

Clarity needed for businesses to achieve greenhouse gas mitigation, study says

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Despite efforts to mitigate the effects of climate change, companies are not set up for success due to conflicting national and sectorial targets and differing availability of abatement options, a new study reveals.

Companies and organizations are making significant efforts to reduce their emissions and manage the effects of climate change, yet many organizations are not efficiently contributing to global climate targets due to disparities between national ambitions, Government guidance, and available abatement options, researchers at Newcastle University have shown.

This is the first study to give a comprehensive analysis, capturing research and industry perspectives and insights. The study suggests introducing a carbon measurement and management process alongside a dynamic framework following a "Plan, Do, Check, Act" process. This would align climate targets, climate actions, monitoring, and reporting.

Author of the study, which is [published](#) in *The Business Strategy and the Environment* journal, Anna Christy, Ph.D. candidate in the School of Engineering, Newcastle University, said, "Best practice is not universal, and companies are trying to balance conflicting standards while trying to improve their environmental performance. Governing bodies should enable effective reporting by harmonizing international regulatory frameworks, empowering organizations to effectively assess, manage, and reduce their carbon footprints."

Ensuring robust assessments of their climate impact

The study found that high-level data sources and guidance are not always sufficient to define accurate accounts of greenhouse gas emissions and that prescribing well-known accounting standards can require inefficient interventions or suboptimal reduction strategies.

The researchers are calling on [government agencies](#) to put in place regulations and guidelines that ensure they make robust assessments of their climate impact and implement abatement technologies that materially reduce their emissions rather than relying on offsets and

offshoring.

This collaborative study has brought together Newcastle University and industry partners to focus on the urgent subject of carbon accounting and measurements. The study received data and support from Northumbrian Water Limited (NWL), which already manages and reports its emissions in line with industry best practices and international standards.

The research will inform the development of a new emissions inventory and reduction framework that is suitable for a regulated utility—balancing the urgency of climate action with the needs of customers and stakeholders.

Currently, over 4,000 companies worldwide are setting climate targets using, for example, the Science Based Target initiative to be in line with the United Nations Greenhouse Gas (GHG) Protocol. However, this study reveals that differences are seen when it comes to guidance and action when companies report on avoided emissions or want to offset emissions.

The study discusses that conflicting demands of regulators, shareholders, and customers are often overlooked. This presents challenges when selecting the best abatement options and can lead to inefficient decarbonization strategies.

The study was conducted by experts in the School of Engineering and the Business School in collaboration with Northumbrian Water. The English Water sector is a leader in Net Zero with the first sector-wide NetZero commitment. However, the researchers found that this commitment is not fully aligned with government policy and or the economic regulation for the sector.

In response to the challenge of meeting its affordability and

decarbonization priorities, Northumbrian Water engaged with Newcastle University to help ensure that they get the balance right.

Study co-author Professor Marwa Elnahass, Professor of Accounting & Finance at Newcastle University Business School, added, "Following the conclusion of the COP28 summit, it is crucial to address climate change policy. The study integrates innovative insights related to the carbon accounting methodology of Northumbrian Water Limited (NWL) and offers valuable findings that resonate not only within the English water sector but also carry broader implications for climate policy."

"This includes recent regulatory changes by the International Sustainability Standards Board (ISSB) concerning global sustainability and climate disclosure standards."

Using the water sector as an example, the authors recommend a more dynamic approach that considers the multiple demands on businesses, particularly prioritizing the efficient use of customer money. The study argues that companies should be encouraged to invest sufficient resources into developing their carbon accounting methods to ensure their management strategy is attainable and aligned with global [climate](#) commitments.

More information: Anna Christy et al, A dynamic framework to align company climate reporting and action with global climate targets, *Business Strategy and the Environment* (2023). [DOI: 10.1002/bse.3635](https://doi.org/10.1002/bse.3635)

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