RESETTING OUR FUTURE

Cut Super Climate Pollutants Now!

The Ozone Treaty's Urgent Lessons for Speeding Up Climate Action

Alan Miller, Durwood Zaelke & Stephen O. Andersen

FOREWORD BY THOMAS LOVEJOY

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Dear Global Citizens,

The bad news is that we have at most ten years, and probably less, to radically slow global warming or face existential consequences on our planet. This threat is being propelled by self-reinforcing feedback loops in the climate system that risk pushing the planet past irreversible and catastrophic tipping points, such as the loss of reflective sea ice and permafrost and the die-off of the Amazon forest, which could lead to a less habitable, 'Hothouse Earth' climate state. We've already moved from the goal of keeping the planet safe, to "saving what we can" through more adaptation and resilience to complement the slow pace of climate mitigation under the Paris Climate Agreement. Without intervention, climate change will alter the planet irrevocably in coming decades, with devastating impact on all life on Earth.

A focus on reducing carbon dioxide (CO_2) is necessary but not sufficient. These strategies require several decades to slow warming because of the enormous transition required in the global energy system, the persistence of CO_2, and the unmasking problem (where immediate cuts in CO_2 cause the co-emitted sulfate particles that cool the atmosphere to quickly fall out, revealing the true warming that the sulfates were masking). This means that reducing fossil fuel emissions actually causes net warming for the first decade or more. As a result, this strategy is a 30-year marathon that is not sufficient on its own to slow the self-reinforcing feedbacks in the critical next decade.

The good news is that there is still a lot we can do to save what we can of our planet by accelerating strategies that slow warming the most in the near-term, starting with strategies that cut "super climate pollutants," including: *hydrofluorocarbons*, *black carbon*, *methane*, and *tropospheric ozone*. These super climate pollutants trap more heat than CO_2 but stay in the atmosphere for less time—days to weeks for black carbon and tropospheric ozone, and a decade and a half for methane and HFCs. The bottom line is that we first need to win the 10-year sprint to cut the non-CO_2 super pollutants if we are to win the longer-term climate marathon to net zero emissions by 2050.

Our plan for avoiding the most warming in the shortest amount of time is to cut the super pollutants as quickly as possible, while also protecting the forests and other natural "sinks" that draw down and store CO_2, even as we work to cut CO_2 from burning fossil fuels and biomass. Cutting the super pollutants will avoid three times as much warming by 2050 as cutting CO_2 alone. We can make this happen by using existing treaties like the Montreal Protocol on Substances that Deplete the Ozone Layer and by developing new global and regional agreements, as well as stronger national regulations. Individual actions can also help.

In the face of the steady drumbeat of increasing climate impacts, we have a message of hope. In most cases, cutting the super climate pollutants can be implemented quickly with existing technologies, and more importantly, will produce fast and measurable results this decade, along with good jobs, plentiful energy savings, and cleaner air. Many of the strategies—especially reducing black carbon and tropospheric ozone—also will help protect public health while also providing greater social equity, stronger economic growth, and help developing countries achieve sustainable development.

Now that the 2050 goal of net zero emissions is well underway, it's time to focus on winning the initial 10-year sprint by cutting the super pollutants. It's time to make 2030 the new 2050.

We have a decade or less to radically slow global warming before we risk hitting irreversible tipping points that will lock in catastrophic climate change. The good news is that we know how to slow global warming enough to avert disaster. *Cut Super Climate Pollutants Now!* explains how a 10-year sprint to cut short-lived "super climate pollutants"—primarily HFC refrigerants, black carbon (soot), and methane—can cut the rate of global warming in half, so we can stay in the race to net zero climate emissions by 2050.

This book … sets out an attainable and fast agenda to cut global warming in half ... As a long-time Congressional champion of cutting super climate pollutants, I recommend it.

Representative Scott Peters, California's 52nd Congressional District

What should the Biden Administration's first steps be to give the climate emergency the attention it deserves? This timely new book by three top climate experts lays out an absolutely essential part of initial climate action in the United States and other countries.

James Gustave Speth, former Chair, US Council on Environmental Quality

The race to Net Zero by mid-century is on. But it is action this decade that will prove decisive. Here, three stalwarts of climate policy urge us to walk and chew gum this decade: maintaining stringent efforts to cut carbon emissions and staging an all-out effort to reduce super pollutants and wipe out their short-lived contribution to warming. We do well to listen.

Rachel Kyte, Dean, The Fletcher School, Tufts University

There is only one way we can reduce enough warming in the near-term to prevent the worst of climate impacts, and that is to cut short-lived climate pollutants now!

Romina Picolotti, former Environment Minister for Argentina

Inspired by the Montreal Protocol, the authors present a powerful plan to cut the rate of global warming in half by reducing the short-lived super climate pollutants over the next 10 years.

Jennifer Haverkamp, Director, Graham Sustainability Institute

The authors have broken open the revolutionary story on "super pollutants" and how they can avoid 'three times as much warming by 2050 as cutting CO_2 alone'—the bright light at the end of our dark tunnel.

Gay Browne, author, Living with a Green Heart, and founder and CEO of Greenopia

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Alan Miller is a former World Bank representative for global climate negotiations; Durwood Zaelke is President and founder of the Institute for Governance & Sustainable Development; and Stephen O. Andersen is a former Director of Strategic Climate Projects at the Environmental Protection Agency.

Resetting Our Future: Will our era be defined by its disaster, the COVID-19 Pandemic, or by our collective response to it: a "Great Reset"? At this critical moment in history we have a rare opportunity to reset our path and avert even bigger disasters: the climate crisis, growing inequality, racial injustice, ecological and economic collapse, and the next pandemic. This series of books provides a platform for pragmatic thought leaders to share their visions for big, paradigm-shifting changes, and to motivate humankind to take the first difficult steps towards a better future.

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