Arctic Council Actions to reduce black carbon emissions

NORTHERN DIMENSION FUTURE FORUM ON ENVIRONMENT

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The Arctic Council was among the first to pay policy attention specifically to black carbon emissions

- **Studies of the Arctic Haze** in the early 1980s found large concentrations of combustion-generated particles including carbon and sulfate particles throughout the Arctic troposphere [Novakov & Rosen Ambio. 2013 Nov; 42(7): 840–851]
- In 2013, the Arctic Council launched a **Task Force on Black Carbon and Methane** to recommend mitigation measures to be considered by Arctic nations.
- During the U.S. chair 2015-2017: the Expert Group on Black Carbon and Methane → **Fairbanks Declaration: an Aspirational Collective Goal of 25-33 % reduction by 2025 relative to 2013**
- Expert Group work continues during the Finnish Chair

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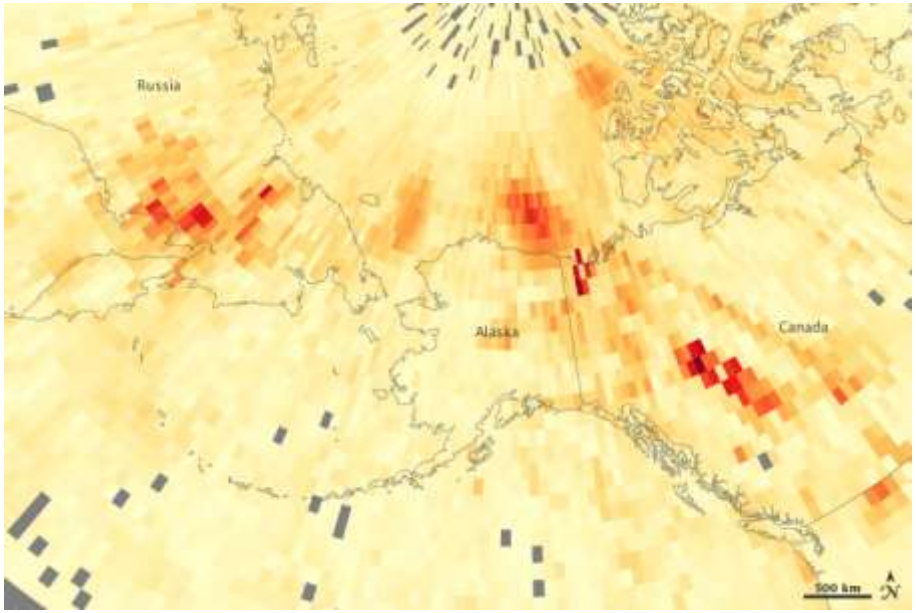
The focal areas of the recommendations in 2017 and 2019 focus on actionable areas

- Flaring and venting in oil and gas production
- Transport emissions, in particular diesels, also stationary
- Domestic heating
- Forest fires and other open biomass burning



False-color image of airborne particles absorbing sunlight over the Arctic on August 1-2, 2009. The aerosols resulted from multiple large fires in the region.
https://earthobservatory.nasa.gov/images/39767/smoke-from-fires-in-russia-and-alaska

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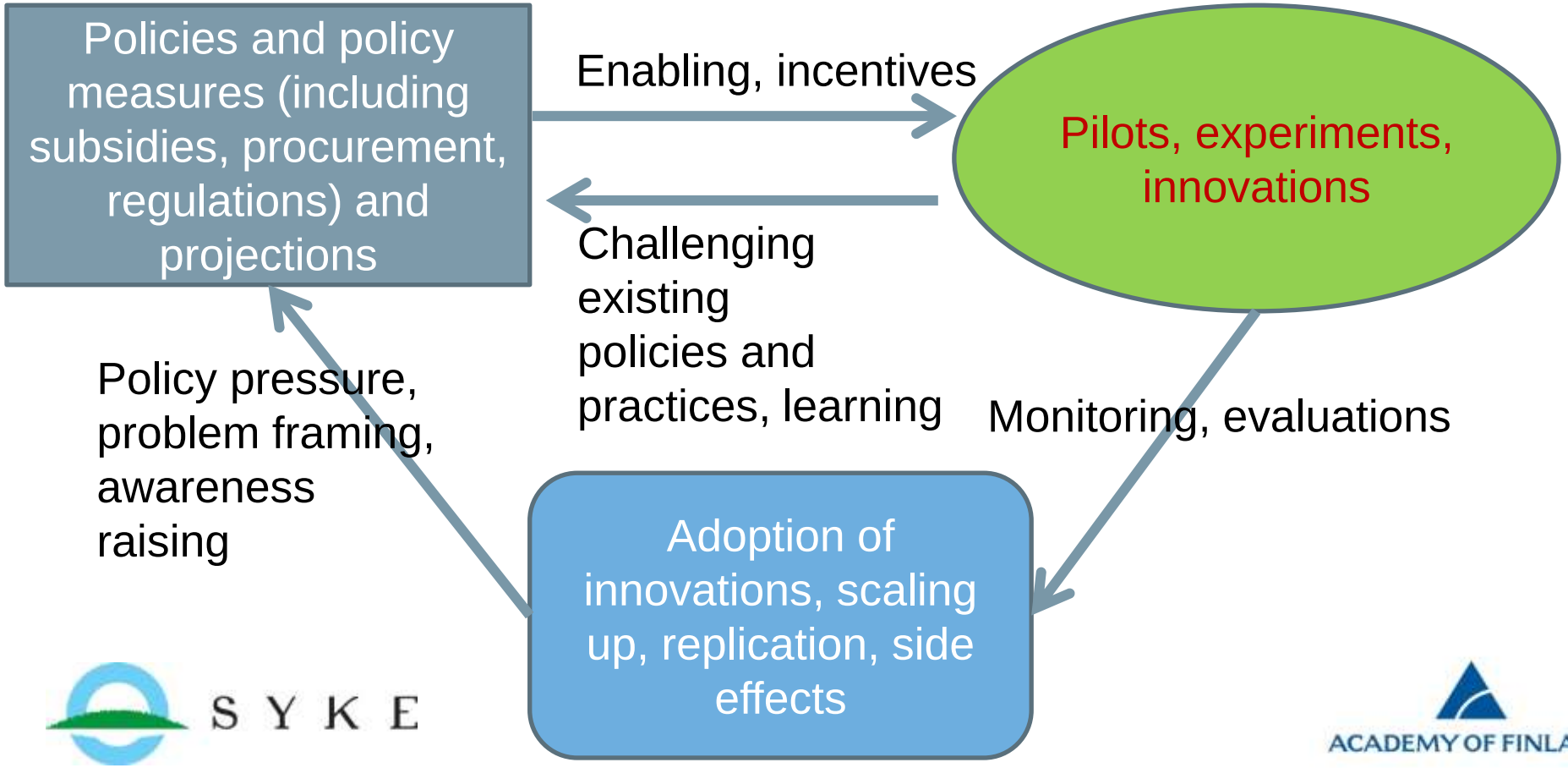
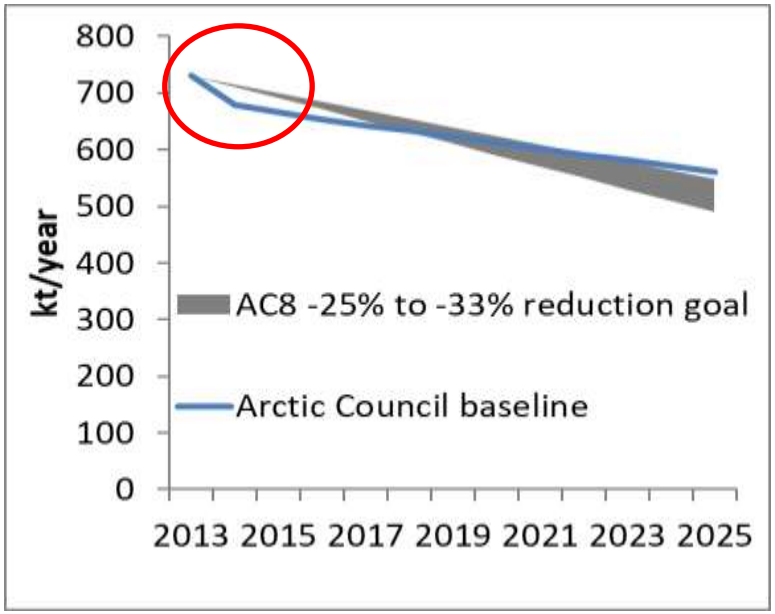
Progress in emission reduction requires action in three different areas

- The interactions between policies, monitoring and experiments should support learning for new policies/actions



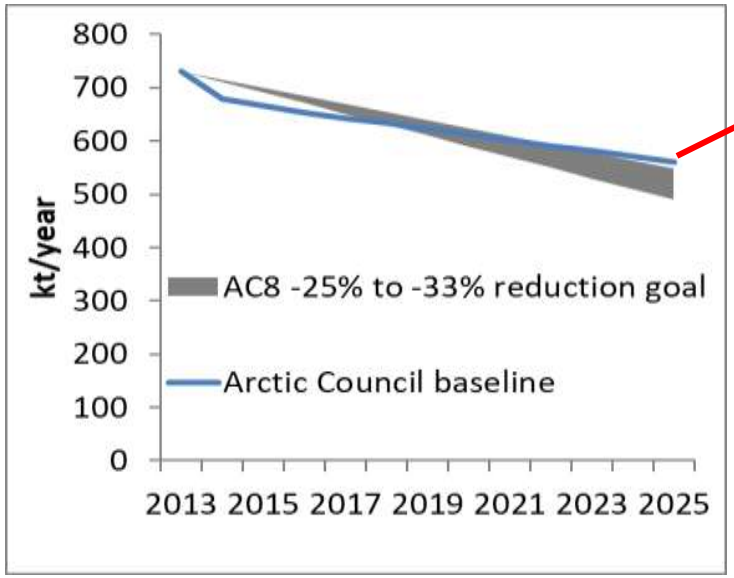
Monitoring: current emission data and data for 2013 need to be updated

- Most countries have submitted updated information compatible with the submissions to the Convention on Long-Range Transboundary Air Pollution
- Lack of updated information on Russian emissions.
- Globally a need for updated emission data from observer countries, in particular China and India



Projections: Need to improve estimates on how easy or challenging the 'aspirational collective goal of a 25-33 % reduction' actually is.

- Lack of updated projections of Russian emissions causes significant uncertainties.
- Observer countries should provide projections to improve the overall picture of the likely development



The slope and the endpoint depend crucially on projections of Russian emissions

To make projections more reliable, it is crucial that all countries report on specific actions that are likely to influence emissions

For example
Mobile and stationary diesel-powered sources
The 2017 recommendations on diesels

Recommendation 1a: Reduce emissions from new diesel vehicles and engines, by adopting and implementing world-class particulate matter exhaust emission standards and ensuring wide-spread availability of ultra-low sulphur fuels.

Policy reporting:

COUNTRY	STATUS
Finland	Finland has adopted and implemented the most recent EURO-regulation and their amendments for light passenger and commercial vehicles, heavy duty vehicles, off-road vehicles and machinery. The amounts of sulphur in gasoline and diesel have been limited to 10 mg/liter (1206/2010) and 0.1 weight-% for ship traffic on Baltic Sea control area.
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Summary: The work under the Arctic Council can reduce emissions further if:

- actions to reduce emissions that are being taken in many sectors lead to faster **learning and replication**: to achieve this ***actions should be properly documented and evaluated***;
- the policy signals encourage the **development and spreading of innovations** improving domestic heating, transport solutions, forest fire prevention and fire fighting.
- the sector **solutions are adapted to Arctic conditions. Sharing experiences** and practices is key. The Arctic Contaminants Action Programme is dedicated to this work, and national actions are to be encouraged.

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Thank you!

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WHITE SNOW, CLEAN AIR – THE CAMPAIGN TO REDUCE BLACK CARBON EMISSIONS

https://clc.fi/en/campaigns/white-snow-clean-air-the-campaign-to-reduce-black-carbon-emissions/