

How carbon labels can aid in the fight against climate change

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Carbon labels can be effective in changing corporate as well as consumer behavior, as corporations adjust their carbon footprint with the dual goals of increased efficiency and improved reputation, according to

newly published research by Michael P. Vandenberg, David Daniels Allen Distinguished Chair of Law at Vanderbilt University and director of its Climate Change Research Network, and a team of co-authors.

"Revisiting the promise of carbon labelling" was published Thursday in the journal *Nature Climate Change*. The analysis outlines the potential effects of carbon labeling—a practice that is receiving attention as companies grapple with how to engage in sustainable practices.

While international and national government efforts at curbing climate change have had limited success in the past year, carbon labeling can be done by the private sector—absent any government action. It also can support development of government measures, such as border allowances and carbon taxes.

Many carbon labels resemble nutritional and ingredient information on grocery items. Carbon labels, however, estimate a product's carbon emissions from its creation to its end. Some labels provide a simple stoplight-type signal about how a product compares to others. Other labels provide an equivalent greenhouse gas emissions number, or CO₂e, detailing how much carbon went into the creation, transportation, use and end of a product. Some labels include both. Consumers can learn how many grams or kilograms of carbon they used when purchasing anything from a bag of chips to a new truck.

Existing literature on carbon labels has focused on how the practice curbs consumers' carbon emissions. The research discussed in the article, however, reveals that businesses often respond to labeling programs by reducing their carbon footprint, possibly because calculating carbon [footprints](#) helps them identify efficiencies—and because the disclosure can affect corporate reputation.

The study addresses key challenges for carbon labels, such as setting

uniform [standards](#), collecting accurate data and designing labels for a global spectrum of products and industries. Vandenberg and co-authors also provide recommendations on how to institute carbon labels as a common practice in society.

"Carbon labels are an important, feasible way to reduce carbon emissions, and these types of feasible options are more important than ever given the combination of the growing threat of climate change and the inability of the international and national processes to make sufficient progress," Vandenberg said.

"Carbon labels can lead companies to reduce [carbon emissions](#) even if consumer responses to the labels are not strong; and as a result, carbon labels should be designed to affect not only retail consumer behavior but also the behavior of corporate managers. That means including both the simple, direct information that consumers are likely to respond to and the quantification of emissions that companies are likely to respond to."

Vandenberg authored the paper with scholars Khan M.R. Taufique, Kristian S. Nielsen, Thomas Dietz, Rachael Schwom, and Paul C. Stern.

More information: Khan M. R. Taufique et al, Revisiting the promise of carbon labelling, *Nature Climate Change* (2022). [DOI: 10.1038/s41558-021-01271-8](#)

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