

Submission for SAO meeting, 28-29 March 2012

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**Arctic Council Task Force on Short-Lived Climate Forcers**

## **Work Plan for Task Force on Short-Lived Climate Forcers, 2012-2013**

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### **Introduction and Background**

This paper outlines a work plan of the Task Force on Short-Lived Climate Forcers (SLCFs) under the Arctic Council, with a primary focus on the deliverables for the Arctic Council Ministerial meeting in 2013.

We first recall that the extended mandate of the Nuuk Declaration requested that the Task Force [and the AMAP expert group] continue its 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.”

Furthermore, the Senior Arctic Official (SAO) final report to Ministers, reflecting the Task Force’s own recommendations (from 2011), stated the following:

*Regarding future work for **black carbon**, the Task Force recommends continued focus on the **costs** of implementing certain measures, the **additional emission reduction potential** of some measures, potential Arctic **climate benefits**, and potential **health benefits**. [emphasis added]*

*Regarding **methane**, the Task Force notes that the Arctic Council and Council nations may be able to **leverage existing efforts** to encourage additional methane **reductions, both within and outside Arctic Council nations, by communicating and demonstrating** the climate benefits of such measures specifically for the Arctic region. [emphasis added]*

The first SAO meeting under the Swedish presidency in Luleå in November 2011 underlined the urgency of taking action on SLCFs. The SAOs endorsed the ideas for future work as presented by the co-chairs of the Task Force; those ideas are further elaborated here.

This work plan also reflects discussions that took place at a recent Task Force meeting, 8-9 February 2012, hosted by the International Institute for Applied Systems Analysis (IIASA) outside of Vienna. As has been common practice in the Task Force, a mix of national representatives, invited experts and NGOs, and permanent participants attended the meeting. There was no participation from Iceland. The Task Force is being co-chaired by Norway, Sweden and the United States.

The remainder of this paper proposes the scope and nature of Task Force deliverables for the 2012-2013 period. The work plan is being submitted for SAO approval at the 28-29 March 2012 meeting.

## **Highlights and timelines:**

### **2012**

1. Help develop near- and long-term priorities for, and provide key inputs to, the ACAP PSG and AMAP Expert Groups on policy relevant areas
2. Present to Deputy Ministers: a) brief status update; b) status on related international efforts on SLCFs; and c) proposed deliverables for 2013 Ministerial meeting
3. Present preliminary messages and expected deliverables at the fall 2012 SAO meeting

### **2013**

4. Collect and communicate more comprehensive and detailed cost information regarding black carbon mitigation actions
5. Synthesize known information on the potential health benefits of black carbon mitigation actions in Arctic Council nations
6. Provide relevant updates on national black carbon emission inventories and national policies or measures, including any national action plans or strategies
7. Report progress and implementation challenges in light of Task Force's 2011 recommendations
8. Deliver or reinforce key messages and provide additional or amended recommendations on black carbon actions in light of updated information
9. Provide recommendations in response to the Nuuk mandate on methane and tropospheric ozone
10. Provide recommendations on other future aspects of SLCF work under the Council
11. Prepare and provide report to Ministers for 2013 Ministerial meeting

## **Details:**

### **1. Priorities for ACAP and AMAP Expert Group**

- The ACAP PSG has already begun its work. It might be useful to discuss which sectors are being addressed and which are the sectors where gaps remain. The mitigation cost of black carbon actions and emission inventories are areas that will benefit from Task Force-ACAP information sharing.
- The AMAP Expert Group report on black carbon has been very valuable to inform Task Force recommendations. Further work examining similar scenarios, but with extensions to Arctic temperatures and snow and ice melt responses (i.e., climate effects beyond radiative forcing) could further inform mitigation recommendations.
- Regarding methane, an area where AMAP's expertise could provide useful insights includes the Arctic climate effects of methane emission mitigation scenarios, regardless of where the efforts take place (i.e., within or outside Arctic Council nations). Both black carbon and methane mitigation scenarios might also be considered alongside CO<sub>2</sub> mitigation scenarios, so that timing and potential magnitude of Arctic climate effects over time can be evaluated more comprehensively.

- The Task Force will seek advice from AMAP and other scientists as necessary regarding the role of tropospheric ozone precursors other than methane, specifically with regard to ozone effects in the Arctic. This should help guide the Task Force on the extent to which the Task Force addresses non-methane precursors of ozone in its recommendations. The Task Force will also seek reports from participating governments as to the measures in place to address non-methane ozone precursors in their countries – to inform these recommendations.
- The Task Force will collaborate with AMAP to determine what products may be feasible in the near-term, particularly if any advice or products may occur in time to inform Task Force recommendations for 2013, and the longer term (i.e., around 2015).

## **2. Brief Status Report for the Deputy Ministers meeting in 2012**

- The Task Force will explain its work plan, planned deliverables for 2013, and provide some key messages for both black carbon and methane/tropospheric ozone at the Deputy Ministers meeting (**14-15 May 2012**). The Task Force could also inform the Deputy Ministers what related international SLCF efforts are taking place (e.g., LRTAP, UNEP, GMI, recent Climate and Clean Air Coalition announcement) and how they may relate to Arctic Council efforts.

## **3. Present preliminary messages at the fall 2012 SAO meeting**

- The Task Force will plan to present for SAO consideration a preliminary set of messages and expected deliverables for black carbon, methane and possibly other precursors of tropospheric ozone. These will be presented at the fall 2012 SAO meeting.

## **4. Collect and communicate more comprehensive cost information regarding black carbon mitigation actions**

- The Task Force will work with IIASA, other experts as needed, and national representatives to provide greater information on the costs of implementing a range of black carbon mitigation options for different emission sources in different Arctic Council nations.

## **5. Synthesize known information on the potential health benefits of black carbon**

- The Task Force will gather and synthesize existing information on the potential for health benefits of existing and additional black carbon mitigation options within Arctic Council nations. The Task Force will leverage the information from the recent UNEP assessment and the forthcoming U.S. EPA Report to Congress on Black Carbon, among other literature sources as necessary, for this information.

**6. Provide relevant updates on national black carbon emission inventories and national policies or measures, including any national action plans or strategies.**

- The Task Force's previous work served as a catalyst for Arctic Council nations to estimate and share their black carbon emission inventories.
- The Task Force will work to explain the relationship of this effort with the development of guidelines for voluntary reporting of black carbon emissions inventories and projections under LRTAP. This could include working with CLRTAP's Task Force on Emissions Inventories and Projections, which will be drafting guidelines for developing black carbon inventories under the Gothenburg Protocol.
- The Task Force will provide updates on any progress or updates regarding national programs, regulations and policies that affect black carbon emissions, including the description of any new national action plans or strategies on short lived climate forcers.

**7. Report progress and implementation challenges in light of 2011 recommendations**

- The Task Force may wish to report on both progress and implementation challenges within Arctic Council nations in light of the Task Force's recommendations delivered to the Arctic Council Ministers in 2011. This would primarily focus on black carbon.

**8. Deliver or reinforce key messages and provide additional or amended recommendations on black carbon actions in light of updated information**

- Key messages and recommendations from the Task Force will reflect the work plan elements described above.
- For example, the Task Force has previously identified the largest sources of black carbon in the Arctic countries and for each of these major sources (e.g., diesel engines (both stationary and land-based transport), shipping, wood burning, agricultural burning, and forest burning) the Task Force may further:
  - Revise as necessary any previous mitigation recommendations in light of new information;
  - Provide greater cost information regarding mitigation actions;
  - Identify potential barriers or implementation challenges for the recommended measures.
- The Task Force previously identified gas flaring as a source of potential concern for black carbon but mitigation options were not recommended given the lack of information. The Task Force will work to provide updated and improved information on the potential magnitude of emissions, as well as possible mitigation options. Given that methane is often co-emitted during flaring activities, the Task Force will also examine methane in this context, and possible ways to optimize reductions of both SLCFs.

- The Task Force will also examine co-emission of black carbon and methane from agricultural burning and work to further recommend best practices and mitigation measures.
- The Task Force will work to identify collaborative efforts the Arctic Council could undertake with observer nations or in other forums such as IMO, LRTAP, and UNEP to pursue certain black carbon actions.

**9. Provide a report including recommendations in response to the Nuuk mandate on methane and tropospheric ozone**

- As discussed above, the Task Force will work with AMAP to explore the feasibility of additional climate modeling to examine the potential Arctic climate effects of methane mitigation scenarios.
- The Task Force previously noted that there already exists ample technical and policy information regarding methane from which the Task Force can immediately draw. The Task Force can provide brief background information on methane, including:
  - Key methane emission sources in Council and non-Council countries, including current emissions and future emission projections;
  - Known cost-effective mitigation options (e.g., from EPA, IIASA, UNEP);
  - Ongoing and planned policies and initiatives.
- The Task Force could consider recommendations for the Council on actions the Council or Council nations could undertake, as well as actions the Council could take to encourage methane measures globally. This may entail an enhanced communication role for the Arctic Council.
- As noted above, the Task Force will also seek guidance from AMAP and other scientists as necessary to determine the extent to which non-methane precursors of tropospheric ozone should be addressed in Task Force recommendations.

**10. Provide recommendations on other future aspects of SLCF work under the Council**

- The Task Force may also want to submit recommendations concerning future SLCF work and priorities for the Council looking beyond 2013.

**11. Prepare and provide report to Ministers for 2013 Ministerial meeting**