Making sense of carbon markets in India

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As the global community once again converges at the Conference of the Parties (COP), the pivotal role of carbon markets in achieving the Paris Agreement's ambitious goal of limiting warming to 1.5 degrees Celsius takes center stage.

Mitigation strategies should be driven by their ability to bring in technological innovation and mobilize resources for implementation. In the Indian context, existing policies like the ethanol blending mandate lack a market-based perspective, potentially impacting emissions reduction achieved and the living cost of consumers. A carbon market is an essential tool that can address innovation and resource mobilization.

Early in 2022, as part of the Union Budget, the Indian Ministry of Finance announced sovereign green bonds to encourage the growth of the nascent green finance market in the country. In a country where investments in innovation and scaling up and deployment of low-carbon technologies are crucial, this is a positive step. The success and growth of the green finance market will be affected by how carbon pricing is implemented. Some interventions can be less disruptive to the average consumer or more effective at mitigation than others.

Carbon markets in India

In this context, the government's announcement in June 2023 of the Carbon Credit Trading Scheme (CCTS) as part of the Energy Conservation Act 2001 is a timely intervention. This clarifies the government's intent to establish a compliance carbon market in India based on emissions intensity targets determined by the Bureau of Energy Efficiency.

This describes a system of tradable performance standards (TPS), which is a form of carbon trading, where targets for each industry are set on an emissions-per-unit-of-output basis rather than on absolute emissions by sector. Entities covered under the scheme can trade carbon credits, fostering a market-driven approach to emissions reduction.

The contrast between carbon trading and carbon taxes is particularly relevant in India's socio-economic landscape. Carbon taxes, often criticized for inflating costs in developing nations, might not be the most suitable option in a country like India where green alternatives are not universally accessible.

Environmental goals and decent living standards

India's unique challenges, including low per capita emissions and a focus on achieving key SDGs, necessitate a different approach to emissions reduction. Rather than advocating for reduced consumption, which is not currently a viable option, the emphasis should be on technological advancements made through mechanisms such as TPS. Evidence suggests that the adoption of an approach such as TPS will promote innovation while minimizing direct consumer cost implications. The CCTS, with its focus on TPS, allows for emission reductions without unduly burdening consumers, aligning with India's sustainable development goals.

Tradable performance standards versus command and control

Pure performance standards (a type of command-and-control measure that involves setting a mandatory target to achieve) are often the preferred policy instrument because of the ease of implementation. Without the option of trading credits, they not only put certain firms at a disadvantage cost-wise but also tend to focus on one particular technology, restricting the incentive to expand the pool of available low-carbon options. In India, the ethanol blending mandate targets the replacement of 20% of petrol with ethanol to reduce on-road greenhouse gas emissions. All primary and supplementary feedstocks for ethanol are food crops (sugarcane, rice, maize) and compete for land and water, significantly impacting the environment and affecting agricultural emissions. This could be exacerbated by increased ethanol demand due to the mandate and further limit innovation in alternatives.

In contrast, the low-carbon fuel standard in California sets an emissions intensity target for the transport sector and allows fuel providers to trade credits. It has reportedly incentivised the reassessment of long-term investments in carbon-intensive assets, even among oil companies.

Resource mobilization and innovation for decarbonisation

The rigidity of pure performance standards and the limited influence of carbon taxes on innovation underscore the need for a nuanced approach. In the presence of multiple sectoral policies with potential impacts on consumer welfare through price feedback, the CCTS could be a less disruptive approach to mitigation. It is complementary to the establishment of a green finance market, which addresses the resource mobilization part of the problem.

However, a carbon market mechanism is an essential tool to encourage innovation and ensure investment in newer low-carbon technologies. This dual-pronged strategy can create an ecosystem aligning with India's twin priorities of fostering innovation and mobilizing resources while enhancing the accessibility of greener technologies for the population. As the nation positions itself for a sustainable future, the integration of carbon markets emerges as a linchpin for transformative change.