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Secretary Clinton and Allies Open Second Front In Fight Against Global Warming

Reducing short-lived climate pollutants can cut the rate of warming in half

Washington, DC, February 16, 2012 – Secretary of State Hillary Clinton, EPA Administrator Lisa Jackson, and environmental ministers from five other countries announced today the formal launch of a new initiative on Climate and Clean Air to Reduce Short-lived Climate Pollutants. These include black carbon (soot), ground-level ozone and its precursor methane, and hydrofluorocarbons (HFCs), used as refrigerants and to make insulating foams. Collectively they contribute up to 40% or more of climate warming.

“The formal declaration by Secretary Clinton and her allies opens up a second front in the fight against global warming,” said Durwood Zaelke, President of the Institute for Governance and Sustainable Development. “This may be the only way to reduce climate impacts in the near term, and is a critical complement to the primary battle to reduce emissions of CO₂.”

Zaelke added that, “Historically this non-CO₂ approach has enjoyed broad political support from conservatives, businesses, and public health advocates, and has the potential to expand the coalition involved in fighting climate change, and to build momentum for a pragmatic climate effort.”

The science supporting fast action to reduce short-lived climate pollutants has been developed over the last 25 years, with by Dr. Ramanathan at the Scripps Institution of Oceanography playing a leading role, often in collaboration with the United Nations Environment Programme (UNEP). Dr. Mario Molina, who shared the Nobel Prize in Chemistry, has been working on the fluorinated gases, which include HFCs, since his seminal paper in *Nature* on CFCs with Dr. Sherwood Roland in 1974.

Last year Dr. Drew Shindell at NASA and a team of scientists working with UNEP culled 16 primary targets for cutting black carbon and methane from a pool of over 2,000 measures. The Shindell team calculated the costs and benefits of targeting these eight black carbon measures and eight methane measures, concluding that they can cut the rate of global warming in half over the next 30 to 40 years, while preventing millions of deaths a year and enhancing food security by cutting losses of four major grains by up to 4%. A substantial part of these cuts can be done at little or no net cost. The results were published last month in *Science*.

Zaelke added, “Cutting the rate of global warming in half for the next 30 to 40 years is critical for protecting vulnerable people and vulnerable places for the next four decades, including the Arctic, Himalayas and other glaciers, drought-prone areas, and low-lying coastal areas. It’s also

critical for food security.”

“To the extent that cutting warming in half would cut the coming impacts in half, this effort would be worth hundreds of billions of dollars in avoided damages, indeed, likely into the trillions—money governments cannot afford to waste,” said Zaelke.

The initiative of developing and developed countries was catalyzed by the Federated States of Micronesia as a way to slow sea level rise, and is designed to complement reductions of CO₂, which remains the priority for climate policy. A substantial part of CO₂ stays in the atmosphere warming the Planet for thousands of years.

The initiative is starting modestly with the initial coalition of six countries—three from the developing world and three from the developed world; the U.S, Mexico, Canada, Sweden, Bangladesh, and Ghana. The secretariat will be hosted by UNEP. A dedicated fund is being raised, with an initial contribution of \$12 million from the U.S. and \$3 million from Canada for the first two years. Sweden is expected to add to the fund, and other donors will be asked to contribute in the coming months.

This funding is new and in addition to the \$20 million the U.S. is currently providing for the Global Clean Cook Stove Initiative (\$10) and for the Global Methane Initiative (\$10 million), which already includes hundreds of projects in 40 countries. The Climate and Clean Air initiative is expected to expand rapidly to include at least 40 countries in the first two months. A ministerial meeting is planned for Stockholm in late April.

Zaelke and Nobel Laureate Mario Molina wrote in an [Op-Ed](#) published 14 February 2012 in *The Hill* (see below):

“The good news is that black carbon and ground-level ozone can be controlled using existing technologies, and in most cases existing air pollution laws and existing institutions, at the national and regional level. HFCs can be controlled under the Montreal Protocol ozone treaty, which has already phased out nearly 100 similar chemicals and has built the capacity in every country of the world to reduce HFCs quickly.

Another critical distinction of these non-CO₂ agents is that cutting them produces a fast response in the climate system. They remain in the atmosphere only for a very short time—from several days to three decades. Not so with CO₂, some of which stays in the atmosphere for thousands of years.”

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How to cut climate change in half

By Mario Molina, Nobel Laureate and Durwood Zaelke, University of California, Santa Barbara

February 14, 2012

What will it take to get the U.S. to take climate change seriously? Climate change threatens the world with powerful and potentially very costly impacts, such as increasingly severe droughts and floods, the die-off of forests and damage to agriculture, as well as rising sea levels. The U.S. is not exempt from these impacts.

The answer is that the U.S. can make progress even in a dysfunctional political climate, by focusing on reducing two local air pollutants, black carbon (soot) and ground-level ozone, along with hydrofluorocarbons (HFCs), man-made chemicals used in refrigerators, air conditioners, and insulating foams. Indeed, recent science shows the U.S., with Mexico and other willing nations, can help lead a global effort to reduce these three warming agents and thereby cut the rate of global warming in half for the next three or four decades.

These warming agents are as important for what they are not, as for what they are. Most significantly, they are not carbon dioxide (CO₂), and they can be cut without waiting for U.S. politicians to fully recognize and address the reality of climate change and the role of CO₂ from fossil fuels. Nor need we wait for the painfully slow international negotiations to produce a new global climate treaty to take effect in 2020 or beyond.

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Another critical distinction of these non-CO₂ agents is that cutting them produces a fast response in the climate system. They remain in the atmosphere only for a very short time—from several days to three decades. Not so with CO₂, some of which stays in the atmosphere for thousands of years.

Reducing these non-CO₂ warming agents is cost effective, even in the relatively near term, in part because of the strong collateral benefits for health and agriculture. The United Nations Environment Program (UNEP) calculates that even without considering the climate benefits, most black carbon and ground-level ozone can be reduced with little or no net cost, as confirmed by long experience with clean air laws, and can save many of the millions of lives lost every year to lung and heart disease caused by these pollutants, while also significantly reducing crop damage. The price for reducing HFCs under the Montreal Protocol is pennies for an equivalent ton of CO₂, a remarkable bargain in a cash-strapped world.

Climate vulnerable islands have formally proposed phasing down HFCs under the Montreal Protocol, with the Federated States of Micronesia leading the charge. The U.S., Mexico, and

Canada followed suit, and a strong majority of 108 countries are in agreement. Because substitutes already exist for most uses, 400 major international companies have agreed to reduce HFCs starting in 2015.

But for the Montreal Protocol to succeed with HFCs, we need leadership from heads of government. Otherwise, the government technocrats in India and China and a few other countries will continue to shield their industries and block action on HFCs. This is what happened last November at the annual Montreal Protocol meeting, where failure to reach consensus is allowing the explosive growth of HFCs to continue.

Reducing these three short-lived climate pollutants may be the only way to slow warming in the next thirty to forty years. A climate treaty that starts mandatory cuts in CO₂ by 2020 will be too little and too late to keep the world from exceeding a 2°C rise above the pre-Industrial temperature, the aspirational goal many heads of state agreed upon two years ago in Copenhagen, to prevent dangerous interference with the climate system in the next few decades.

It is still essential to reduce CO₂ emissions to avoid potentially catastrophic climate change in the mid- to long-term. This requires civilization to live within a carbon budget, including the U.S. This can be achieved by ensuring lower emissions of CO₂ and faster removal of the CO₂ that is already in the atmosphere, starting with efforts to protect and expand our forests, grasslands, and wetlands.

But the U.S. has an opportunity today to complement the needed cuts in CO₂ by cutting these short-lived climate pollutants. The U.S. also has an opportunity to help build a strong and pragmatic global coalition dedicated to using existing technologies and existing laws and institutions to reduce this part of climate change. While the US and Mexico are working with UNEP on such an initiative, along with several other willing countries, the scale that is needed to deliver the full benefits for health, agriculture, and climate requires presidential leadership both at home and globally.

Perhaps most critically, focusing on non-CO₂ mitigation will prove that the U.S. can act inexpensively and successfully on climate mitigation in the near-term, countering the cynical climate nihilism of so many of our increasingly misguided, and sadly irresponsible, political leaders.

Molina is professor, Department of Chemistry and Biochemistry, University of California, San Diego and shared the Nobel Prize in Chemistry in 1995 for his work on stratospheric ozone.

Zaelke is president, Institute for Governance and Sustainable Development, Washington, DC and Geneva and co-director, program on governance for sustainable development, Bren School of Environmental Science & Management, University of California, Santa Barbara.