

Actions to Reduce Black Carbon Emissions in the Arctic:

An EU-Funded Project Update 2020–2021

Introduction

Black carbon (BC) pollution is transported to the Arctic from regions across the northern hemisphere, including Europe, Asia and North America, where it impacts on climate, human health and air quality. Emissions sources within or in close proximity to the Arctic, however, have the greatest impacts. Addressing emissions of short-lived climate forcers such as black carbon is therefore a problem that requires local, national and international solutions and response.

The EU-funded Action on Black Carbon in the Arctic (EUA-BCA) is contributing to the development of collective responses to reduce black carbon emissions in the Arctic and to reinforce international cooperation to protect the Arctic environment. It provides and communicates knowledge about sources and emissions of black carbon. It contributes to policy dialogues by reaching out and participating in relevant international policy processes with an aim at setting clear commitments and/or targets for reducing black carbon emissions from major sources (gas flaring, domestic heating, transport (on- and off-road), open burning and maritime shipping).

The project is being funded through the EU's Partnership Instrument from January 2018 to June 2021 and focusses on improving the knowledge base, increasing awareness/sharing knowledge, technical guidance, roadmap for future actions, visibility and supporting outreach to take collective action in support of regional/national/international initiatives. It is managed by the Arctic Council's Arctic Monitoring and Assessment Programme (AMAP) Secretariat in collaboration with six European environmental science institutes.

The EUA-BCA takes part in existing processes and fora, and also strives to enhance international cooperation on black carbon policy in the Arctic region – with a special focus on supporting the work of the Arctic Council and engaging with the United Nations Economic Commission for Europe's (UN-ECE) Convention on Long-range Transboundary Air Pollution (i.e., UN-ECE Air Convention) and other national, regional and international initiatives, and building strong collaboration with EU strategic partners.



Regional / National / International Engagement

Emphasis to date has been on enhanced cooperation with the **Arctic Council** and the **UN-ECE Air Convention** as well as cross-convention collaborations and coordination.

Other key international stakeholders have included: Organisation for Economic Cooperation and Development (**OECD**), **World Bank's** Global Gas Flaring Reduction partnership (**GGFR**), Inter-governmental Panel on Climate Change/United Nations Framework Convention on Climate Change (**IPCC/UNFCCC**), Climate and Clean Air Coalition (**CCAC**) and the International Maritime Organisation (**IMO**).

National stakeholder cooperation has been focussed on **Russia, Canada and the USA**, as these countries produce the highest BC emissions of the eight Arctic countries. There has been good cooperation with these countries with several in-country stakeholder consultation meetings having been held in Canada and Russia which have resulted in strong expressions of interest to coordinate actions, where possible. The EUA-BCA has worked closely with applicable stakeholder groups within these countries including coordination of technical input on black carbon emission reduction initiatives.

Cross-cutting issues of regional/national/international priority have included observations capacities and data availability, reporting and inventory systems and development and use of baseline and mitigation scenarios.

Recommendations on best available techniques and technical guidance related to BC emissions from gas flaring and domestic heating have been produced and communicated with key international and national stakeholders, including governments, regional groups, NGOs and industry.

Outreach, communications and visibility have been critical parts of the work to date. All EUA-BCA products produced, in particular knowledge-based products, have been promoted for use or considered for further actions by key stakeholders.

Key policy and decision-making processes linked to the EUA-BCA's work:

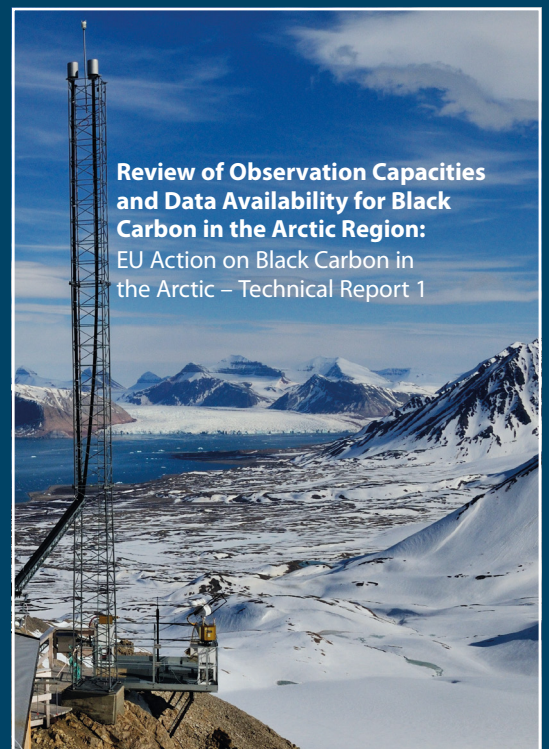
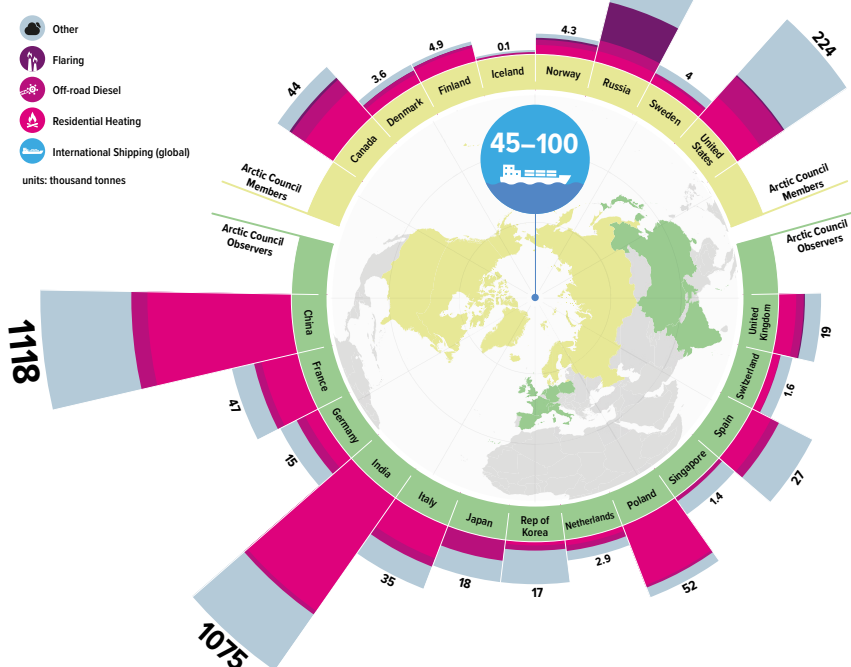
Arctic Council:

- Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions – recommendations on meeting targets – Expert Group on Black Carbon and Methane (EGBCM)
- Monitoring initiatives and environmental assessments on Short-lived Climate Forcers (including BC) – Arctic Monitoring and Assessment Programme (AMAP)
- BC pilot projects in the Arctic – Arctic Contaminants Action Program (ACAP)

UN-ECE Air Convention:

- Strategic input to the review of the Gothenburg Protocol – EB/WGSR
- European Monitoring and Evaluation Programme (EMEP) – reporting/inventories; monitoring and observations capacities
- BC Expert Group under Task Force (TFEIP)
- Task Forces use of EUA-BCA recommendations to reduce emissions and access to EUA-BCA Best Available Techniques (BAT) and guidance documents

Black Carbon Emissions in 2015



Review of Observation Capacities and Data Availability for Black Carbon in the Arctic Region:
EU Action on Black Carbon in the Arctic – Technical Report 1

Other policy and decision-making processes linked to the EUA-BCA's work:

- EU's National Emission reduction Commitments (NEC) Directive, e.g., on fine particulate matter (PM2.5) and BC
- IMO/Polar Code – reducing BC emissions and use of heavy fuel oils (HFOs)
- OECD – Economic Benefits from Air Quality Improvements in Arctic Council Countries with a focus on Black Carbon Emissions Reductions
- CCAC/ICCI – domestic burning guidance
- World Bank's Global Gas Flaring Reduction (GGFR) Partnership; Zero Emissions from Routine Gas Flaring by 2030
- IPCC Expert Group on SLCFs, including BC to address methodologies
- National frameworks and plans (e.g., Canada and Russia; technical input also received from the USA stakeholders)
- NGOs (e.g. ICCI) – high priority to push for action including domestic burning, open burning and wildfires

Roadmap

- A key output of the EUA-BCA is to develop a roadmap to enhance international cooperation on black carbon emission reduction actions in support of policies to protect the Arctic concerning air quality, human health and climate change. For each BC source sector and cross-cutting issue (i.e., reporting and inventory systems and monitoring and observation capacities) covered in the roadmap, actions for enhanced international cooperation are being presented concerning options and solutions to further reduce BC emissions. Stakeholder consultations are being conducted to best determine priorities for actions and where gaps and obstacles remain for improvement over a period of 2020–2030.
- The main published product will be a “meta-roadmap” which will: identify the key source sectors and cross-cutting issues; explain how the specific roadmaps are inter-linked to one another; and introduce a way to track progress (web-based).

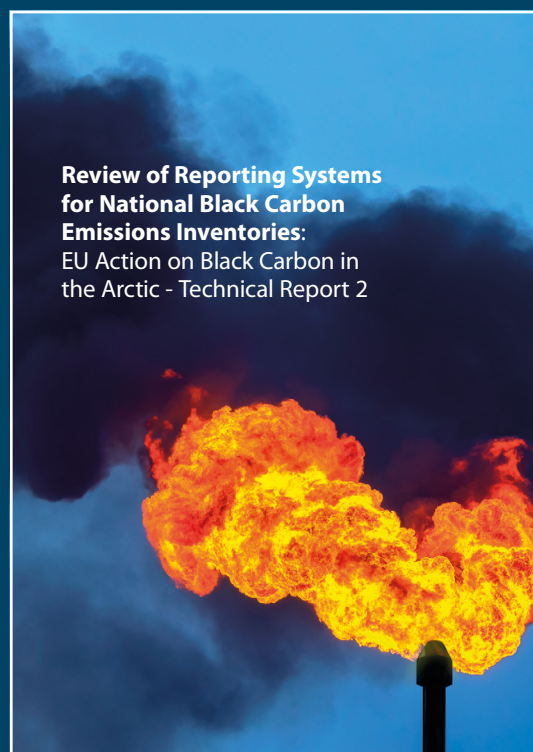
Publications

EUA-BCA technical reports:

- EUA-BCA Technical report #1: Review of Observation Capacities and Data Availability for Black Carbon in the Arctic Region
- EUA-BCA Technical report #2: Review of Reporting Systems for National Black Carbon Emissions Inventories
- EUA-BCA Technical report #3: Best Available Techniques Economically Achievable to Address Black Carbon from Gas Flaring
- EUA-BCA Technical report #4: Guidance on Reducing Black Carbon Emissions from Residential Heating in the Arctic

Other reports (currently under production):

- Elements in a Roadmap for Action on Black Carbon in the Arctic, Stakeholders Analysis, and Meta-roadmap
- Articles in Peer Reviewed Journals on the baseline and mitigation scenarios.
- Input from EUA-BCA directly into the updated AMAP Environmental Assessment Report on SLCFs, including BC, and the OECD report on “The economic benefits from air quality improvements in Arctic Council countries: A focus on the black carbon emission reduction target”



Review of Reporting Systems for National Black Carbon Emissions Inventories:

EU Action on Black Carbon in the Arctic - Technical Report 2

Roadmap final products:

- Meta-roadmap + Roadmap Options paper (i.e., Elements of a Roadmap for Action on Black Carbon in the Arctic) (November 2020)
- 5-page summary (in time for Northern Dimensions BC in the Arctic Forum on 24 November 2020 and Air Convention EB and WGSR sessions in 14–18 December 2020)
- Digital roadmap (final by 1 March 2021)
- Final 10-page summary for policy-makers (glossy) by 1 March 2021 (printed and on-line versions)

Key events

- ACAP Webinar on Black Carbon and Methane from Oil and Gas Sector in the Arctic, 27–28 October (EUA-BCA presentation and participation in panels).
- Joint EUA-BCA/Northern Dimensions Institute Virtual Forum on Curbing Emissions of Black Carbon in the Arctic, 24 November 2020 (co-sponsored by EUA-BCA).
- Air Convention – 40th Session of the Executive Body and the 58th Session of the Working Group on Strategies and Review, 14–18 December 2020 (EUA-BCA input to review of Gothenburg Protocol, submission of draft guidance paper on reducing BC emissions and roadmap).
- Arctic Council's EGBCM Meeting, 27–29 January 2021 (EUA-BCA assessment of EGBCM recommendations for enhanced action based on using GAINs results for Arctic Council countries; contribution to discussion of Framework for Action and presentation of roadmap).
- Barents-Euro Arctic Council Working Group on Environment, 2–3 February 2021 (EUA-BCA presentation).
- Russian Stakeholder Consultation Meeting, early 2021 (organized by EUA-BCA)
- Final Project workshop, early 2021 (organized by EUA-BCA)

Website

<https://eua-bca.amap.no/>

(includes Publications and Resources)

Project partners

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

Contact

Simon Wilson: s.wilson@inter.nl.net

Russel Shearer:
russelshearer87@gmail.com



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This report does not necessarily reflect the views and opinions of the European Commission

