A Global Carbon Credit Market?

Introduction

Everywhere, companies are signing up to carbon-neutral or net-zero pledges. Hardly a day goes by without the announcement that a major company has committed to a 2030 or 2050 goal. These pledges are part of a broader global movement to reach 2050 net-zero emissions, which it is hoped will limit global warming to 1.5 to 2˚C above pre-industrial levels.

Such platitudes have been bandied around for years but since the coronavirus pandemic there has been a substantial shift in urgency. Many countries have pledged to centre their economies on a 'green recovery' post-pandemic.

The biggest companies are trying to set examples to the rest; Microsoft, Apple, Shell, airlines and many more have committed to net-zero while Blackrock, the largest global asset manager announced it 'would now avoid investments in companies that "present a high sustainability-related risk'.

Big finance and international institutions are signalling their intentions to make sustainability a primary concern for business as part of a shift towards Corporate Social Responsibility (CSR). The entire weight of global business, finance and politics has aligned behind a decarbonisation movement. This will affect every business operation, and anyone not getting to grips with it will find out very quickly that they are playing catch-up.

Background- Scope 3

The first thing to note is that the carbon credit system is designed to be supplementary to – not a replacement for – decarbonisation efforts.

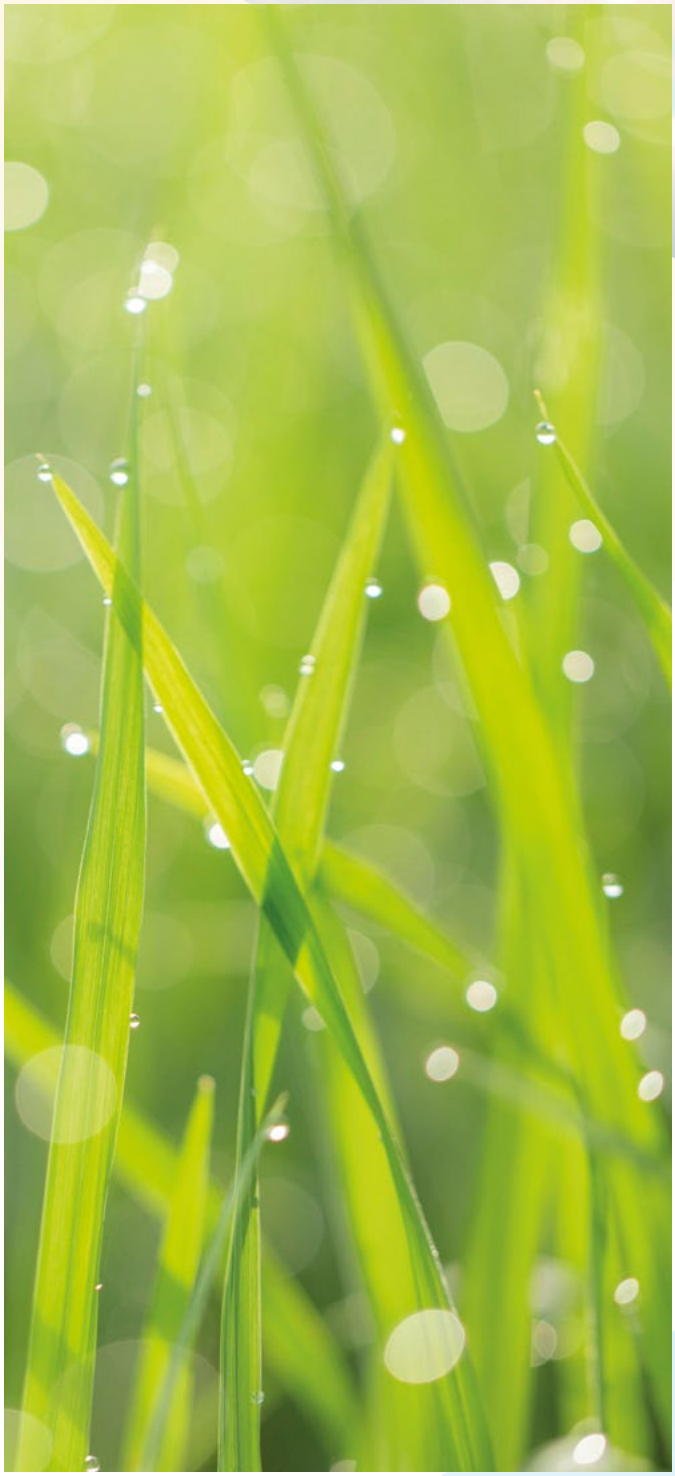
Perhaps the most important development for all businesses is the implementation of Scope 3 reporting, see previous Kite report "Are you ready? Why energy and carbon reporting requirements for large organisations matters to you."

Briefly, this requires larger companies to report on CO_2 emissions across their value chain and to make demonstrable improvements over time. This requirement will drive top-down sustainability changes as the reporting company is essentially made responsible – and liable for – reporting emissions made by distributors or producers they work with.

Several forthcoming shifts will make this a central concern for all organisations: firstly, the trend towards investment and financing tied to sustainability improvements; secondly, the quantifying of a carbon price; thirdly, a drive at the demand level towards 'ethical consumerism', where carbon footprint labelling will likely be introduced, similarly to nutritional labelling and products/ corporations may be ranked on a 'green' or 'sustainability' scale.

> "The World Bank recommendation is 'to increase carbon literacy of all consumers' via 'improvements in quality, credibility, transparency, and consumer education….(it) recommends requiring clear and consistent carbon claims, using clear carbon labelling.' Carbon-neutral milk is even used as an example in the report.

Clearly, maintaining market competitiveness and even survival over the medium to long-term depends on businesses demonstrating improvements in their carbon footprints. There will be a carrot (ability to sell offsets from removal or reduction of CO_2, or funding provided for technology to reduce emissions) and a stick (requirement to pay excess carbon emissions through tax or offsetting and consumer/investment/reputational pressure).



The Current Carbon Credit Market

Beyond reporting and emissions targets, a centralized, global carbon credit market is being mooted which is designed to offset emissions from hard-to-abate sectors, encourage emission reductions and direct capital towards the development of removal and sequestration technologies. It is very difficult to be specific about what form this market may take, and how it may work as the plan is still in the blueprint phase and there are many unknowns, even amongst those devising it.

It is likely that we will have a better idea of the form by the end of this year. The COP26 in Glasgow in November 2021 will focus heavily on Article 6 of the Paris Agreement; the long unresolved issue of international mitigation efforts – i.e., how countries will trade emission credits to ensure they comply with their Nationally-Determined Contributions (NDCs).

The UK's NDC, reported in December 2020, committed to a 68% emissions reduction by 2030 relative to 1990 across the entire economy. It has already announced that a UK Emissions Trading Scheme (ETS) will begin in May 2021, with a carbon price likely to be linked to the EU ETS; currently around 40 Euros.

However, this 'Cap and Trade' ETS only applies to 'energy intensive industries, the power generation sector and aviation', covering 'activities involving combustion of fuels in installations with a total rated thermal input exceeding 20MW' – in short, this is not applicable to agriculture.

Currently, the carbon credit market consists of a voluntary (VER) and a compliance (CER) market. CERs are for high emitting industries like the ones covered by the UK ETS above. The voluntary market is for businesses and individuals to offset their emissions if they choose or are working towards an emissions target. It is also more fragmented, suffering from low/volatile carbon prices, problems with fraud and transparency, and a small-scale which the Institute of International Finance (IIF) estimate will need to be drastically scaled up to meet their offsetting targets. The IIF estimate meeting this 2 gigaton target will require at least a 15-fold scale-up of the voluntary market by 2030 vs 2019, and a 100-fold scale-up by 2050.

Types of Carbon Credits

There are also two types of carbon credits: **reduction credits** (which are created by reducing emissions) and **removal credits** (which are created by removing CO_2 from the atmosphere via sequestration).

Many corporates are making these pledges, but carbon-neutrality is more achievable in the short-term. The science-Based Target Initiative (SBTi) is currently the main official accreditor of corporate pledges, ensuring that business emissions targets align with the science-based 1.5 to 2˚C global warming target. In November 2021, they will release their framework which will likely standardize the net-zero process for companies to pledge to.

Blueprint for a Centralized, Voluntary Carbon Credit Market

The massive price discrepancies of carbon credits – ranging from less than US$1/tCO2e to US$119/tCO2e, with almost half of the covered emissions priced at less than US$10/tCO2e – means there are issues with participation and uncertainty.

Carbon credits are also fraught with verification problems – reduction credits have the additionality issue, where there must be proof the reductions would not have otherwise occurred without a credit.

Removal credits have problems too; sequestration is currently incredibly difficult to accurately measure, with scientists estimating that the percentage of global GHG emissions that soils could sequester could be between 1.6% and 35% per year. There is also a significant time lag between planting trees and the associated CO_2 they remove.

Additionally, such projects need future-proofing; assurances that forests will continue to be protected and land-use reserved for certain offsetting projects over the longer-term to reap the sequestration/removal benefits. As many of the offset projects are located in the global south – both to direct capital to developing countries and as forestation projects generally occur in South America, Africa and Asia – there is a level of faith required in the political systems of these states to continue to adhere to the environmental projects, but no guarantees.

To overcome some of these issues, there is a proposal for a single global voluntary market which is regulated by central, independent parties to create a stable price signal and encourage broader participation. The key concepts IIF outlines are that this market be:

Transparent - connects carbon credit supply and demand in seamless, cost-effective, transparent way

Verifiable - ensures credibility that carbon credits are being used properly

Robust - scalable to accommodate expected demand

The price of a carbon credit is predicted to rise to US$100/tCO2e by 2030 to meet this scaling challenge. Big companies will need to pay close attention to the development of this market, as they will likely need to purchase offsets to complement their emissions pledges.

A higher price means organisations will be incentivised to look more closely at potential emissions reductions in their own value chain, but on the flip-side may provide opportunities for farmers

to become sellers of reduction credits or recipients of funding for removal technologies like biogas digesters.

It may also encourage farmers to shift their land-use. An Australian farmer made headlines after selling carbon credits worth $500,000 to Microsoft after saving 40,000 tonnes of sequestered soil carbon through sophisticated grazing management.

However, there is an emphasis to keeping credits in-house: IIF recommend 'corporates to consider buying carbon credits within their own value chain to abate for their Scope 3 emissions. This may help promote early investment in the projects and technologies that are the most difficult to commercialize within their own value chain to scale down the cost curve, promoting a long-term reduction in that industry's Scope 3 emissions.'

Rabobank recently created the new Rabo Carbon Bank designed to 'connect large corporates looking to offset their emissions with smallholder farmers who are sequestering carbon through agroforestry.' They also suggest an in-house approach: 'Rather than relying on external third-party markets to buy offsetting carbon credits to meet targets, dairy brands have an opportunity to work within their supply chain with their producers. Producers are more likely to respond to incentive programs implemented by their milk buyers, and brands are then able to leverage a more meaningful sustainability story.' This would necessitate industry-wide cooperation and communication, requiring everybody to be on board and collecting data in a standardized way.

Until it is clear what role offsetting will play for those in the agriculture industry, and we have a clearer idea of how a centralised carbon credit market may work, businesses should now focus on collecting data and identifying areas to reduce emissions, putting them in better stead for what is inevitably coming down the line.

Other considerations

Perhaps of more concern for the agriculture industry than the potential form of the credit market is the imposition of carbon taxes. This will vary country by country, depending on how they assess their NDCs.

The UK NDC is still vague about explicit emission targets for each sector, with the strategy for agriculture loosely defined as 'delivering a national shift to healthy diets supported by a sustainable food system which contributes towards a reduction in GHG emissions'.

The Government's extensive Energy White Paper 'Powering our Net Zero Future', published in December 2020, covers several sectors but has no mention of agriculture beyond the necessity of further GHG removal technologies for 'difficult to decarbonise' sectors like agriculture and aviation.

The UK has mooted the idea of carbon taxes, which may vary in price by sector and take the form of a cap-and-trade scheme similar to the one big emitters are subject to, but extended to other sectors like farming. Again, it is unclear exactly what form this would take but the NDC suggests 'starting in 2021/2022, the Government will target a total carbon price which will give businesses greater clarity on the total price they will pay for each tonne of emissions.'

Conclusion

The first step is understanding what data to collect and to begin collecting it. For big companies obliged to Scope 3 reporting, this will be across their entire supply chain so they should be encouraging companies they work with to collate/provide them with data.

As the IIF report consistently reiterates, the priority is 'Reduce, Report, Offset' – in that order. Once the data is collected, every business should be looking at ways and opportunities to reduce emissions. If nothing else, this will set up organizations to be responsive and proactive to as-yet-unknown emission targets or carbon carrots/sticks, and demonstrate to big, reporting companies that they are serious about sustainability.

The business landscape will soon be clearly divided between those who have begun this process and those who are lagging behind. As Rabo Carbon Bank CEO Barbara Baarsma suggests, carbon will become a currency, creating winners and losers on either side.

Glossary

Nationally Determined Contribution (NDC) National emissions targets relative to a 1990 baseline year, reported every five years. Part of Paris Agreement to meet 1.5 to 2˚C warming pathway.

Article 6 of Paris Agreement: Aims at promoting integrated, holistic and balanced approaches that will assist governments in implementing their NDCs through voluntary international cooperation.

Scope 3 Reporting (SECR): Requirement for large companies to report on carbon emissions across their entire value chain. Mandatory Scope 3 reporting currently is only 'energy use and emissions from business travel in rental cars or employee-owned vehicles (where they pay for the fuel)', but there is strong encouragement to go further and the likelihood is that reporting a full (or more comprehensive) estimation of Scope 3 reporting is the direction of travel in the next several years, as Scope 3 emissions constitute a large proportion of a company's emissions.

Carbon credit: A unit of carbon dioxide-equivalent (CO2e) that is reduced, avoided or sequestered to compensate for emissions occurring elsewhere.