in net zero plans. More surprising are the Developing Nations that are taking a lead, and three stand out as moving towards a regulatory and political environment that makes real progress possible:

SENEGAL

With more than two-thirds of its population occupying low-lying coastal areas along with 90% of the country's industrial production, Senegal is in the firing line as climate change impacts sea levels. However, the government has seized the opportunity not only to secure its future but support global carbon emission goals. One notable project is its program to manage food and organic waste which contributes 10% of the country's GHGs. Instead of allowing waste to rot in landfill sites, it will be processed at 10 sites across the country and converted into organic compost which not only reduces methane emissions but also provides farmers with a low-cost, environmentally friendly alternative to chemical fertilisers.

COLOMBIA

A carbon tax introduced in 2017 and modified in 2023 set a price of nearly US\$4.30 per tCO₂e on fossil fuels, creating an environment designed to drive down their use. Companies subject to the tax are able to pay off their liabilities by retiring carbon credits from projects in the country, thus setting a price floor for carbon credits and providing companies with alternative ways to settle their taxes. This is just one of a number of initiatives the government has created to drive the country towards net zero. It includes a very open approach to the international voluntary carbon market including taking advantage of carbon projects to trade under Article 6 of the Paris agreement.

The country is highly supportive of REDD+ developments and has created a regulatory framework that protects its natural resources while giving developers security and protection of investments.

CAMBODIA

Nearly three years ago, Cambodia became the first country in ASEAN to issue a long-term strategy for carbon neutrality with an ambitious 2050 target. Much of this is pegged on the government's openness to REDD+ projects with a national framework for carbon credit infrastructure under consultation. Similarly, a new unified legal framework to cover emission reduction mechanisms, asset ownership and taxation is expected to become law later in 2023. With 42% of the country's land mass covered by forests, REDD+ projects are critical. They have been subject to significant logging activities which not only removes carbon sequestration opportunities but has also had a catastrophic effect on the country's biodiversity. The new frameworks, combined with numerous carbon projects, provides hope for the future.

LEADING THE WAY: BUSINESSES

In the absence of regulation, many companies have become the driving forces behind climate action. Some have become stand-out leaders on the path to net zero, serving as guiding lights for their peers.

SINGAPORE AIRLINES: As an airline, Singapore Airlines (SIA) faces the same dilemma as the rest of the world's airlines: low carbon flying is currently impossible. SIA is tackling carbon emissions on numerous fronts. First, it has committed to moving to newer, more fuel-efficient aircraft. Second, it is developing sources of sustainable aviation fuel (SAF) made from waste and biofuels, while acknowledging that SAF will only ever provide a small fraction of what is needed. Third, it will be required to reduce net emissions under the United Nations CORSIA offset scheme. In addition, SIA's voluntary carbon offset programme enables customers across its passenger and cargo airlines to offset their own carbon emissions via dedicated microsites.

MICROSOFT: Microsoft has made one of the most ambitious decarbonisation commitments in the corporate sector. Having started down a familiar pathway of incremental decarbonisation, in 2020 the company pivoted and committed to becoming carbon negative by 2030 and removing all of its historic emissions by 2050, using nature-based and technology-based removals. Its rationale is in line with its innovative past and present: by engaging early, at scale, in the removals sector Microsoft can have a significant impact in the acceleration of these technologies' role in reducing atmospheric carbon levels. Microsoft is also transparent about its carbon emissions and the choices it makes in compensating for residual emissions. The company goes to great lengths to incentivise innovation by publicly issuing requests for proposals for carbon projects, publishing the results and its overall progress and engaging in policy fora to advance decarbonisation.

TELSTRA: Australian telecommunications company Telstra has been at the forefront of offsetting for many years. Telstra was able to make its operations carbon neutral from 2020, doing so by directly reducing its emissions, investing in renewable energy, and purchasing carbon credits to offset its remaining emissions. It invests in a variety of carbon projects both inside and outside of Australia including wind and solar power generation in South Asia, managing fire in northern Australia's savannahs, and restoring degraded land. As Telstra's example shows, corporate climate action is becoming simpler as actions to decarbonise supply chains become the norm, and voluntary carbon market rules have evolved toward more clarity and certainty.

APPLE: Apple's global corporate operations have been carbon neutral since 2020, and it has a goal to become carbon neutral across its entire global supply chain by 2030, prioritising reductions in the product life cycle: electricity, materials, and transportation and offsetting residual emissions. Apple sources and retires high-quality carbon credits from nature-based projects to neutralise residual emissions. The company has also driven its global supply chain to address their greenhouse gas emissions, holding its major manufacturing partners to account for their decarbonisation progress, including yearly tracking. The company has made significant investments in renewable energy in Europe, partnerships to support businesses transitioning to clean energy, and supports projects that advance natural carbon removal and community-driven climate solutions around the world. Recently Apple unveiled its first 'carbon neutral' product, the Apple Watch, achieved through 75% reduction in direct emissions and using high quality carbon credits to compensate for the remaining emissions.

LEADING THE WAY: CARBON CREDIT PROJECTS

Carbon projects not only reduce and remove harmful greenhouse gases from the atmosphere, they can provide staggering co-benefits for people and nature. Here are four of the best*:

PROTECTING THE FORESTS OF THE ORINOCO IN COLOMBIA

The one million-hectare Selva de Mataven REDD+ project in eastern Colombia illustrates what a good carbon project looks like. It was created by a former University Provost working hand-in-glove with the local community which, by and large, had little contact with the central government in Bogota and almost no support for their human development.

The project has demonstrated excellent carbon sequestration and avoided deforestation, earning an A-rating from Sylvera. It has also helped preserve and protect biodiversity in the area which was under threat from logging activity. Perhaps even more importantly, the project has changed the lives of the 16,000 indigenous people from six tribes that live in the area: children now have access to education; healthcare access is now within easy reach of families who have also been taught sustainable agricultural practices that will provide income for generations to come. There is also access to drinking water for the first time as well as solar energy.



*Carbon credits from some or all of these projects may be held in funds managed by Carbon Growth Partners.

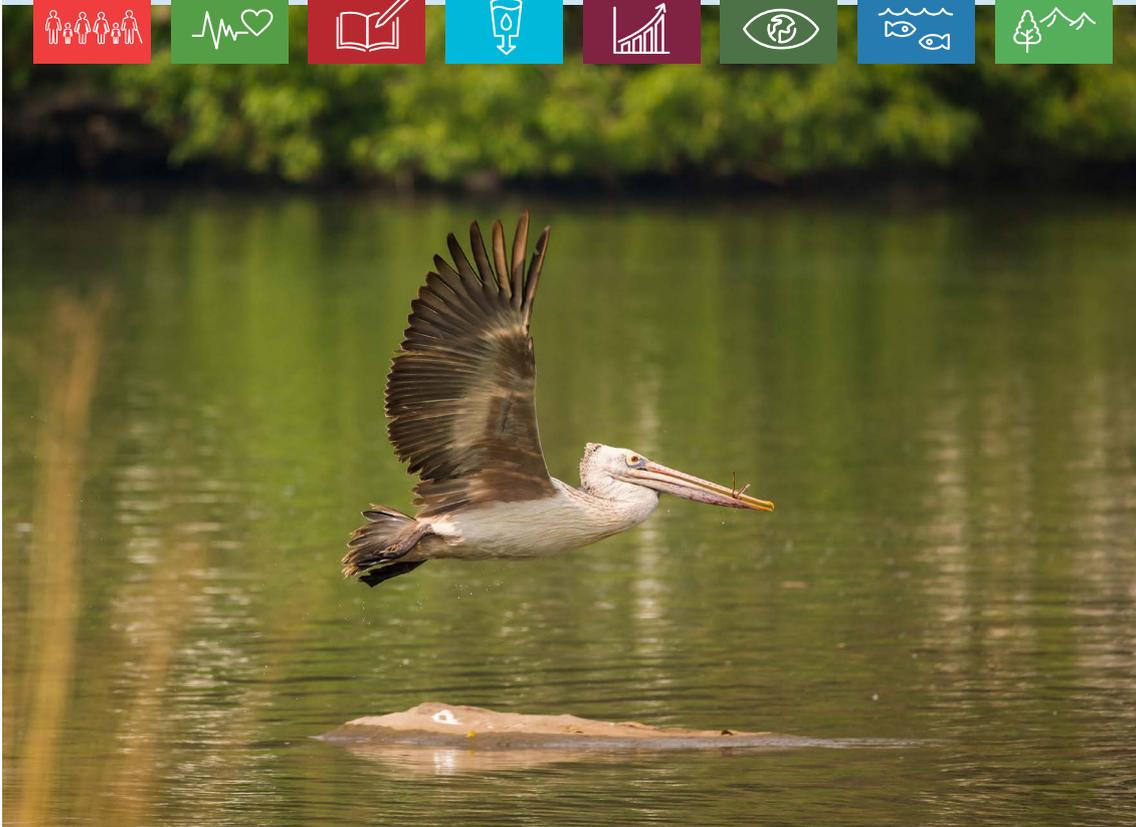
RESTORING MANGROVES IN PAKISTAN

The Delta Blue Carbon (DBC) project in Pakistan’s Indus river delta aims to restore and protect 345,000 hectares of mangrove forests. Mangroves, saltmarshes and seagrasses – collectively known as ‘blue carbon’ ecosystems – have an outsized ability to sequester vast amounts of carbon; estimates are that the world’s mangrove ecosystems could, by themselves, reduce annual CO₂ emissions by the equivalent of 117 million homes in the United States.

In addition to its climate outcomes, the Delta Blue Carbon project has created 21,000 jobs, helping to move thousands of families out of poverty. The team is also installing technology to provide clean and safe water for 49,000 people in 60 villages. For many, this will be the first time they have access to clean water on their doorstep, not only saving lives but hundreds of hours a year through not having to make daily trips to a distant well.

Designed in partnership with local communities, the project is also bringing health to the community by providing ambulances and mobile health services that supplement government facilities. Education is another co-benefit. Work is being done to improve learning facilities as well as making primary and secondary education more accessible. There are training courses on crab farming, agriculture, forestry and livestock management which will help families earn a living for generations to come.

The project is also helping preserve local biodiversity facing significant survival challenges. The endangered Indian Ocean Humpback Dolphin, the Indus Fishing Cat and the Indian Monitor Lizard are just a few examples of the conservation work the project is supporting.



PROVIDING SAFE, CLEAN COOKING IN AFRICA

Clean cooking - financed at scale by carbon markets - saves lives, creates economic opportunity and reduces deforestation. Across much of Africa, around 200 million households, around one billion people, still rely on open wood fires to cook. Women spend hundreds of hours a year gathering firewood, making it hard to earn income or attend school and causing widespread deforestation. When they cook, the wood smoke fills their homes causing long-term lung damage to them and their families.

Using simple technology, projects across Africa create an opportunity not only to improve the lives and health of these women but also stop a major cause of deforestation. These projects also create much-needed jobs in some of the world's poorest countries.

The stoves are manufactured locally – providing a sustainable income for families there – and transported across nations and borders. They are then distributed to villages across the country by a highly unusual network of NGOs, businesses, community groups and faith-based organisations. Monitoring their use, repairing and replacing stoves and recruiting more users is carried out by a cadre of trained local women who act as 'stove leaders'.



Image: C-Quest Capital.

DELIVERING RENEWABLE ENERGY IN UGANDA

Carbon markets can bring clean, reliable energy to people in the world's poorest countries. Just 30% of the population of Uganda has access to electricity and, while there are considerable natural resources that could be harnessed, the government has limited resources to invest.

The Bugoye run-of-river hydropower plant is a quick and relatively low-cost solution that has added 7% to Uganda's electricity capacity. In addition to the energy produced, it created 150 construction jobs and five permanent roles to manage the site. Even more importantly, the plant only uses part of the river, rather than completely diverting the water which would impact the local flora and fauna, as well as farmers and households. The technology and training transfer in this project – and others to come – helps eliminate the need to build new coal-powered electricity generating plants.

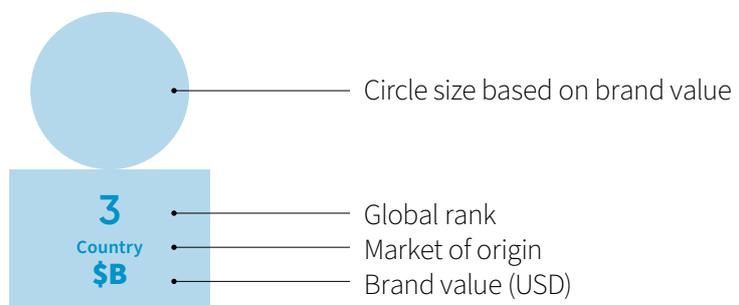


SAFETY IN NUMBERS – THE WORLD’S MOST VALUABLE BRANDS ALREADY USE CARBON CREDITS

Throughout 2023, a perception has been created that when it comes to carbon offsetting, it is reputationally safer to do nothing than to do something. But the perception is not matched by reality: 8 of the world’s 10 most valuable brands – who understand their customers intimately and protect their brands fiercely – already use carbon credits or have pledged to do so, including all of the top four.

Those eight companies, in order of brand value – are shown below.

So why are these brands doing this? It's simple: successful companies with valuable brands know that one of the best ways to maintain their brand value is to do the right thing. And they have decided that offsetting residual carbon emissions is the right thing to do.



Data and graphics adapted from the Visual Capitalist (<https://www.visualcapitalist.com/top-100-brand-value-2023/>) and Brand Finance (<https://brandfinance.com/>)

ACCESSING THE INVESTMENT OPPORTUNITY

Investors and companies alike should do due diligence on the carbon market appropriate to their circumstances. Whether they are buying credits to hold as an appreciating asset, financing credit-issuing projects upstream or buying to retire a one-off event, increased transparency and available information mean due diligence has never been easier.

In addition to selecting projects and credits from an ICROA-approved standard, and considering the ICVCM Core Carbon Principles and its approved methodologies, participants should consider what is appropriate for their overall strategy – i.e., whether to invest in projects, managed funds, ETF, futures or simply spot credits in the secondary market.

While the carbon market is based on robust science, community engagement and financial innovation developed over more than 25 years, not all carbon projects are created equal. With the market shifting quickly to price quality and integrity, understanding the pros and cons of each investment is critical for any organisation’s reputation, its ability to meet its net zero goals, and its financial returns.

For those making project-level investments or securing longer-term offtake agreement, investors should look for projects that:



1. ARE OWNED by credible actors with whom trusted relationships can be built.



2. ARE SUPPORTED by local, provincial and/or national host governments to ensure long-term stability.



3. CLEARLY SHOW that the indigenous and local people either own or share fairly in the financial and wellbeing benefits of each project and have strong decision-making powers.



4. DELIVER REAL BENEFITS to natural systems, and the people that rely on them.



5. ARE VERIFIED by third-party auditors and their scientific integrity is validated by a recognised registry system.



6. ARE ALIGNED with the UN Sustainable Development Goals so the projects deliver benefits in addition to carbon sequestration or avoidance. There should be a particular focus on the economic and social development of the world’s 46 Least Developed Countries.



7. USE PEER-REVIEWED scientific modelling and project design to support carbon benefits.



8. PROVIDE OPPORTUNITIES to partner in the long-term rather than a one-off financial transaction.

LEADING THE WAY: INVESTMENT MANAGERS

Since 2021, a number of dedicated investment managers have been established to drive responsible investment into carbon markets.

At one end of the spectrum, firms like Respira, Climate Asset Management and Carbon Streaming have made project-level investments in carbon credit-generating activities, while at the other end of the spectrum, Krane Shares offers an ETF that tracks the voluntary carbon market through the S&P GSCI Global Voluntary Carbon Liquidity Weighted, designed to reflect the performance of the global voluntary carbon credit market.

Spanning this spectrum are specialist managers who provide diversified exposure to both high quality carbon credits and projects. One such manager is Carbon Growth Partners, which seeks to generate financial returns for investors and positive impact for people and the planet by financing carbon assets that:

- **PROTECT AND RESTORE NATURE** By investing in projects that deliver co-benefits to forests, grasslands and wetlands, and the people who rely on them
- **PROVIDE CLEAN, RELIABLE ENERGY** By supporting the transition to renewables and distributing clean and safe household cooking devices
- **ACCELERATE CLIMATE ACTION** By bringing high-quality carbon offset solutions to responsible businesses that complement their own emissions reductions.

Since inception in 2021, Carbon Growth Partners has provided more than \$227 million in financing[^] for emissions projects:



45% nature-based solutions
20% household devices
35% energy and industry

37 million tonnes
of verified emissions reductions
since inception



Projects in **27 countries** across five continents:
25% of projects located in Least Developed Countries
73% of projects located in Developing Countries
2% of projects located in Developed Countries

76%
primary finance
24%
secondary finance



[^]\$173.6 million of primary finance and \$53.8 million of secondary finance.

CONCLUSION

Earth's climate is quickly approaching a point of no return. The investment need and opportunity to meet this challenge are enormous. As companies and countries begin to set and meet ever-more ambitious targets, demand for carbon offsets – a necessary transition tool on the path to net zero – will increase. As demand for offsets rises, prices are also set to rise, creating a win-win for the planet and those who invest in the solutions that keep the planet safe.

The power to change our future is entirely in our own hands. Companies across the world, in tandem with governments, need to act to decarbonise. We need to rapidly move away from fossil fuels and we need to protect Earth's remaining forests, wetlands and grasslands from destruction. Those two solutions alone can reduce annual emissions by half within the next seven years.

But the simple truth is that making that happen requires capital – and huge amounts of it. While the number of emission reduction and removal projects is rising rapidly – there are an estimated 1,500 new projects already in development – there is a US\$90 billion shortfall in the funding needed to make them happen²⁰.

This is where the carbon market is so essential: driving finance to where it is most needed to accelerate action and to buy the climate time.

A number of recent integrity initiatives will bring much needed clarity and certainty to carbon markets. These moves will take some time to bring about buyer confidence but make no mistake: it is coming. That confidence should lead to significant price increases as the market deals with restricted supply.

The opportunity for investors who are prepared to move now is enormous. So too for businesses that invest in carbon credits now and who will not have to sacrifice capital investment opportunities in the future to fund their carbon emission offsetting.

Carbon markets are a win-win for everyone. For project owners and their host communities and countries, carbon markets provide much needed finance; for indigenous peoples, carbon markets offers a healthier and more sustainable future; for investors, carbon markets represent a major new asset class that can deliver attractive, impactful and uncorrelated returns; and for businesses, carbon markets provide the opportunity to fulfil their climate pledges in a robust, transparent and cost-effective way.

Now is the time: carbon markets are cleared for take-off.

²⁰ Trove Research: *Carbon Credit Investment Report* (<https://trove-research.com/report/global-carbon-credit-investment-report/>), 2023

ABOUT CARBON GROWTH PARTNERS

Carbon Growth Partners (CGP) is a leading investment manager in global carbon markets. CGP invests in a portfolio of high integrity carbon assets to deliver three key outcomes: generating financial returns, protecting and restoring nature, and accelerating climate action by bringing high-quality carbon offset solutions to responsible businesses. For more information, visit www.carbongrowth.com

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