

***Joint 1<sup>st</sup> and 2<sup>nd</sup> IPCC Expert Meeting on SLCFs  
11-22 October 2021***

**EMEP/EEA METHODOLOGY ON SLCFs**

TFEIP co-chairs

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# EMEP/EEA EMISSION INVENTORY GUIDEBOOK

**CLRTAP** UNECE Convention on Long-Range Transboundary Air Pollution

**EEA** European Environment Agency

**EMEP** European Monitoring and Evaluation Programme

**NECD** EU National Emissions Ceilings Directive

**TFEIP** Task Force on Emission Inventories and Projections (EMEP)

**emep**

**TFEIP**

**TASK FORCE ON EMISSION INVENTORIES & PROJECTIONS**

Co-operative programme for monitoring and evaluation of the long-range transmissions of air pollutants in Europe

**European Environment Agency**



# EMEP/EEA EMISSION INVENTORY GUIDEBOOK

<https://www.eea.europa.eu/publications/emep-eea-guidebook-2019>

To support emission inventories under  
UNECE CLRTAP & EU NECD

Published since 1994, versions 2019, 2016, 2013,  
2009, 2007, 2006, 2002, 2001, 1999, 1996

Users are recommended to refer to the  
latest version, currently September 2019

Next version is scheduled for 2023

Updates every 3-4 years to reflect the latest scientific  
findings and knowledge – a list of updates is available  
in a [log file](#) on the website

Emission factors can be searched online in the  
Emission Factor Database 2019

Guidebook maintained by TFEIP Expert Panels

Combustion and Industry  
Transport  
Agriculture and Nature  
Projections

EEA Report | No 13/2019

## EMEP/EEA air pollutant emission inventory guidebook 2019

Technical guidance to prepare national emission inventories

ISSN 1977-8449



emep

25  
1994-2019  
European Environment Agency



**TFEIP**

TASK FORCE ON EMISSION  
INVENTORIES & PROJECTIONS

# Russian translation of the 2019 version of the Guidebook

<https://www.eea.europa.eu/ru/publications/rukovodstvo-emep-eaos-po-inventarizacii-vybrosov-2019>



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TASK FORCE ON EMISSION INVENTORIES & PROJECTIONS

# EMEP/EEA GB METHODS FOR AIR POLLUTANTS 1/3

All sources covered in the Guidebook for		Inventories obligatory since
Main pollutants	SO <sub>x</sub> NO <sub>x</sub> NMVOC NH <sub>3</sub> CO	Base year (1980's) + since 1990
Particles	TSP PM <sub>10</sub> PM <sub>2.5</sub> BC	2000
Heavy Metals	As, Cd, Cr, Cu, Hg, Ni, Pb, Se, Zn	Base year + since 1990
Persistent organic compounds	PAHs, PCDD/F, HCB, PCBs	Base year + since 1990

## Particles

Guidebook provides information if the EFs represent the total primary particles or the filterable PM fraction

## BC Emission factors

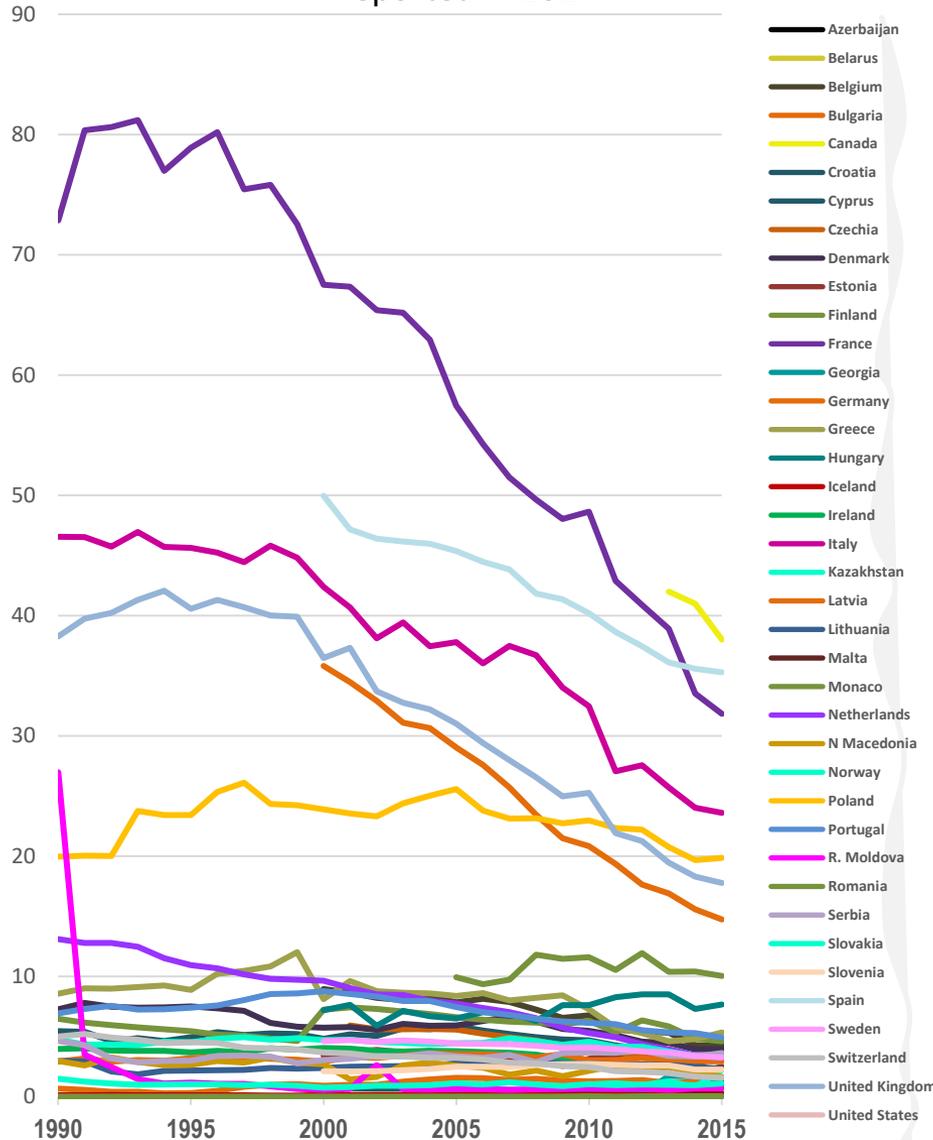
- Fractions PM<sub>2.5</sub> (PM<sub>10</sub>) emissions  $Emission_{BC} = EF_{PM_{2.5}} * Activity\ data * Speciation\ factor$
- Sources covered: Biomass burning, Wildfires, Mobile sources, Industry, Waste incineration

## **TFEIP BC Group 2020 -**

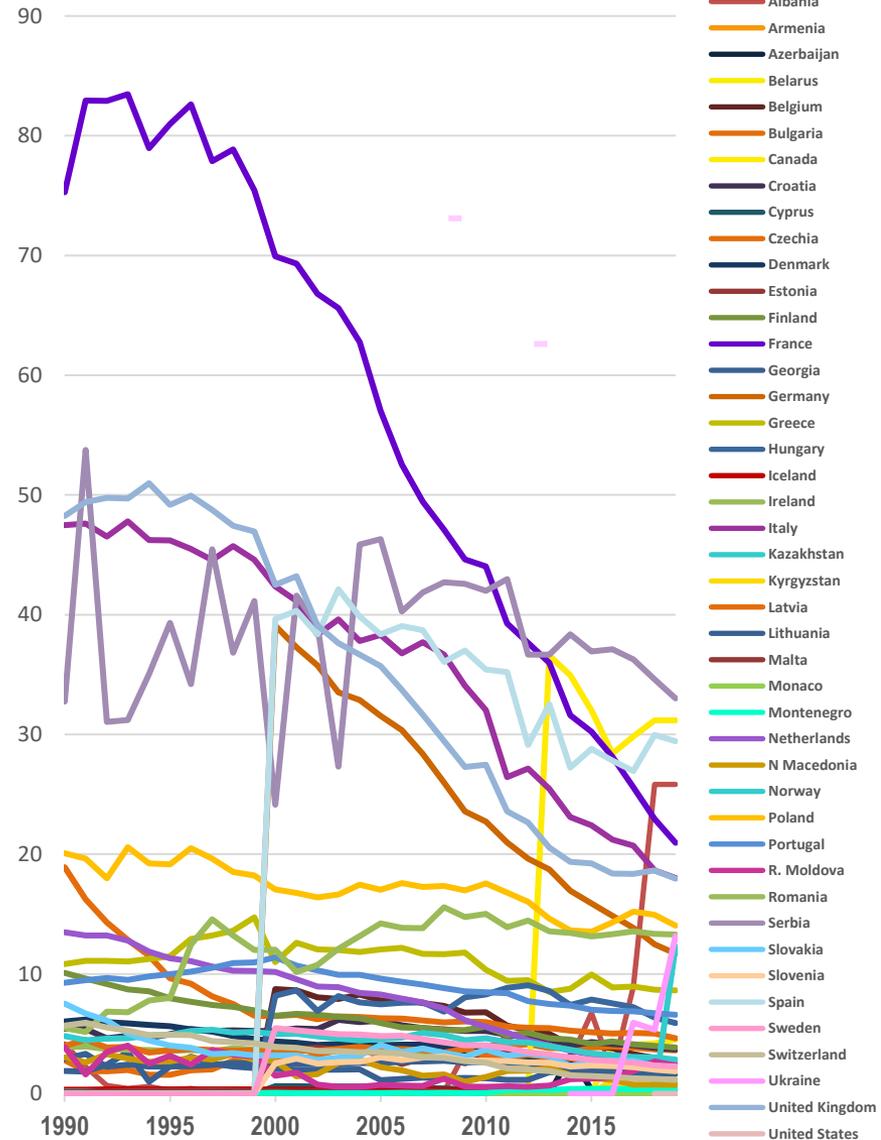
- Literature review to classify Guidebook EFs: the EFs mostly equal to EC (elemental carbon) rBC or eBC
- Updates needed for priority sectors: Small scale combustion, Open burning, Forest fires, Refinery flaring, O&G production, Transport
- Guidebook annexes to include consistent tabular information on the carbon speciation
- BC speciation factors only to be applied on PM EFs that include condensables. Guidance to be included on how to apply BC EFs to default / country-specific PM EFs and on where alternate approaches may increase uncertainties.
- Implement clear definitions of pollutants, EF units, measurements
- A shared online space to collect BC research information

# BC INVENTORIES UNDER UNECE CLRTAP/ EU NECD

Reported in 2017



Reported in 2021



# EMEP/EEA GB METHODS FOR AIR POLLUTANTS 2/3

The scope of the Guidebook is UNECE (United Nations Economic Council for Europe) and the EEA (European Environment Agency)

- Many EFs originate in international literature
- Several sources that are relevant in developing countries (e.g. cooking) are not covered
- Profound documentation of the sources, process/boiler/abatement techniques, fuels/raw material and conditions as well as T1/T2/T3 methods/EFs are provided in the Guidebook, thus the EFs can be applied anywhere in the world where the conditions, techniques, fuels etc. correspond. The TFEIP hopes to be able to review that information on regional applicability of the methods is sufficiently explained in the Guidebook.
- TFEIP works on voluntary basis (timeframes, access to references, possible outdated of sources)

## Alignment of codes and methodologies

- Reporting codes (CRF/NFR) have been aligned as far as possible, note that all ghg sources are not sources of air pollutants
- Link between IPCC and EMEP/EEA methodologies for "common" pollutants (UNFCCC/CLRTAP, i.e. SO<sub>x</sub>, NO<sub>x</sub>, NMVOC, CO) was provided already in IPCC 2006 GL Vol 1 Ch7.2.2 and Table 7.1

*TFEIP wish to avoid overlaps with the IPCC guidelines and prefers using resources to align between the IPCC and EMEP/EEA guidance, continue good earlier cooperation in referencing between the IPCC 2006 GLs and the EMEP/EEA GB – ideally with closer contacts between the TFI and the TFEIP*

THANK YOU

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