

Project EU Action - Black Carbon in the Arctic

*Talk originally given by Russel Shearer, Simon Wilson (AMAP Secretariat), Zig
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Sofia, 2018



ARCTIC COUNCIL



Implementing the European Union initiative in support of International Action on black carbon in the Arctic

EU Steering Group – Presentation
Brussels, 22 February 2018

Russel Shearer, Simon Wilson (AMAP Secretariat), Zig Klimont (IIASA)



EU Action -Black Carbon in the Arctic

- EUA-BCA officially started 15 January 2018 and has a three-year implementation period.
- Implementation is organized under 4 work-packages with substantive work to be undertaken in 2018

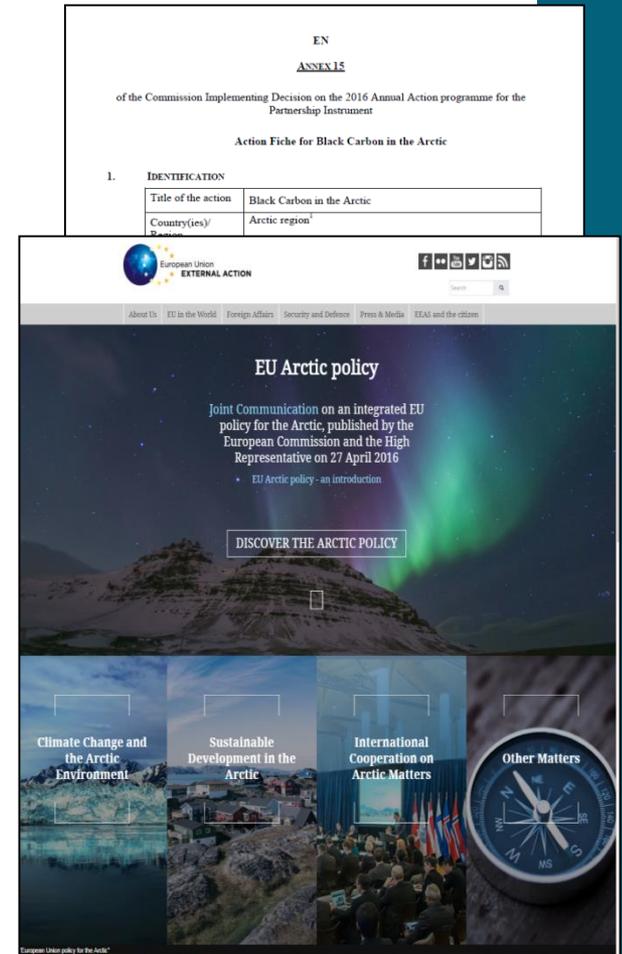
Project coordinated by secretariat of AMAP
(Arctic Monitoring and Assessment Programme)

Co-applicants:

- Carbon Limits (CL)
- Environment Agency Austria (EAA or UBA)
- Finnish Environment Institute (SYKE)
- International Institute for Applied Systems Analysis (IIASA)
- Norwegian Institute for Air Research (NILU)
- Swedish Environmental Research Institute Ltd. (IVL)

EU Action on Black Carbon in the Arctic (EUA-BCA)

- Action Fiche (2016) described goals; **policy-focus (not a science action); black carbon only; developing strategic partnerships**
- Implementation plan work-packages constructed around desired results
- Strong linkages to AMAP/EGBCM and CLRTAP groups, as well as ACAP, CCAC, etc.
- Has both **technical and policy-oriented components with a strong emphasis on science to policy integration, partnerships and outreach**
- Action goals include **enhancing relationships between EU and key international partners** (Canada, Russia, United States)

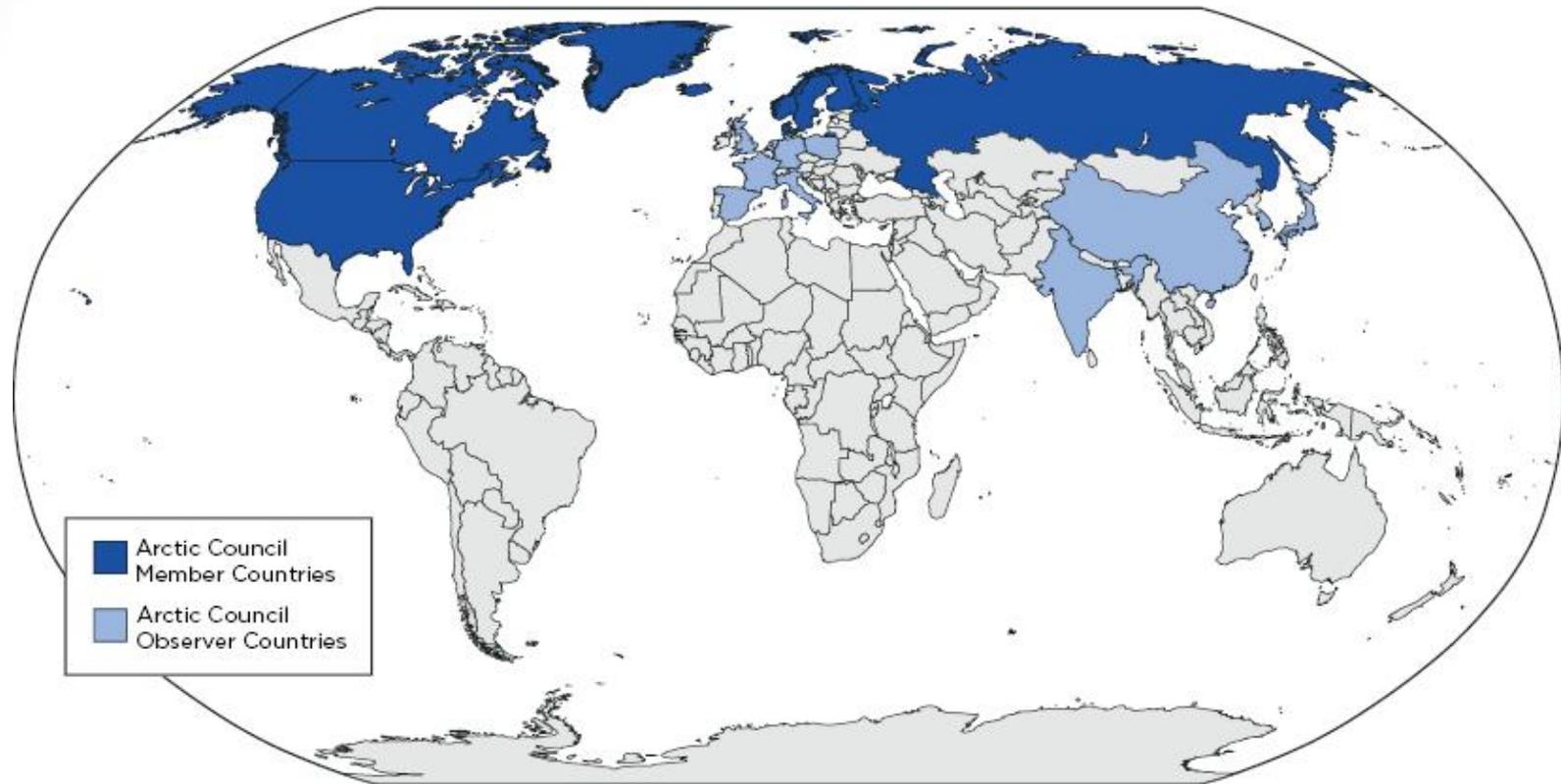


Arctic council

The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic. The work of the Council is primarily carried out in 6 WGs.

- The Arctic Contaminants Action Program (ACAP) acts as a strengthening and supporting mechanism to encourage national actions to reduce emissions and other releases of pollutants.
- The Arctic Monitoring and Assessment Programme (AMAP) monitors the Arctic environment, ecosystems and human populations, and provides scientific advice to support governments as they tackle pollution and adverse effects of climate change.
- The Conservation of Arctic Flora and Fauna Working Group (CAFF) addresses the conservation of Arctic biodiversity, working to ensure the sustainability of the Arctic's living resources.
The Emergency Prevention, Preparedness and Response Working Group (EPPR) works to protect the Arctic environment from the threat or impact of an accidental release of pollutants or radionuclides.
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Regional context for the Action



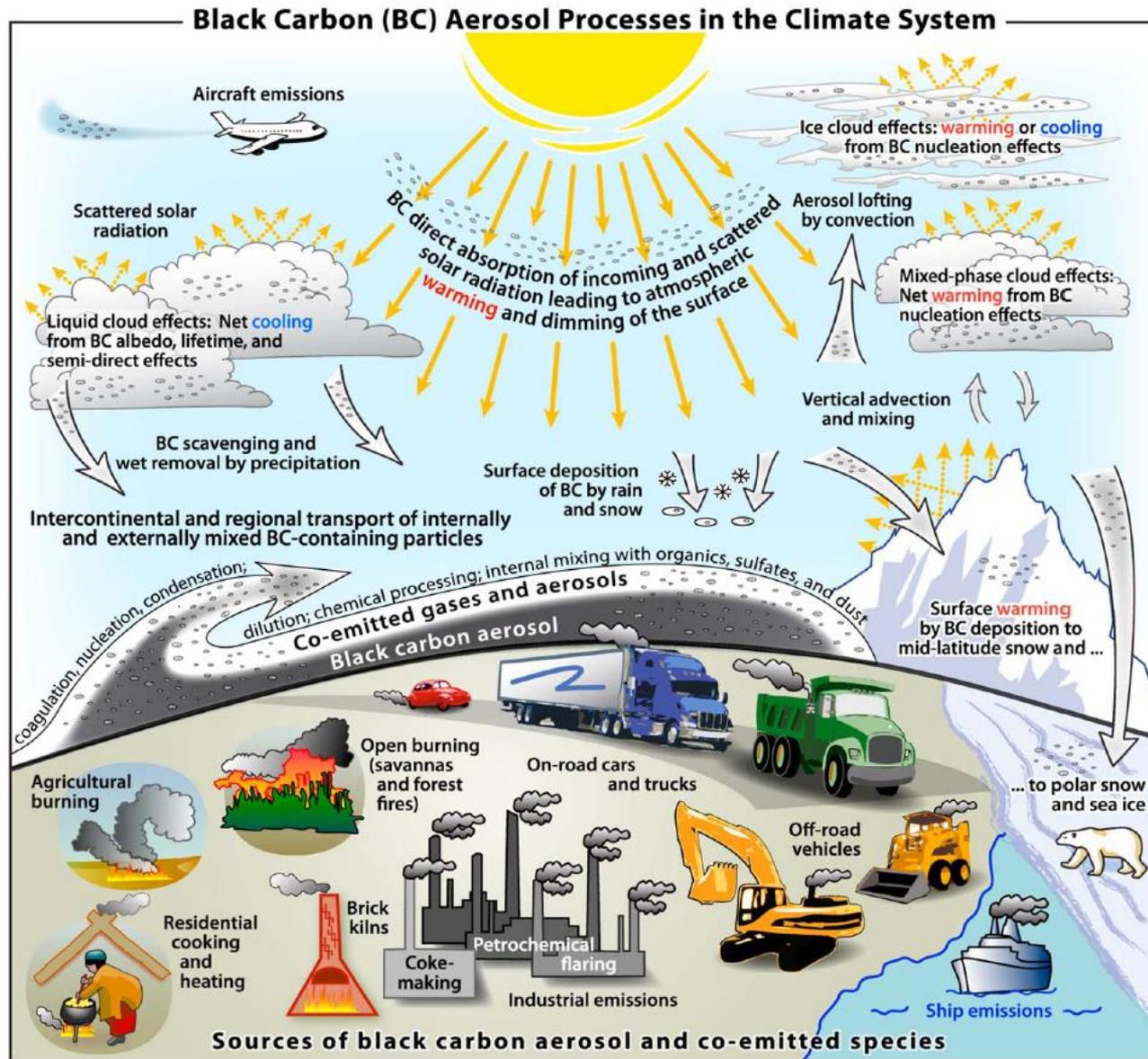


Figure 1. Schematic overview of the primary black-carbon emission sources and the processes that control the distribution of black carbon in the atmosphere and determine its role in the climate system.

Source: Bond et al. (2013)

Objectives of Action

- **To contribute to the development of collective responses to reduce black carbon emissions in the Arctic and to the reinforcement of international cooperation to protect the Arctic environment.**
- Support, promote and enhance the **process of setting clear commitments and/or targets on major BC sources** with the potential to affect the Arctic (gas flaring, domestic heating, maritime shipping);
- Move forward a **process leading to enhanced international cooperation on black carbon policy in the Arctic region**

Partnerships: Key to Success

Inter-programme cooperation/ coordination:

- UN ECE Convention on Long-range Transboundary Air Pollution (LRTAP)
- Arctic Council
- Climate and clean Air Coalition (CCAC)
- UNFCCC/IPCC

Strategic partners

- Informal consultations to build collaboration and make links with national action plans, etc.

Commonality of member countries
Limited resources (expertise)

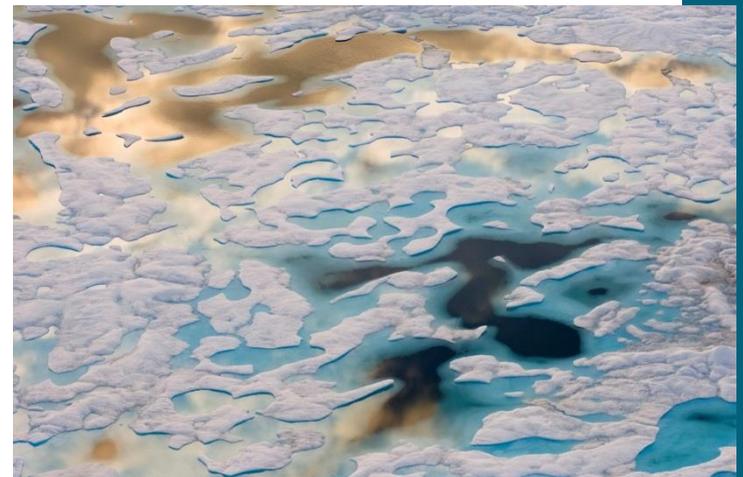
	Arctic Council	LRTAP
<i>Coordination</i>	AC, AMAP WG	Executive Body
<i>Monitoring (trends and effects)</i>	AMAP WG	EMEP-CCC, TFMM
<i>Modelling</i>	AMAP EGs (SLCFs, POPs, Hg, etc.)	TFHTAP, MSC-E, MSC-W, TFEIP, CIAM, TFMM
<i>Scientific assessment (SO_x, NO_x, SLCFs (BC, CH₄, O₃, etc.), POPs, Hg)</i>	AMAP assessment groups (SLCFs, POPs, Hg, etc.)	WGE, TFEIP,
<i>SLCP (policy)</i>	AC EG BCM	TFEIP, CEIP
<i>Integrated assessment</i>	AMAP assessment groups (SLCFs, POPs, Hg, CEG, HHAG, etc.)	TFIAM, CIAM

Implementation plan

1.5 million EUR over 3-year implementation period (2018-2020)

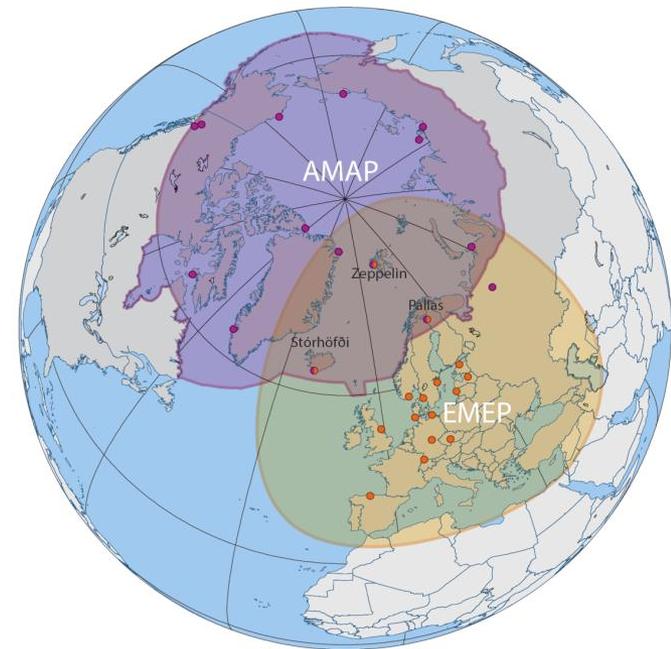
Four work-packages developed to reflect desired 'results' identified in the Action Fiche:

1. Improved knowledge base on BC emissions
2. Increased awareness and shared knowledge
3. Analytical and technical advice documents and scenario analysis
4. Roadmap for international cooperation on BC



1. Improved knowledge base on BC emissions

- **Mapping** observing systems [datasets for validation of models]
- Mapping reporting/inventory systems
- Mapping of technical advice
- Developing next generation emissions / scenario datasets
- Identification of gaps
- Coordination of work under ACEGBCM, CLRTAP EMEP, CCAC and IPCC



2. Increased awareness and shared knowledge

- Technical reports / Datasets for use in multiple activities / Technical workshops
- Contribution to work to update climate (and co-effects) impact assessments
- Interagency consultation (informal)
- Visibility Actions targeting policy fora
 - Saltsjöbaden VI (March 2018)
 - Environment Ministers Meeting (October 2018)
 - AC Ministerial Meeting (Spring 2019)
 - TFEIP meeting (April 2018)



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EU Ambassador: Arctic Sets Cornerstone Issues of Cooperation With Russia

RUSSIA 02:18 16.02.2018

MOSCOW (Sputnik) - The European Union's policy priority on cooperating with Russia in the Arctic is the environment and climate change issues, EU Ambassador at Large for the Arctic, Marie-Anne Coninx told Sputnik on Thursday.

"[The priority is] working together on the issues, which are directly related to the Arctic, and which is in the field of environment, climate change, and other issues of common interest," the ambassador said.

Earlier on in the day, Coninx met Deputy Chairman of the Federation Council Committee on federal structure, regional policy, local government and Northern Affairs, Alexander Akimov. During the meeting she pointed out that the European Union was interested in development of the Northern Sea Route.

"We are very much interested in the Northern Sea Route, and its developments. I had a very positive, very constructive meeting with Rosatom and with [Rosatom's CEO] Mr [Alexey] Lihachev, being here on the first day of my visit, and this is also an area where we see a possibility of increased cooperation," the ambassador stated.

The European Union and Russia are also interested in cooperation in addressing the black carbon issue, according to Coninx.

"Within the Arctic Council we are supporting a major project in addressing black carbon, black carbon is a serious problem. So there we are looking for partners to join the program. And the second program is in the framework of the Northern

Environment Finance Cooperation, NEFCO, is working also on addressing black carbon emissions in North West Russia, toxic waste in Krasnyy Bor [landfill]," the ambassador added at the meeting with Akimov.

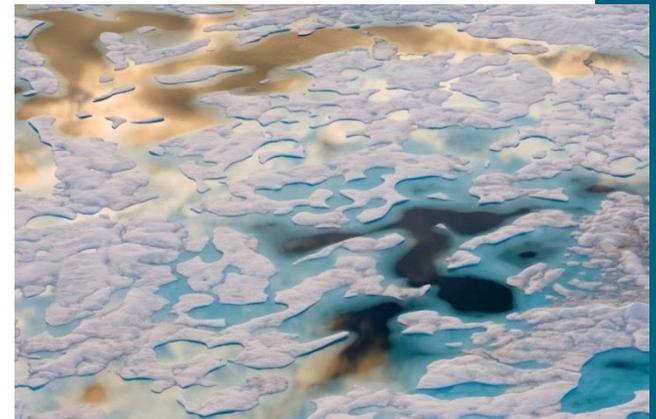


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EU Envoy to Russia: European Approach to JCPOA Close to Positions of Moscow

3. Analytical and technical advice documents and scenario analysis

- Overview of information currently available (Carbon Limits)
- Best available technology (economically achievable; BAT-EA)
- Analytical and technical advice documents
- Scenario analyses



4. Roadmap for international cooperation on black carbon

- Policy-makers summaries
- Alignment of policy initiatives
- National regulations – regional initiatives – global action
- Urgency of implementation action on SLCFs
- Climate impacts
- Co-effects and Co-benefits (Indirect climate impacts; air quality and human health benefits; integrated air pollution strategies)
- Costs and Degree of implementation of agreed measures



Deliverables of the Action

- **Modelled scenarios** for different policy options to reduce BC emissions;
- **Publicly available datasets** for international inventories and projected emissions that affect the Arctic;
- **Synthesized BC information and data** to identify knowledge gaps, improve source quantification, and evaluate the climate impacts in the Arctic;
- **Outreach materials** to communicate findings to key stakeholders;
- **An indicative roadmap for enhanced international cooperation** under a number of key national, regional and global initiatives.



Timeline

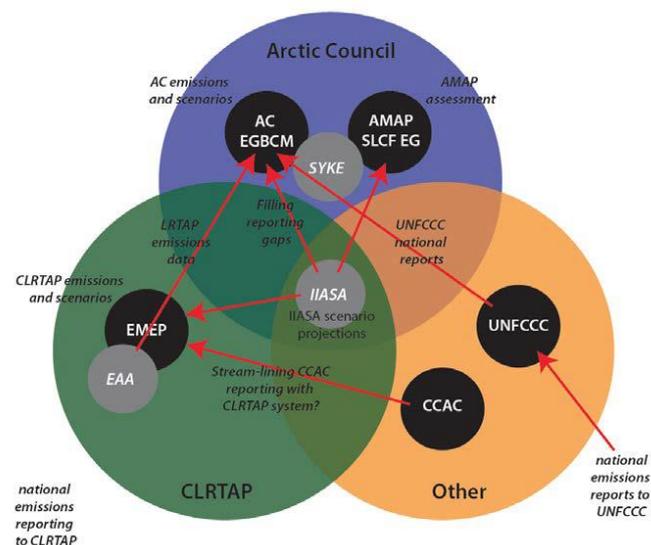
- Year 1: **Mapping, identification of gaps, emissions inventories and scenario datasets;** Building connections to national initiatives (Canada, USA, Russia); Promoting awareness of the Action
- Year 2: **Technical advice, Communication and Outreach;** Consolidating connections to national initiatives (Canada, USA), Russia); Use of results
- Year 3: **Policy focus** (Development of Roadmap; Acceptance of results; promoting uptake and implementation of policy-recommendations)



Role of UBA within EUA-BCA

Review of BC emissions reporting within CLRTAP:

- Recommended and applied methodologies for BC estimates
- Status of BC emissions reporting:
 - National totals
 - (G)NFR category level priorities
 - Transport
 - Residential
 - Projections ?



Obtain insights from LRTAP country experts:

- Current barriers to reporting
- Recommendations

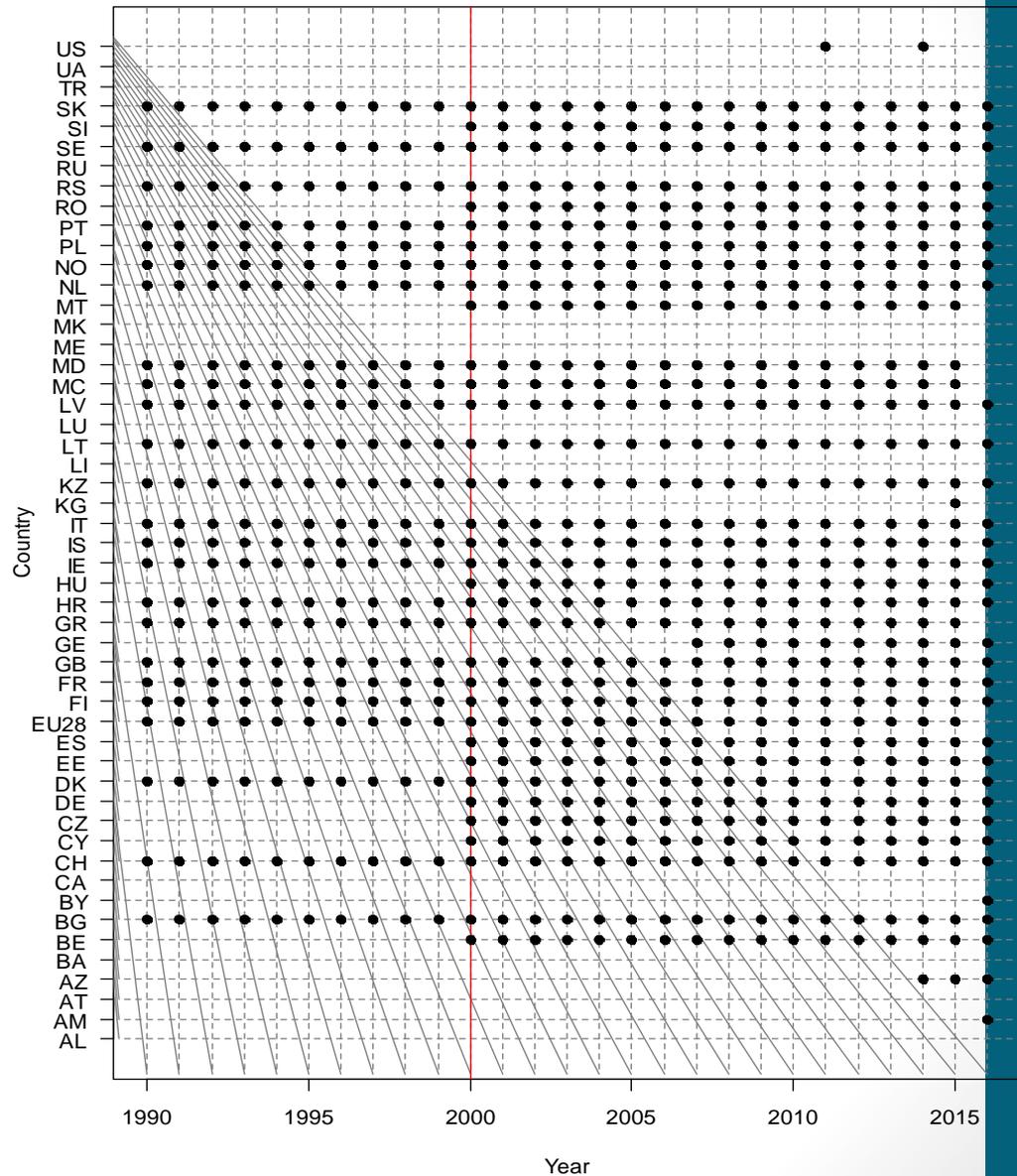
BC emissions reporting under CLRTAP

- Since 2013, the 51 Parties to CLRTAP have been encouraged to submit data on national BC emissions.
 - At its 32nd session, the EB for the Convention on LRTAP adopted *guidelines for reporting emissions and projections data* under the Convention (ECE/EB.AIR/122/Add.1, decisions 2013/3 and 2013/4)
 - These guidelines (latest version ECE/EB.AIR/128), outline official encouragement with respect to BC emissions e.g.:
 - “...Parties are strongly encouraged to report their emission inventory for black carbon from the earliest year possible using the methodologies in the latest version of the EMEP/EEA guidebook, as appropriate...”
 - “... In addition, Parties are strongly encouraged to annually report emission inventories of black carbon...”
 - “Parties to the Gothenburg Protocol within the geographical scope of EMEP shall regularly update their projections and report every four years from 2015 onward their updated projections, for the years 2020, 2025 and 2030 and, where available, also for 2040 and 2050..... Projected emissions for substances listed in paragraph 7 and, where appropriate, black carbon should be reported using the template within annex IV to these Guidelines.....”

Reporting of BC Emissions under CLRTAP

- **EU28** reported BC emissions between 1990-2015. Most MS reporting emissions since 2000 except **Austria** and **Luxembourg**
- **US** reported national totals for 2011 and 2014
- **Canada** quantified 2013 and 2014 BC emissions at NFR level and reported this information in a special 2016 Black Carbon Inventory. The report was submitted to CEIP; however, data in the common reporting format (NRF excel tables) were not submitted.
- **Russia** has not yet submitted any data on BC emissions.
- **Kyrgyzstan (2015), Belarus and Armenia (2016)** have reported recent BC emissions

Reporting of National Emissions Totals: BC



NEXT: EUA-BCA Workshop

- 2nd – 4th May 2018, IIASA, Laxenburg, Austria
- Focus on planned work for WP 1, addressing:
 - BC inventory and reporting systems
 - Monitoring and observations systems
 - Emission scenario development
- Discussions on involvement with and outreach to other applicable parties and further science and policy related activities

More Information

- For further information and updates please visit the website of the Arctic Monitoring and Assessment Programme (AMAP)

<https://www.amap.no/eu-black-carbon-action>

- Questionnaire on BC emissions reporting is being developed and will be sent to national inventory experts for CLRTAP parties:
 - We look forward to your feedback :)



ACTION ON BLACK CARBON IN THE ARCTIC

A European Union Initiative to Support International Policy Development

The Action will contribute to the development of collective responses to reduce black carbon emissions in the Arctic by:

- Supporting processes aimed at setting clear commitments and/or targets for reducing black carbon emissions from major BC sources (gas flaring, domestic heating, maritime shipping)
- Enhancing international cooperation on black carbon policy in the Arctic region – with a special focus on supporting the work of the Arctic Council and Convention on Long-range Transboundary Air Pollution and other national, regional and international initiatives, and building strong collaboration with EU strategic partners

How?

- Improving the knowledge base on black carbon emissions
- Increasing awareness and sharing knowledge
- Preparing technical advice documents and scenario analyses
- Supporting development of a roadmap for international cooperation on black carbon

Why is Black Carbon a concern in the Arctic?

Black carbon or soot is produced by incomplete burning of wood and fossil fuels. When these dark particles land on snow or ice they absorb heat from the sun, increasing rates of melting. Black carbon contributes significantly to overall warming in the Arctic.



The Action is implemented through the EU Partnership Instrument providing 1.5 million EUR of funding for Action implementation during 2018-2020.

For further information: www.amap.no/eu-black-carbon-action

Implementing Partners

- Arctic Monitoring and Assessment Programme (AMAP) Secretariat
- Carbon Limits
- Environment Agency of Austria (EAA)
- Finnish Environment Institute (SYKE)
- International Institute for Applied Systems Analysis (IIASA)
- Norwegian Institute for Air Research (NILU)
- Swedish Environmental Research Institute (IVL)



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