Scientists say voluntary corporate emissions targets not enough to create real climate action

April 25 2024

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Companies' emissions reduction targets should not be the sole measure of corporate climate ambition, according to a new perspective paper.

Relying on emissions can favor more established companies and hinder innovation, say the authors, who suggest updating regulations to improve corporate climate action.

The paper, published today in *Science*, is by an international team led by Utrecht University, which includes Imperial College London researchers.

Lead author of the study Dr. Yann Robiou Du Pont, from the Copernicus Institute of Sustainable Development at Utrecht University, said, "Assessing the climate ambition of companies based only on their emissions reductions may not be meaningful for emerging companies working on green innovation."

Companies can set individual climate goals, typically commitments to reduce greenhouse gas emissions from their activities—not unlike national governments. To indicate how ambitious these voluntary commitments are, businesses can get them validated as "Paris-aligned" under the Science Based Targets initiative (SBTi), a collaboration that started in 2015.

This validation means SBTi considers their targets to be aligned to the Paris Agreement, which aims to limit global temperature increase to well below 2°C above preindustrial levels and pursue efforts to limit it to 1.5°C.

The new paper says this approach may inadvertently favor larger existing companies, stifling innovation and skewing the playing field against emerging competitors. This is because Paris-aligned targets for larger, established companies often assume that they can simply keep their current market share of emissions, leaving no capacity for emissions from the activities of emerging companies.

For example, a new solar panel manufacturer that needs to grow its emissions ten years from now while it scales up a new, highly efficient method of building those panels, may be squeezed out of the market because, in this model, their operation would mean overshooting the Paris-aligned climate goal.

Dr. Robiou Du Pont said, "These voluntary corporate targets may have been useful to achieve some progress on emissions reduction in the largest companies. But our paper shows that this approach is not sufficient to guide the corporate sector and cannot be the sole basis for regulations assessing if businesses are Paris-compliant."

To level the playing field, the authors say corporate climate targets could be based on other factors than reductions in emissions, such as emissions intensity per unit of economic or physical output. These types of targets however are harder to align to Paris Agreement targets, as they don't cap absolute emissions.

The study also highlights that adopting a target doesn't necessarily cause a drop in actual emissions, as voluntary targets are just that. The authors point to evidence that corporations are already using these voluntary targets, often of questionable credibility, as justification for watering down or delaying mandatory regulations.

Co-author Professor Joeri Rogelj, from the Centre for Environmental Policy and Director of Research at the Grantham Institute at Imperial College London, said, "Companies setting their own individual targets risk complacency that we can't afford.

"The window to keep the planet to 1.5°C warming is rapidly closing, and even for keeping warming well below the upper Paris limit of 2°C we need concerted action to reduce greenhouse gas emissions now. Voluntary corporate emissions targets alone are not enough for rapid global decarbonization and certainly not a substitute for regulation."

The authors conclude that governments or intergovernmental organizations need to introduce legal frameworks based on a range of indicators that encourage best practices and innovation, as well as stringent requirements on transparency for any assessments.

The toolkit for building those frameworks exists, argue the authors, including carbon pricing, green subsidies and demand-side measures. Regulators should also consider the usefulness of the products that companies produce in the green transition, not only their emissions. Under a revised framework, the more efficient solar panel manufacturer would not have to constrain production, allowing for needed innovation with spillover effects in the future.

Co-author Professor Detlef van Vuuren, also from the Copernicus Institute of Sustainable Development at Utrecht University, said, "Our research underscores the urgent need for robust regulatory frameworks and transparent oversight to guide corporate climate action. Voluntary targets, while commendable, are not a substitute for mandatory regulations that ensure accountability and drive innovation across all sectors."

More information: Yann Robiou du Pont, Corporate emissions targets and the neglect of future innovators, *Science* (2024). DOI: 10.1126/science.adl5081. www.science.org/doi/10.1126/science.adl5081

Provided by Imperial College London