



Short-Lived Climate Forcers: The Expert Groups of the Arctic Monitoring and Assessment Programme (AMAP)

Status report for the SAO meeting in Whitehorse in 2013. Agenda item 5.1

Background

The Arctic Council is evaluating steps that could be taken to reduce the impact of specific Short-Lived Climate Forcers (SLCF) in the Arctic. In support of that evaluation, AMAP has commissioned two Expert Groups to evaluate the state of the science in understanding the sources and impacts of SLCF's. A technical report assessing the emissions and transport of black carbon and tropospheric ozone precursors to the Arctic as well as a parallel report assessing natural and anthropogenic sources and emissions of methane in the Arctic will be finalized at the end of 2014.

The Expert Group on black carbon and tropospheric ozone

The Expert Group on black carbon and tropospheric ozone published the AMAP report 'The Impact of Black Carbon on Arctic Climate' in 2011. The report focusses on the emissions and transport of black carbon in and Arctic context, and it further describes the black carbon distribution, seasonality and trends in the Arctic. The mechanisms whereby black carbon acts as a climate forcer in the Arctic is described together with an overview of the links of sources to Arctic radiative forcing. The group has extended the scope to include tropospheric ozone. AMAP expects to release a technical report from the expert group in the spring of 2015.

The Expert Group on methane

There are known to be large reservoirs of methane and organic carbon in Arctic soils, sediments and oceans, and the rapidly warming cryosphere creates the potential for significant changes in methane production and release. It is in this context that the Methane Expert Group has been charged by AMAP to provide the scientific foundation to support potential methane mitigation by the Arctic nations, the intent being to help reduce the rate of Arctic warming and feedbacks in the near-term. The group seeks to provide a scientific foundation directed to answering two overarching questions: *What are the current and potential future anthropogenic methane emissions of Arctic and non-Arctic nations?*, and; *What are the likely Arctic region methane responses to a warming climate?* The Group started its work in 2012 and is expected to finalize its work by end 2014. A technical report is expected ready for release in the spring of 2015.

A non-technical summary of reports from SLCF expert groups.

Based on the above mentioned technical reports the AMAP WG intends to prepare a non-technical summary report on key findings from the reports of the Expert Groups. The summary report is intended available for the 2015 ministerial.

Cooperation with the Task Force for Action on Black Carbon and Methane

AMAP had provided status reports from the two mentioned Expert Groups to the first meeting in the task force for its meeting in September 2013. The AMAP Working Group will seek further cooperation with the Task Force and continuously update the Task Force on the work and plans of d AMAP WG activities in relation to short lived climate forcers.