INSIGHTS INTO THE ROLE OF RESEARCH IN THE ARCTIC COUNCIL

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Acknowledgements: Tuuli Ojala (Ministry of Foreign Affairs),
Tuula Aarnio (Academy of Finland)

Outline

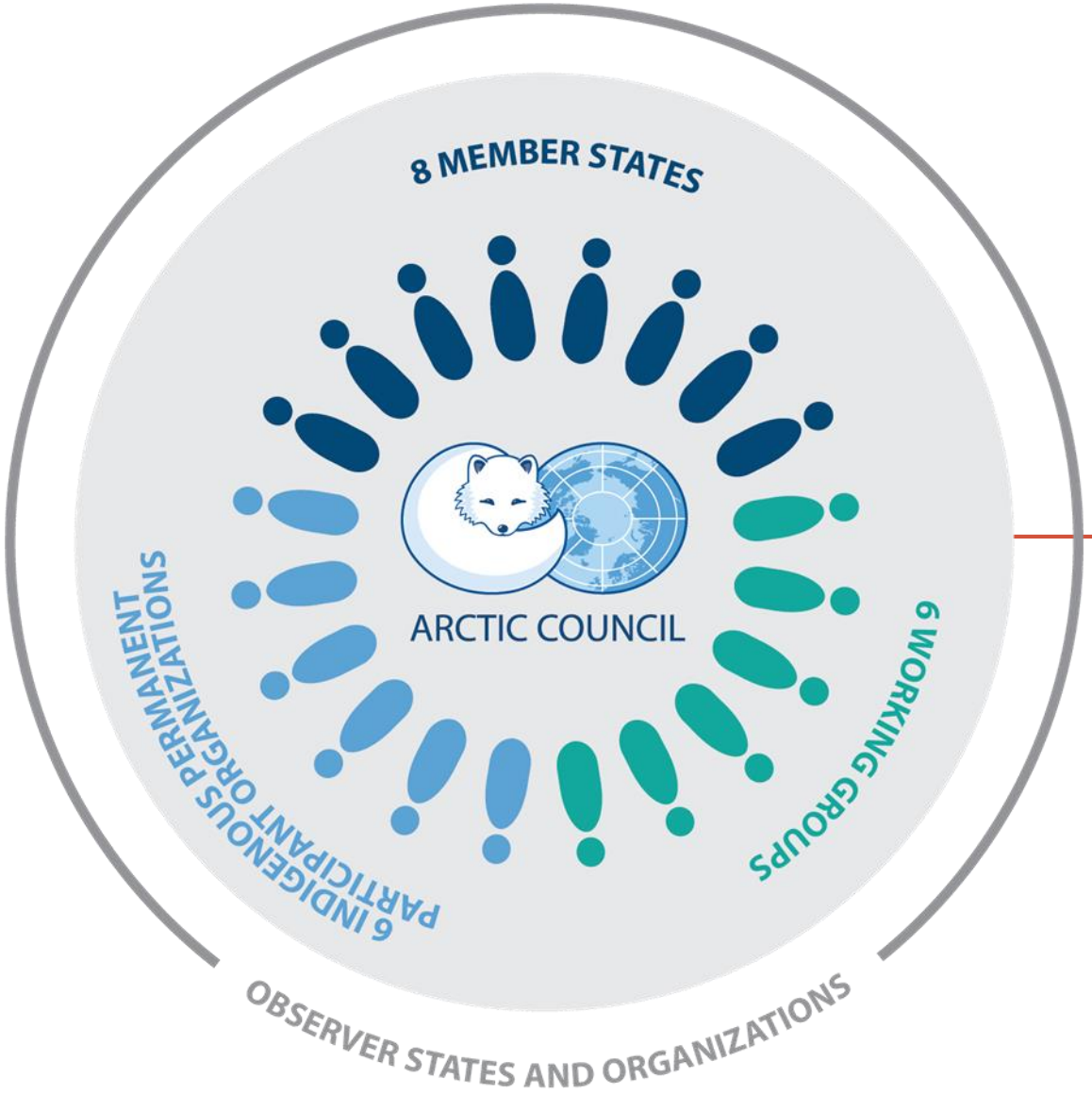
1. Overview of the Arctic Council
2. Finnish chairmanship programme for the Arctic Council (2017-2019)
3. Role of research in the work of the Arctic Council – case Short-Lived Climate Pollutants (SLCP)

Arctic Cooperation

- Relevant international organizations
  - United Nations
    - e.g. UN Law of the Sea Convention (NB! US not a Party)
  - International Maritime Organization, IMO
  - North Atlantic Treaty Organization, NATO
- Intergovernmental cooperation
  - Arctic Council (with transnational elements)
  - Nordic Council & Nordic Council of Ministers
  - Barents-Euro Arctic Council

Arctic Cooperation

- Relevant transnational initiatives include:
  - Conference of Parliamentarians of the Arctic Region
  - The Northern Forum
  - The Youth Arctic Coalition



ARCTIC COUNCIL

- Intergovernmental forum established in 1996 by the Arctic states (**Canada, Denmark, Finland, Iceland. Norway, Russia, Sweden, USA**).

- Permanent Participation of 6 indigenous peoples' groups

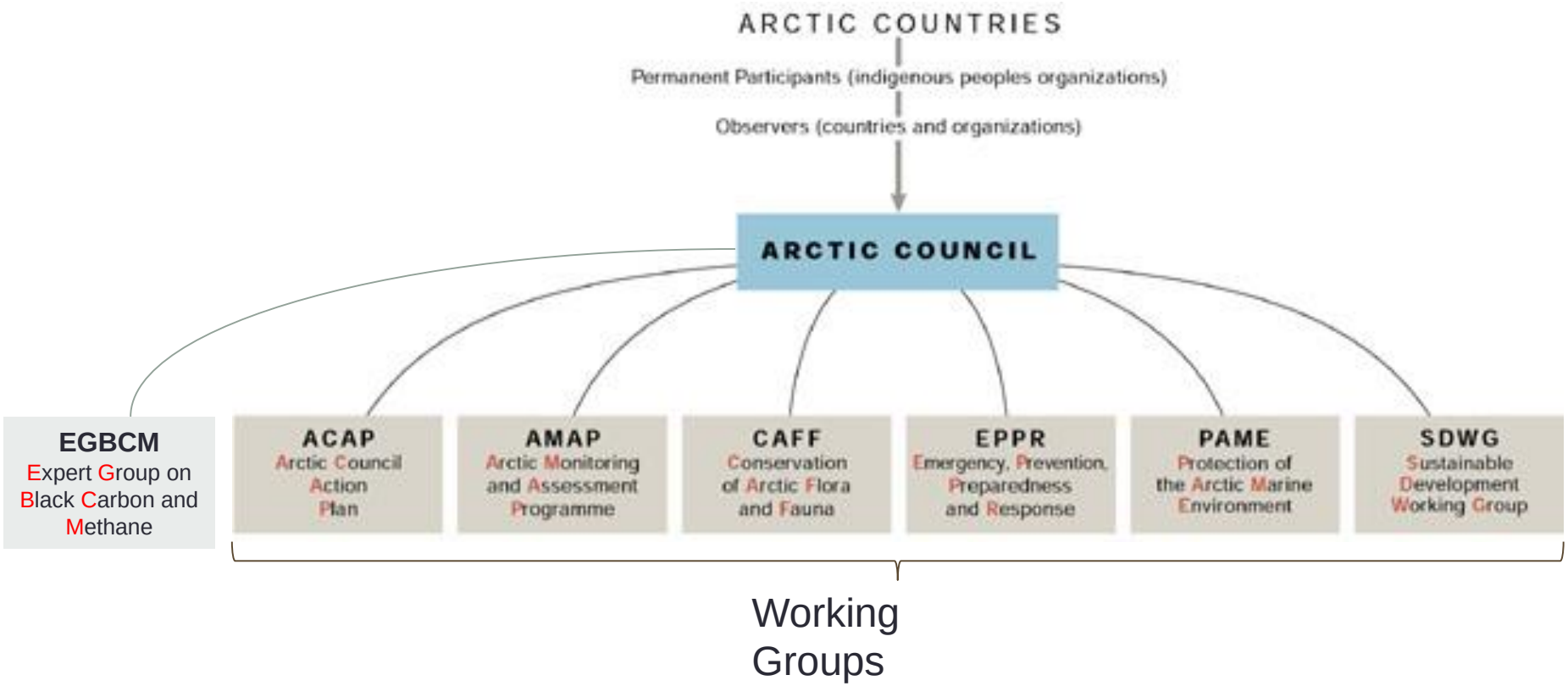
- Engagement of Observer states and organizations

Arctic Council Mandate

Ottawa Declaration (1996), Art. 1(a):

"to provide a means for **promoting cooperation, coordination, and interaction** among the Arctic states, with the involvement of the Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular issues of **sustainable development and p**"

Organizational Structure



Arctic Council Secretariat located in Tromsø (Norway): operational since 2013, provides administrative capacity, communication, outreach, general support to activities.

Decision-making

- By consensus of 8 Arctic States
- With full consultation and involvement of Permanent Participants
  - **Aleut International Association**
  - **Arctic Athabaskan Council**
  - **Gwich'in Council International**
  - **Inuit Circumpolar Council**
  - **Russian Association of Indigenous Peoples of the North**
  - **Saami Council**
- Rotating chairmanship between Arctic states (every 2 years)
- Working Groups prepare and carry out AC projects and programs
  - AC assessments and recommendations are results of activities/analyses of the six Working Groups
- Task Forces and Expert Groups often established to carry out specific work.

Observer Status

- Open to non-Arctic states, inter-governmental, inter-parliamentary, global, regional and non-governmental organizations.
- Observers contribute through engagement in Arctic Council Working Groups.
- Roster of observers increasingly internationalized (e.g. China, India)

Accomplishments

- **Working Groups produce comprehensive environmental, ecological and social assessments** (e.g. important work on POPs and mercury contributed to the international community's adoption of the Stockholm and Minamata Conventions).
- **Has provided forum for negotiation of 2 legally binding agreements** between Arctic States: *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic* (2011), *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic* (2013).
- Adoption of *Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions* (2015): **first voluntary agreement between Arctic states with collective commitment to reduce SLCP emissions. Open to observer states as well.**

Arctic Science Co-operation Agreement

- Fostering science is one of the most important practical objectives of the Arctic Council
- a **new legally-binding agreement between** the eight Arctic States **to enhance co-operation and to increase efficiency in scientific activities in the Arctic**.
- facilitates **access to scientific data** as well as **access to terrestrial, coastal, atmospheric and marine areas** in the Arctic as defined by each Arctic State
  - entry and exit of persons, equipment and materials;
  - access to research infrastructure and facilities; and
  - access to research areas.
- The agreement calls for the Parties to include students in all levels of education and early career scientists to Arctic science activities
- Encourages the utilization of traditional and local knowledge (TLK) and communication with TLK holders.
- Allows the parties to enhance and facilitate co-operation with non-Parties (including Arctic Council Observer States)

Institutional aspects

- No programming budget, all projects financed by one or more Arctic states and some support from other entities.
- No legal mandate: Arctic Council cannot enforce any of its recommendations, responsibility rests on individual Arctic states.

Arctic Council chairmanship

- from the conclusion of a biennial ministerial meeting to the conclusion of the next ministerial meeting
- Responsibilities
  - facilitates preparations for Ministerial and SAO meetings
  - carries out other tasks as the Arctic Council may require or direct
- may take communication with other international fora as agreed by Arctic States

10th Arctic Council ministerial meeting:
11 May 2017
Fairbanks, USA

Finnish Chairmanship in the Arctic Council 2017-2019 – Exploring Common Solutions

Two frameworks for all Arctic Council activities

- Climate change – Paris agreement ambition level
- United Nations' Sustainable Development Goals or Agenda 2030 adopted in 2015

Finnish Chairmanship in the Arctic Council 2017-2019 – Exploring Common Solutions

- Four priority areas
  - Environmental protection
  - Connectivity (telecommunications)
  - Meteorological cooperation
  - Education
- Close co-operation with the Arctic Economic Council, the Arctic Coastguard Forum, the University of the Arctic and other organizations to address Arctic issues
- Agreement on Arctic Scientific Cooperation ready for signing
- Alongside with the chairmanship program the Working Groups continue with their approved work programs

Role of research in the work of the Arctic Council – case Short-Lived Climate Pollutants (SLCP)

ACADEMY OF FINLAND

Short-Lived Climate Pollutants (SLCPs)

- Gaseous and aerosol substances contributing to climate change
- Dangerous air pollutants with detrimental impacts on human health, agriculture and ecosystems.
- Arctic region is warming faster than the globe and is especially sensitive to the effects of SLCPs.
- Studies have demonstrated that global mitigation measures could cut down global and Arctic temperature rise (i.e. UNEP/WMO 2011, Shindell et al. 2012, Stohl et al. 2015)

Atmos. Chem. Phys., 15, 10529–10566, 2015
www.atmos-chem-phys.net/15/10529/2015/
doi:10.5194/acp-15-10529-2015

Atmospheric Chemistry and Physics Open Access

Evaluating the climate and air quality impacts of short-lived pollutants

A. Stohl[1], B. Aamaas[2], M. Amann[3], L. H. Baker[4], N. Bellouin[4], T. K. Berntsen[2], O. Boucher[5], R. Cherian[6], W. Collins[4,7], N. Daskalakis[8,9], M. Dusinska[1], S. Eckhardt[1], J. S. Fuglestvedt[2], M. Harju[1], C. Heyes[3], Ø. Hodnebrog[2], J. Hao[10], U. Im[8,a], M. Kanakidou[8,9], Z. Klimont[3], K. Kupiainen[3], K. S. Law[11], M. T. Lund[2], R. Maas[12], C. R. MacIntosh[4], G. Myhre[2], S. Myriokefalitakis[8,9], D. Olivié[13], J. Quaas[6], B. Quennehen[11], J.-C. Raut[11], S. T. Rumbold[7], B. H. Samset[2], M. Schulz[13], Ø. Seland[13], K. P. Shine[4], R. B. Skeie[2], S. Wang[10], K. E. Yttri[1], and T. Zhu[14]

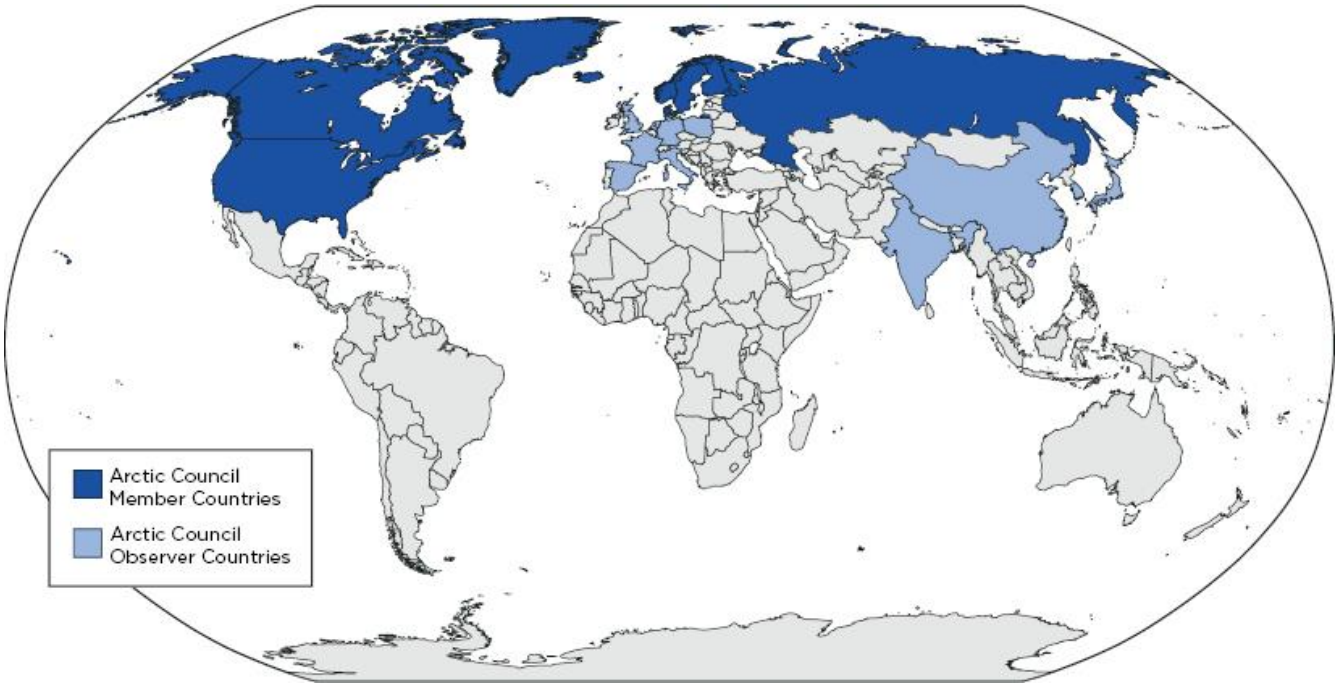
Simultaneously Mitigating Near-Term Climate Change and Improving Human Health and Food Security

Drew Shindell,[1]* Johan C. I. Kuylenstierna,[2] Elisabetta Vignati,[3] Rita van Dingenen,[3] Markus Amann,[4] Zbigniew Klimont,[4] Susan C. Anenberg,[5] Nicholas Muller,[6] Greet Janssens-Maenhout,[3] Frank Raes,[3] Joel Schwartz,[7] Greg Faluvegi,[1] Luca Pozzoli,[3]† Kaarle Kupiainen,[4] Lena Höglund-Isaksson,[4] Lisa Emberson,[2] David Streets,[8] V. Ramanathan,[9] Kevin Hicks,[2] N. T. Kim Oanh,[10] George Milly,[1] Martin Williams,[11] Volodymyr Demkine,[12] David Fowler[13]

www.sciencemag.org SCIENCE VOL 335 13 JANUARY 2012

The Arctic Council Framework on SLCPs

- Arctic Council countries have committed to “adopt an ambitious, aspirational and quantitative collective goal on black carbon emission reduction by 2017”
- AC looks forward for the observer countries to join in implementing the framework



Map source: http://www.nap.edu/catalog.php?record_id=21717

Iqaluit, Canada, April 24, 2015

IQALUIT DECLARATION 2015

On the occasion of the Ninth Ministerial Meeting of the Arctic Council

PROTECTING THE UNIQUE ARCTIC ENVIRONMENT

22. **Acknowledge** that reducing greenhouse gas emissions continues to be the most important contribution to addressing global and Arctic climate change and to the long-term conservation and sustainability of the unique Arctic environment, **recognize** that short-lived climate pollutants emitted within and beyond the borders of the Arctic States have substantial impact on the Arctic, and **further recognize** that efforts undertaken by the Arctic states to reduce these emissions, which complement initiatives such as the Climate and Clean Air Coalition, lead to climate, as well as health and economic benefits, in the Arctic,

23. **Welcome** the assessments and conclusions on black carbon, tropospheric ozone and methane which provide a clear and compelling basis for further action on short-lived climate forcers in the Arctic and beyond, as well as the successful work related to reducing black carbon emissions from diesel and residential wood combustion,

24. **Decide** to implement the Framework for Action on Enhanced Black Carbon and Methane Emissions reductions, **establish** an expert group reporting to Senior Arctic Officials to report on our collective progress, and **call upon** observer states to join us in these actions given the global nature of the challenge,

Arctic Council SLCP work (2008-2015)

2009: COP15 US black carbon initiative

2008 AMAP reports #1 & #2 (Quinn et al. 2008. ACP)

2010: UNECE ad-hoc black carbon expert group

2009 Tromsö ministerial declaration,

SLCF Task Force established,

AMAP Expert Group (SLCF) established

2011: UNEP/WMO on black carbon and tropospheric O3 assessment

2011 Nuuk ministerial declaration,

SLCF Task Force report,

AMAP EG report (black carbon),

ACAP SLCF project steering group

2012-2013: Climate and Clean Air Coalition (CCAC), CLRTAP Goth Prot, WHO BC report, US EPA BC report, Bounding BC

2013 Kiruna ministerial declaration,

Task Force for Action on BC and methane (old TF retires)

2015 Iqaluit ministerial declaration,

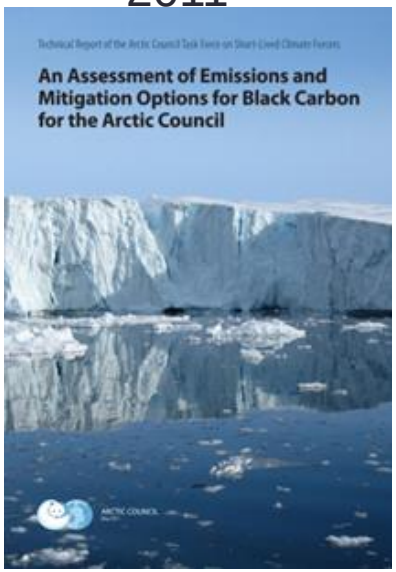
Framework for Action on BC and methane,

AMAP EG report (Black Carbon & tropospheric ozone)

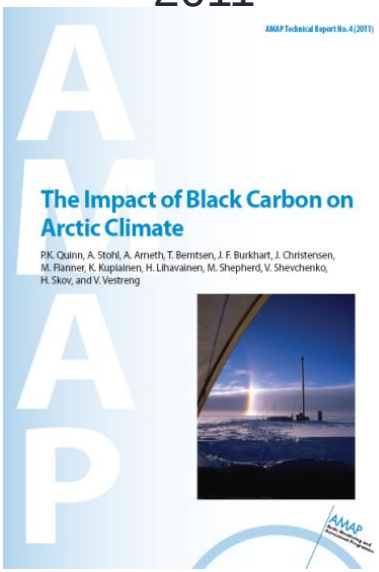
AMAP EG report (methane)

Bold = scientific work and products
Blue = policy work and products
Grey = policy and science processes outside the Arctic Council

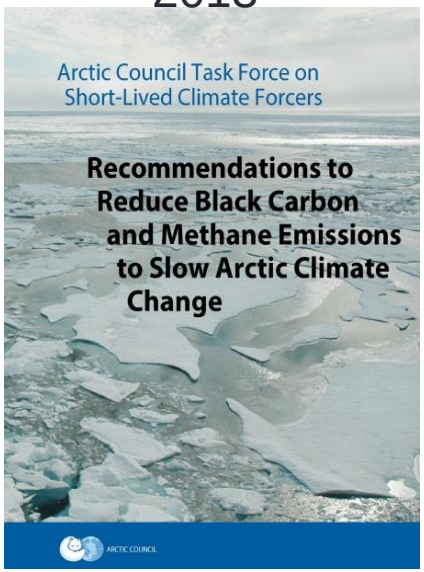
2011



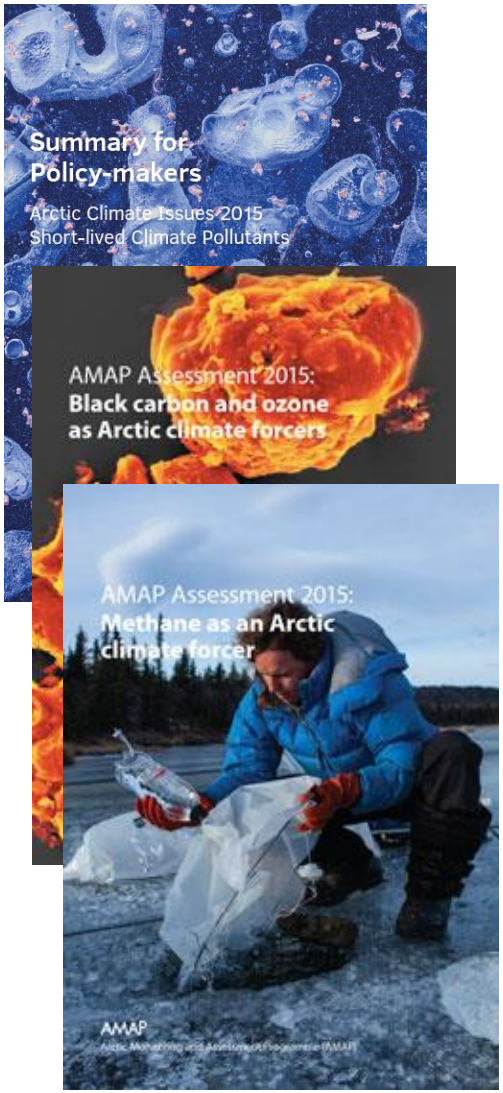
2011



2013

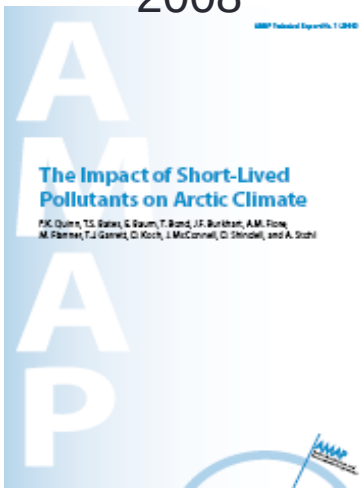


2015

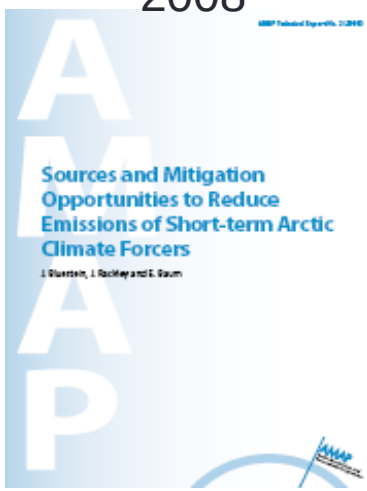


Available from http://www.amap.no/documents

2008



2008



2009

An Arctic Council scientific assessment – case AMAP 2015

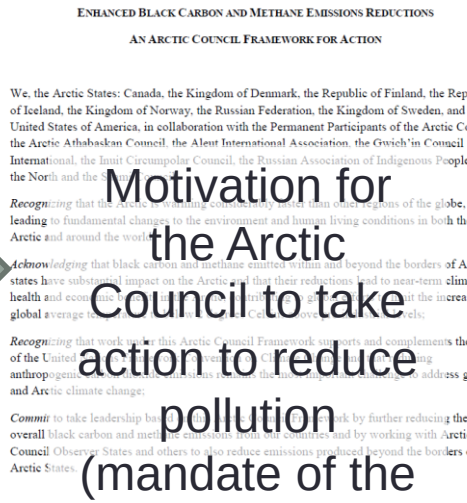
Science → Policy

Expert Group
~50 scientists from the Council and Observer states organized into task/writing teams

The assessment
a combination of literature review and modelling calculations

Assessment reports:
Scientific products prepared by the **Expert Group** that go through a peer-review process

Summary report(s):
Prepared by the **AMAP secretariat and science writers** based on the Assessment reports. Subject for review by the Expert Group


ENHANCED BLACK CARBON AND METHANE EMISSIONS REDUCTIONS

AN ARCTIC COUNCIL FRAMEWORK FOR ACTION

We, the Arctic States: Canada, the Kingdom of Denmark, the Republic of Finland, the Rep
of Iceland, the Kingdom of Norway, the Russian Federation, the Kingdom of Sweden, and
United States of America, in collaboration with the Permanent Participants of the Arctic C
the Arctic Athabaskan Council, the Aleut International Association, the Gwich'in Council
International, the Inuit Circumpolar Council, the Russian Association of Indigenous People
the North and the

Recognizing that the Arctic is warming considerably more than other regions of the globe,
leading to fundamental changes to the environment and human living conditions in both th
Arctic and around the world;

Acknowledging that black carbon and methane emitted within and beyond the borders of A
states have substantial impact on the Arctic and that their reductions lead to near-term clim
health and econ
global average

Recognizing that work under this Arctic Council Framework supports and complements th
of the United
anthropogenic
and Arctic climate change;

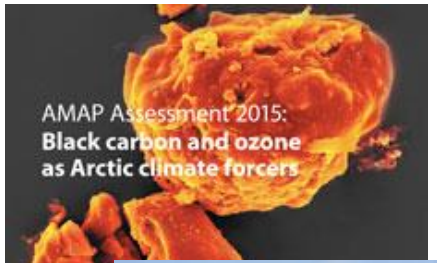
Commit to take leadership ba
overall black carbon and meth
Council Observer States and others to also reduce emissions produced beyond the borders
Arctic States;

rk by further reducing the
Arcti

Motivation for the Arctic Council to take action to reduce pollution (mandate of the EGBCM)

An Arctic Council scientific assessment – case AMAP 2015

Science → Policy



Current levels of SLCPs in the Arctic?

Are the monitoring methods and networks sufficient?

Emissions now and in the future?

Role of natural releases?

Trends and variability?

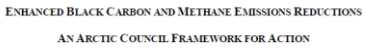
What are the uncertainties?

Impact of SLCPs in the Arctic climate?

Role of Arctic Council emissions in total impacts?

What are the main emission sectors?

Can the impacts be reduced via emission reductions?



Can the Arctic Council find consensus on a collective (emission) reduction goal?

What policies are already in effect in different countries and do they target the main sectors?

Have the policies been effective in reducing SLCPs?

Can we learn from prior experiences in policy interventions?

Thank you!

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