INTERNATIONAL ARCTIC INTERESTS & PERSPECTIVES ON BLACK CARBON

Andrew Eil

United States Department of State,
Office of Global Change

March 28, 2014

Overview of Global and Regional Efforts to address Black Carbon

- Arctic Region
  - Arctic Council
  - Arctic Black Carbon Initiative
  - GEF Arctic Agenda 2020
- U.S.-Russia Bilateral Programs
  - Environment Working Group
  - Climate Science Sub-Group (Science & Technology Working Group)

Global Black Carbon Efforts

- UNEP:
  - *Integrated Assessment of Black Carbon and Tropospheric Ozone* (with WMO, spring 2011)
  - Synthesis Report on *Near-term Climate Protection and Clean Air Benefits: Actions for Controlling Short-Lived Climate Forcers* (fall 2011)
  - UNEP Atmospheric Brown Cloud program, and regional assessment report with a focus on Asia (published 2008)
- WHO: *Health Effects of Black Carbon* (2012)
- LRTAP: Adopted new language in Gothenburg Protocol encouraging development of BC inventories and priority reduction of BC-rich PM sources
- IMO: Considering whether to control Black Carbon emissions from ships
- Climate and Clean Air Coalition
- Global Alliance on Clean Cookstoves
- Partnership for Clean Fuels and Vehicles

Regional Black Carbon Efforts: The Arctic Council

- Tromso (2009), Nuuk (2011), and Kiruna (2013) declarations
- Arctic Monitoring and Assessment Program
  - "The Impact of Black Carbon on Arctic Climate": 2011 report
  - Report under preparation on Black Carbon and Tropospheric Ozone (also on Methane)
- Short-Lived Climate Forcers Task Force
  - Task Force Report delivered in Nuuk, Greenland at AC Ministerial, 2011
  - Task Force Report delivered in Kiruna, Sweden at AC Ministerial, 2013: "Recommendations to Reduce Black Carbon and Methane Emissions to Slow Arctic Climate Change"

Regional Black Carbon Efforts: The Arctic Council

- Arctic Contaminants Action Program: Short-Lived Climate Forcers Project Steering Group (SLCF PSG)
  - U.S. EPA diesel black carbon mitigation project in Russia
  - Norway black carbon from domestic heating project
  - U.S. project on best practice sharing
  - Russian proposal for national black carbon inventory
- Project Support Instrument (PSI): Arctic environmental project fund, including addressing black carbon
  - U.S. contribution of $1 million for BC projects
  - Five other countries' commitments
  - Russian implementing structure, contribution being finalized to launch the funding mechanism, working with NEFCO

NUUK DECLARATION

On the occasion of the Seventh Ministerial Meeting of

The Arctic Council

12 May 2011, Nuuk, Greenland

Welcome the Arctic Council reports on Short-Lived Climate Forcers (SLCF), that have significantly enhanced understanding of black carbon, **encourage** Arctic states to implement, as appropriate in their national circumstances, relevant recommendations for reducing emissions of black carbon, and **request** the Task Force and the AMAP expert group to continue their work by focusing on methane and tropospheric ozone, as well as further black carbon work where necessary and provide a report to the next Ministerial meeting in 2013,

Decide to establish a Short-Lived Climate Forcer Contaminants project steering group that will undertake circumpolar demonstration projects to reduce black carbon and other SLCF emissions,

Task Force Findings and Recommendations Delivered to Nuuk Ministerial, 2011

New Report Delivered in Kiruna, 2013

Key Task Force Findings, 2011 report

- *Unlike the case for methane and other well-mixed greenhouse gases, the most effective black carbon control strategies for Arctic climate benefits will vary by location and season*
- *Controls on black carbon sources that reduce human exposure to particulate pollution improve health, and in that regard many measures can be considered no-regrets*
- *The largest sources of black carbon emissions in Arctic Council countries have been identified*
- *To maximize climate benefits, particulate matter (PM) control programs should aim to achieve maximum black carbon reductions*
- *Total Arctic Council black carbon emissions are projected to decrease if existing and planned land-based transport regulations are effectively implemented, though this is not uniform across countries or sectors*
- *Emissions from sources other than land-based transport will likely remain the same or increase without new measures*

Key Task Force Findings, 2013 report

- *Nations of the Arctic Council are well positioned to reduce black carbon and methane emissions to slow the rate of Arctic climate change over the next few decades. Existing technologies and proven best practices are available to reduce these emissions. Arctic nations have different policy options—regulatory and voluntary—that already have been and can continue to be used to deliver black carbon and methane emission reductions. Measures that reduce methane and especially black carbon emissions provide significant health and environmental co-benefits.*
- *The Arctic Council can encourage the exchange and sharing of knowledge and data; facilitate collaboration and collective action where needed among Arctic nations; and incentivize sustained actions to reduce emissions of black carbon and methane. The Arctic Council can also facilitate the pursuit of common objectives among Arctic nations to reduce short-lived climate forcers in collaboration with other international forums and Observer nations.*
- *For science and policy reasons, the Arctic Council is especially well suited to play a leadership role in addressing black carbon emissions.*

Kiruna Ministerial, May 2013

Ministerial Declaration

- **Recognize** that reduction of short-lived climate forcers, could slow Arctic and global climate change, and have positive effects on health, and **welcome** the report on short lived climate forcers, and support its recommendations including that national black carbon emission inventories for the Arctic should continue to be developed and reported as a matter of priority,…
- **Decide** to establish a Task Force to develop arrangements on actions to achieve enhanced black carbon and methane emission reductions in the Arctic, and report at the next Ministerial meeting in 2015,…

Task Force on Black Carbon and Methane:

- Co-chaired by Canada and Sweden
- Two meetings held to date: Whitehorse (Sep 2013) and Stockholm (Dec 2013)
- Participation of all Arctic states and many observers (China, India, Japan, Germany, European Commission) and other stakeholders
- Development of draft “arrangement” and discussion of various proposals to achieve enhanced reductions, including domestic and collaborative actions, reporting of actions and inventories, projects, science, and outreach

Regional Black Carbon Efforts: Arctic Black Carbon Initiative

- Announced in Copenhagen in December 2009 by U.S.
- Goal: Pan-Arctic program to reduce the climate impacts of black carbon in the Arctic region
  - Significant collaboration with the Arctic Council
- U.S. Government $5M commitment in 2010, focusing on sources of BC in Russia
- Three implementers:
  - U.S. EPA, $2.5M to reduce black carbon from diesel emissions, including through Arctic Council's PSI
  - USDA, $1.5M to reduce BC from wildfires and agricultural burning
  - U.S. DOE, $1M to reduce BC from industry and residential sources (district heating, CHP)
- Norway joined in June 2012, committed $1 million

Regional Black Carbon Efforts: GEF Arctic Agenda 2020

- GEF-Russian Federation Partnership on Sustainable Environmental Management in the Arctic under a Rapidly Changing Climate (Arctic Agenda 2020)
- Funding: USD 25 million plus USD 310 million in co-funding
- Framework approved October 2011
- Black carbon reduction is one of the objectives

A. FOCAL AREA STRATEGY FRAMEWORK [2]:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Type of Trust Fund	Indicative Financing ($)	Indicative Co-financing ($)
(CCM-1)	1.1: Technologies leading to energy-efficient improvements and reduction of black carbon are selected, transferred and demonstrated in pilots	1.1: Number of technologies identified and demonstrated leading to higher combustion efficiency and reduced black carbon emissions for selected main black carbon source categories	GEF	320,550	1,400,000
	1.2. Enabling policy environment is proposed for selected municipalities in the domestic heating sector leading to black carbon reductions	1.2: Number of municipal strategies for the deployment and commercialization of innovative low-carbon technologies in the domestic heating sector		340,000	1,000,000

Bilateral U.S.-Russia Collaboration

- Collaboration through Arctic Black Carbon Initiative projects and programs
- Bilateral Presidential Commission

- Science and Technology Working Group
  - Climate Science Sub-working group
- Environment Working Group

Thank you!

Andrew Eil
Coordinator of Climate Change Assistance Programs
Office of Global Change (OES/EGC)
United States Department of State
office phone: (202) 647-6738
email: EilAG@state.gov