

An **outlook** on the **voluntary** **carbon market**



A report by Shell and BCG

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1.0

Foreword





The pace of change today, challenges much of the thinking that has characterised the carbon markets in which I've worked during the last decade. The growing ambitions of our corporate customers in pursuit of decarbonisation is driving interest and activity in these markets.

At Shell, we are delighted to partner with BCG on this report which seeks to better understand how the voluntary carbon market could develop in the coming years. We approached a broad range of customers and other stakeholders active in the market to form the basis of the analysis contained in this report.

I would like to thank our many contributors, who have been generous with their insights. Their story was clear. There is an urgency to our collective need to tackle greenhouse gas emissions. And on top of taking action in their operations where it was technically and/or economic to do so, our surveyed group saw the voluntary carbon market as key to meeting their decarbonisation objectives.

The word quality came up time and again. They talked about it being the backbone of their investments, and I couldn't agree more. There are many paths to net zero, but it must

start now, and it must channel funds from the private sector to high-quality carbon avoidance and removal projects which will have a positive impact on our climate.

In February 2021, Shell set out how we are playing our part with our Powering Progress strategy. Our target is to be a net-zero energy company by 2050, in step with society and our customers. That means reimagining our business and addressing emissions from our operations and from the fuels and other energy products we sell to our customers¹. And carbon credits are playing a role – for example, in providing carbon compensated driving for our retail customers not yet in a position to switch to an electric vehicle.

We stand ready to help our customers in investing in ways to decarbonise through the voluntary carbon market and help to develop it in the process.

Bill McGrath

GM Global Environmental Products, Shell



¹This is a huge and long-term task for an energy business. While we do not have a detailed business plan that stretches 30 years into the future, Shell will change and the exact changes will depend on where we can find opportunity and business value as our customers move towards net zero.



As businesses set increasingly ambitious commitments to reduce global greenhouse gas emissions, there is rapid growth in demand for voluntary carbon credits to supplement their broader decarbonisation efforts.

In this report, we set out to better understand the voluntary carbon market and the drivers and challenges to its progress. We spoke to 116 stakeholders across industries and asked them about their efforts to address emissions from their operations and the role they expect carbon credits to play. We gathered insights on their preference for credit type and quality and furthermore how they were planning to source them. Based on these insights, we have outlined potential future market characteristics and scenarios for growth.

For sustained success, the voluntary carbon market needs to mature both in terms of structure and credibility and choices made today will play a key role in this.

Anders Porsborg-Smith

Managing Director and Partner, BCG





2.0

Introduction

A clear call for action

There is a broad consensus that tackling climate change is mankind's most complicated and significant challenge to date. Even if the 197 countries that signed the 2015 Paris Agreement were to meet their commitments, the world would still fail to reach the accord's target of limiting the impact of climate change to 2 degrees Celsius above pre-industrial levels with 1.5 degrees Celsius even more challenging.

To realise this ambition, global emissions would have to be cut by approximately 55 additional gigatonnes of CO₂ equivalent (GtCO₂e) by 2050 on top of today's commitments².

Closing the gap requires rapid action on a scale not previously seen. As the "catch-up" effort to meet the Paris Agreement builds momentum, becoming part of public discourse, setting net-zero targets (e.g. China 2060, EU 2050) and affecting financing and insurance markets, it is forcing businesses to re-evaluate their emissions profile and broader environmental, social and governance (ESG) strategies. Any company's decarbonisation strategy must start with avoiding and reducing emissions in its operations and supply chains.

Even if
197 countries
that signed the Paris Agreement
in 2015 were to meet their
existing commitments...



the world will fail to hit the accord's target of limiting global warming to 2.0° Celsius
above pre-industrial levels.

²IPCC Report 2021

As this paper concludes, however, carbon markets and the ability to offset emissions is a vital part of the solution. Through such measures, businesses and consumers are able to put a price on their emissions, make choices about how to best tackle them, and to provide an effective source of financing to net-zero, and even negative, emissions solutions.

Corporate stakeholder pressures, issues around societal licence to operate, and government policies are driving action in the short term. Carbon markets should be considered as part of a wider emissions reduction strategy, while technologies and solutions to avoid and reduce emissions develop at scale.

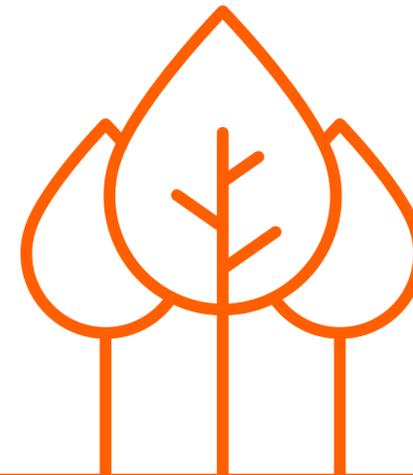
Private capital can play a crucial role in ensuring the flow of finance to grow the role of nature in capturing and storing carbon.

A 2021 report³, concluded that investments of US\$8.1 trillion by 2050 – and annual investments of \$536 billion by that year – are necessary to address the interlinked issues of climate, biodiversity, and land degradation. That is four times the current level of investment.

The \$4.1 trillion gap in financing nature preservation and restoration cannot be filled by public financing alone – both private and public investment will be necessary.

This report sets out an analysis of the voluntary carbon credit market and looks at indicators of change. It does not consider compliance markets, such as the European Union Emissions Trading Scheme (EU ETS), in detail, beyond their current and future interlinkages to the voluntary market. As part of the research for this report, and to better understand the current sentiment towards carbon offsets, as well as the associated hurdles the voluntary market needs to overcome, we surveyed 116 sustainability managers across industries and geographies (those planning to purchase carbon credits).

Carbon markets have a chequered history, and there are hurdles to overcome in strengthening the foundations of the markets to enable growth at the speed required – quality, additionality, transparency – are amongst the key items to get right. Initiatives such as the Taskforce for Scaling Voluntary Carbon Markets (TSVCM) are engaged in this work and their recently established Governance Council is a promising step. As the landscape rapidly changes, this report seeks to shine some light on the sector and what to expect next.



The **\$4.1 trillion** gap in financing nature preservation and restoration cannot be filled by public financing alone

116 sustainability managers surveyed across industries and geographies



³ State of Finance for Nature - Report by UNEP, WEF, ELD, Vivid Economics

3.0

**The voluntary
carbon market
today**



3.1

A growing market

Starting from a low level throughout the mid-2000s, the voluntary carbon market has grown significantly in recent years. Since 2015, its compound annual growth rate (CAGR) has been around 30%⁴.

The growth is mainly driven by increasingly ambitious commitments of companies to reduce their CO₂ emissions and pledges to move forward on the path to reach net-zero emissions. Despite this robust growth, voluntary credits cover less than 1% of global carbon emissions.

This compares with around 16% for compliance markets and carbon taxes. Therefore, the majority of emissions generated are not covered by either a voluntary or regulated emissions market or regime.

Overall demand for carbon credits for retirement has remained at around 50% of supply, resulting in a structural oversupply. There are, however, wide differences in the supply-demand balances across project types and qualities. As a result, the glut is mainly found in credits perceived to be of lower quality and credits issued earlier in the

development of the market. Credits which are perceived as higher quality are seeing a significantly more balanced outlook.

⁴ Based on carbon credit issuance of about 57 megatonnes of CO₂ equivalent, or MtCO₂e, in 2015

1 Voluntary market developing from low level

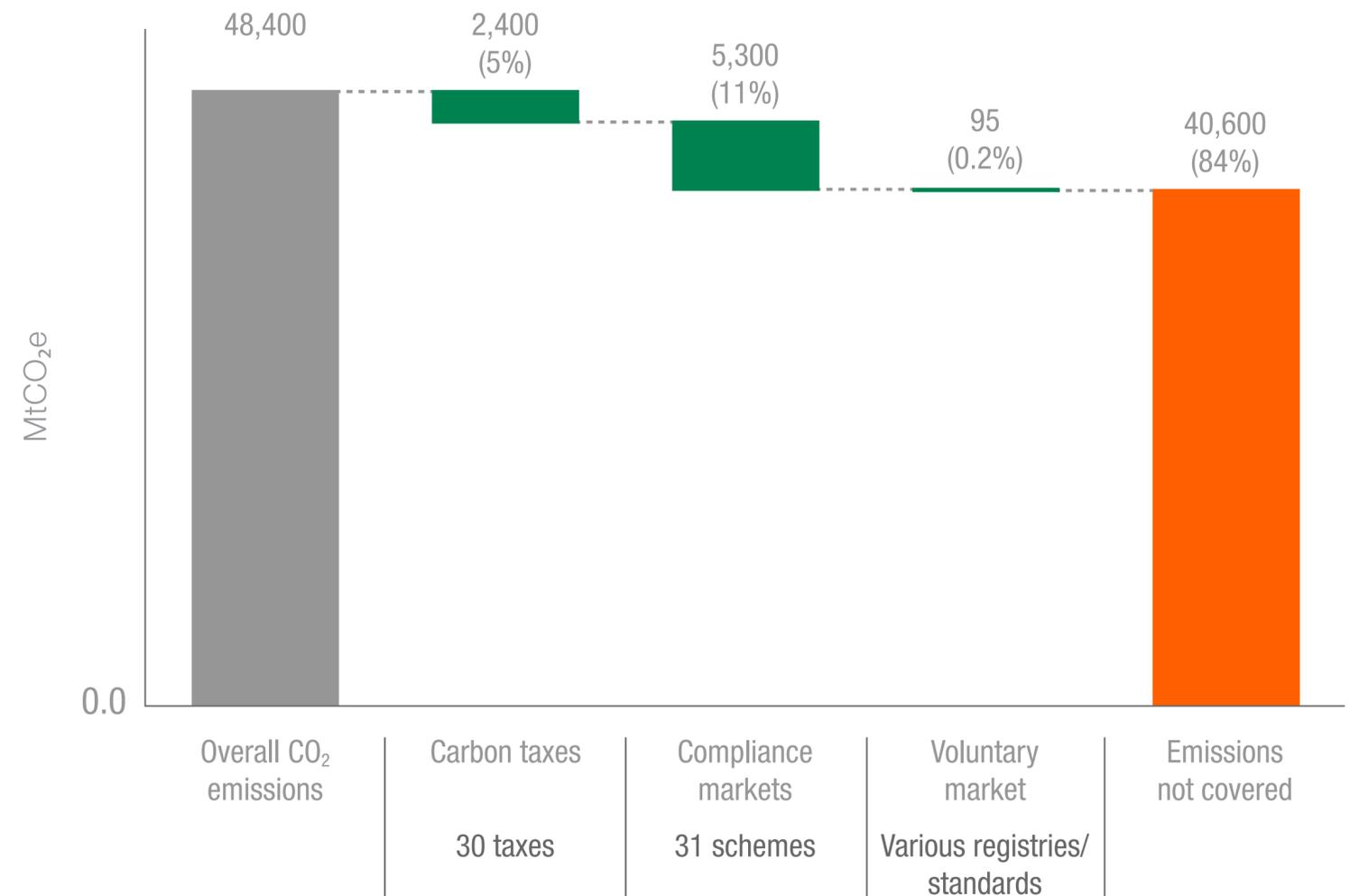
Size of voluntary market only ~2% compared to compliance market

2 Markets currently fragmented

Various carbon markets and taxes cover only ~16% of global CO₂ emissions, with a high degree of fragmentation

Modest starting point

But with significant room to grow for both voluntary and compliance markets



Based on retirement volume in 2020 across Verra VCS, Gold Standard, ACR and CAR
Source: World Global Carbon Project; State of the Voluntary Carbon Market 2019; World Bank State and Trends of Carbon Pricing 2021; BCG analysis

Price drivers

Historically, average prices for carbon credits have been low, when compared to the “required” cost necessary to abate operational emissions. There are several reasons for this, namely:

- Lack of trust in legitimacy and efficiency of carbon credits, resulting in conservative corporate demand;
- an absence of incentives for companies to decarbonise in the short-term; and
- an oversupply of low-quality credits and a lack of uniform minimum quality standards.

“The topic of avoidance versus removal offsets is gaining more and more importance and I definitely see supply shortage going forward – our company is thus investing heavily in forestry-type projects.”

Former Sustainability Manager, Tech Company

Prices for carbon credits vary widely depending on the specific type and characteristics of the credit, and buyers are willing to pay significantly more for credits they perceive as higher quality, for instance those generated from regenerative agriculture, direct air capture, or biochar, where prices can be higher than \$100 per tonne of CO₂e⁵.

Our analysis suggests that the proximity to a buyer’s value chain, the geographic location of projects, the vintage of the carbon credit (as standards have developed, newer credits might be preferred), and the branding value of projects (i.e. the “story” of a project and its benefits) all impact individual prices.

“We need to find projects that are directly relatable to our supply chain to have a good and credible story for our customers.”

Sustainability Manager, Sportswear Company

In recent years, nature-based removal credits (such as afforestation projects) have commanded the highest prices due to a limited supply of this type of credit and perceived high quality.

“We clearly preferred buying removal over avoidance credits – however, supply shortage of nature-based removals is already a reality today, especially for projects that allow to build a compelling story around them.”

Senior Director
Environmental Sustainability, Tech Company

Pricing factors

Several factors have an impact on the price of a credit. Among those are:



Methodology:

some methodologies, such as reforestation, have a higher premium because the method of credit generation is more desirable, as are the compelling stories about the benefits of many of these projects.



Verification standard:

the different standards by which a project is developed, certified and tracked, impact price and value of credits depending on the external perception of the standard.



Additionality:

emission reductions from carbon projects should not have occurred without the offset financing activity.



Leakage:

emission reductions from carbon credits will not be counter-balanced elsewhere.



Co-benefits:

positive impacts, in addition to direct greenhouse gas emissions mitigation, resulting from the project. These might include co-benefits linked to: restoring degraded ecosystems and preserving biodiversity, improving resilience of ecosystems, and the impact on local communities through liveable or socio-economic improvements, often linked to the UN’s Sustainable Development Goals (SDGs).



Permanence:

proper assurances have to be made to cover the reversal risk.

⁵ Goldman Sachs research report Carbonomics

3.3

Time for action

Today, there is growing pressure on companies to take action to address climate change, and not simply make pledges.

The growth of the voluntary carbon market is a consequence of both the need for the private sector to find solutions to meet their emissions targets in the short term, and the urgency of protecting and restoring natural ecosystems as part of climate mitigation strategies.

This confluence is enabling the development of new and innovative approaches in the sector across negative emissions technologies.



A top-down view of a dense tropical forest floor, featuring various types of green leaves and ferns. The lighting is soft, highlighting the textures and colors of the plants.

4.0

Outlook for the voluntary carbon market

The five drivers of demand

The outlook ahead sets out factors and scenarios for the growth of the voluntary carbon credit market. This analysis is built from our engagement with the 116 stakeholders and customers we surveyed for this report and reflects their views on the market.

Our analysis suggests that the following factors will be critical in driving voluntary market demand:

1. Investor pressure

Growing pressure from investors and consumers on companies to decarbonise and set short-term targets is pushing them to make bold net-zero emissions pledges which, in turn, is creating more demand for carbon credits. Credits play an especially crucial role in offsetting emissions that are currently too expensive to reduce, impossible to abate, or require measures that will take time to deploy or scale.

2. Better organisation

Enhanced organisation of the voluntary market through creation of a central registry; widespread application of ethics and compliance policies, including “know your customer” requirements; and consistent accounting practices, particularly those necessary to avoid double counting.

3. Regulation changes

The interaction between compliance markets and the voluntary market has a significant impact on both volumes and prices of carbon credits. Regulatory changes in individual compliance markets can either reduce or increase demand for specific carbon credit types.

4. Customer demands

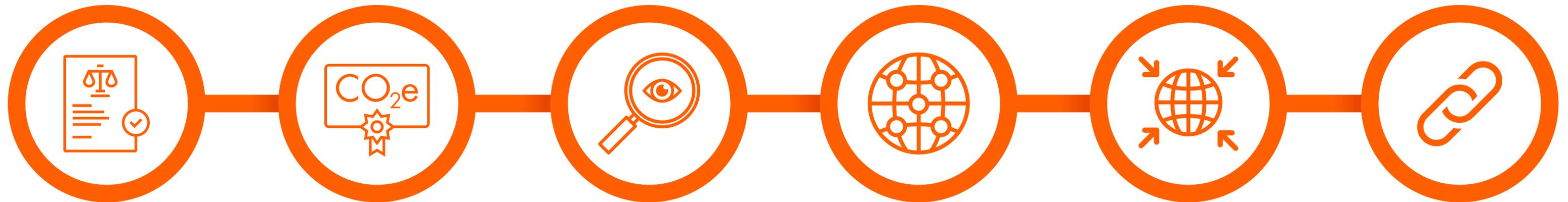
Volatility in buyer preferences leads to volatility in demand for certain types of carbon credits. This can result in increased uncertainty for buyers and developers. However, it can also lead to a rapid influx of interest and capital to new credit types, bringing agility to the market.

5. Quality benchmarks

An overhang of carbon credits of perceived lower quality negatively impacts the market and drags down average prices. A substantial number of such credits still exist in the market and have often been criticised for a variety of quality related reasons. Many such credits were issued in the early phases of the market, when standards were less mature and criteria for certification less stringent (especially for proving additionality and leakage).

Developing a more dynamic voluntary market

For the voluntary carbon market to achieve robust growth, it must mature in several areas. Positive developments in one aspect of the market will help to make progress in other areas⁶.



Perceived quality and legitimacy issues

One of the main challenges for participants is to address the perception of certain types of carbon credits and whether they are a legitimate and credible means of mitigating climate change. Several types of carbon credit projects struggle to prove they have an effective, permanent impact on global emissions or that they exhibit financial additionality, among other quality indicators such as managing leakage, or delivering a positive social impact. This leads to a perception that some projects and the credits they generate are not contributing to climate change mitigation as they should, and this has an associated impact on the market.

Standardisation

More aligned global standards are needed for the market to function effectively. Variations in the requirements set by individual standards make it difficult to compare the quality of individual carbon credits on the supply side. On the demand side, different abatement guidelines (such as the Science Based Targets initiative or the Transition Pathway Initiative) and reporting standards (for example, Carbon Disclosure Project or the Global Reporting Initiative) are unclear about the role of offsets, leaving buyers to do their own interpretations.

Transparency

Companies will have to become more transparent about disclosing their carbon credit portfolios, using widely accepted standards, if the voluntary market is to further enhance its credibility as a mechanism to address emissions. To bolster market transparency, mechanisms for tracing carbon credits also need to improve.

Infrastructure

A more developed and sophisticated global market infrastructure for voluntary carbon credits is required. The key elements needed for a mature market, such as derivatives contracts and a clearing house mechanism, are only just starting to emerge.

Converting long-term pledges into actual commitments

The rise in net-zero pledges from companies and government bodies indicates that demand for carbon credits could rise. However, a pledge to be net zero within a certain time frame requires specific plans and purchase commitments to be meaningful.

Compliance market links

Inconsistent approaches to carbon credits among compliance market regulators are holding back the development of carbon credit projects. Not all regulators allow regulated emitters to purchase carbon credits to meet part of their emissions commitments. Article 6 of the Paris Agreement is intended to facilitate the creation of a broad international carbon market – allowing participation of both public and private entities – and introduce robust accounting procedures to prevent double counting of emissions reductions. The precise details have yet to be finalised, though the debate about Article 6 will likely feature prominently at the COP26 meeting in Glasgow in November 2021.

⁶Also see related statement of the TSVCM

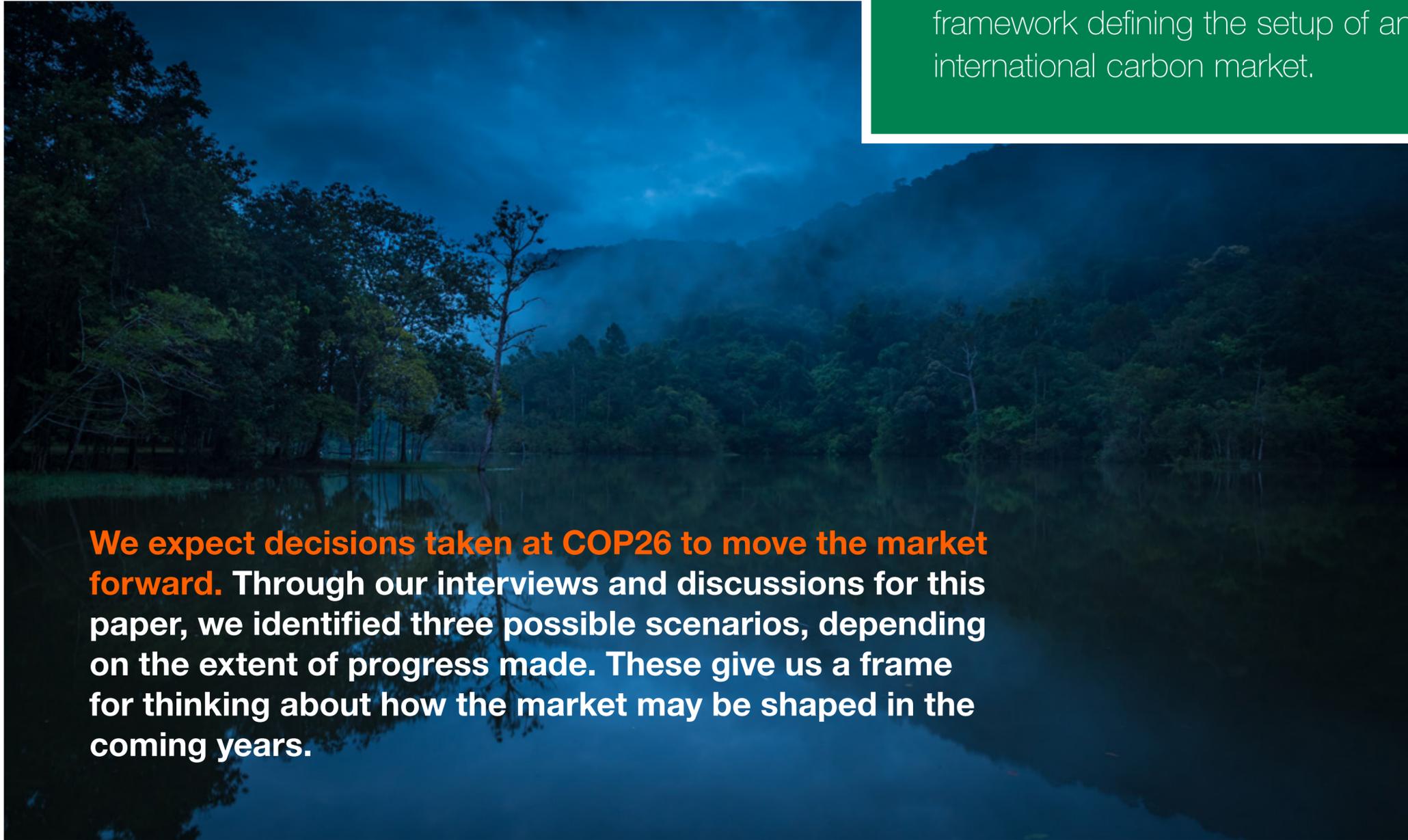
The role of regulation: Article 6

A number of factors will determine the development of the voluntary carbon market over the course of the next decade. Among the most prominent is the outcome of discussions on Article 6 of the Paris Agreement at COP26. Article 6 deals with the regulatory framework defining the setup of an international carbon market.

Areas that have yet to be resolved include: the prevention of double counting, the use of proper accounting methods, and the acceptance of certain carbon credit types.

The incremental growth of geographical and industry compliance markets will be an important factor in this respect; with more schemes in place, the need for a voluntary market will in many cases be lessened.

Article 6 deals with the regulatory framework defining the setup of an international carbon market.



We expect decisions taken at COP26 to move the market forward. Through our interviews and discussions for this paper, we identified three possible scenarios, depending on the extent of progress made. These give us a frame for thinking about how the market may be shaped in the coming years.

Market development scenarios

Global market scenario



Significant progress at COP26 (and subsequent COPs) leads to a “global” market scenario with a strong global coordinated carbon market for both compliance and voluntary corporate actions. Demand for carbon credits could rise to an estimated 2 gigatonnes of equivalent carbon dioxide (GtCO₂e) a year by 2030.

In this scenario, we would likely see higher levels of public trust in carbon credits; full transparency and comparability in how registries classify carbon credits, reassuring participants that different credits hold minimum level of quality characteristics, within distinct quality tiers; a higher degree of standardisation in market infrastructure enabling financial risk management and efficient channels of financing; and lastly, standardised certification programmes’ methodologies, and a single credit repository for all major certification programmes. Carbon credits would also be counted as part of countries’ Nationally Determined Contributions (NDCs) under the Paris Agreement.

Diverged market scenario



In this scenario, there is less global coordination and more fragmentation. The lack of convergence both across regions but also between voluntary and compliance markets make it challenging to create a common set of rules and regulations. And without significant gains by independent governance groups, there could be a continued lack of transparency and trust and perceived credibility issues for certain types of projects.

This discrepancy in quality perception will force market participants to opt for high-grade credit portfolios, likely leading to supply congestion as high-quality credit supply becomes constrained.

However, we expect the global voluntary carbon market to grow even in this scenario, as companies will need to meet their existing targets, leading to estimated annual demand reaching 0.7 GtCO₂e per year by 2030.

Linked market scenario



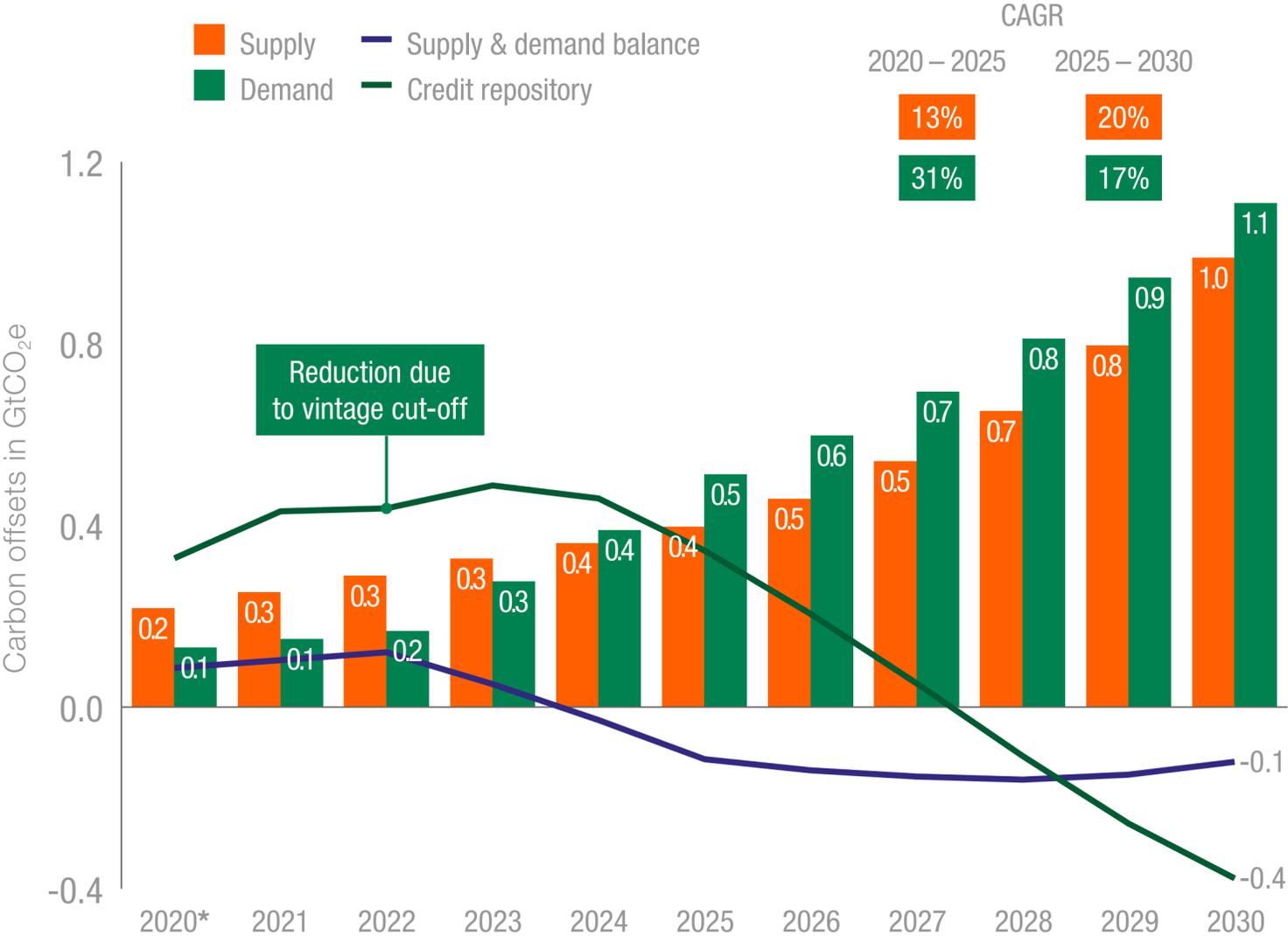
The third scenario sees decisions by policy makers resulting in greater convergence between compliance markets and the voluntary market. In this scenario, measures agreed will stop short of creating a single global carbon market. Instead, our analysis indicates that a “linked” market scenario will likely emerge, resulting in annual carbon credit demand rising to about 1.1 GtCO₂e per year by 2030.

Under a “linked” scenario, the assumption is that a greater convergence between voluntary and compliance markets will drive a rapid increase in demand for carbon credits, with an overall compound annual growth rate (CAGR) of around 24% up to 2030. Supply may not be able to keep pace – mainly due to the lead times required for developing high-quality projects – the market could tighten by 2024 on an annual basis and by 2028 on a cumulative basis.

4.5

Demand expected to exceed supply in “linked” scenario

In the central “linked” scenario, a supply shortage is expected by 2024 on a yearly basis and 2028 on a cumulative basis



*Actual
Source: Registries (Verra, Gold Standard, ACR, CAR, CDM); CORSIA; IMO; IEA; CDP; Company commitments; ICAP; Fraunhofer ISI; BCG analysis

Commentary

Driven by Article 6 alignment, voluntary and compliance markets converge but not to one global market. Demand for carbon credits increases rapidly reaching 1.1 GtCO₂e in 2030.

Ramp-up of project development struggles to keep pace, resulting in market shortage (especially for high-quality offsets) by 2024 on a yearly basis and by 2028 on a cumulative basis. The market is expected to start rebalancing in 2030.

Demand

Demand is driven by further voluntary commitments, partly already determined, as well as future commitments.

Supply

Supply shifts with buyer preferences increasingly towards nature-based solutions and especially nature-based removal credits. However, removal credits are expected to cover only ~30% of demand in 2030 due to limited technological maturity and high costs, implying further need for nature-based avoidance credits.

4.5

We expect two key drivers for demand growth. First is an increase in voluntary commitments – the major source of demand to date – beyond companies’ regulatory requirements as corporates turn to carbon credits as a key lever, alongside internal abatement measures, to meet their pledges to decarbonise.

Voluntary commitments could make up as much as 60% of demand by 2030.

Industry-specific compliance programmes will be another major source of demand in the years ahead.

The impact of Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) will likely be delayed as airlines prioritise post-COVID recovery measures over emissions targets. However, it is set to have a material impact on demand towards decade end.

In the shipping sector, the International Maritime Organization (IMO) has not yet announced its position on carbon credits, however they are likely to have a role in the industry’s efforts to curb its emissions given expectations of increasing decarbonisation ambition for the sector.

In the “linked” scenario, we expect industry compliance markets to cover up to 25% of annual carbon credit demand by 2030.

Expected supply gap

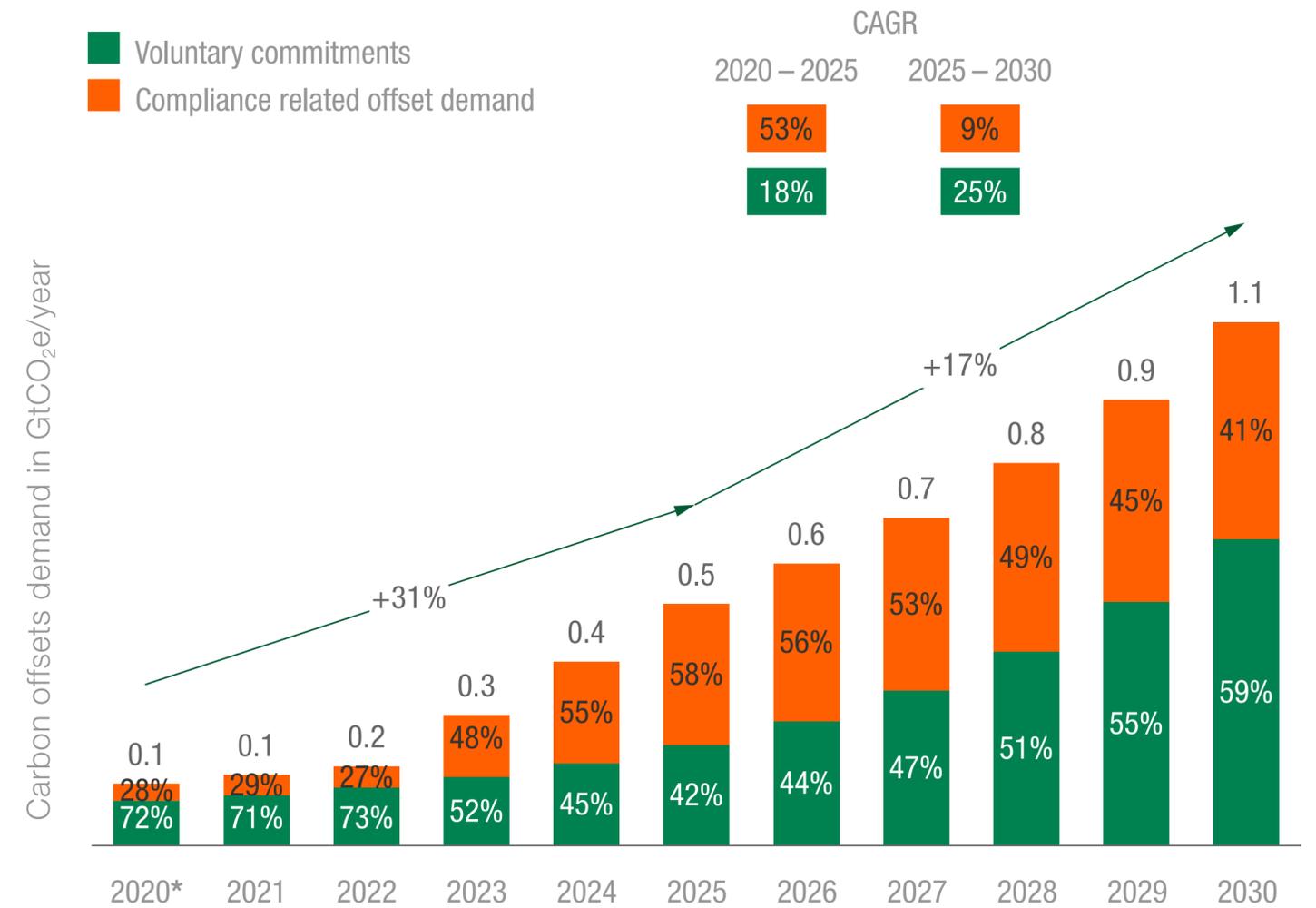
The growth in supply is expected to lag the growth in demand, although supply accelerates in the second half of the decade in all scenarios outlined above. There are several reasons for the lag, the most important being the current uncertainty about future market development, a lack of concrete commitments today from purchasers, the lead times required to execute projects, and challenges faced by project developers in accessing finance. In addition, we expect buyers to disregard older credits going forward due to quality issues (for example, the lack of additionality of older large renewable projects) and a lack of relatability.

Industry's ambitious targets
 In the ‘linked’ scenario, we expect industry compliance markets to cover up to

25% of voluntary carbon credit demand by 2030.

Voluntary commitments to drive demand

Demand driven by voluntary commitments and industry-compliance schemes



*Actual
 Compliance demand includes California CaT and other smaller geographical compliance offset demand
 Source: Registries (Verra, Gold Standard, ACR, CAR); CORSIA; IMO; IEA; CDP; Company commitments; ICAP; Fraunhofer ISI; BCG analysis

5.0

Future market characteristics



Future market characteristics

A focus on quality

“In the next 5 years, the market will get far more transparent – there is no question that offset buyers will increasingly focus on high-quality offsets.”

Senior Sustainability Manager,
Chemicals Company

“Brand image may get tarnished if we invest in low-quality carbon projects. The carbon credits might get disqualified in future for some reason. I don’t want to pay for “Hot air” but rather genuine projects.”

Senior Sustainability Manager,
Chemicals Company

The most important factor in shaping the future market will be buyers’ increasing focus on credit quality, driven by credibility, project type, value chain proximity, and the co-benefits beyond pure emission reductions. There is a concerted push for improved standardisation and transparency measures which allow purchasers to better compare carbon credits, and a marked shift, already visible today, in buyer preferences towards types of carbon credits over price considerations.

Work done by groups such as the Taskforce for Scaling Voluntary Carbon Markets (TSVCM) is contributing towards this change.

Over the next decade, purchasers of carbon credits are likely to favour emissions removal projects and, within these, nature-based projects.

“We clearly prefer to buy removal over avoidance carbon credits. However, the supply shortage in nature-based removals is already a reality today, especially for projects that allow players to build a compelling story around them.”

Senior Director Environmental
Sustainability, Tech Company

Buyers will choose these types because they see them as offering a compelling narrative along with credibility, largely due to permanence and additionality considerations as well as the co-benefits that most nature-based projects generate. The narrative is especially compelling when a company selects projects which are connected to its own value chain. Afforestation, reforestation, and soil enrichment projects will benefit from the growing interest in nature-based removals.

“A mistake for 1% of offsets will threaten the entire programme, especially with the history and size of a player like ourselves.” Director, O&G company



5.1

Removal credits (from reforestation and afforestation) will likely only meet around a third of overall demand for carbon credits by 2030, according to our analysis. This is because removal projects need significant lead times and won't be able to match the rapid growth in credit demand. Given their large carbon footprints, oil and gas, technology, and apparel companies alone could absorb the total supply of removal credits from now until 2030.

Indeed, the top-five Big Tech companies could cause a supply shortage of removal carbon credits in 2025 if they opted to buy only removal credits to cover just their Scope 3 emissions⁷.

Engineered removals, such as direct air capture (DAC) and biochar, are still in the early stages of their technological maturity. While they may develop quickly, they may not be cost competitive or available at scale before 2030, despite significant investment from corporates. We expect them to account for just 3-6% of carbon credit supply by 2030, unless technological breakthroughs are achieved.

Engineered avoidance projects – such as solar, wind, and run-of-river hydro – currently



The preservation of forests will be an important driver of demand for nature-based avoidance projects in the short to medium term, as well as being crucial in the fight against climate change.



⁷ Emissions which are generated by the use of their products and services.

account for half of all carbon credit supply. For some, growth will level off, driven primarily by renewables as many current projects will not generate further credits and because new large projects often lack financial additionality (i.e., such projects are no longer dependent on the revenue from carbon credits for financial viability or sustainability). However, other engineered solutions, including emission reductions from household devices and fuel switching to more efficient fuels, are expected to grow as we head towards 2030.

Deforestation contributes over 10% of global emissions every year⁸. Therefore, the preservation of forests will likely be an important driver of demand for nature-based avoidance projects in the short to medium term.

As the TSVCM highlighted, “Ideally, on top of decarbonising their own operations and value chains in line with scientific consensus, companies also compensate and neutralise their emissions “on the path to net-zero”... We call for high ambition companies to go above and beyond plans that regard net-zero only as an endpoint.”

The available number of nature-based avoidance projects – including forest management, grassland, and wetland projects – looks set to grow, helped partly by the general demand for nature-based solutions, but also as:

- avoidance projects are often more cost-effective than removal projects, due to their relative position on the emission abatement curve.
- they can achieve scale quickly, with significant credit volumes available, for example when halting deforestation.
- they can provide substantial co-benefits, including the support of local communities and a positive impact on ecosystems.

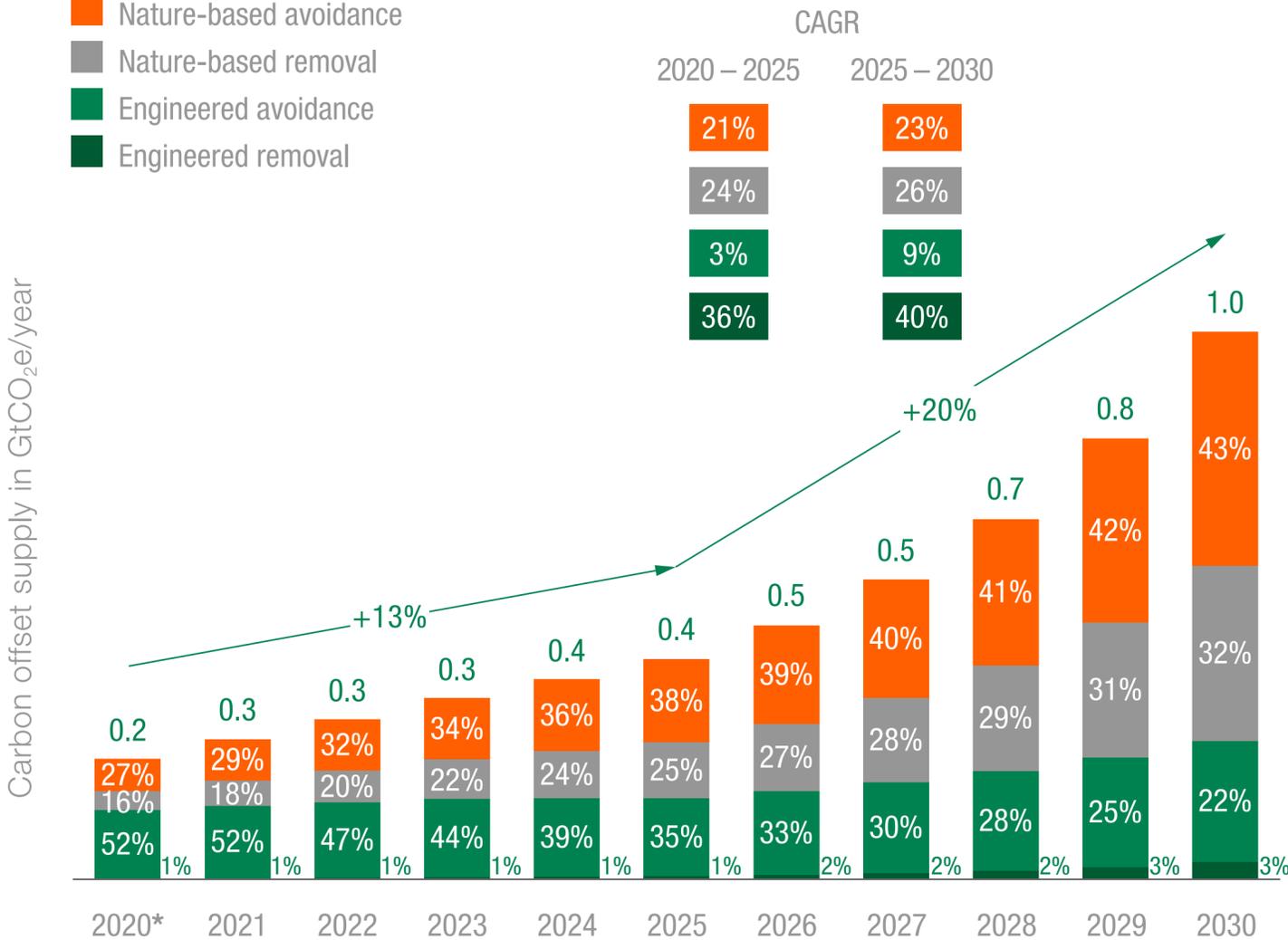
⁸ International Union for Conservation of Nature (IUCN) website.

5.2

Supply likely to shift towards nature-based solutions

Supply shifts to nature-based solutions & especially nature-based removals – engineered avoidance levels off as renewables additionality decreases

- Nature-based avoidance
- Nature-based removal
- Engineered avoidance
- Engineered removal



*Actual
 Please note: Hybrid credits are split equally between the respective categories (e.g., Increased Forest Management) 1. Sustainable Development Goals
 Source: Registries (Verra, Gold Standard, ACR, CAR); CORSIA; IMO; IEA; CDP; Company commitments; ICAP; Fraunhofer ISI; BCG analysis

Commentary

Increasing demand for high-quality offsets drives supply of nature-based offsets – engineered avoidance levels off as renewables additionality decreases.

Nature-based solutions

Buyers are interested in compelling stories (e.g. value chain proximity, support of SDGs) and high project credibility, driving project development investments towards nature-based solutions and especially removals.

Engineered solutions

Engineered avoidance supply keeps growing but levels off as buyers prefer nature-based solutions. Engineered removals grow, but only start to play a role by 2030.

Five signals to watch for market growth

The enormity of the climate challenge requires action now. Given the magnitude of the change needed, and the readily available solutions that exist at present, there is opportunity for all.

Companies often lack a clear, step-by-step emissions abatement strategy within the timeframe of their pledges. Alongside emissions reductions programmes in their supply chain, the voluntary carbon market provides the means for them to have a direct and immediate effect on climate change.

“We need to find projects that are directly relatable to our supply chain.”

Former Sustainability Manager,
Sportswear Company

Progress on five critical signals would demonstrate that the market is supported and realising its potential.

These five signals would help indicate market development in the short term. Alongside, a last-resort option could be tighter regulations in the event of non-action by companies⁹.

⁹ See also recently published TSVC work

1 Greater clarity from regulators on the future relationship between the voluntary market and compliance markets would help market participants to more accurately determine future carbon credit demand, mobilising supply.

2 Concrete financial commitments from buyers by converting long-term pledges into detailed, actionable carbon credit purchase plans over a two to three-year time frame, would drive capital commitments and activate resources for the development of projects. Clear buyer commitments under long-term agreements would increase price certainty and enable developers to plan securely over the medium-term, making investing in projects more attractive.

3 Access to financing is key if project developers are to scale up the supply of carbon credits in the volumes, and at the speed, needed to keep up with growing demand. Tackling the lack of firm commitments from buyers to purchase carbon credits – both in the short and long-term – would unlock project financing from banks and enable other traditional financing institutions to enter the market and provide capital to developers.

4 Shorter project lead times, achieved through improved standardisation of methodologies and leaner registration processes, would enable carbon credit supply to ramp up faster. A quicker ramp up could also be achieved through a more compressed carbon crediting process, resulting in earlier issuance of credits and faster financial pay-outs for project developers. This should not, however, be at the expense of credibility.

5 Incentives encouraging developers to scale up and increase the size and scope of projects – through aggregation (for example, method stacking) and new methodologies – could also boost carbon credit supply.



An aerial photograph of a dense, vibrant green forest. A winding river flows through the center of the forest, its water appearing dark blue. The forest canopy is thick and textured, with various shades of green. In the bottom left corner, there is a small, bright green field. The overall scene is a lush, natural landscape.

6,0

Conclusion

Conclusion

The voluntary market is undergoing significant growth as companies seek ways to reduce their carbon footprints. However, it remains a small proportion of today's carbon markets – less than 1% of global emissions versus 16% covered by compliance markets and carbon taxes.

There are several hurdles that need to be overcome for the market to achieve its full potential. These include a lack of transparency and, in some instances, lower levels of trust among buyers and other stakeholders in certain types of projects.

As these issues are addressed, we expect the annual demand to increase to nearly 1.1 GtCO₂e by 2030 as modelled in our linked scenario. At the same time, we anticipate a demand/supply gap by the mid-2020s, driven on the demand side by a strong rise in decarbonisation commitments, and on the supply side, by a lack of high-quality carbon credits to meet that demand.

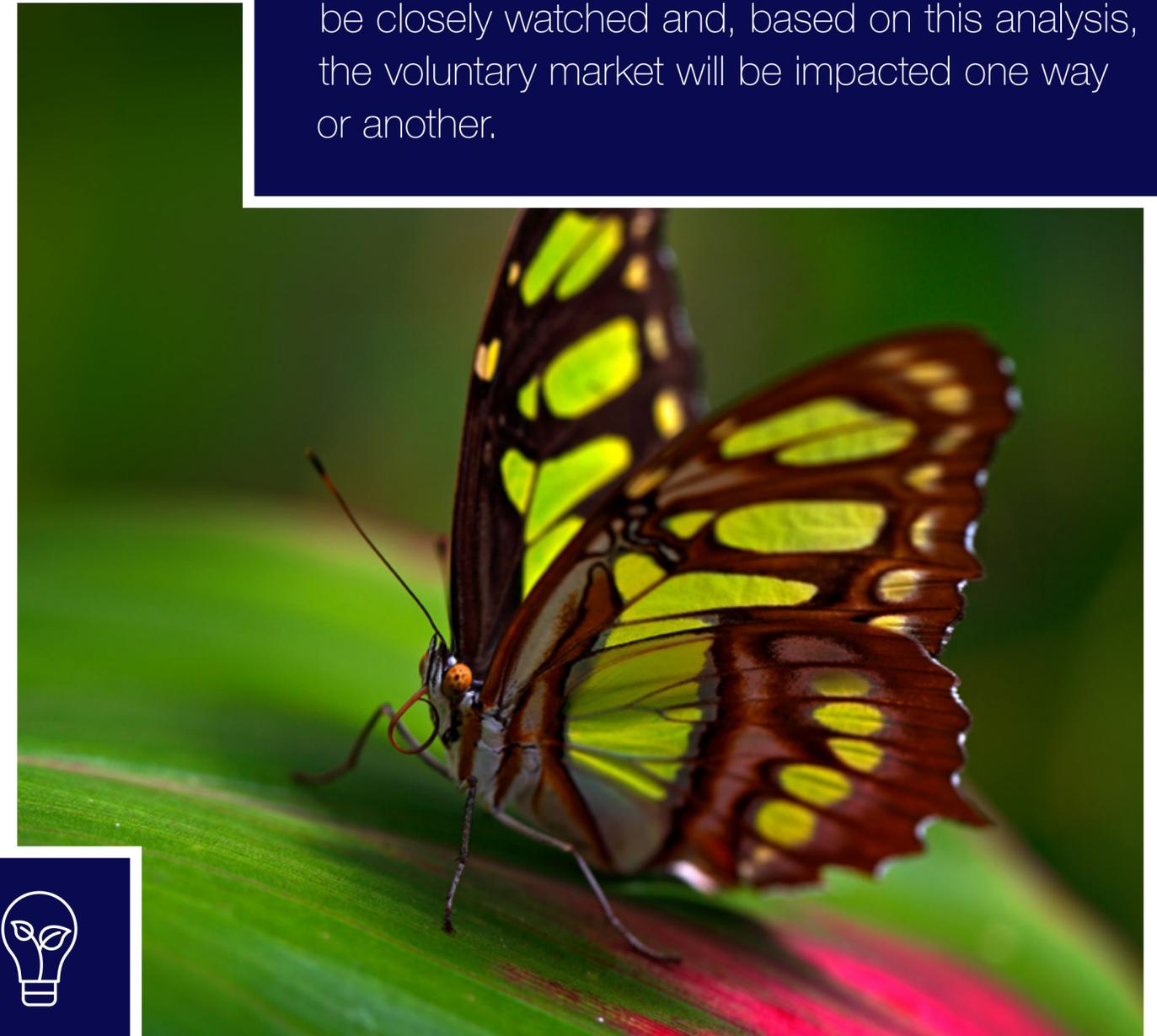
Buyers focusing on quality are likely to increasingly look to nature-based solutions as a source of credits. Carbon removal

credits would play a key role in the linked scenario, although would be unable to scale to meet all demand. High-quality avoidance credits generated from projects which protect natural carbon sinks under threat, will be critical in meeting both corporate emissions reduction pathways on the journey to net-zero, and contribute to overall climate goals given the carbon emissions generated by activities such as deforestation.

The outcome of COP26 in November 2021 will be closely watched and, based on this analysis, the voluntary market will be impacted one way or another. The relationship between the compliance and voluntary markets will be a key factor in the demand for carbon credits this decade, alongside clear buyer commitments, access to finance, project development timescales, and size and scope of projects.

Ultimately, the voluntary carbon market is coming of age and quality will be the determining factor in its success and in the buying habits of its participants. Alongside making absolute emissions reductions, the need for immediate action should find a vital part of the solution in a high-quality voluntary carbon market.

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