



## **Dangerous Sea Level Rise Imminent Without Large Reductions of Black Carbon and Implementation of Other Fast-Action Mitigation Strategies**

### **Poznan Panel of Experts Discuss Importance of Black Carbon, the Montreal Protocol, Biochar, and Methane as Part of Global Climate Strategy**

Poznan, Poland, December 11, 2008 – The world is already close to passing the tipping points for abrupt climate change events, and if strong measures aren't taken immediately the results will be catastrophic, concluded panelists during a side event at the UN climate conference in Poznan Tuesday night. Both scientific experts and government representatives alike at the event sponsored by the Federated States of Micronesia and Sweden, stressed the urgent need for fast-action mitigation measures that should be implemented and expanded immediately in order to avoid devastating consequences such as sea level rise.

Dr. Hermann Held of the Potsdam Institute for Climate Impact Research pointed out that land ice melt is being vastly underestimated, and that non-linear abrupt climate change is not being taken into account as it should be by the climate convention. The world is already committed to an astounding 2.4 degrees of warming, due in part to the warming effects of black carbon – a substance that is now considered the second-greatest contributor to climate change after CO<sub>2</sub> – which are being “unmasked” by reductions of SO<sub>2</sub>, which produces a cooling effect.

“As we continue to reduce sulfur emissions around the world for health reasons, we are unmasking additional warming that is bringing us closer and closer to tipping points like the meltdown of the Greenland Ice Sheet,” said Dr. Held. “In order to avoid a large jump in temperature and in turn avoid the devastating effects of sea level rise, we need to act quickly to reduce black carbon emissions in coordination with sulfur.”

“Black carbon is extremely bad news because it contributes to climate change in two ways: it absorbs heat from above and contributes to warming, but then as it falls on snow and ice it darkens the ground and reduces the albedo, or reflective ability,” said Durwood Zaelke, President of the Institute for Governance & Sustainable Development. “As a major contributor to snow and ice melt, this is especially troublesome for places such as the Tibetan Plateau, which is a critical tipping point. If this ice mass disintegrates, millions of people will lose their drinking water and irrigation for agriculture, leading to famine and possible national security threats over natural resources.”

Zaelke emphasized that although the current situation is dire, using these fast-action measures

can still save the world from passing the tipping points. As the world's best environmental treaty, the Montreal Protocol was brought into the discussion because of its track record of mitigating climate emissions by 135 billion tonnes of CO<sub>2</sub>-eq (many times more than the Kyoto Protocol) and effectively delaying climate change by up to 12 years. With its continued success in regulating ozone-depleting substances for both ozone and climate benefits, the Montreal Protocol can serve as an important model for climate.

“Since the creation of the Montreal Protocol, the Parties have been conscious of the potential effects of these ozone-depleting substances on climate, but now they have openly accepted their responsibility to protect climate, with the historic agreement to accelerate the phase-out of HCFCs in September 2007 and again this year with the decision to address the dangerous ozone chemicals from old equipment which are also very damaging to climate,” said Marco González, Executive Secretary of the Montreal Protocol Ozone Secretariat. “So far, we see more potential for the Montreal Protocol to benefit both ozone and climate, and we must continue to strengthen it.”

This sentiment was echoed by Husamuddin Ahmadzai from Sweden in his statement to the audience: “Among the opportunities for cooperative *action now*, measures to strengthen the Montreal Protocol can provide significant climate mitigation to help avoid tipping points. This is supported by the world's major economies who, in July 2008, through the *Declaration of Leaders Meeting of Major Economies on Energy Security and Climate Change*, pledged:

‘We, the leaders of ... the world's major economies ... recognizing the need for urgent action ... commit to taking the actions in paragraph 10 without delay. ... To enable the full, effective, and sustained implementation of the [UNFCCC] between now and 2012, we will: ... promote actions under the Montreal Protocol on Substances That Deplete the Ozone Layer for the benefit of the global climate system.’” An agreement to hold a workshop next year on possible collaboration between the Montreal Protocol and the UNFCCC in regulating potent HFC greenhouse gases, is a positive step, and another way to maximize the potential of the ozone treaty to protect climate.

Andrew Yatilman, Head of Delegation for the Federated States of Micronesia, expressed his support for using means under both treaties to address the climate crisis and reduce the serious threat of sea level rise to island nations: “The Federated States of Micronesia takes the Montreal Protocol and the UNFCCC very seriously because we understand that the future of our small islands and the lives of our people depend on the success of these two treaties. We urgently need to find the political will necessary to move these fast-action strategies forward.” Micronesia submitted a proposal last week in Poznan regarding Paragraph 1 of the Bali Action Plan, in order to stress the importance of fast-action climate mitigation measures in the face of tipping points and abrupt climate change.

“One clear way to move the climate negotiations forward is to focus some attention on trust and confidence building through concrete actions and decisions during this COP and this year,” said Ana Maria Kleymeyer from Argentina. “Parties need to believe that they will be able to carry through on their agreements, for which financial and technological assistance are the keys. Under the Montreal Protocol, developing countries have consistently been able to achieve all goals because the Multilateral Fund and its supporting institutional and capacity building support were

firmly in place to help deliver results. We can, with similar instruments, build that foundation of trust within the climate convention in order to move forward.”

Another key piece of the fast-action strategy is an emerging technology called biochar, which refers to a charcoal-like substance sustainably produced from biomass, that has the ability to permanently sequester significant amounts of carbon from the atmosphere in soil.

“Biochar is one of the most promising carbon-negative technologies available,” said Peter Read from Massey University Centre for Energy Research in New Zealand. “We need these technologies because reducing emissions (even to zero in 25 years, which is not a realistic possibility) cannot avert the threat of climatic catastrophe with unacceptable consequences for Micronesia as well as many populous river deltas around the world. While it is important to cap emissions, there is no question that we need an additional strategy for taking carbon out of the air and putting it somewhere safer – biochar has incredible potential to do this, along with a great deal of good in raising soil fertility and enabling sustainable rural development. It should be seriously considered by the climate convention.” The United Nations Convention to Combat Desertification has already submitted a proposal to include biochar under the UNFCCC.

Although methane’s contribution to climate change is not a new issue, recent increases in temperature could drive up methane emissions significantly. Importantly, like black carbon, methane is a short-lived climate forcer, making its reductions an ideal way to benefit climate in the near-term, while at the same time improving air quality and reducing mortality rates.

“Methane is a potent greenhouse gas and currently accounts for 18 percent of radiative forcing,” said Ashley King, Co-Director of the Methane to Markets Partnership Secretariat. “Reducing methane emissions from anthropogenic sources, which are estimated to increase 23 percent by 2020, is an important tactic for avoiding serious abrupt climate change events.”

The key message from the panel was summed up by Durwood Zaelke: “Several years ago, we thought that abrupt climate change events were something for future generations to worry about. True, the effects of passing the tipping points will continue to worsen as time passes without serious action. Unfortunately, we have to face the fact that increased emissions from dangerous substances like black carbon are exacerbating the climate situation and leaving us very little time to react. Taking quick action that will immediately benefit climate, is quite simply our only near-term option.”

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