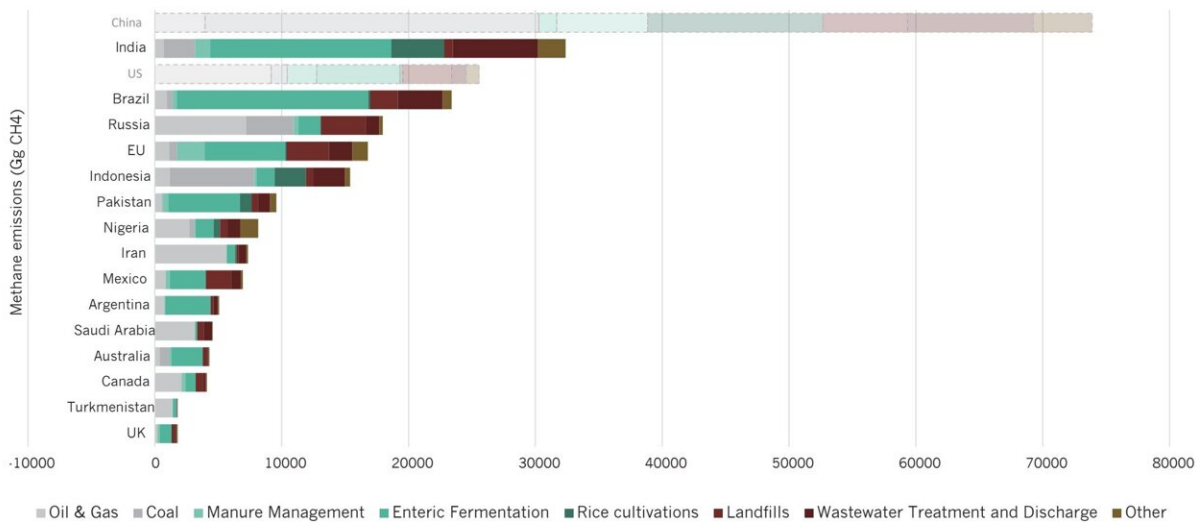


# The 15 top methane-emitting nations lack policies to rein them in

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Methane emissions in the key emitters by subsectors in 2022. Credit: Overview of Methane Mitigation Policies in Global Key Emitters Beyond the United States and China (2024)

While the United States and China have taken important steps to reduce their methane emissions, other significant producers of the potent greenhouse gas rarely have concrete national plans to mitigate it, according to a new University of Maryland analysis.

The [report](#) from the Center for Global Sustainability (CGS), in

collaboration with the Energy Foundation China, investigated 276 policies of 15 countries that account for approximately 39% of global emissions of methane, the second-largest contributor to [global warming](#) after carbon dioxide. It found large gaps in policy efforts, adoption and implementation.

"Along with the United States and China, major emitters such as India, Russia and Canada account for more than 60% of global emissions. Yet, existing study shows that current methane policies cover only 13% of global [methane emissions](#), with their effectiveness still unclear," said Mengye Zhu, CGS assistant research professor and lead author of the analysis.

As the world seeks to limit global temperature rise and achieve net-zero emissions, addressing methane output remains a pivotal step in climate action, climate experts say.

The U.S. and China—the subject of a 2022 CGS study on methane emissions—have demonstrated a commitment to reducing emissions through [collaborative efforts](#) such as the U.S.-China Joint Glasgow Declaration and the Sunnylands Statement on Climate Action. Both nations also endorsed the Global Methane Pledge, which aims to slash emissions by at least 30% below 2020 levels by 2030.

Yet human-induced methane emissions, which come from fossil fuels, waste and agriculture, remain a global challenge, particularly among other top emitters. The CGS researchers looked at India, Russia, the European Union, Brazil, Nigeria, Indonesia, Australia, Canada, Pakistan, Turkmenistan, Saudi Arabia, Mexico, Argentina, the United Kingdom and Iran.

The [agriculture sector](#) produces the largest share of methane emissions—47%—yet only 19% of the policies among these key

emitters focus primarily on it. Argentina, Mexico and Indonesia lack specific policies addressing methane emissions from agriculture, while India, Russia and Iran have few.

Many countries primarily focus on the [energy sector](#), but their policies tend to be more concerned with safety and resource conservation rather than direct climate mitigation. While regulations on methane emissions from oil and gas are established, notably Canada and Mexico lack policies specifically targeting methane emissions from abandoned coal mines.

Alternatively, Brazil, Australia, Canada and the EU have robust policies for reducing methane emissions from livestock. However, methane mitigation policies for [rice cultivation](#) in major rice producers, such as India and Indonesia, are less advanced. Lastly, various countries, notably Indonesia and the UK, have implemented measures to reduce methane from landfills, but not wastewater.

"Despite progress in energy and agriculture, more targeted policies and international coordination are needed to tackle methane emissions across all sectors," said Ryna Cui, CGS acting director and co-author of the analysis. "Canada, Brazil and the EU provide a benchmark with their comprehensive approaches encompassing regulations, [financial support](#), market mechanisms and research. Other key emitters can follow their lead to achieve significant environmental and economic improvements."

For instance, strengthening monitoring, reporting and verification systems for methane emissions, particularly in developing countries, could ensure accurate and credible emissions reporting. Additionally, adopting market-based approaches or economic instruments (e.g., taxes, and carbon markets) could generate financial incentives that promote emission reductions, the report found.

Provided by University of Maryland

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