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## Voluntary carbon markets are helpful but far from perfect

*Voluntary carbon markets are an important tool in the fight against climate change, but several issues make them less effective. Carbon offsets often overstate emissions reductions, and firms use these as a cheaper alternative to investing in real, tangible emissions reductions in their own supply chains. Ram Smaran Suresh Kumar summarises the key issues with these markets and outlines important reforms they need.*

Confronting climate change requires significant investment. The IMF **estimates** that achieving net zero by 2050 requires low-carbon investments to rise from \$900 billion in 2020 to \$5 trillion annually by 2030. Of these, emerging markets and developing economies will need \$2 trillion annually, a fivefold increase from 2020. Voluntary carbon markets are a useful tool to channel private climate finance, particularly to these countries.

In a voluntary carbon market, carbon credits are purchased, usually by organisations, for **voluntary use** rather than to comply with legally binding emissions reduction obligations. The global market is small, valued at \$2 billion in 2021, covering less than one per cent of global carbon emissions. However, it is projected to grow rapidly, reaching a valuation of **between \$10 billion and \$40 billion** by 2030.

The voluntary aspect incentivises the development of projects that reduce or avoid emissions. There are a few key conditions for a voluntary carbon market to be an effective tool for decarbonisation:

- **Permanence:** Removal generated by carbon credits must be permanent.
- **Measurement and verifiability:** Carbon removal/avoidance must be accurately quantified using established methodologies which can be checked by independent verifiers.
- **Additionality:** The removal/avoidance project should not have taken place in the absence of the market.

- **No double counting:** A carbon credit must uniquely represent one unit of carbon removal and can be claimed only once.

There are issues with current markets that preclude achieving these conditions, making them far less effective than they could be. Assessing the carbon price (vis-à-vis other carbon markets) provides some evidence for this: the price of carbon in voluntary carbon markets is far lower than in compliance markets such as the EU and UK's Emissions Trading Scheme (ETS).

## Supply-side issues

### Measurement issues and determining additionality

It is difficult to measure the carbon avoidance/removal achieved by projects (particularly for forestry and land use projects, which constitute a large proportion of all projects). Doing so involves evaluating the level of emissions if the voluntary market did not exist (the counterfactual). This is hard to do: it involves consideration of laws, common local practices, alternative funding streams, alternative greening projects, likelihood of leakage (displacement of emissions elsewhere, as opposed to removal or avoidance) and a host of other things. These measurement issues make it difficult to identify low-quality credits, impacting the credibility of voluntary carbon markets.

### Misaligned incentives

Absent regulation or standards, voluntary markets incentivise project developers, certification standards (which issue credits to projects and sells these credits), and third-party credit rating agencies (which independently verify the integrity of credits) to inflate emissions removal claims. Unregulated markets can keep such behaviour in check if buyers have sufficient incentives and information to identify misleading claims. However, removals are imperfectly observed by buyers, who often neither have the incentives nor the expertise needed to verify avoidance/removal claims.

### Differences in credit type

There are significant differences in the attributes of carbon credits in these voluntary markets, and this variation can impede effective functioning of the market. Carbon credits differ in terms of type of project (nature-based, technology-based), additionality, permanence, leakage, timing of emissions reductions, and co-benefits (additional positive outcomes of a carbon offset project, such as biodiversity conservation, improved local air quality, or social benefits for local communities). Moreover, there are multiple certification standards that issue these credits and each of them has different criteria for validating, verifying and monitoring projects, and estimating emissions reductions. Differences in credit type, together with the measurement and incentive issues described above, create pricing inefficiencies in the market.

## Demand-side issues

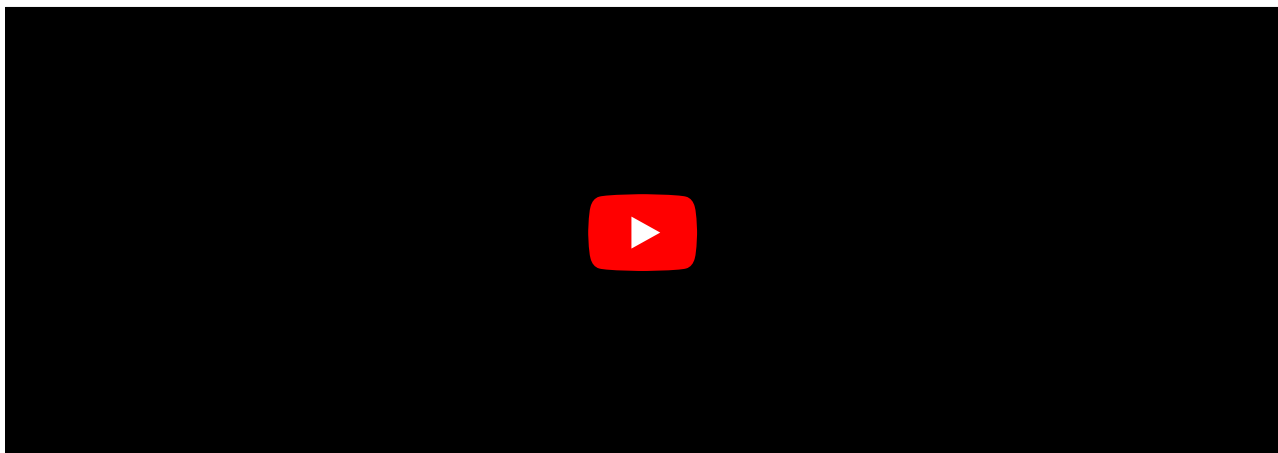
## **Misleading net zero claims**

Firms do not follow a common standard to measure their emissions, corresponding reductions and any offsets. There is lack of clarity on what constitutes net zero, and to what extent businesses can use offsets to claim net zero. Moreover, firms often do not specify which specific activities they are offsetting and how much they rely on carbon credits for their net zero claims. There can, therefore, be material differences in the extent to which different businesses that claim net zero are truly carbon neutral.

## **Offsetting at the expense of emissions reductions**

Firms should prioritise real emissions reductions to achieve net zero. Offsetting should be complementary to these reductions, used by firms to either (i) go over and above their own emissions reduction ambitions, or (ii) offset hard-to-abate “residual” emissions. However, the low carbon price in voluntary carbon markets makes excessive offsetting economically attractive compared to real emissions reductions in their own supply chains. Moreover, firms may be under a false impression that offsetting effectively compensates for their emissions, causing them to emit more than in a scenario where voluntary markets did not exist.

*Video of the event “Innovative market solutions to confront climate change”*



# Reforming voluntary carbon markets

The issues outlined above warrant important reforms to voluntary carbon markets to make them a useful tool to channel climate finance. The steps proposed below are a useful starting point, but more will be needed as voluntary markets continue to grow and evolve.

## **Standards for issuing carbon credits**

Clear and detailed (but flexible) global standards are needed to set benchmarks for high-integrity carbon credits. Creating and enforcing these standards requires a collaborative approach involving all stakeholders. These standards should ensure that removals/avoidance from credit issuance are additional, permanent, accurately measured, monitorable, and verifiable. Measurement and

evaluation of additionality should be transparent and based on agreed methodology and principles (which can evolve over time).

Recent initiatives such as the multi-stakeholder led Integrity Council for the Voluntary Carbon Market (ICVCM) are a step in the right direction. The initiative's Core Carbon Principles (CCPs) establish a set of standards for high-integrity credits, with a detailed assessment framework determining adherence to these principles.

### **Government oversight of credit issuance**

Voluntary standards should be complemented by government regulation and oversight of voluntary carbon markets. Developing countries can gain a competitive edge in attracting valuable private capital by designing regulation that promotes high-integrity carbon credit projects. Government regulation can build on standards such as ICVCM's Core Carbon Principles to introduce minimum quality criteria for carbon credit projects.

Regulatory and legal oversight of certification standards and ratings agencies is another area where governments can play a key role. Legal accountability of certification standards and ratings agencies can deter misleading emissions reductions claims (such as via penalties or fines). Regulation should specifically manage conflict of interest issues for ratings agencies. One way to do this is to randomise/rotate allocation of ratings agencies to projects, which prevent certification standards from colluding with ratings agencies to inflate removal claims. Many lessons from the regulation of financial credit ratings agencies post the global financial crisis are applicable here.

### **Defining net zero and when offsets can be used**

Governments and/or standards should clearly define what constitutes net zero for a firm, which types of emissions can be offset (as opposed to being abated), and for how long a firm can continue to offset such emissions without abatement action. They should also require firms to report their carbon credit purchases and their corresponding contributions to firms' net emissions. These steps may soften demand for carbon credits, but more importantly, they will encourage stronger abatement action and more insetting (firms investing to reduce emissions in their own supply chains, allowing better monitoring and mitigating incentive problems). Similar to the supply side, voluntary demand-side initiatives such as the Science Based Targets Initiative (SBTi) and the Voluntary Carbon Markets Integrity Initiative (VCMI), are steps in the right direction.

## **Important tool for the green transition**

Notwithstanding their issues, voluntary carbon markets are an important tool to help facilitate the global transition to net zero. With appropriate reforms, high-integrity carbon offsets can complement firms' own emissions reduction efforts, while also channelling crucial climate finance to developing countries. The green transition requires a concerted global effort to do "whatever it

takes". Far from abandoning voluntary carbon markets, we need to move rapidly to reform them, encourage wider adoption with greater integrity, and make them a useful tool in our fight against climate change.

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- This blog post follows an event on "Innovative market solutions to confront climate change", which took place on 24 September 2024 as part of LSE Environment Week.
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