



The Future of Voluntary Carbon Markets

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Foreword

On behalf of the UK Voluntary Carbon Markets Forum, I am pleased to introduce this guide to the market. We have produced this as a digestible introduction to the array of initiatives that have developed recently to support the scaling of high integrity voluntary carbon markets (VCMs).

Carbon offsetting is a complex subject and not without its detractors. Globally agreed governance principles and clear standards are fundamental to the proper supply and use of credits that align to the ambition of the Paris Agreement and can accelerate the delivery of its promise.

Investments in carbon offsets offer huge potential for tackling the immense and inequitable challenge of climate change. They can facilitate a just transition. Voluntary carbon markets will allow capital to flow to projects that reduce/avoid or remove/sequester carbon and to propel new carbon capture technologies. The growing demand for a supply of quality carbon offsets provides a catalyst to the innovation and behavioural shift needed from a broad range of private, corporate and government actors.

As we build these solutions there will be an unprecedented need for global cooperation. My hope is that COP26 will provide an opportunity for the private sector to work together with the public sector and civil society to build a better collective understanding of the role that market solutions can play in securing a safe and prosperous future for our planet.

For those interested in the potential for VCMs, this guide sets out a vision for well governed and efficient markets that can transform the transition to net zero.



Dame Clara Furse DBE,
Chair of the UK Voluntary
Carbon Markets Forum



To ensure high integrity VCMs, the Taskforce for Scaling Voluntary Carbon Markets (TSVCM) set out six areas for action:

- 1 Core Carbon Principles (CCP) to ensure credits of high integrity**
- 2 Core carbon reference contracts to drive a transparent price signal**
- 3 Infrastructure supporting trade, post-trade, financing, and data**
- 4 Strong and transparent demand signalling**
- 5 Consensus on legitimacy of offsetting**
- 6 Market integrity assurance e.g., legal and accounting enablers in place**

Additionally, the Voluntary Carbon Markets Integrity Initiative (VCMI) has identified the need for further work on demand side integrity, including guidance to ensure claims made are transparent, credible and widely understood.

Introduction

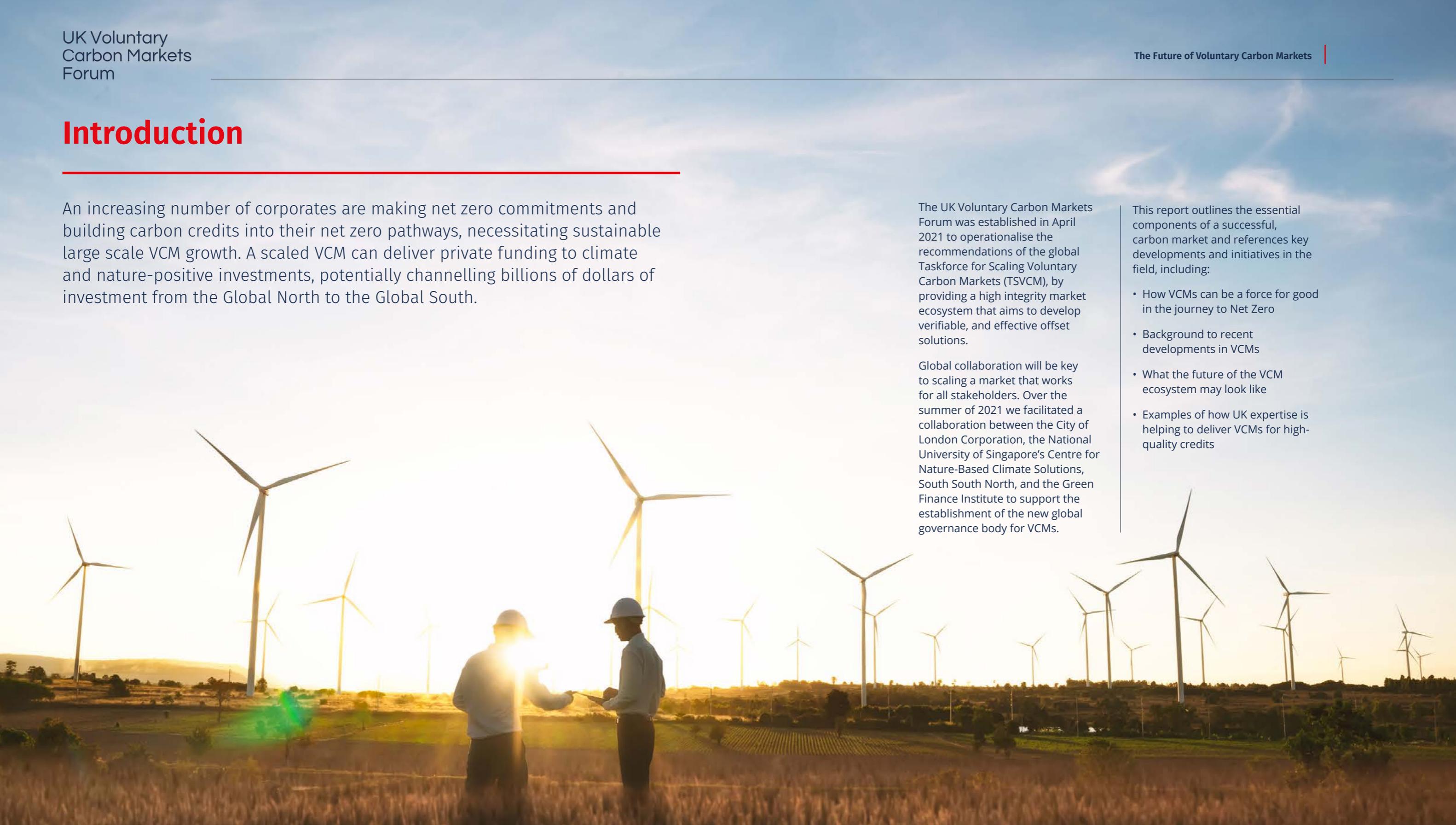
An increasing number of corporates are making net zero commitments and building carbon credits into their net zero pathways, necessitating sustainable large scale VCM growth. A scaled VCM can deliver private funding to climate and nature-positive investments, potentially channelling billions of dollars of investment from the Global North to the Global South.

The UK Voluntary Carbon Markets Forum was established in April 2021 to operationalise the recommendations of the global Taskforce for Scaling Voluntary Carbon Markets (TSVCM), by providing a high integrity market ecosystem that aims to develop verifiable, and effective offset solutions.

Global collaboration will be key to scaling a market that works for all stakeholders. Over the summer of 2021 we facilitated a collaboration between the City of London Corporation, the National University of Singapore's Centre for Nature-Based Climate Solutions, South South North, and the Green Finance Institute to support the establishment of the new global governance body for VCMs.

This report outlines the essential components of a successful, carbon market and references key developments and initiatives in the field, including:

- How VCMs can be a force for good in the journey to Net Zero
- Background to recent developments in VCMs
- What the future of the VCM ecosystem may look like
- Examples of how UK expertise is helping to deliver VCMs for high-quality credits



Background to VCMs

Decarbonisation commitments are driving up demand

Leading global corporates are setting 'net zero' targets and many expect to rely on some carbon credit use to deliver this. In addition to corporates' primary obligation to decarbonise, additional compensation and neutralisation have an important role to play to achieve a 1.5° pathway. It is essential that any use of carbon credits that forms part of corporate climate commitments is done through quality projects.

National governments also have targets under the Paris Agreement. Decisions on 'Article 6' at COP26 could unlock significant voluntary carbon credit demand from governments.



VCMs are undergoing rapid transformation

The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) has brought together a multitude of interested parties to deliver recommendations to provide governance and scalability to the market, enabling VCMs to play a critical role in bridging our economy to net zero. Efforts around the market are focussing on four key developments:

1. Scaling supply, including unlocking new technologies

While a range of VCM technologies exist, many scalable solutions such as renewable energy will be more difficult to verify going forwards. The market is developing to attract sustainable finance into a range of technologies including alternative technologies such as nature-based solutions (NBS)¹ and emerging technologies such as DAC² or CCUS³.

2. Minimum standards for carbon credits are currently being drafted

The new Integrity Council for Voluntary Carbon Markets (IC-VCM), announced by the TSVCM, is drafting Core Carbon Principles (CCPs) to provide minimum standards for carbon credits. This is expected to enable the market to catalyse their demand and hence, support supply of carbon credits. The new Council will also advocate for the inclusion of the rights and voices of Indigenous Peoples and local communities that host carbon credit projects.

3. Solidifying demand signals via development of guidance on use of carbon credits in corporate claims

Multiple frameworks, standards and initiatives are emerging on the use of carbon credits in net zero strategies.

The Voluntary Carbon Markets Integrity Initiative (VCMI) is developing best practice guidance for the use of carbon credits and credible corporate claims.

4. Connecting registries to better enable accurate carbon accounting

The number of compliance, national, and voluntary crediting programmes is increasing as a result of the Paris Agreement. Carbon markets will look to connect them to drive efficiencies and to lower the cost of abatement. Yet doing so increases the risks of double counting and double claiming.

The IHS Markit Carbon Meta-Registry is an online platform that connects disparate environmental markets and registry systems around the world to mitigate the risk of double-counting and double-claiming of credits.

¹ Nature based solutions are actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits. Source: International Union for Conservation of Nature.

² DAC Direct Air Capture is a technology that captures carbon dioxide directly from the air with an engineered, mechanical system. Source; Carbon Engineering

³ CCUS: Carbon capture, utilisation, and storage technologies involve the capture of carbon dioxide (CO₂) from fuel combustion or industrial processes, the transport of this CO₂ via ship or pipeline, and either its use as a resource to create valuable products or services or its permanent storage deep underground in geological formations.

Examples of initiatives enhancing demand-side integrity



The “Oxford Principles for Net Zero Aligned Carbon Offsetting” (September 2020) set out 4 principles encouraging the prioritisation of emissions reductions before using offsets and the use of high quality credits.



The Science Based Targets Initiative (SBTi) provides companies with a clearly-defined path to reduce emissions in line with the Paris Agreement goals. Carbon credits are an option for companies wanting to finance additional emission reductions beyond their science-based targets.



The VCMI has laid out a Roadmap to ensure voluntary carbon markets play a credible role in the achievement of the Paris Agreement temperature goal and UN Sustainable Development Goals. Key components of VCMI’s work will be to (1) address whether and how businesses’ use of carbon credits can be truly above and beyond and not displace or delay science-based action on decarbonisation; (2) guarantee carbon credits are underpinned with high integrity projects that benefit local communities and Indigenous Peoples – supporting sustainable development and aligned with national climate priorities; (3) work with governments to develop Country Access Strategies to attract investment that supports the achievement of their Nationally Determined Contributions (NDCs).



The Sustainable Market Initiative’s Financial Services Task Force has signalled its support for carbon credits. Signatory banks are pledging to support their clients in their commitments to science-based decarbonisation efforts, by encouraging the use of carbon credits to balance residual emissions where there are limited technologically or financially viable options to abate.

The “High Ambition Path to Net-Zero” is a statement encouraging companies to compensate and neutralise their emissions “on the path to net zero,” on top of decarbonising their own operations and value chains in line with scientific consensus. Key signatories include Mark Carney, Lord Nicholas Stern, Günther Thallinger, and Bill Winters.

Delivering wider benefits

A liquid voluntary carbon market at scale would allow billions of dollars of capital to flow from those making net-zero commitments into the hands of those with the ability to reduce and remove carbon, accelerating the transition to net zero.

Some projects can also generate broader environmental, social and economic benefits, ranging from:

- Protecting biodiversity
- Supporting local communities, Indigenous Peoples and job creation
- Improving health outcomes from avoided pollution
- Moving private capital to the Global South where the bulk of natural capital and lower-cost mitigation options are located

- Scaling emerging climate technologies down the cost curve, facilitating their cost-effective use in direct emissions reductions

At its core, a carbon credit represents a direct investment in the transition to a low-carbon economy. This is an attractive alternative to debt, which is common in development finance but may not always be in the best interest of the recipients.



Today's marketplaces for carbon credits will not serve the needs of 2030 requirements

and an enhanced, high integrity market will require



Demand for voluntary carbon credits has been increasing rapidly in recent years, doubling over the last three to four years, reaching 95MtCO₂e in 2020.



By 2030, market demand is estimated to be 1.5-2 GtCO₂e.

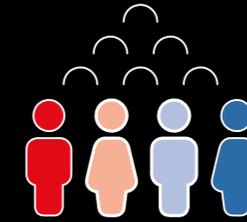
A recent WEF report estimates that 0.2 GtCO₂e are already committed to use by 700 of the world's largest corporates today.



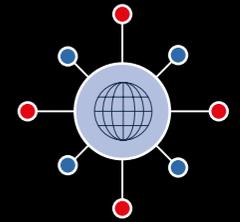
Today, high quality carbon credits are scarce because accounting and verification methods are still maturing, and the co-benefits are seldom well defined.



A commitment to governance, corporate integrity and an agile regulatory regime



Access to a highly qualified talent pool to tackle complex issues, e.g., accounting and verification



Centred on a global hub to bring together geographically diverse buyers and sellers



Access to a deep pool of global capital and key demand drivers to motivate investment



Innovative ecosystem supporting accounting and verification via new technological solutions



Enhanced trade and post-trade infrastructure to ensure transparency and market efficiency

Linking the price and quality of carbon credits can be challenging

Multiple factors determine carbon credit quality and prices.

Additionality

Projects must genuinely yield emission abatement that would not have otherwise occurred

Co-benefits

Some projects deliver benefits beyond carbon emissions reductions. Co-benefits must take into account the rights and needs of Indigenous Peoples and local communities impacted by projects

Leak Mitigation

Projects must not displace emissions to a different location

Permanence

Projects must lead to reduced emissions for the stated life span. Mitigation actions must be taken against reversal risks

Measurability

Carbon reductions are quantified and monitored via a credible standard and only counted once

Safeguards

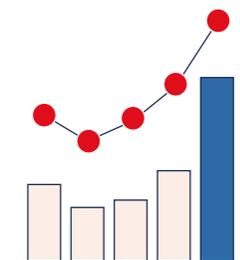
Measures must be taken to prevent social or environmental consequences



Demand for credits is set to grow, providing the opportunity for finance to flow at scale to new projects.

Trove Research estimates that increased demand in VCMs could drive prices up to \$25-\$100/tCO₂e by 2030. This could motivate substantial investment in nature and technology-based projects.⁴

Average prices today are around \$3-\$5/ tCO₂e. Part of the reason prices are so low is an oversupply of low-quality credits, and a lack of market transparency which can stop buyers from clearly understanding the quality of a credit and how it should be priced.



\$25-\$100

Research estimates that increased demand in VCMs could drive prices up to \$25-\$100/tCO₂e by 2030

Better financial infrastructure can deliver a more transparent market with higher quality of credits and higher prices

- One of the key issues in today's voluntary carbon markets is that there are no "liquid" reference contracts (e.g. spot and futures) with a daily, reliable price signal.
- This makes price risk management costly and serves as an impediment to the growth of supplier financing. In order to concentrate liquidity and unlock the benefits that come with it, there is a need for core carbon reference contracts that can be traded on exchange.
- Over-the-counter (OTC) markets can also benefit from reference contracts as they could use the price of the core carbon contract as a starting point and then negotiate pricing for additional attributes.
- In the medium to long term, a liquid spot and futures market for carbon credits would also provide a great foundation for structured finance offerings because it would provide clarity on pricing and facilitate risk transfer, improving the overall bankability of these projects.



A commitment to global governance will underpin market integrity

TASKFORCE ON SCALING VOLUNTARY CARBON MARKETS

The 'Taskforce on Scaling Voluntary Carbon Markets' (the "Taskforce" or "TSVCM") is a private sector initiative working to scale an effective and efficient voluntary carbon credit market to help meet the goals of the Paris Agreement.

- The Taskforce was initiated in 2021 by Mark Carney, UN Special Envoy for Climate Action and Finance, and former Governor of the Bank of England
- Its aim is to bring all parts of the value chain together to identify solutions for the market
- Over 250 member institutions are involved. These include not only buyers and sellers of carbon credits, but also civil society, academia, and international organisations



In the autumn of 2021, the Taskforce launched Integrity Council for Voluntary Carbon Markets (IC-VCM), a global governance body which will bring high-quality, transparent and consistent meta-standards – Core Carbon Principles (CCPs) – to the supply of carbon credits.

The CCPs will identify carbon credits that deliver additional, high-quality emissions reductions with real environmental and social impact and will allow the market to scale with integrity.

The majority of the IC-VCM Board Members will be independent individuals from the NGO and civil society sectors. Individuals from over 12 countries are represented, with a high proportion (~40%) of voices from the Global South.

The IC-VCM is also beginning a process to appoint representatives from Indigenous peoples and local communities to its board, to ensure participation by communities where the majority of nature-based projects are located.

VCMI

Voluntary Carbon
Markets Integrity
Initiative

The Voluntary Carbon Markets Integrity Initiative (VCMI) has laid out a Roadmap to ensure voluntary carbon markets play a credible role in the achievement of the Paris Agreement temperature goal and UN Sustainable Development Goals.

VCMI's Roadmap will be taken forward in collaboration with global climate action leaders from governments and civil society – and in consultation with businesses demonstrating leadership on climate action.

VCMI focuses on ensuring that the voluntary use of carbon credits aligns with and contributes to the achievement of the goals of the Paris Agreement and that claims made about this use are transparent, credible and widely understood.

The UK is committing its experience and expertise to the new Integrity Council for Voluntary Carbon Markets (IC-VCM)

Leadership

Offering leadership of the Taskforce's mission to bring greater quality, integrity and scale to VCMs

Operationalising a robust, well governed, liquid and efficient market for a global VCM

Markets Expertise

Providing critical experience from financial and professional services markets

Managing interlinkages to the broader financial system

Standards Expertise

Drawing on UK experience to produce technical standards on a range of services

Coordinating the work of the expert panel developing CCPs

Example UK actors (not exhaustive)



Founding Sponsor

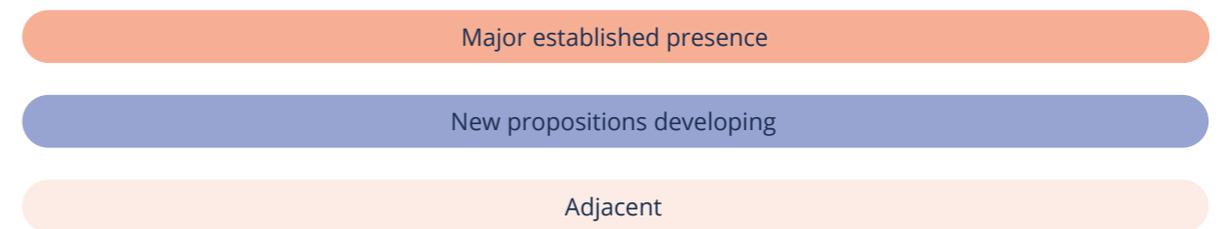


Operational Lead of the
Executive Secretariat



Standards Lead of the Executive
Secretariat

UK-based market participants are building solutions to drive integrity across the value chain



Energy Majors & Independent Traders



Playing an active role across value chain from origination to distribution
A growing number of independent traders are establishing voluntary carbon trading desks in addition to compliance carbon. Strongest demand for products with green wrappers (e.g. carbon-free crude oil)

Banks



Developing propositions to help corporate and retail customers seamlessly access voluntary carbon markets

Inter-dealer brokers



Strong presence in related markets (carbon permits, commodities)

Asset managers and Investors



Dedicated funds are developing which are focused on natural capital. There is a growing interest in offsetting portfolio emissions

Specialist brokers



Multiple providers are playing a brokerage role for corporate clients

Trading Venues



A strong intermediary network is present for existing clearing and exchange infrastructure. New propositions are under development

Standards & Registries



Several standards providers and corresponding registries active in UK. Meta-registries also have been launched

Price reporting agencies



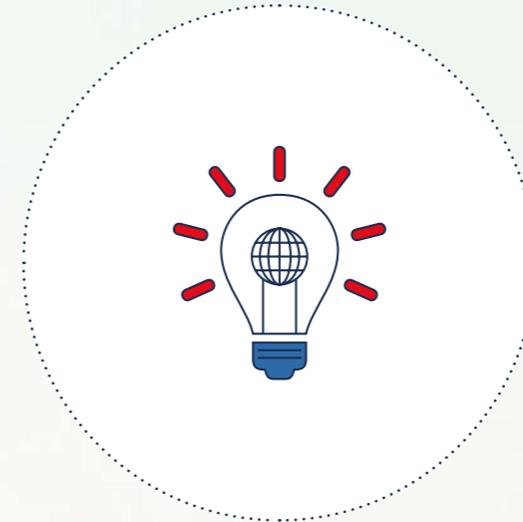
Price benchmarks are live in the market. More will follow once core reference contracts for voluntary offsets are established

Leveraging our resources to catalyse a successful, VCM ecosystem

Seafields is building a nature-based sequestration solution using Sargassum in the oceans, which aims to capture and permanently remove one gigaton of CO₂ every year, financed via the voluntary and regulated carbon markets.

Carbon Engineering has spent more than a decade developing Direct Air Capture technology, and is now working with multiple partners to deploy megaton-scale facilities and produce permanent carbon removal on behalf of customers in both voluntary and regulated markets.

ICE offers the largest and most liquid environmental markets in the world to price carbon, environmental attributes, and manage climate risk. More than 14 gigatons of carbon trades on ICE annually, equivalent to c.40% of the world's total annual emissions footprint. ICE plans to launch a Nature-Based Solutions carbon credit futures contract, traded and cleared in London, which will physically deliver credits certified under Verra's Verified Carbon Standard (VCS) and Climate, Community and Biodiversity (CCB) Standards Programs.



The IHS Markit Carbon Meta-Registry is an online platform to mitigate the risk of double-counting and double-claiming of credits. It supports governments, multinational institutions and compliance / voluntary programmes. The platform will soon expand to include liquidity platforms, trust custodian banks and others, including project developers, traders, brokers and end buyers.

The London Stock Exchange is creating solutions to direct capital flows into projects that address the climate crisis, to support a just transition to a low carbon economy.



With contributions from:

BCG
KPMG
Oliver Wyman

The UK Voluntary Carbon Markets Forum is a group that aims to operationalise a global, high integrity market for voluntary carbon credits; an essential component of an accelerated and economically productive transition to net zero. The Forum is chaired by Dame Clara Furse. Its members reflect a range of stakeholders from the corporate, financial, legal, and non-profit sectors. The City of London Corporation provides secretariat support.

Members of the Steering Committee include:

Kathy Benini, Managing Director at IHS Markit; Koushik Chatterjee, Executive Director and Chief Financial Officer at Tata Steel; Edward Hanrahan, Director at ClimateCare / Natural Capital Partners; Peter Harrison, Group Chief Executive at Schroders; Julia Hoggett, CEO of LSE, plc; Carol Howle, Executive Vice President, Trading and Shipping at bp; Nigel Howorth, Partner at Clifford Chance; Cindy Levy, Senior Partner at McKinsey & Company; Catherine McGuinness, Chair of Policy and Resource at City of London Corporation; Noel Quinn, Chair of the Sustainable Markets Initiative (SMI) Financial Services Taskforce and CEO of HSBC; Dame Anne Richards DBE CVO FRSE, CEO of Fidelity International; Professor Lord Nicholas Stern, Chair of the Grantham Research Institute on Climate Change and the Environment; Nick Studer, CEO of Oliver Wyman; Dr. Rhian-Mari Thomas OBE, CEO of Green Finance Institute; Stuart Williams, President, ICE Futures Europe, Intercontinental Exchange; Bill Winters CBE, Chair of the Taskforce on Scaling Voluntary Carbon Markets and CEO of Standard Chartered.

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