

# CEIP activities 2021- Plans for 2022-2023

Present state of emission data, review process and  
data for modellers  
(ECE/EB.AIR/GE.1/2021/7–ECE/EB.AIR/WG.1/2021/18)

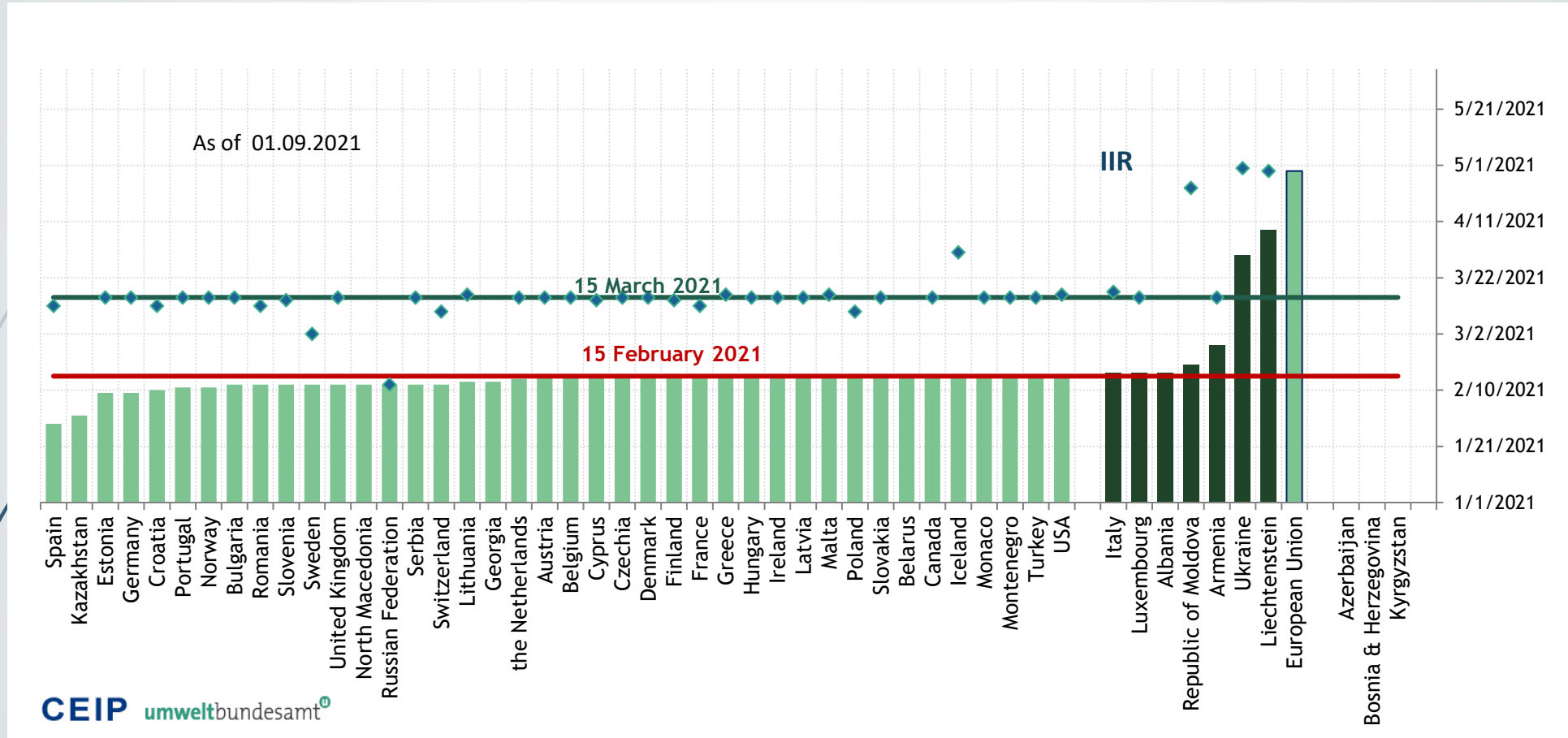
Seventh joint session of the EMEP Steering Body and the Working Group on  
Effects

*13-16 September 2021, web-meeting*

Sabine Schindlbacher, Katarina Mareckova, Robert Wankmüller, Marion  
Pinterits, Bernhard Ullrich, Bradley Matthews

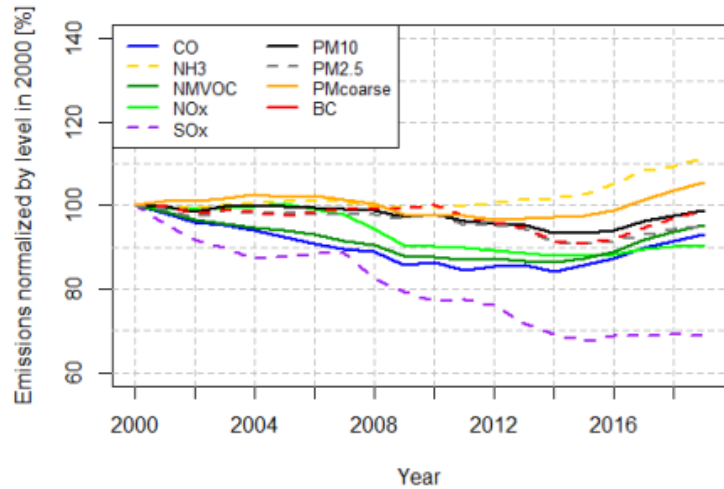
# Status of reporting

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➤ <https://www.ceip.at/status-of-reporting-and-review-results>

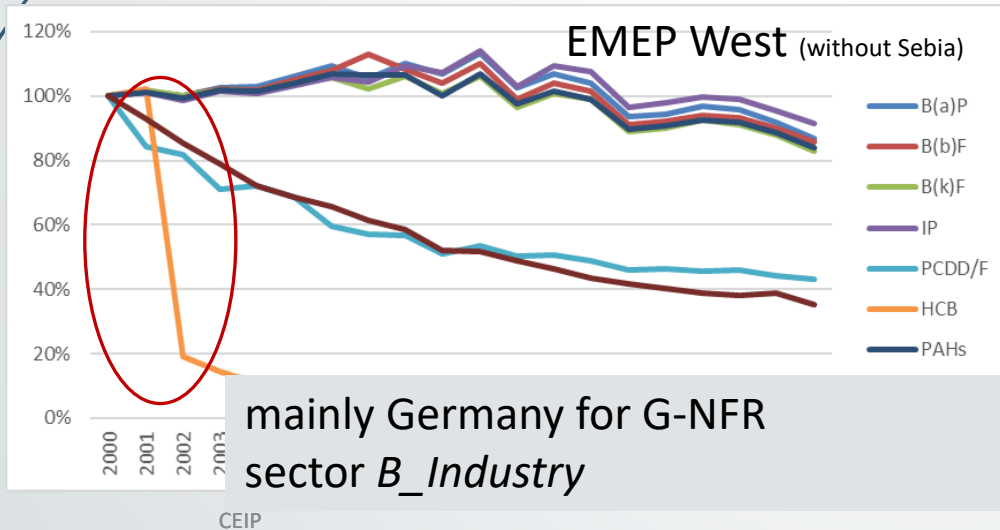
# Emission Trends in EMEP-area



More in Status Report 1/2021 Transboundary particulate matter, photo-oxidants, acidifying and eutrophying components

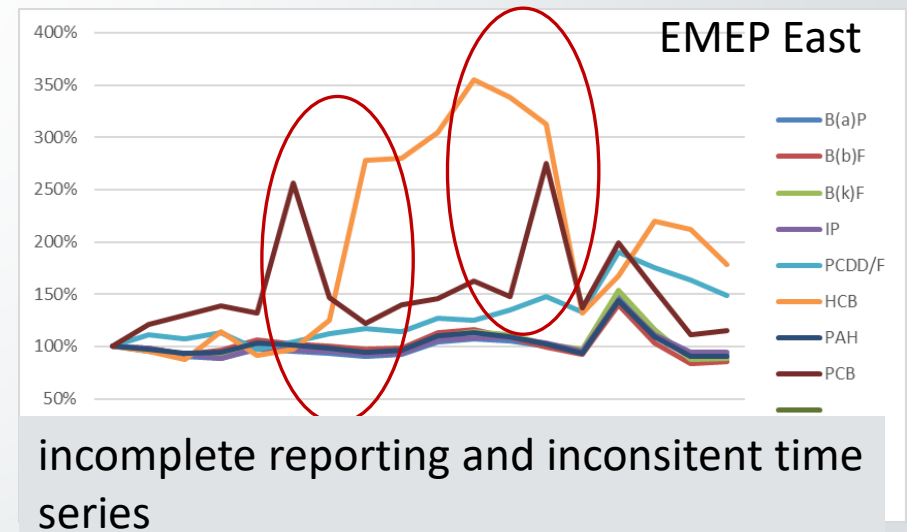
Source: Status Report 2/2021  
 Heavy metals and POPs: Pollution assessment of toxic substances on regional and global scales

Source: Status Report 1/2021 Transboundary particulate matter, photo-oxidants, acidifying and eutrophying components



mainly Germany for G-NFR sector *B\_Industry*

Source: Status Report 2/2021  
 Heavy metals and POPs: Pollution assessment of toxic substances on regional and global scales



incomplete reporting and inconsistent time series

# Emission Database

- Compile emission data reported by Parties to the Convention and import them into the EMEP/Centre on Emission Inventories and Projections database

HOME / WebDab

## The Emissions Database

**WebDab** is the emission database of EMEP (Co-operative programme for monitoring and evaluation of long range transmission of air pollutants in Europe) and open to the public for interactive use via the Internet. Emissions on **Main Pollutants, Heavy Metals, Persistent Organic Pollutants and Particulate Matter** are available as totals/sectors both for officially reported data and gap-filled emissions.

WebDab contains all emission data officially submitted to the Secretariat of the Convention on Long-range Trans-boundary Air Pollution (LRTAP Convention) by the Parties to the Convention.

### Reported emission data

National totals and sector data as reported by the Parties [1980 to (N-2) year]

READ MORE

### Emissions as used in EMEP models

National totals and sector data as used in EMEP models [1980, 1985, 1990 to (N-2) year]

READ MORE

### Reported activity data

Activity data as reported by the Parties [1980, 1985, 1990 to (N-2) year]

READ MORE

➤ <https://www.ceip.at/webdab-emission-database>

# Review Activities

▶ Carry out annual quality control of inventories reported under the Convention

- ▶ Stage 1 and 2 review: **Technical review** of all submitted inventories: three rounds in 2021  
15/02; 15/03 and 07/05 (update)
  - ▶ <https://www.ceip.at/status-of-reporting-and-review-results/2021-submission>
- ▶ “Inventory review 2021” (*Technical report CEIP 3/2021*) plus “Data-viewer” and “Methodology report” (*Technical report CEIP 4/2021*)
- ▶ <https://www.ceip.at/ceip-reports> Assessment of Inventory Reports – May (2021 IIR awards to: Austria, Poland, Estonia, Malta and Spain)
  - ▶ <https://www.ceip.at/iir-awards>
- ▶ In depth review (Stage 3) of 4 countries (country reports sent to countries for comments)
  - ▶ <https://www.ceip.at/review-of-emission-inventories/in-depth-review-of-ae-inventories>

# Stage 3 review

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▶ plan and organize an annual technical in-depth review of submitted inventories...

3 cycles of in depth review closed: each eligible Party (except BiH) reviewed  
2008-2012/**44** countries, 2013-2017/**45** countries, 2008-2021/**21** countries (focus on non-EU MS)

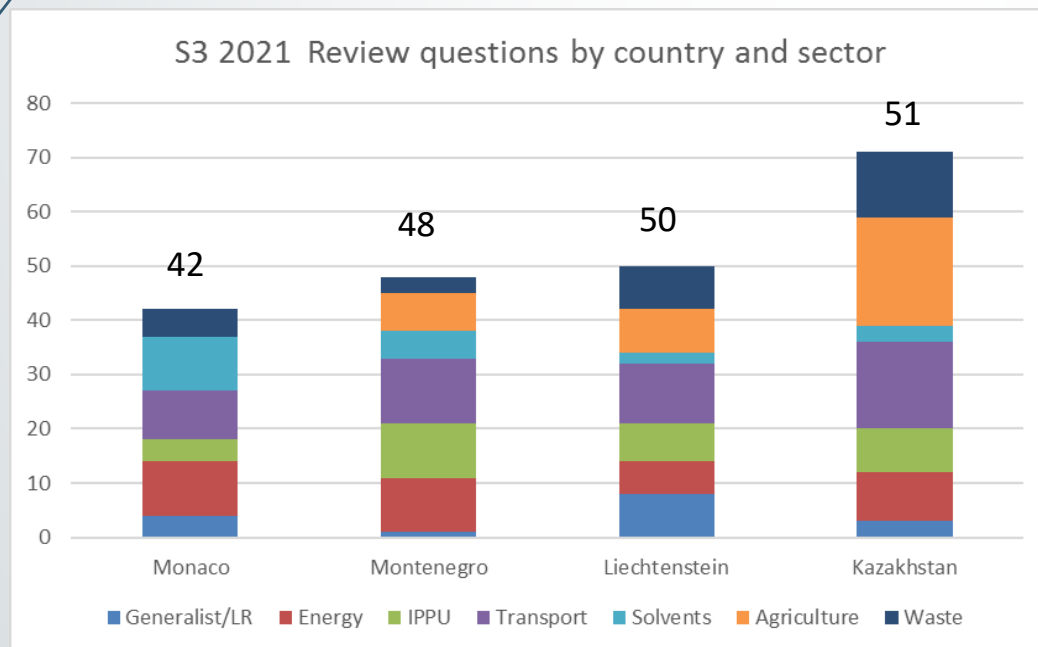
2021	2022
Kazakhstan	All Parties: Residential Heating (incl. condensables)
Liechtenstein	All Parties: Road Transport (incl. condensables)
Monaco	Continue assessment of the implementation of findings from the previous reviews
Montenegro	
Assessment of the implementation of findings from the previous reviews (planned for Q3-Q4)	

[http://www.ceip.at/review\\_results/stage3\\_country\\_reports/](http://www.ceip.at/review_results/stage3_country_reports/)

# Stage 3 review 2021 – progress, recommendations

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- ▶ Review of 4 Parties completed
- ▶ ERT raised 211 question in total, 121 unresolved (>50%)
- ▶ Significant inconsistencies in time series, missing AD, T1 used by key categories
- ▶ Sufficient cooperation with Parties, however less experienced national experts particularly in Kazakhstan and Montenegro => capacity building might help
- ▶ In depth review should continue - important capacity building tool



## Review reports (RR)

- ▶ RR completed by ERTs and sent to Parties for comments
- ▶ Monaco and Kazakhstan provided feedback (no comments) – RR uploaded

14.09.2021

# Stage 3 review 2022 and thereafter

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► ...plan and organize an annual technical in-depth review of submitted inventories...

- **In-depth review is an important tool for the**
  - **improvement of national emission inventories**
  - **capacity building of air emission inventory experts (reviewers)**
- **How do we proceed 2023 onwards ?**
  - 2022 - focus on selected categories/pollutants and condensable
  - 2023 - continue with selected categories/pollutants/topics and/or (add) review of selected countries (e.g. proposed by IC, modelers, based on results of indicial checks...)
- **Centralized meeting** very important for interaction within the review team
  - Hopefully possible next years
- Need **nomination of review experts from EECCA and West Balkan countries**
  - EC will sponsor the travel/accommodation for a few Western Balkan experts to the review meeting, via one of their neighbourhood programmes



# Gridded Emission Datasets

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- c) Develop emission data sets for modellers (gridded data of EMEP pollutants for the EMEP area)

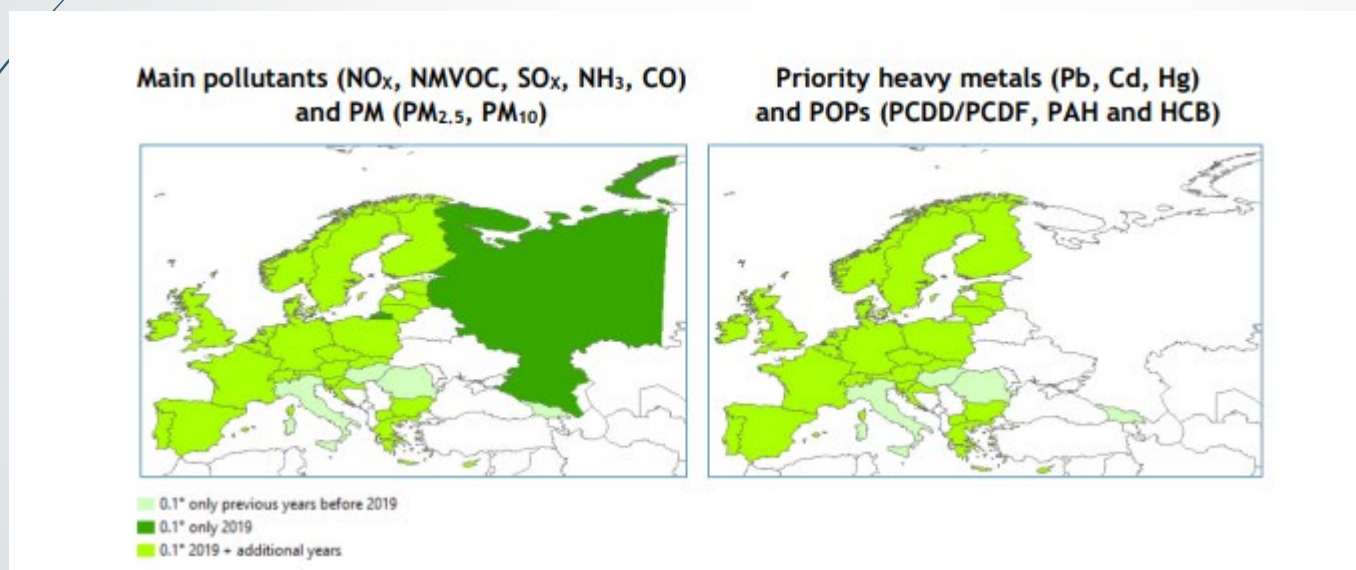
- **Gridded emission data for modellers** in 0.1°x0.1° long/lat distribution on GNFR sector level

- 2000 to 2019 for Main pollutants, CO, PMs, BC
- 2019 for HMs and POPs
- Gap-filling process and the use of reported data is documented in the Reports: “Methodologies applied to the CEIP GNFR gap-filling 2021”
  - <https://www.ceip.at/ceip-reports>

# Data sets for modelers

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- Gridded data is part of the four-year reporting obligation that was due in 2021
- **32 countries** in total reported sectoral gridded emissions in 0.1°x 0.1° long-lat resolution until August 2021
- Reported gridded sectoral emissions data in 0.1°x0.1° (long/lat) resolution, which were used for the preparation of gridded emissions for modellers, covers **less than 25 %** of the cells within the geographic EMEP area



Source: *Inventory review2021*, Technical report 03/2021  
<https://www.ceip.at/review-of-emission-inventories/technical-review-reports/rr2021-1>

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# Data sets for modelers

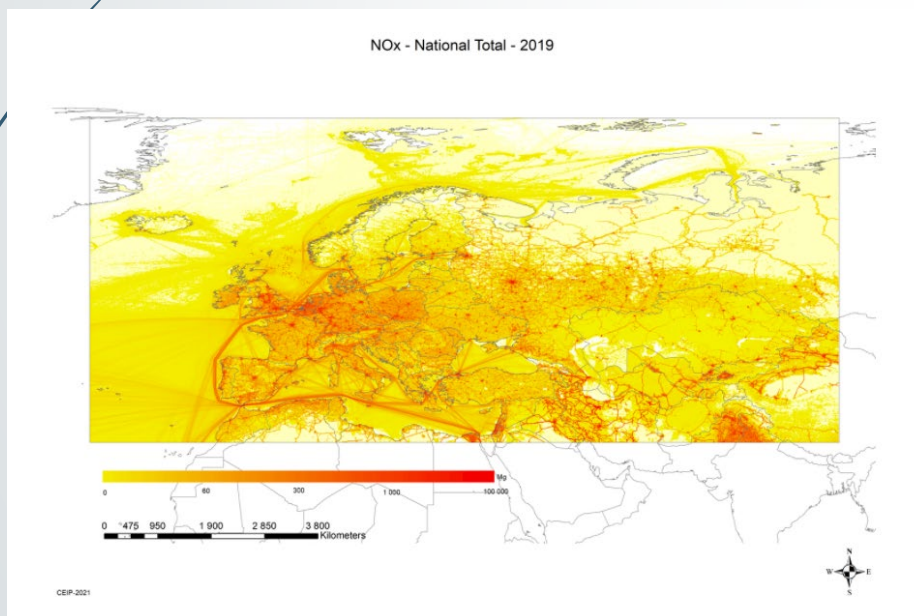
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## Shipping emissions

- are not consistently reported across Parties
- Emissions for the sea regions for gridded data were calculated using the CAMS global shipping dataset for the years 2000 to 2019 (Finish Meteorological Institute, FMI), provided via ECCAD (CAMS\_GLOB\_SHIP)

## Gridded data available at:

- <https://www.ceip.at/the-emep-grid/gridded-emissions>



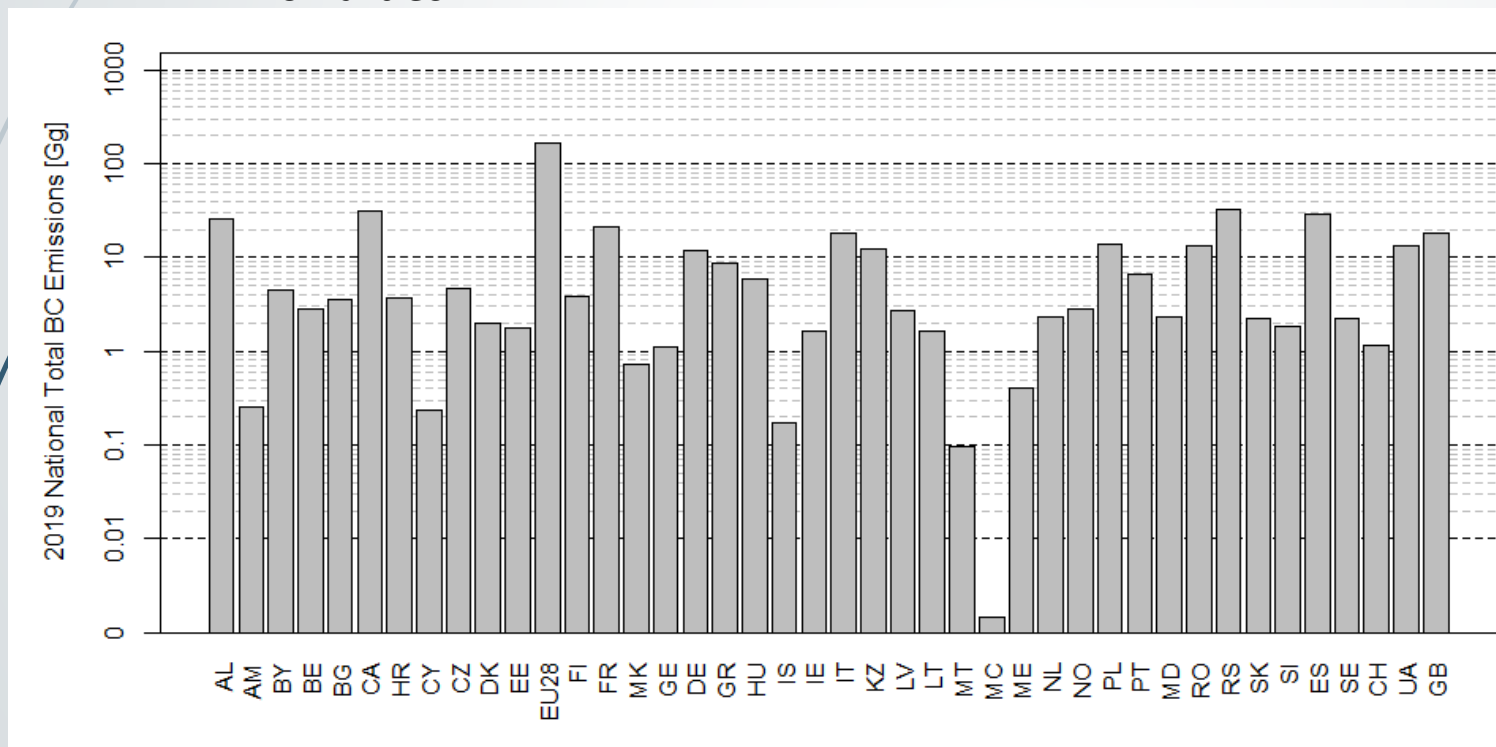
Source: <https://www.ceip.at/the-emep-grid/gridded-emissions/nox>

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# Black Carbon reporting & Gap-filling 2021

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- ▶ Since enabling reporting , 45 Parties have reported BC
- ▶ In 2021:
  - ▶ 42 Parties reported BC National Totals for 2019
  - ▶ 38 Parties reported BC National Totals for 2000-2019
- ▶ For EMEP gridded BC emissions (2021 dataset), gap-filling/replacement was necessary for 20 Parties



- ▶ More in Status Report 1/2021 Transboundary particulate matter, photo-oxidants, acidifying and eutrophying components
- ▶ CEIP has cooperated with AMAP on the EUA-BCA project that concluded in June 2021. Project reports and a digital black carbon policy landscape can be accessed via <https://bc-policy-landscape.amap.no/>

14.09.2021

# Plan for revision of Annex II (IIR) to the reporting guidelines

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- Annex II to the reporting guidelines is the recommended structure for the IIR
- Suggested changes include:
  - Changes to the suggested information on the **inclusion of the condensables**
  - Clearer specification of the information that should be provided in the chapter on reporting of gridded data and LPS data
  - Revisions in the guidance provided in the sector „sections“
  - Suggestion to include information on verification activities
  - Suggestion to include a **table** with information on the **implementation of recommendations/findings** from reviews (CLRTAP stage 3 and where relevant NECD review)
- Approval by Steering Body?
- Used 2022 onwards?

# Revision of the Reporting Guidelines ([ECE/EB.AIR.125](#))

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CEIP and TFEIP have compiled a preliminary list of issues that should be addressed during the revision of the Guidelines.

- ▶ Elaboration of the text regarding reporting of LPS and gridded data
  - ▶ add definitions and clear guidance
  - ▶ better guidance on reporting emissions from agriculture for LPS
  - ▶ define consistency with data reported in NFR tables and gridded data
  - ▶ define use of the reported LPS data (e.g. should CEIP be allowed to present LPS in maps on the CEIP website?)
- ▶ Up-date outdated references and links
- ▶ Add definition of the geographic area of Parties for historic years
- ▶ Remove the alternative to report gridded emissions in a grid of approximately 50 x 50 square kilometres (km<sup>2</sup>) until it is technically and economically feasible to switch to a grid of 0.1 x 0.1 degrees.
- ▶ Add the requirement to provide a “Declaration on the publication of the IIR” together with the IIR
- ▶ Revise the use of shall/should/encourage/good practice in several places

14.09.2021

# Revision of the Reporting Guidelines ([ECE/EB.AIR.125](#))

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- ▶ Further, additional topics were identified that should be discussed as part of the revision of the Guidelines.
- ▶ Some of these topics might need to be addressed at another place (e.g as part of the revision of protocols or as part of the revision of other Guidance documents)
  - ▶ Require emissions per fuel??
  - ▶ Review the list of pollutants, consider to make Black Carbon reporting mandatory??
  - ▶ Review if it is possible to remove certain elements of the reporting requirements
- ▶ Next steps: Discussion with a larger group of TFEIP representatives in 2022

# Workplan 2022/2023 – suggestions and ideas

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- Contribute to activities related to the topic of the condensable component of PM emissions
- Improving the spatial distribution of BC emissions
- Finalizing the update of the Guidelines for reporting emissions and projections data under the Convention (EMEP mandatory contributions)
- Improvement of data for the modellers: comparison of EMEP gridded emissions with other sources (CAMS, Fairmode) with a focus on selected pollutants
- Cooperation with Arctic Council and AMAP (Focus on black carbon under AMAP assessment)
- Overview tables on status of reporting, for each of the seven Protocols
- Emission data trend tables and updates provided to the secretariat



# Workplan 2022/2023 – suggestions and ideas

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- ▶ Gap-filling of 2020 and 2021 emission datasets (the special conditions in these years (COVID pandemic) will need refinement of the standard approaches
- ▶ Refinement of the gap-filling of the shipping emissions
- ▶ Contribution to the streamlining of the adjustment application process for adjustment applications for the Emission Reduction Commitments
- ▶ Up-date report on uncertainties
- ▶ Work on the questions for the **Gothenburg Protocol review**

# Contact and Information

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