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The Power of Together

Voluntary carbon markets

Upscaling net zero ambition

December 2021

A new global carbon market…

In our previous article, we focused on the role of the regulated carbon markets as a means to drive down greenhouse gas emissions. The regulated markets cannot on their own however achieve the levels of greenhouse gas emissions reductions necessary to keep the rise in global temperatures below 2°C limit (whilst aiming for 1.5°C).

The voluntary carbon markets will play an important role in upscaling global efforts to combat climate change and the ability of countries to meet their national emissions reduction targets.

In this alert, we look at how the voluntary carbon markets work and how businesses can use them to realise their own climate change goals.

Note: the location of the yellow markers identifying existing carbon markets may not be exact given that the map is not to scale.

A new framework – the basics

After six years of negotiations, the rules for the creation of a new, global, carbon market pursuant to Article 6 of the Paris Agreement were finally put in place at the 2021 United Nations Climate Change Conference in Glasgow.

Under Article 6, countries can:

- voluntarily participate in bilaterally governed cooperative approaches to generate and trade carbon credits (Article 6.2);
- voluntarily participate on a multilateral basis to generate and trade carbon credits, with an associated multilateral governance structure (Article 6.4); and
- voluntarily participate in non-market based approaches to promote sustainability (Article 6.8).

Under Articles 6.2 and 6.4, countries may voluntarily trade the benefits created by projects that remove or reduce emissions (known as "**internationally transferred mitigation outcomes**") provided that such internationally transferred mitigation outcomes:

- are real and verified;
- are measured in metric tonnes of carbon dioxide equivalent;
- are generated from 2021 onwards*; and
- are authorised for application towards a country reducing its CO2e emissions and, if applicable, towards a country achieving its minimum emissions reduction targets.

If a country makes any internationally transferred mitigation outcomes available on the global market then such country must apply a corresponding adjustment to its own emissions reduction records so as to ensure there is no 'double-counting' of the benefit of the mitigation outcome that is transferred as between (i) the country making the transfer; and (ii) the country receiving the transfer.

Countries must report information regularly (at least annually) about the internationally transferred mitigation outcomes that they transfer or receive and the corresponding adjustments that they make. Such reports will be reviewed and verified by a technical expert. A centralised accounting and recording platform will record all data submitted by all countries and will be monitored.

* A compromise allowing emissions reduction credits from projects registered after 1 January 2013 for the purposes of countries meeting their first annual target under the new framework has been widely criticised on the basis that the 'quality' of older credits falls short of what is required to minimise global warming within the 2°C limit and risks to produce a misleading positive result relating to collective efforts to reduce global emissions.

The role of voluntary carbon markets

Significantly greater commitment is required to narrow the emissions gap (being the difference between the 2°C limit and current emissions trends). Global efforts to reduce emissions of greenhouse gases are currently estimated to fall approximately 40% short of global reduction targets.

Voluntary markets operate outside the regulated markets and allow participants to trade credits (each representing one metric tonne of a greenhouse gas) to meet their respective greenhouse gas emissions reduction targets.

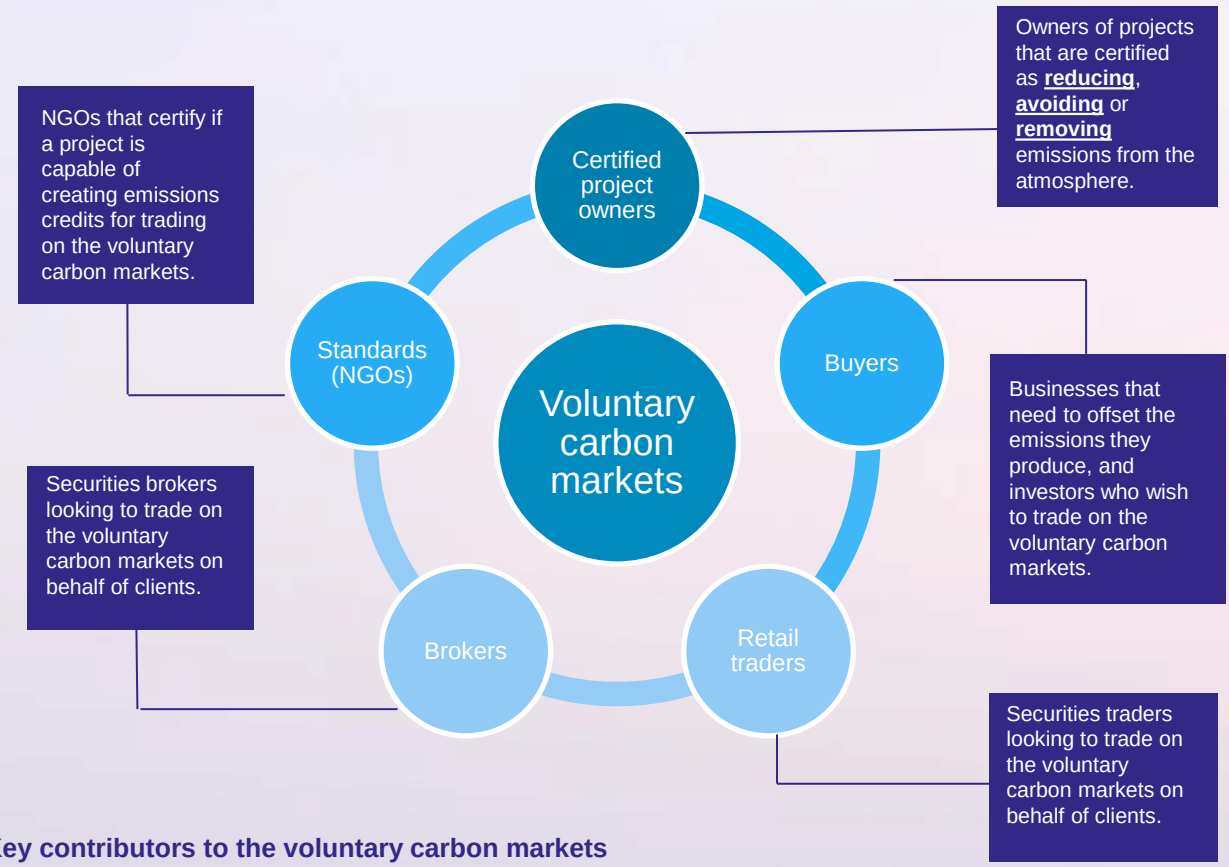
The voluntary carbon markets are more liquid than the regulated markets with the potential to be accessed by businesses and investors across a broad range of industries and jurisdictions. However, in order for carbon pricing to be effective, the price per unit needs to be much higher.

Protagonists believe that the voluntary carbon markets can radically reduce global greenhouse gas emissions.

Sceptics, on the other hand, argue that allowing emitters to 'pay to pollute' is not the answer to the critical problem of climate change and that, with many countries accelerating their net zero targets, a more appropriate response is for carbon trading to be replaced by more transformational measures.

Perhaps, the truth lies somewhere in between.

Whilst an instant switch to zero-carbon is wholly unrealistic, trading and offsetting greenhouse gas emissions is only part of the journey to net-zero. Policy-makers must also legislate to permanently remove greenhouse gas emissions from the atmosphere (which is what the Article 6 rules aim to achieve, although there will no doubt be a need for supplemental rules and guidelines to address issues as they arise).



Key contributors to the voluntary carbon markets

Bridging the emissions gap

Collective efforts to reduce emissions of greenhouse gases and to close the gap between current emissions trends and the emissions reduction targets required to keep global warming below 2°C (whilst still aiming for 1.5°C) requires a two pronged approach:

- ❑ first, **avoid** generating emissions as far as possible (taking into account a reasonable timeframe for transition to low carbon technology and infrastructure); and
- ❑ second, **reduce** unavoidable emissions as far as possible through a combination of 'cap and trade', taxes/levies or other trade restrictions.

Whilst the role and viability of offsets as an effective means of reducing net global emissions is open to some debate, the Article 6 rulebook seeks to address a number of key concerns by implementing a suite of protective measures designed to ensure that:

i. for every unit of a greenhouse gas emitted, another unit is captured or avoided;

ii. credits are not 'double-counted' towards the targets of both (y) the country or entity generating the credit and (z) the country or entity purchasing the credit;

iii. an emitter cannot circumvent its obligations to reduce emissions by relocating greenhouse gas intensive projects/activities to other jurisdictions;

iv. the cost of zero-carbon transition is distributed fairly, with developed economies shouldering a larger proportion of the bill;

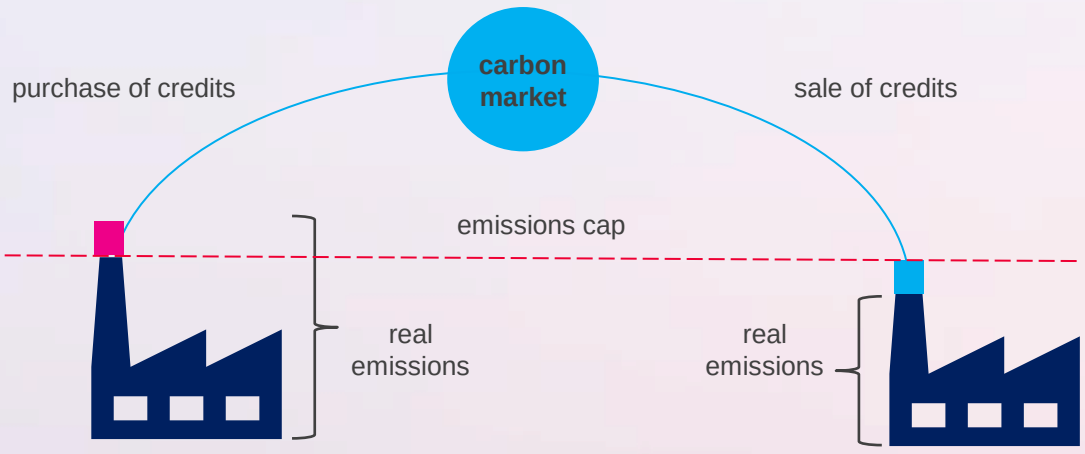
v. revenues derived from the carbon markets are not subsequently used (directly or indirectly) in support of greenhouse gas generating projects/activities; and

vi. 'used' or 'old' credits are promptly and permanently retired.

We consider how the Article 6 rulebook addresses these issues on page 12.

Before that, we look at some fundamentals about the voluntary carbon markets and how they operate.

Example sale and purchase of CO2e emissions reduction credits



"We are, after all, the greatest problem solvers to have ever existed on Earth. If working apart, we are a force powerful enough to destabilize our planet. Surely working together, we are powerful enough to save it."

David Attenborough, veteran British broadcaster and documentary maker – November 2021

What is a carbon credit?

Each carbon credit represents one metric tonne of a greenhouse gas, expressed as **MtCO2e**.

The unit **CO2e** represents an amount of a greenhouse gas the atmospheric impact of which has been standardized to that of one unit mass of carbon dioxide, based on the global warming potential of the gas.

All carbon credits, irrespective of the type of credit (see below) or the market (regulated or voluntary) on which they are traded represent the same volume of CO2e, namely 1 metric tonne (or 1,000 kilograms).

The most common greenhouse gas is carbon dioxide and so other common greenhouse gases (e.g., methane, nitrous oxide and synthetic gases called fluorinated gases) are equated to CO2 when discussing emissions – hence CO2**e** ('e' meaning 'equivalent').

The different types of credit

There are a number of different credits available in the voluntary carbon markets which can be categorised according to the set of standards pursuant to which they are issued and verified.

In this article, we focus on:

Certified Emissions Reductions: credits issued pursuant to the United Nations Clean Development Mechanism protocol (relating to climate mitigation projects in developing countries) or the United Nations Joint Implementation protocol (relating to climate mitigation projects in developed countries).

Verified Emissions Reductions: credits issued in respect of a climate mitigation project that is independently audited (i.e., verified) against a third-party certification standard. The most common standard is the Verified Carbon Standard which is verified by Verra, a not-for-profit corporation registered in Washington DC, United States of America.

Gold Standard: Certified Emissions Reductions and Verified Emissions Reductions can be upgraded to Gold Standard credits if they satisfy the requirements of the Gold Standard. The Gold Standard was established by the WWF and other international NGOs applying strict eligibility criteria according to the underlying type of climate mitigation project.

China Certified Emissions Reductions: similar to Certified Emissions Reductions, China Certified Emissions Reductions are valid for trading on China's eight regional emissions trading systems (voluntary markets).

"To meet the goals of the Paris Agreement, the world needs to rapidly drive emissions down and investment up. Well-designed international carbon markets can nearly double currently planned emissions cuts at no additional cost, while helping to channel investment to developing countries. At COP26, countries need to establish credible rules for high-integrity international carbon markets that contribute to global efforts to limit warming to 1.5 degrees."

Fred Krupp, President, Environmental Defense Fund – October 2021

MEASURE → **REDUCE** → **OFFSET**

How are credits produced?

At a macro level, climate mitigation projects fall into one of three categories:

Avoidance ⇨ The project **emits zero** CO2e
- ❑ wind / solar / hydro power
- ❑ biofuel
- ❑ forestry and farming emissions avoidance e.g., prevent deforestation

Reduction ⇨ The project **reduces** the volume of CO2e emitted
- ❑ reduced energy demand
- ❑ fuel efficiency
- ❑ capture or elimination of pollutants e.g., methane collection

Removal ⇨ The project **removes** CO2e directly from the atmosphere
- ❑ reforestation
- ❑ wetland preservation
- ❑ soil sequestration

What does a credit represent?

A 'standard' refers to the methodology and principles according to which the credits generated by a climate mitigation project are certified or endorsed.

The NGO certifying or endorsing that the credit satisfies the applicable standards will then determine the number of credits generated by reference to the number of units of CO2e avoided, reduced or removed by reference to a hypothetical 'business as usual' base case.

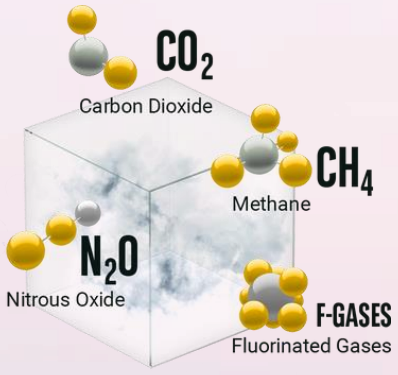
1 MtCO2e avoided, reduced or removed = 1 carbon credit

To put this into context:

1 credit is equivalent to the amount of CO2 captured by 50 trees growing for one year;
5 credits is equivalent to the amount of CO2 produced by an average car for one year; and
10 credits is equivalent to the amount of CO2 produced by twelve homes energy use for one year.

The most prominent NGOs that certify or endorse carbon credits include:

- United Nations;
- Verra;
- Gold Standard;
- Climate Action Reserve;
- American Carbon Registry;
- Plan Vivo;
- Green-e; and
- Climate, Community & Biodiversity Alliance.



"The voluntary carbon market can complement efforts to permanently remove carbon emissions from the atmosphere. A 'reduce first, mitigate second' strategy will enable firms to achieve net-zero carbon emissions in an economically efficient way."

ISDA® – "Legal Implications of Voluntary Carbon Markets" – December 2021

What standards apply?

A wide variety of businesses can create and sell carbon credits by reducing, capturing, and storing emissions through different processes.

A large volume of climate mitigation projects fall into one of four categories:

- renewable energy;
- energy efficiency;
- carbon and methane capture and sequestration; or
- land use and reforestation.

Carbon assessment methodology is constantly evolving.

More sophisticated calculators include data from a variety of sources with adjustments according to geographic factors, global intensity, distribution methods, usage of renewables, accommodation and standards of living, diet, farming and food consumption, movement and transformation of raw materials and currency movements.

There are numerous calculation tools available to quantify the emissions reduction benefits generated by a climate mitigation project and therefore calculate the number of credits that are attributable to that project.

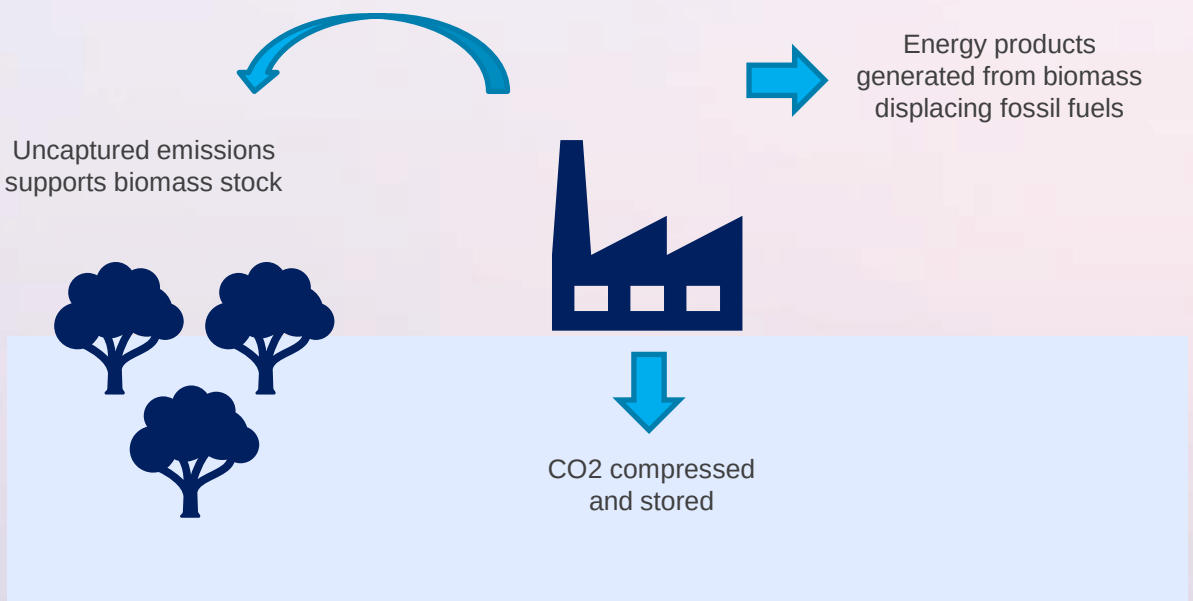
The carbon offset market is however largely unregulated which raises a fundamental question: how is the quality/integrity of a climate mitigation project and the credits that it produces verified?

Prudent buyers will source credits that have been certified by well-known and trusted non-governmental organisations, such as:

- United Nations – in the case of Certified Emissions Reductions;
- Verra – in the case of Verified Emissions Reductions; or
- Gold Standard – in the case of Gold Certified Emissions Reductions or Gold Verified Emissions Reductions.

In each case, the number of credits generated by a carbon mitigation project is calculated by reference to a hypothetical ‘business as usual’ baseline scenario pursuant to which the climate mitigation project had never existed.

Example climate mitigation project: bio-energy power plant with carbon capture and storage



Calculating credits (1)

Clean Development Mechanism / Joint Implementation

The volume of credits generated is calculated by reference to the type of climate mitigation project that they relate to, of which there are five primary categories:

- Large scale projects
- Small scale projects
- Carbon capture and storage
- Large scale projects for afforestation/reforestation
- Small scale projects for afforestation/reforestation

Further sub-categories then apply according to type of activity conducted and the type of technology used, in order to identify the applicable calculation methodology for that project.

There are numerous methodologies under each sub-category (e.g., there are currently 115 approved methodologies under the 'large scale project' category) and then numerous calculation tools that apply at methodology level.

Verified Carbon Standard

Under the Verified Carbon Standard, climate mitigation projects are classified according to 15 sectoral scopes:

- Energy generation
- Energy distribution
- Energy demand
- Manufacturing industries
- Chemical industry
- Construction
- Transport
- Mining/Mineral production
- Metal production
- Fugitive emissions – from fuels (solid, oil and gas)
- Fugitive emissions – from Industrial gases (halocarbons and sulphur hexafluoride)
- Solvents use
- Waste handling and disposal
- Agriculture Forestry and Other Land Use
- Livestock and manure management

Similar to the Clean Development Mechanism and Joint Implementation protocols:

- further project sub-categories may apply within a particular sector;
- there are numerous methodologies under each sector which are used to quantify the emissions reduction benefits that can be achieved.

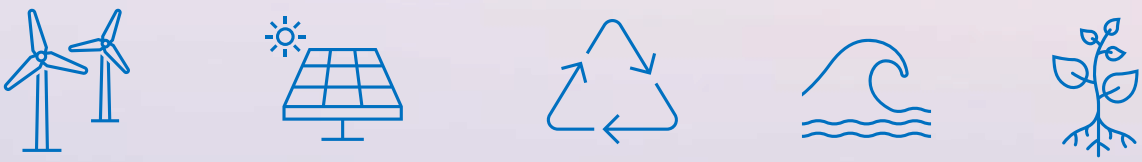
Gold Standard

Gold Standard is an international standard that focuses on progressing the United Nation's Sustainable Development Goals and making sure that climate mitigation projects benefit neighbouring communities. Accordingly, the Gold Standard concentrates on carbon mitigation projects that **provide lasting social, economic, and environmental benefits.**

To achieve Gold Standard certification, a project must comply with the mandatory principles and requirements applicable to: (1) the project as a whole; (2) the project activities undertaken; (3) impact quantification; and (4) any related products.

"When it comes to global challenges such as climate change, multilateralism is the right prescription."

President Xi Jinping's written statement for the World Leaders Summit of COP26, 1 November 2021



Calculating credits (2)

Gold Standard (continued)

There are five core principles under the Gold Standard:

- **United Nations Sustainable Development Goals**: all projects must show a clear and direct contribution to at least three United Nations Sustainable Development Goals, one of which must be goal 13 (which relates to Emissions Reductions or Removals and/or Adaptation to Climate Change).

- **Safeguarding**: all projects must carry out an upfront assessment against the Gold Standard safeguarding principles, a number of which require expert stakeholder opinions and recommendations.

- **Stakeholder engagement**: all projects must identify and engage relevant stakeholders and seek expert stakeholder input where necessary in the design, planning and implementation of the project.

- **Real outcomes**: all projects must demonstrate real and verified outcomes.

- **Additionality and ongoing need**: all projects must demonstrate that they are additional, meaning that their impact in terms of climate security (mitigation or adaptation) and sustainable development are beyond those that would have occurred in the absence of the certified Gold Standard project.

China Certified Emissions Reductions

China Certified Emissions Reductions are project based emissions reductions generated by projects located in Mainland China. China Certified Emissions Reductions are certified by the National Development and Reform Commission and are similar to the Clean Development Mechanism standard in many respects.

All of Mainland China's carbon markets (the national emissions trading system plus the eight regional emissions trading systems – Beijing; Shenzhen; Guangzhou; Fujian; Shanghai; Hubei, Chongqing and Tianjin) have adopted the China Certified Emissions Reduction as the unit representing CO2e emissions reductions. In addition to China Certified Emissions Reductions, there are Carbon Emissions Allowances which represent the volume of CO2e emissions which entities subject to the Mainland's national emissions trading system – currently 2,225 power stations in Mainland China – are permitted to emit under the national emissions trading system during a given time-period.

Whilst registration of new China Certified Emissions Reductions has been suspended since 2017, trading of existing China Certified Emissions Reductions is still permitted.

As there are different rules that apply to each of Mainland China's eight regional carbon markets, the China Certified Emissions Reductions that may be used within the different regional markets are subject to varying restrictions, including restrictions as to the type of emissions reduction project to which they relate, the originating region of the emissions reduction project to which they relate, the quantity of permitted units, and the age of the emission reduction units.

"Asia and the Pacific has a unique advantage in operationalizing Article 6. The region has a lot of experience using international carbon markets. Approximately 80% of all Clean Development Mechanism projects, as well as roughly 90% of all Joint Crediting Mechanism projects, are hosted in our region. Thus, the regional potential to reduce greenhouse-gas emissions at scale—coupled with the existing expertise and interest in using carbon markets—positions the region as the epicenter for the next generation of carbon markets."

Bambang Susantono, ADB Vice-President for Knowledge Management and Sustainable Development, 8 November 2021

Pricing carbon – an overview

The price of carbon is driven by supply and demand. Whilst the price of carbon continues to climb on the European emissions trading system in correlation with reductions in emissions quotas, in other jurisdictions the compliance carbon markets are still under development which means that the price of carbon in those markets remains low.

In order for carbon markets to be effective in driving down CO2e emissions, economists suggest that the price of carbon needs to significantly increase to somewhere in the region of USD75* – USD100** per unit. In addition, the coverage of carbon pricing programs also need to be dramatically upscaled – current coverage only extends to approximately one-fifth of global emissions.

* suggested by the International Monetary Fund
** suggested by Reuters

The carbon markets hold significant growth potential.

Nonetheless, aggressive pricing is difficult when countries fear that their ability to compete on the global markets will be adversely affected in the absence of a consistent and unified approach to carbon pricing. To address this, economists suggest setting a uniform carbon floor by reference to (i) the highest emitting countries and (ii) the largest economies and fixing a minimum floor for individual countries to implement (thereby allowing countries flexibility to increase the floor applicable at national level).

According to the International Monetary Fund, a 2030 price floor of:

- ❑ USD75 per unit – for advanced economies;
- ❑ USD50 per unit – for higher-income, emerging economies; and
- ❑ USD25 per unit – for lower-income, emerging economies,

would keep global warming below 2°C with just six participants (Canada, China, European Union, India, United Kingdom, United States) and other G20 countries meeting their Paris Agreement pledges.

"Carbon pricing is a key element of the broader climate policy architecture to help countries reduce their emissions cost-effectively while mobilizing fiscal resources to drive green recovery and growth."

Asian Development Bank, "Carbon Pricing For Green Recovery and Growth", November 2021

Image: World Bank Group – "A look at Carbon Pricing and Competitiveness" – June 2016

Pricing carbon – a need for balance

Carbon pricing initiatives continue to evolve based on past experience and new initiatives that aim to put a price on the social cost of emissions.

There is a need for balance.

Pricing a credit below what a project costs to implement during its lifetime (minimum price), means that the project is not commercially viable in the long term. Furthermore, failing to price a credit so that it accurately reflects the value it generates (upward adjustment), risks devaluing the credit and disincentivising emissions reduction.

As more data about the holistic cost of climate change is collated, carbon pricing methodology will become increasingly more transparent and standardised.

An example of the 'minimum cost + value generated' model adopted by the Gold Standard is depicted below.

Price / number of credits =

minimum price =

investment cost
plus project cost
plus carbon cost
plus business margin
less project revenues

+

upward adjustment =

value / savings generated by the project

Pricing carbon – internal models

More companies are developing tools to calculate their carbon exposure as a means to identify savings (e.g., reduced energy costs) and identify viable risk mitigation techniques (e.g. waste management and supply chain efficiencies) which can then be applied as part of their internal decision-making and compliance processes.

According to the Carbon Disclosure Project, there are more than 1000 companies reporting that they price carbon internally or plan to do so within the next two years.

Internal carbon pricing can help a business to achieve a variety of goals, including the ability to:

- de-risk a project, a business line or a business model;
- reduce exposure to carbon tax or other carbon pricing (either direct exposure of supply chain exposure);
- stress test profitability and economic resilience;
- effectively allocate capital and prioritise expenditure;
- engage with regulators, stakeholders, clients, and financiers; and
- increase efficiency and reduce waste.

"Creating long-term value requires both a focus on financial and sustainability performance. This means we need tools for measuring sustainability performance just as we have for financial performance."

Klaus Schwab, Founder and Executive Chairman of the World Economic Forum – November 2021

Rising to the challenge

A large proportion of global CO2e emissions fall outside the scope of the regulated carbon markets. Accordingly, the voluntary carbon markets provide the means for countries to upscale global CO2e emissions reductions in a more accessible way.

Although it is clear that the voluntary carbon markets have the potential for exponential growth over the coming decades, a brief description as to how the Glasgow summit sought to address some of the barriers to upscaling global, net emissions reduction is set out below.

Target adjustments: countries are asked to submit improved 2030 emissions reduction targets in 2022 in order to keep 'net-zero 2050' in sight.

Policy alignment: countries agreed to accelerate efforts to phase down coal and fossil fuel subsidies. National bursary/subsidy schemes and taxation policies for CO2e intensive industries such as agriculture and fisheries will also need to be reviewed to ensure that they are aligned with global emissions reduction targets.

Taxonomy: the United Nations Clean Development Mechanism and Joint Implementation protocols will be replaced with a Sustainable Development Mechanism designed to encourage climate change mitigation through results-based climate finance rather than offsets. The idea is to deliver emissions reductions and to support sustainable development more generally through the application of consistent standards, baselines and value adjustments.

Transition fund: an agency has been established to look into the request by poorer countries for a dedicated fund to compensate them for the damage caused by historical emissions of richer nations. In addition, richer nations have committed to mobilise US$100bn a year in climate finance through to 2025 and to double the funding available for climate change adaptation by 2025.

Transparency: the International Financial Reporting Standards Foundation trustees have announced three significant developments to provide the global financial markets with high-quality disclosures on climate and other sustainability issues:

- the formation of a new International Sustainability Standards Board to develop a comprehensive global baseline of high-quality sustainability disclosure standards;
- a commitment by leading investor-focused sustainability disclosure organisations to consolidate into the new board; and
- the publication of prototype climate and general disclosure requirements.

The Article 6 framework provides for a centralised database and a centralised accounting and reporting platform subject to technical expert review for consistency. It is expected that standardised rules on transparency, disclosure and reporting will be in place from 2024.

Anti-avoidance: the 'corresponding adjustment' mechanism in relation to internationally transferred mitigation outcomes is designed to prevent double-counting the benefits of emissions mitigation projects, whilst steps to improve transparency, disclosure and reporting are designed to prevent carbon-sinking (i.e. relocating carbon intensive projects/activities) in jurisdictions where national regulatory requirements are less strict.

Scope and coverage: standardisation of taxonomy, transparency through access to centralised data and consistency of reporting and disclosure will in turn support the expansion of national and international emissions trading systems (sector and activity coverage as well as the types of product available) and generate a much needed increase in global trading volumes.

"We all have a role in this adjustment. One of the most basic roles is asking questions."

Mark Carney, UN Special Envoy on Climate Action Finance, January 2021

Voluntary markets in Mainland China (1)

Mainland China's national emissions trading scheme (regulated market) commenced trading on 16 July 2021 and runs in tandem with the eight pilot regional schemes (voluntary markets) listed below.

The regional schemes will continue to run in parallel with the new national scheme in the near to medium term before being gradually transitioned into the national scheme. The scope of each regional scheme is however different and so before their transition over to the national scheme can be completed, the sectoral coverage, product offerings, pricing mechanics and rules for participation will need to be aligned. In the meantime, each of the regional schemes operates on a segregated and standalone basis.

Whilst only Carbon Emissions Allowances may be traded on Mainland China's (regulated) national carbon market, the trading of other products (including China Certified Emissions Reductions) is permitted within the (voluntary) regional carbon markets, subject to compliance with the rules applicable to those individual regional markets.

China Certified Emissions Reductions are carbon credits that are produced by domestic emission reduction projects which substitute, neutralise or reduce CO2e emissions. Whilst participants in the national scheme are not currently able to trade China Certified Emissions Reductions, they are permitted to offset 5% of their Carbon Emissions Allowances using China Certified Emissions Reductions purchased on the regional markets.

A separate national, centralised market for China Certified Emissions Reductions is currently being established. On 10 March, 2021, the General Office of the Communist Party of China Beijing Committee and General Office of Beijing People's Government jointly issued the Beijing Municipality, Implementing Plan on Building a Modern Environmental Governance System which provides that Beijing will lead the establishment of a national China Certified Emissions Reductions trading centre.

"China has the means and capabilities to accomplish an even faster clean energy transition that would result in greater social and economic benefits for the Chinese people and also increase the world's chances of limiting the rise in global temperatures to 1.5C."

Fatih Birol, executive director of the International Energy Agency – 30 September 2021

Voluntary markets in Mainland China (2)

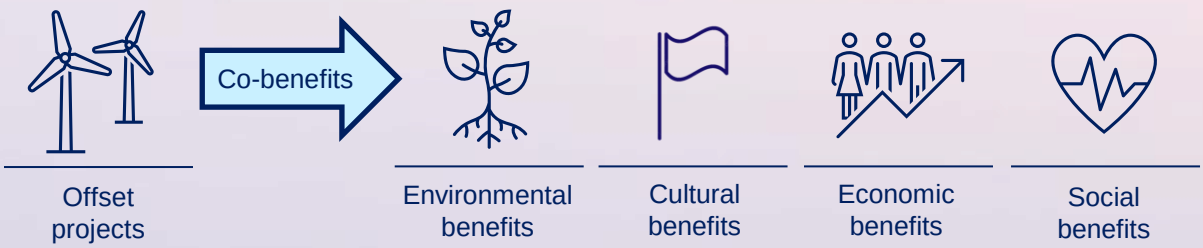
A brief description of the scope and sectoral coverage of Mainland China's regional markets is set out in the table below.

	Sectors covered	Foreign investors
Beijing	Industrial and non-industrial companies and entities, including electricity providers, heating sector, cement, petrochemicals, other industrial enterprises, manufacturers, service sector, public transport, and domestic aviation.	×
Shanghai	Airports, domestic aviation, chemical fibres, chemicals, commercial, power and heat, water suppliers, hotels, financial, iron and steel, petrochemicals, ports, shipping, nonferrous metals, building materials, paper, railways, rubber, and textiles.	×
Hubei	Different from other Chinese pilots, Hubei does not pre-define which sectors are covered under its ETS; rather, it sets a threshold which applies to all power and industrial sectors. Those sectors with entities above the threshold then are covered.	✓
Guangzhou	Power, iron and steel, cement, papermaking, aviation, and petrochemicals.	✓
Chongqing	Power, electrolytic aluminium, ferroalloys, calcium carbide, cement, caustic soda, and iron and steel.	×
Shenzhen	Power, water, gas, manufacturing sectors, buildings, port and subway sectors, public buses, and other non-transport sectors.	✓
Tianjin	Heat and electricity production, iron and steel, petrochemicals, chemicals, oil and gas exploration, papermaking, aviation, and building materials	×
Fujian	Electricity, petrochemical, chemical, building materials, iron and steel, nonferrous metals, paper, aviation, and ceramics.	✓*

* Limited to legal persons incorporated in Hong Kong, Macau and Taiwan.

The regional markets do not restrict the trading of China Certified Emissions Reductions and participants may trade China Certified Emissions Reductions on a regional scheme even if the project generating the China Certified Emissions Reductions is located in a different region. Accordingly, the project owner decides the regional scheme that they would like to apply to join.

For the time being, the China Certified Emission Reduction Exchange Registration System only accepts members who are registered as a legal person in Mainland China. Foreign investors are not therefore currently able to complete the registration of ownership/transfer of China Certified Emissions Reductions prescribed by the China Certified Emission Reduction Exchange Registration System. We do however expect that the establishment of a national China Certified Emissions Reduction trading centre will provide opportunities for foreign investors to participate in the trading of China Certified Emissions Reductions in the coming months.



Opening up to foreign investors?

With Mainland China's national carbon market set to be the largest in the world, foreign investors are looking for ways to participate. For the time being, the national market is only open to domestic entities (currently 2,225 power stations). The regional markets generally adopt a membership system which can be accessed by members of the system directly and by other parties indirectly through a brokerage arrangement with a direct member. The ability of foreign investors to become members of the applicable exchanges or to indirectly access the regional markets through brokerage arrangements is subject to the rules and regulations of the underlying exchange. The regional carbon markets that are open to participation by foreign investors are: Hubei, Guangzhou, Shenzhen and Fujian. There are however some hurdles for foreign investors to overcome including:

barriers to registration of China Certified Emissions Reductions: foreign investors are not currently able to register ownership or transfer of China Certified Emissions Reductions trading through the China Certified Emission Reduction Exchange Registration System;

capital controls and foreign currency settlement: settlement of trades is encouraged in RMB through specially designated, onshore, deposit accounts. Arrangements for settlement of trades in foreign currency are more complex and vary according to the requirements of the applicable exchange. As participation by foreign investors in China's regional carbon markets is still new and business practice is developing, foreign investors are encouraged to communicate with the applicable onshore authorities (notably the local branch of the State Administration of Foreign Exchange) in advance; and

regulatory alignment: the cross-over and interaction of the various regulatory authorities in Mainland China remains to be settled. At present, there is no obvious alignment between the regulation of the nation market (through the Ministry of Ecology and Environment), the regional markets (through the National Development and Reform Commission) and foreign investment channels such as the (R)QFII or QFLP regimes (through the China Securities Regulatory Commission and the China Securities Depository and Clearing Corporation).

There are some positive signs that Mainland China's carbon markets will eventually be opened up to offshore investors. For example:

- in August 2021, China's first cross-border carbon trade was made by Xiong'an New Area in Hebei province using a carbon asset from 675,000 kilowatt-hours of solar energy capacity that were exchanged with a power generation company and hardware corporation in Australia;

- at a key note speech on 12 October 2021 at the 15th summit of the United Nations Biological Diversity Convention, President Xi Jinping announced that: "*[China] shall take international law as the basis to uphold a fair and equitable international governance system. We need to practice true multilateralism, and effectively honour and implement international rules…*";

- the Chinese government issued a policy on 15 July 2021 encouraging Chinese businesses to integrate green development throughout the whole process of overseas investment and cooperation. The document, entitled "*Green Development Guidelines for Overseas Investment and Cooperation*", was jointly issued by the Ministry of Commerce and the Ministry of Ecology and Environment. The guidelines recommend that Chinese enterprises "*follow international green rules and standards*" in overseas activities, particularly in countries where local standards are insufficient. The guidelines are specifically addressed to some of China's most important financial institutions: China Development Bank, China Import-Export Bank and Sinosure, China's export credit agency, and allude to "relevant environmental protection requirements on overseas projects". As such projects do not yet exist, it is anticipated that further announcements will be issued in the near future; and

- at a news conference in August 2021, the head of climate change at the MEE, Li Gao, said that China will make efforts to tighten the allocation of Carbon Emissions Allowances including "considering introducing caps on carbon emissions in some key regions to align air pollution control with carbon reduction" and "strive to transform [China's] carbon emission management mechanism from one with a carbon intensity cap to one with an emission upper limit during the 15th Five-Year Plan period (2026-30)", indicating that China's national ETS is set to expand thereby opening up the possibility for offshore investors to participate in China's low carbon transition.

Voluntary markets in Hong Kong

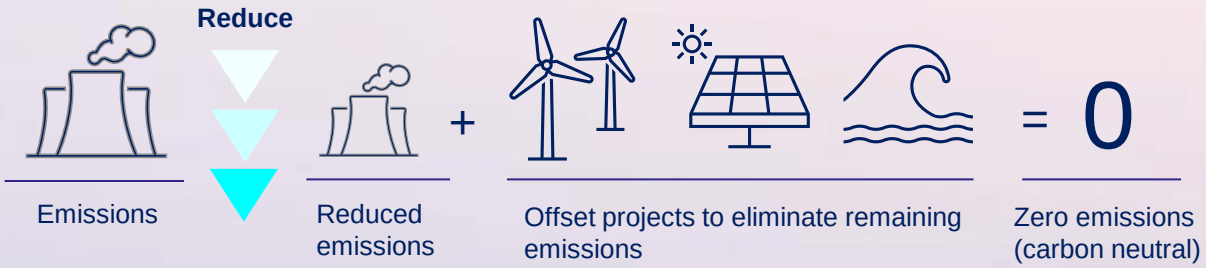
Proximity to Mainland China and access to global investors, means that Hong Kong is well placed to develop voluntary carbon trading markets in the region.

The Chief Executive announced in the 2020 Policy Address that Hong Kong would strive to achieve carbon neutrality before 2050. Initiatives outlined in the Chief Executive's 2021 Policy Address to attain Hong Kong's carbon reduction goals include:

- ending the use of coal in electricity generation by 2035;
- promoting cross-border financial technologies and actively exploring with the Mainland the formation of a one-stop sandbox network to facilitate financial institutions and information and technology companies from the Guangdong-Hong Kong-Macao Greater Bay Area to test cross-border fintech applications;
- setting a new medium-term target of reducing the total carbon emissions by half from the 2005 level before 2035 and exploring ways to enhance regional cooperation to increase the supply of zero-carbon energy ;
- ceasing the new registration of fuel-propelled and hybrid private cars by 2035;
- supporting the Hong Kong stock exchange to promote co-operation with the Guangzhou Futures Exchange to develop carbon emissions futures products, and assessing the feasibility of developing Hong Kong into a regional carbon trading centre. A study report commissioned by The Green and Sustainable Finance Cross-Agency Steering Group, led by the Hong Kong Monetary Authority and the Securities and Futures Commission is expected to be completed in December 2021; and
- regulators will prioritize climate-related disclosures; carbon market opportunities; and a new cross-sector platform to help the financial industry manage climate change-related risks and opportunities.

In the absence of sufficient liquidity, the opportunities for Hong Kong lie in the ability of Hong Kong companies to access and participate in the Mainland's carbon markets. Ultimately, robust regulations that enforce common standards for impact measurement and information disclosure are the most powerful policy option to support the development of green and social finance in not only in China but world-wide.

Demand is growing for environmental, social, and governance standards to be integrated into financial investments and business management, and capital allocation is shifting accordingly. China's 2060 carbon-neutral pledge is anticipated to boost trading volumes via the Bond Connect scheme and the Sustainable & Green Exchange, an online portal recently launched by the Hong Kong Exchanges and Clearing Limited, will provide critical support to the development of sustainable finance products.



Synergies for growth

Chinese-EU cooperation as regards climate change began in 2005. China's current targets to peak carbon emissions before 2030 and achieve carbon neutrality before 2060 continue to strengthen cross-border dialogue. Continued cooperation between China and the EU requires increased investment. Possible synergies to foster such investment include:

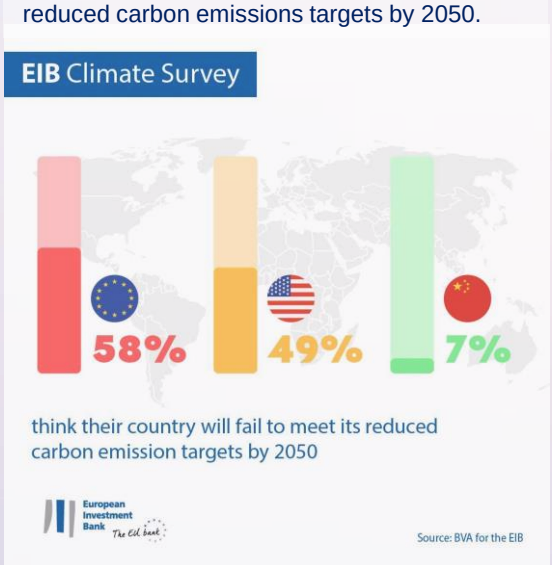
China is a major force in the manufacture and development of electric vehicles, solar and wind energy technology. Clean-tech remains a significant growth market with huge potential for China-EU cooperation.

China and the EU could work together to create a platform to align climate change mitigation with economic stability and social welfare. The executive vice president of the European Commission, Frans Timmermans, has stated that the clean energy transition should be just and inclusive. President Xi Jinping has similarly emphasised that green transition should be fair and just.

The EU imports about 60 percent of its critical raw materials from China. The Joint Research Centre of the European Commission estimates that between 2020 and 2050 the demand for these materials will double, while the demand for wind turbines and e-car production could increase by 15 times.

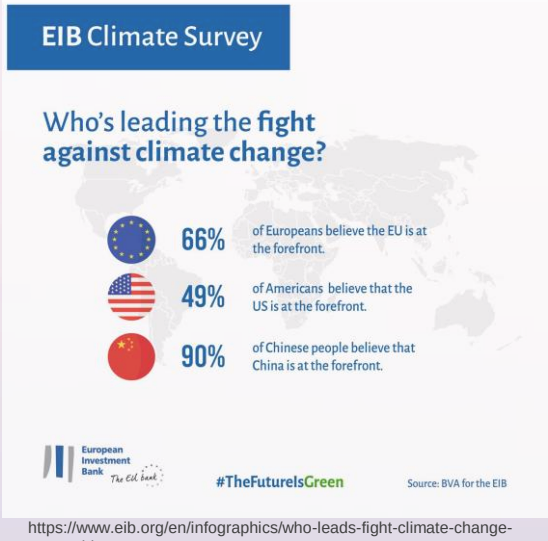
China is the world's second-largest oil consumer (behind the USA). Unlike the USA, China remains a net-importer of oil and views its dependency as an energy-security vulnerability. The production of power in China from solar PV and wind energy has grown dramatically over recent years. Five of the top ten global wind turbine manufacturers are Chinese (Goldwind, Envision, Ming Yang, Windey and Dongfang), whilst over 80 per cent. of solar PV cells exported around the world originated in China. The EU has advocated the introduction of a carbon border adjustment mechanism (essentially a carbon tax on imported goods) with a transitional phase (without financial adjustments) starting in 2023, as a means to protect EU businesses and encourage international decarbonisation. The potential for disputes relating to the mechanism (which could essentially double existing tariffs) is large. Yet, a more competitive climate diplomacy could be a highly effective means to upscale net-zero ambition.

58% of EU citizens and 7% of Chinese citizens think that their country will fail to meet its reduced carbon emissions targets by 2050.



https://www.eib.org/en/infographics/think-their-country-will-fail-meet-reduced-carbon-emission-targets-eu-us-china

66% of EU citizens and 90% of Chinese citizens believe that their country leads the fight against climate change.



https://www.eib.org/en/infographics/who-leads-fight-climate-change-eu-us-china

Common Ground Taxonomy

Systems that classify sustainable economic activities, or “taxonomies”, help investors and issuers to implement their transition strategies. Transparency is essential to build market confidence in sustainable investment and underpins the credibility and pricing of sustainable financial products, CO2e credits and CO2e offsets. Compatibility or, at the least, comparability between the various standards and methodologies is necessary to upscale sustainable finance and in particular to develop an international policy framework for standardising the treatment of sustainable projects and products and the fiscal and prudential treatment applicable to them.

In July 2020, the EU and China initiated and co-chaired a working group on sustainability related taxonomies. The objectives are to comprehensively compare existing taxonomies for sustainable investments and to identify commonalities and differences in their respective approaches, criteria and outcomes. This work is referred to as the Common Ground Taxonomy.

The CGT analyses 80 activities across six sectors and covers activities that make a substantial contribution to climate change mitigation. The Common Ground Taxonomy is published for open feedback until 4 January 2022.

It is important to be clear about the purpose of the Common Ground Taxonomy :

✓ an analysis of the commonalities and differences between the EU taxonomy and the China taxonomy	✘ a legally binding obligation
✓ a tool to aid discussion about the types of project and activity that should be covered and to identify gaps in coverage	✘ a comprehensive or exclusive list or eligible projects or activities
✓ a reference document for comparison	✘ a single taxonomy to be applied to all projects and all activities
✓ a tool to help developing markets create their own taxonomies	✘ a definitive standard for everyone to follow

The Common Ground Taxonomy considers, among other things:

- technical screening criteria indicating whether a particular factor makes a substantial contribution to climate change mitigation; and
- overlap scenarios, including examples where Europe is more stringent; China is more stringent; there is clear overlap or there is clear divergence in standards.

The purpose of the Common Ground Taxonomy is not to propose a definitive, single standard for the classification of climate mitigation projects or activities but rather an evolving tool that can be used to identify the commonalities and differences between the taxonomies applied in different jurisdiction and different industries.

There is no issue in having multiple taxonomies. In fact, the reverse is true. Differences between industries, projects, activities and jurisdictions necessitate that multiple taxonomies exist. The critical issue is ensuring that the metrics and definitions used must be transparent and consistent (or, at the least, comparable).

The development and upscaling of the voluntary carbon markets (not least the credibility of CO2e emissions reduction credits and CO2e emissions offsets) requires a fundamental level of interoperability across taxonomies. Ultimately investors will gravitate towards economies and financial systems that apply taxonomies that are transparent, consistent, technically-sound and flexible.

“Today's world is faced with mounting challenges, and there is a greater need for China and the EU to join hands. China-EU cooperation is not optional – it's essential.”

Chinese Ambassador Zhang Ming at the "Sixty-Minute Briefing" organized by the European Policy Centre – 16 November 2021

Conclusions

According to the Taskforce on Scaling Voluntary Carbo Markets, the voluntary carbon markets will need to grow 15-fold by 2030 and 100-fold by 2050 (in each case from 2020 levels) if global CO2e emissions reduction objectives are to be met.

It is encouraging that traded volumes of credits from projects in Asia doubled between 2019 and 2021 with prices increasing 85 per cent in the same period. However, with the global average price of a unit of CO2e estimated to be just US$3 (according to a report published by the International Monetary Fund in September 2021 – "*Five things to know about carbon pricing*"), a substantial value deficit remains to be addressed if the voluntary carbon markets are to successfully galvanise the net-zero transition by 2050.

Climate change mitigation and adaption will continue to dominate the agenda in 2022. As growth in the voluntary carbon markets will be driven not just by the need to offset unavoidable CO2e emissions but by companies desire to deliver 'added value' and 'co-benefits' to their customers and stakeholders.

Mainland China has the means and the opportunity to leverage European experience and to put itself at the forefront of positive change and growth in sustainable technology, sustainable infrastructure and sustainable finance.

We look forward to seeing what positive changes 2022 brings.

Next steps

As one of China's leading law firms, King & Wood Mallesons is advising clients on how they might participate in and benefit from the international voluntary carbon markets. Please contact us if you have any questions. We would be delighted to help.

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Sources: *Partnership for Market Readiness (PMR) 2017. Carbon Tax Guide: A Handbook for Policy Makers. World Bank, Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO; Asian Development Outlook 2021. Financing a Green and Inclusive Recovery. April 2021. Creative Commons Attribution CC BY 3.0 IGO; Forest Trends' Ecosystem Marketplace. 2021. 'Market in Motion', State of Voluntary Carbon Markets 2021, Instalment 1. Washington DC: Forest Trends Association; Asian Development Bank. Carbon Pricing for Green Recovery and Growth. November 2021. Creative Commons Attribution CC BY 3.0 IGO; Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement. Proposal by the President. UNFCCC. Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). 13 November 2021; https://carboncredits.com/the-ultimate-guide-to-understanding-carbon-credits; https://www.bbc.com/future/article/20211018-climate-change-what-is-the-global-carbon-market; https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/international-carbon-market_en; https://www.spglobal.com/platts/en/market-insights/blogs/energy-transition/061021-voluntary-carbon-markets-pricing-participants-trading-corsia-credits; https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading; https://verra.org/voluntary-carbon-markets; https://www.goldstandard.org/impact-quantification/carbon-markets; https://www.offsetguide.org/understanding-carbon-offsets/carbon-offset-programs/mandatory-voluntary-offset-markets; https://www.nature.com/articles/d41586-021-01989-7.*

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