

Targeting Super Pollutants: The Fastest Path to Climate Impact

The climate crisis demands urgent, effective action. While significant investment capital flows toward emerging technologies and long-term solutions for CO₂, readily available and scientifically proven methods for immediate impact often go overlooked.

The Hidden Potential of Super Pollutants

Under the [Paris Agreement](#), almost every country has committed to reducing greenhouse gas emissions so that future temperature increases are limited to 1.5°C above pre-industrial levels. While many countries and companies have made commitments to achieve net-zero emissions around 2050, current efforts are [not on track](#) to meet the 1.5°C target.

The International Panel on Climate Change (IPCC), the leading climate science body, emphasizes the need to reduce non-CO₂ greenhouse gases. Often called “super pollutants,” these gases are extremely potent—trapping up to [12,700 times](#) more heat than CO₂, ton-for-ton, over a 20-year period. Methane, fluorinated gases (e.g., old refrigerants), nitrous oxide, and black carbon account for [nearly half](#) of all global warming caused by human activity since 1970. Once released into the atmosphere they cannot be withdrawn and their contribution to climate change cannot be reversed.

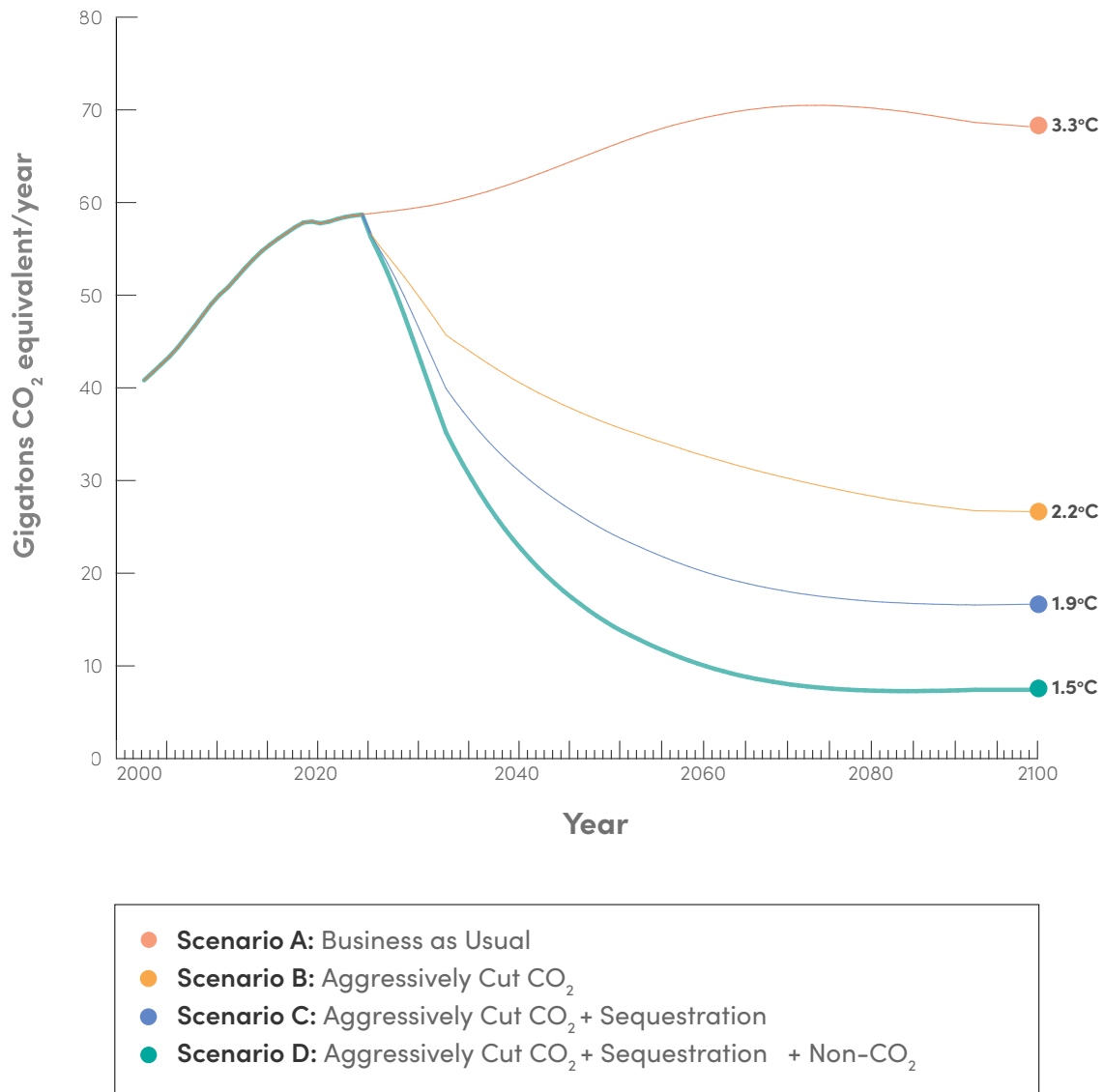
A Faster Path to Impact

According to the IPCC, it is [impossible](#) to limit warming to 1.5°C without aggressively addressing both CO₂ and non-CO₂ gases. Sophisticated [modeling analyses](#) from Climate Interactive in collaboration with the MIT Sloan Sustainability Initiative shows that focusing only on reducing CO₂ is not enough to achieve the 1.5°C goal. Because the infrastructure changes and technological maturity needed for CO₂ solutions will take time, immediate [mitigation of super pollutants](#) is critical.

Super pollutants increase atmospheric temperature more rapidly than CO₂, meaning their faster reduction can sharply [bend the curve](#) on global warming in the quickest way possible. A study in the National Academy of Sciences found that targeted super pollutant measures have the capacity to offer [four times the net benefit](#) of CO₂ reductions by 2050. This means that for every dollar invested in reducing super pollutants, the resulting positive impact on the environment is four times greater than a similar investment in reducing CO₂.



Impact of Climate Solution Types



Source: [Climate Interactive En-ROADS Simulator](#), [Scenario A](#), [Scenario B](#), [Scenario C](#), [Scenario D](#).

Smart Investment for Immediate Results

Leaders often look to market-based mechanisms to accelerate climate action when they cannot reduce emissions from their value chain fast enough. As the carbon market soars past \$250 billion, striking a balance of diverse climate investments is crucial to maximizing near-term and long-term impact.

Fortunately, strategies for addressing super pollutants at scale are already available and particularly cost-effective when compared to carbon removal strategies. For instance, the technology exists to collect and permanently destroy fluorinated gases (or “F-gases”) from old appliances and plug methane leaks from old oil and gas wells. These approaches are effective but not yet happening at scale.

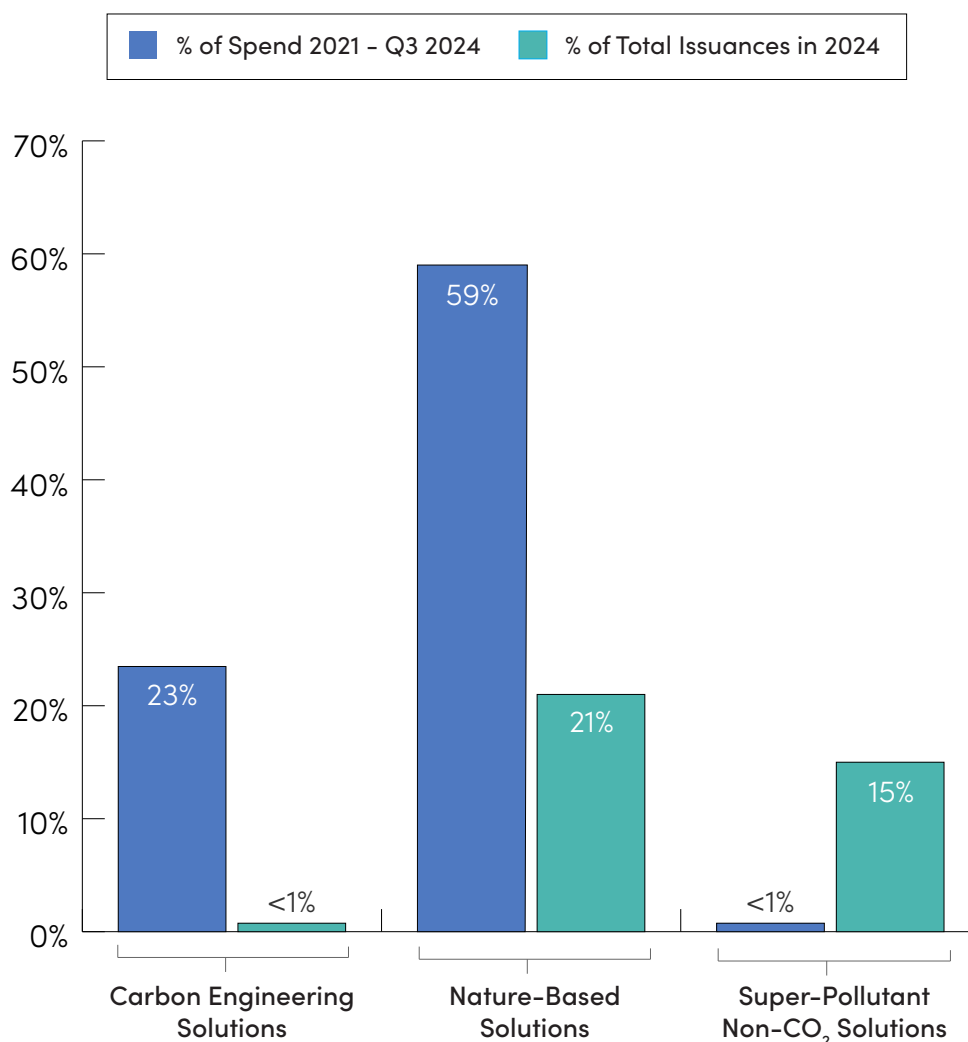


Despite their potential to deliver fast-acting progress and critical long-term impact, super pollutant solutions receive only a fraction of the capital flows in the global voluntary carbon market compared to engineered carbon solutions like Direct Air Capture (DAC) and Carbon Capture and Storage (CCS). Between 2021 and 2024, approximately \$10 billion — [23% of total climate investments](#) — flowed into DAC and CCS.

Yet, this substantial investment only delivered an estimated [4.7 million tons](#) of carbon dioxide equivalent (CO₂e) mitigation over the same timeframe at costs as high as \$850 per ton. In 2024, these projects issued just over 500,000 tons. Channeling capital instead into proven super pollutant solutions would drive faster, more substantial progress when it's needed most.

Spend vs. Issuances

Percent spend from 2021 through Q3 2024 compared to carbon credit issuances in 2024.



**Data excludes operational spend (e.g. fuel switch, energy efficiency, renewables).*

Source: [Investment Trends and Outcomes in the Global Carbon-Credit Market-2024](#) | MSCI



A Strategic Path Forward

Super pollutant projects provide a powerful, low-risk complement to CO₂ projects, delivering significant impact for about \$20 per ton. At this rate, that same \$10 billion investment can eliminate roughly 500 million tons of CO₂e. Redirecting just 20% of the projected \$250 billion carbon market to super pollutant mitigation could eliminate 2.5 gigatons of emissions. This would diversify carbon credit portfolios and deliver significant, immediate climate impact, rather than waiting decades when it may be too late.

Harnessing private climate finance for high-impact solutions is our most powerful defense against the worst of climate change and our surest path to a healthy planet for generations to come. Targeting super pollutants is an efficient, cost-effective strategy that can be implemented right now.

About Tradewater

A certified B Corp, Tradewater directly combats climate change by identifying, collecting, and eliminating the release of non-CO₂ super pollutants—like refrigerants from old appliances and methane leaks from uncontrolled wells. These critical environmental actions are transformed into high-quality carbon offset credits. We've set an ambitious goal to prevent the equivalent of at least 30 million tons of carbon dioxide equivalent (CO₂e) from entering the atmosphere by 2030, a permanent impact similar to removing nearly 7 million gas-powered cars from U.S. roads. Since 2012, we've eliminated over 10.5 million tons of CO₂e. Every carbon credit from Tradewater is backed by rigorous third-party verification and issued by leading registries, guaranteeing the highest integrity, additionality, and accuracy.

Learn more at www.tradewater.co.

