



Weekly Brief

August 21, 2023



Methane Matters—Much More Than You Think

You may have read in the climate literature that one ton of methane emissions has roughly 28 times the warming impact of one ton of carbon dioxide emissions. But if you're like me, you may not realize how much that difference is understating the near-term impact.

Methane emissions are shorter-lived in the atmosphere than CO₂ emissions, which means their warming effect is more concentrated. So, over the first 20 years, that one ton of methane emissions will have a warming effect that's about 80 times greater than that of carbon dioxide. **In the first year, those emissions are 120 times more powerful.**

I've been engaging deeply in the climate crisis for years, but I only became aware of the implications of this a few months ago, when a team at BCG shared [this analysis](#) with me. And I'll be honest: it didn't seem believable at first. How could an issue this big—with solutions already at our disposal—not get more attention in the fight against global warming, particularly over the next couple decades as other solutions are still ramping up?

The fact is that most of the collective focus and conversation to date has been on reducing carbon dioxide emissions, and this remains essential. But accelerating the fight against methane emissions, which come primarily from unintended leakages in energy production, agriculture, and waste, is a critical puzzle piece that often gets overlooked and undervalued.

There are three reasons why cutting methane emissions is the most powerful weapon we have in the struggle against near-term climate change:

Methane is much more potent than carbon dioxide.

Its impact over the short term is staggering, as I described above. Carbon dioxide may be responsible for the scale and longevity of climate change, but methane is setting today's pace.

Methane concentrations are way up.

Since 1900, atmospheric concentration of methane is up about 120%. Carbon dioxide is up about 40%. Multiply these numbers by methane's front-loaded effect, and it's clearly responsible for a large component—more than one-third, according to our estimates—of the global warming we are experiencing today.

We can turn the tide.

Every day, emissions released in the atmosphere increase GHG concentrations. Fortunately, GHGs are absorbed in the sea and land and destroyed through natural processes. These sources of reduction are known as sinks.

In the case of methane, current emissions are only modestly greater than sinks. Recent research shows that from 2010 to 2017 methane emissions were about 4% greater. This is important. If we can reduce methane emissions by 10%, atmospheric concentrations should start to decline. If we can reduce them by 30%, we have a chance to slow the runaway train of climate change.

Many solutions already exist in the sectors responsible for methane

emissions, and the needed technology is advancing. To make a significant difference, we can detect and fix leaks in oil and gas operations and infrastructure, collect and destroy methane at landfills, and start to address agriculture by converting manure into biogas and applying new feed additive technology to reduce methane released by cattle.

As I've come to understand the huge and understated near-term impact of methane emissions, I've realized that their reduction must be at the core of our efforts to tackle rising temperatures and not a side point to carbon dioxide.

This November, leaders from more than 150 nations will gather at COP28 to discuss, in part, how they can meet the Global Methane Pledge to reduce emissions by 30% by 2030. Getting there will require new regulation, as well as stronger commitments from companies and consumers—and a deeper understanding that the actions on methane we take now could have the greatest impact on changing the temperature trajectory between now and 2050.

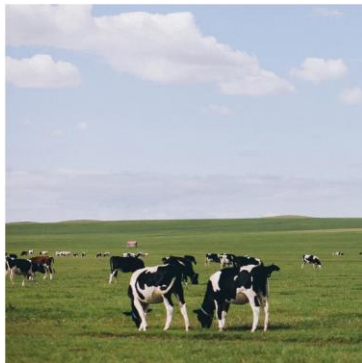
Next time you are discussing sustainability with your leadership team, take a moment to do a deep dive on methane emissions from your organization, customers, and supply chain. See where you can accelerate action, and embed these new opportunities in your plans.

Until next time,

A handwritten signature in dark ink, appearing to read "Rich", with a stylized flourish at the end.

Rich Lesser
Global Chair

Further Reading



[Methane: Today's High-Impact Greenhouse Gas](#)

Methane is a significant contributor to global warming—but the conventional approach to measuring the warming potential of GHGs understates its true impact.

[| READ MORE](#)



[Shifting the Direct Air Capture Paradigm](#)

How to reduce the costs of the carbon-dioxide removal technology below \$150 per ton—and transform it into an affordable solution for tackling the climate crisis.

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[Fast-Tracking Green Tech: It Takes an Ecosystem](#)

The window for developing the new technologies needed to slow global warming will soon close. Stakeholder ecosystems can help bring these essential tools to market quickly.

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