

Nitrogen pollution policies around the world lag behind scientific knowledge

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National and regional policies aimed at addressing pollution fueled by nitrogen lag behind scientific knowledge of the problem, finds a new analysis by an international team of researchers. Its work, which appears

in the journal *Nature Sustainability*, reveals how governmental regulations favor nitrogen use for commercial enterprise over curbing its environmental impacts.

"There is a large gap between what scientists understand about nitrogen [pollution](#) and how policymakers address it," says David Kanter, an assistant professor in New York University's Department of Environmental Studies and one of the paper's co-authors. "By favoring the use of fertilizers and other nitrogen-rich materials for agricultural purposes over scientifically informed controls, governments around the globe are coming up short in addressing environmental concerns."

The analysis, conducted with Wilfried Winiwarter of the International Institute for Applied Systems Analysis in Austria and Poland's University of Zielona Góra, examined more than 2,700 nitrogen policies in 186 countries. It is the first to study nitrogen policy on a global scale.

Specifically, it examined both national and regional policies by continent, then considered the policy category they fell under (e.g., regulatory, economic, etc.), which sectors these policies applied to (e.g., agriculture, waste, transportation, etc.), and where resulting nitrogen-fueled pollution ended up—also known as "environmental sink" (e.g., air, water, soil, etc.)—as a result of these policies.

Overall, the [analysis](#) revealed a nearly complete lack of policies that address nitrogen impacts across multiple destinations, or sinks.

"This reveals how environmental [policy](#) around the world is currently not equipped to address such a cross-cutting pollutant," explains Kanter.

Notably, there were significantly more policies in the [agricultural sector](#)—the dominant source of nitrogen pollution—that incentivize nitrogen use or manage its commerce (640 policies) than aim to reduce [nitrogen](#)

pollution (190 policies).

More information: Kanter, D.R., Chodos, O., Nordland, O. et al. Gaps and opportunities in nitrogen pollution policies around the world. *Nat Sustain* (2020). doi.org/10.1038/s41893-020-0577-7

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