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## **Getting to 350: “Fast-Action” Climate Mitigation Strategies Essential**

Washington, D.C., October 24, 2009 – In order to give the world enough time to return global CO<sub>2</sub> concentration to 350 parts per million (ppm) – the now widely recognized limit before the onset of abrupt and potentially irreversible climate changes – world leaders will need to take immediate and aggressive action to implement several “fast-action” climate mitigation strategies in addition to aggressive action to reduce CO<sub>2</sub> emissions. Key fast-action strategies can reduce the 50% of climate forcing that is from non-CO<sub>2</sub> sources. These include reducing black carbon soot, tropospheric ozone, and HFCs, as well as expanding biosequestration through biochar.

Today, October 24, has been designated an international day of action to raise awareness about the importance of reducing greenhouse gas emissions to meet this target.

“The 350 ppm number is the right target, but we’re running out of time to get there,” said Durwood Zaelke, President of the Institute for Governance & Sustainable Development. “Cutting CO<sub>2</sub> isn’t able to reduce warming for 1,000 years or more. To get to 350, we need to cut CO<sub>2</sub> as fast as we can. We also need to cut the non-CO<sub>2</sub> pollutants that are causing the other 50% of climate change, as well as expand our carbon sinks, by protecting and expanding our forests, and by expanding biochar production.”

Biochar is a fine-grained charcoal product and a stable form of carbon that can be plowed into soil where it remains for hundreds to thousands of years, also serving as a natural fertilizer. Biochar comes from cooking biomass waste at low temperatures with minimal oxygen—a process called pyrolysis. It is also one of the only safe carbon-negative measures available.

A new paper published in the *Proceedings of the National Academy of Sciences (PNAS)* by Nobel Laureate Dr. Mario Molina, Zaelke, and colleagues lays out the importance of the fast-action strategies: because these non-CO<sub>2</sub> climate forcers are all short-lived in the atmosphere compared with CO<sub>2</sub>, reductions will produce major cooling benefits quickly and help delay abrupt climate change by up to 40 years.

Not only are the results quick, implementation can be quick as well because the necessary technology is already available: black carbon can be reduced significantly using diesel particulate filters and cleaner-burning cookstoves in developing countries; the gases that form tropospheric ozone can be reduced by increasing industrial efficiency; and HFCs (used widely as a coolant in air conditioning systems) can be phased down using the successful Montreal

Protocol ozone treaty.

By 2050, HFC emissions could equal up to 19 percent of global CO<sub>2</sub> emissions under business-as-usual scenarios. Small island nations Micronesia and Mauritius submitted a proposal earlier this year calling for a phase-down of HFCs under the Montreal Protocol. Eight other island states, the U.S., Canada, Mexico, and the EU have since voiced their support for such action. The decision on HFCs, which are now controlled under the Kyoto Protocol, will be decided at the Montreal Protocol's annual meeting the first week of November in Port Ghalib, Egypt.

“Reducing CO<sub>2</sub> concentrations to 350 ppm will be key for the long-term fight against climate change, but fast-action strategies will also be necessary to get us there,” added Zaelke.

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**PNAS Paper referenced:** *Reducing abrupt climate change risk using the Montreal Protocol and other regulatory actions to complement cuts in CO<sub>2</sub> emissions*

Mario Molina, Durwood Zaelke, K. Madhava Sarma, Stephen O. Andersen, Veerabhadran Ramanathan and Donald Kaniaru

**Available online:** <http://www.pnas.org/content/early/2009/10/09/0902568106.full.pdf+html>