

Emission inventories and adjustment procedure

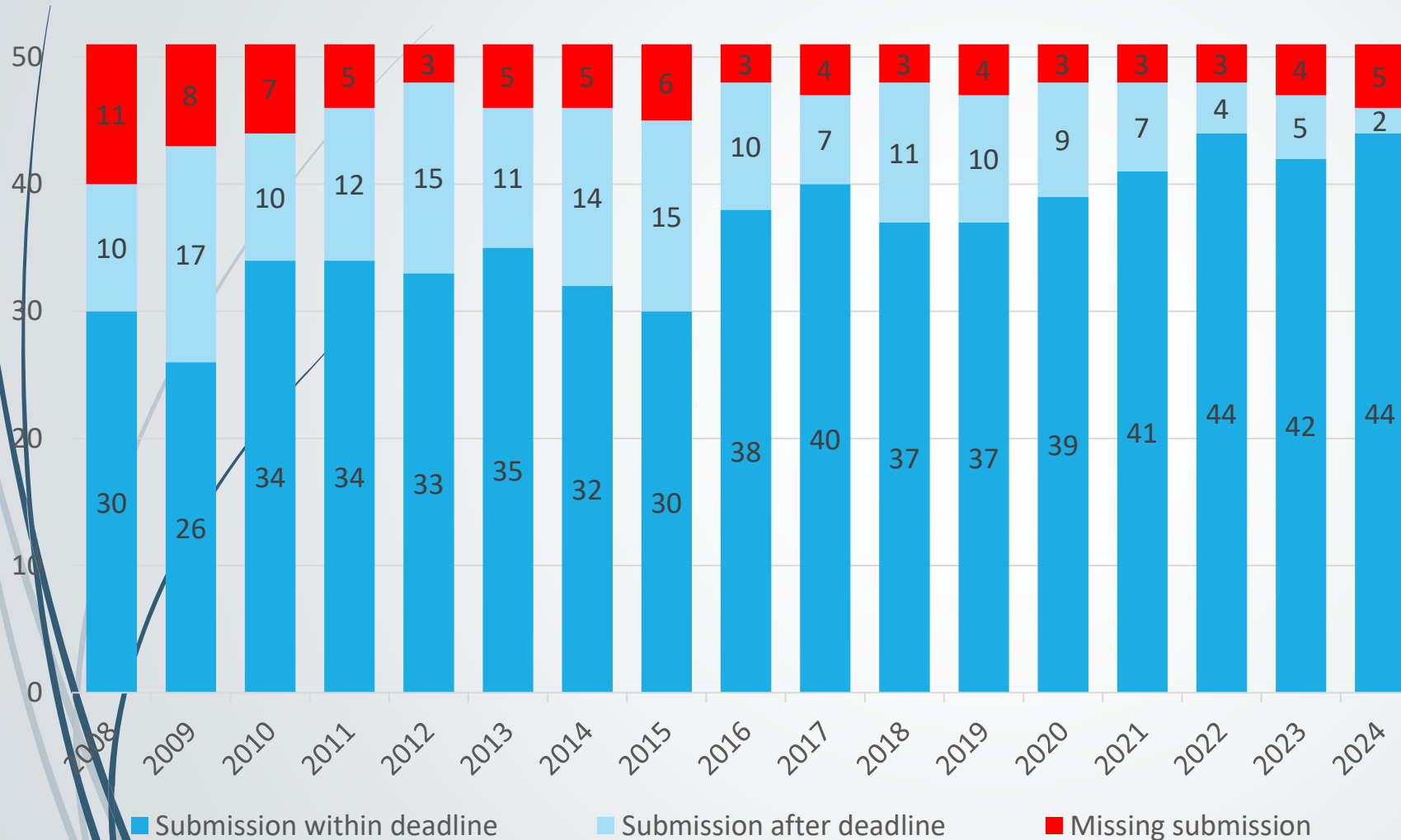
Progress in the 2024-2025 work plan

Joint Meeting of the Extended Bureau of EMEP steering body
and the extended Bureau of the Working Group on Effects

28 February - 1 March, web-meeting

Sabine Schindlbacher, Robert Wankmüller, Bernhard Ullrich, Bradley Matthews

Status of reporting



Status of reporting 2024

(as of 27.02.2024)

- 46 inventories
- 44 on time
- 2 gridded data/ 2 LPS
- 3 (4) approved adjustments
- 2 new adjustments (CZ and DK)

Source: CEIP

Data publically available in the emission data base

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]

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Reported activity data

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

READ MORE

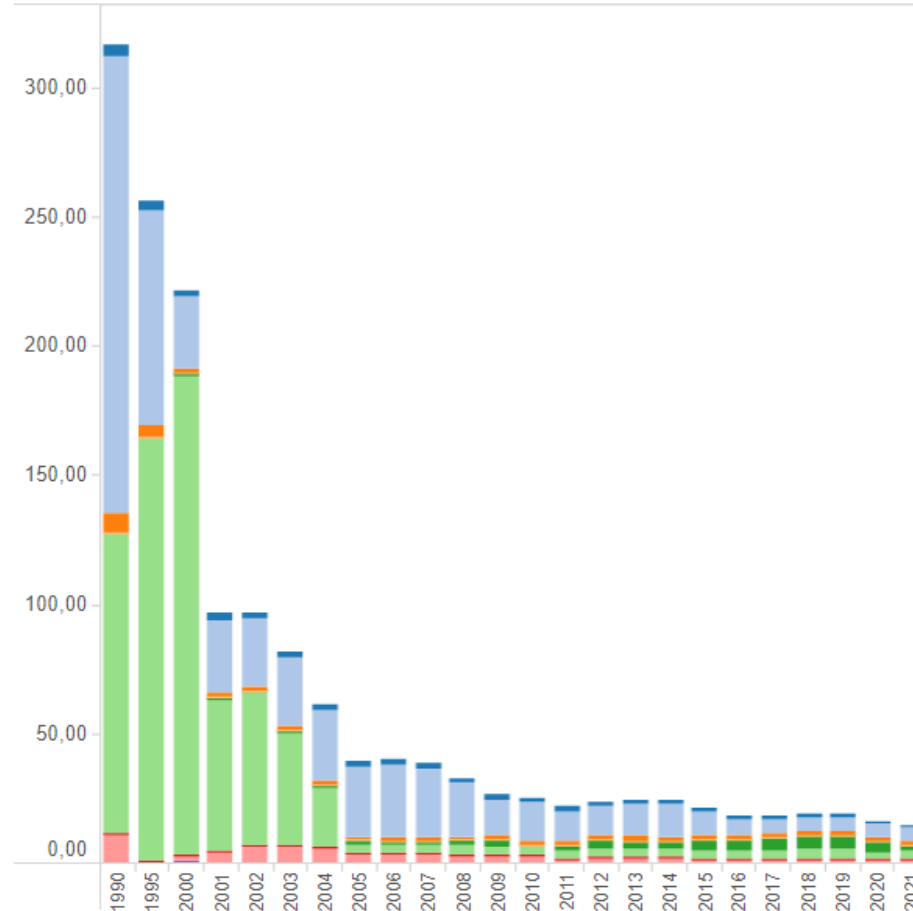
Source: CEIP

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

Dataviewer

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Emissions of Pb (tonnes), Czechia



Country

Czechia

Pollutant

Pb

Select level of detail

GNFR Sector

(Alle)

Level of detail

- A_PublicPower
- B_Industry
- C_OtherStationaryComb
- D_Fugitive
- E_Solvents
- F_RoadTransport
- G_Shipping
- H_Aviation
- I_Offroad
- J_Waste

The data presented in this data viewer uses the GNFR14 and NFR14 nomenclature and is the officially reported data submitted up to 01 June 2023.

Gridded Emission Datasets – data for modelers

- Gridded emission data for modellers in 0.1°x 0.1° long/lat distribution on GNFR sector level
- Main pollutants, CO, PMs, BC - **years 1990 to 2022**
- HMs and POPs - **year 2022**
- **Will be available for download as CSV und NetCDF** at <https://www.ceip.at/the-emep-grid/gridded-emissions>
- Gap-filling process and the use of reported data will be documented in the Reports: “Methodologies applied to the CEIP GNFR gap-filling 2024”
<https://www.ceip.at/ceip-reports>

Country	Data source to be used for GNFR C	Country	Data source to be used for GNFR C
Albania	CEIP- gap-filled	Latvia	CEIP- reported by Party
Armenia	CEIP- gap-filled	Liechtenstein	CEIP- gap-filled
Austria	REF2	Lithuania	REF2
Azerbaijan	CEIP- gap-filled	Luxembourg	REF2
Belarus	REF2	Malta	CEIP- reported by Party
Belgium	CEIP- reported by Party	Monaco	CEIP- reported by Party
Bosnia & Herzegovina	REF2	Montenegro	REF2
Bulgaria	CEIP- reported by Party	Netherlands	CEIP- reported by Party
Croatia	CEIP- gap-filled	North Macedonia	CEIP- reported by Party
Cyprus	CEIP- reported by Party	Norway	CEIP- reported by Party
Czechia	CEIP- reported by Party	Poland	CEIP- reported by Party
Denmark	CEIP- reported by Party	Portugal	CEIP- reported by Party
Estonia	REF2	Republic of Moldova	REF2
Finland	CEIP- reported by Party	Romania	CEIP- reported by Party
France	CEIP- reported by Party	Russian Federation	REF2/CEIP
Georgia	REF2	Serbia	CEIP- reported by Party
Germany	REF2	Slovakia	CEIP- reported by Party
Greece	CEIP- reported by Party	Slovenia	CEIP- reported by Party
Hungary	CEIP- reported by Party	Spain	CEIP- reported by Party
Iceland	CEIP- reported by Party	Sweden	CEIP- reported by Party
Ireland	CEIP- reported by Party	Switzerland	REF2
Italy	CEIP- reported by Party	Türkiye	CEIP- gap-filled
Kazakhstan	REF2/CEIP	Ukraine	REF2
Kyrgyzstan	CEIP- gap-filled	United Kingdom	CEIP- reported by Party

Data source for PM emission in GNFR C used in EMEP models in 2023

01.03.2024

Gridded Emission Datasets – data for modelers

- Good understanding for the sector residential heating and transport
- Other sectors are not as well understood
 - Energy
 - **Industry**
 - Shipping/Aviation
 - Waste
 - ...

Review of Adjustment Applications 2024

Country	Date	Pollutant	Sector	NFR Code	Years	First submitted in
Czechia	15.02.2024	NH3	Agriculture	3Da1	2005, 2020 to 2022	New
Denmark	15.02.2024	NMVOC	Agriculture	3B1a	2005, 2020 to 2022	2022
Denmark	19.02.2024	NMVOC	Agriculture	3B1a	2005, 2020 to 2022	New
France	09.02.2023	NMVOC	Agriculture	3B, 3D	2005, 2020 to 2022	2022
Netherlands	14.02.2024	NMVOC	Agriculture	3B1a	2005, 2020	2022
United Kingdom		NH3	Agriculture	3Da2c	2005, 2020 to 2022	2022

Review of Adjustment Applications

- ▶ Initial checks of submitted adjustment applications: assessment of formal criteria (CEIP in cooperation with UNECE secretariat)
- ▶ <https://www.ceip.at/gothenburg-protocol/review-of-adjustments>
- ▶ Desk review: **April – beginning June**
- ▶ Status report to EMEP SB: mid June
- ▶ Country summary note: June – July
- ▶ **Adoption of ERT recommendations: Sept (EMEP SB meeting)**

Scientific information for the review of the Gothenburg Protocol

Para 67: ...Improving the quality, completeness, accuracy and transparency of emissions reported by the Parties is a top priority since it drives all interpretations of trends in air pollution and its effects...

Annual technical in-depth review of submitted inventories

- ▶ In-depth review in 2024 – ad hoc review
- ▶ Topics of the review
 - ▶ **emissions from IPPU-solvents** with a special emphasis on NMVOC emissions
- ▶ gridded data for the sector IPPU-solvents – comparison with CAMS data planned
- ▶ **all Parties** that send a submission before 15 April 2024 (start of the desk review) **will be reviewed**
- ▶ Centralized review meeting: **Vienna 3 June to 7 June 2024**
- ▶ travel/accommodation for experts from the Western Balkan and the EECCA region will be supported via two EU funded projects
- ▶ Already more than 15 reviewers accepted the invitation to participate in the review

Annual technical in-depth review of submitted inventories – 2024 to 2026

- ▶ The Steering Body and the Working Group approved the plan for the ad hoc (in-depth) reviews for the years 2024 to 2026:
 - ▶ 2025: Review of **projections** with clearly defined scope
 - ▶ 2026: Review of the **transport sector** with a special focus on NO_x, NMVOC, CO, PM, BC, Pb, Cd and Dioxin/Furan emissions; including gridded data

Annual technical in-depth review of submitted inventories – 2027 and beyond

- ▶ the “sectoral” approach is well accepted by the reviewers
- ▶ possibility to meet and discuss with other sector experts
- ▶ plan is to **keep the “sectoral” approach** and review energy stationary, waste and IPPU (non-solvents) in the coming years
- ▶ further **strengthening the capacity building component** of the review

Annual technical in-depth review of submitted inventories – 2027 and beyond

- ▶ quality of the inventories is very different between countries
- ▶ good use of resources to review countries with very good inventories while there are still many inventories where substantial improvements are needed?
- ▶ Only review inventories where significant improvements are needed?

Only review inventories where significant improvements are needed?

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- ▶ review team would have more time to review inventories that need major improvements
 - ▶ overall the quality of EMEP wide estimates would improve more **IF** the Parties implement the recommendations of the review team
- ▶ the review team would have more time to calculate **technical corrections**, which is a direct help for the national inventory compilers

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- ▶ need to choose countries – this needs to be well justified
- ▶ as the reported emission estimates are used for compliance checks the estimates from all countries should at least be checked sometimes
- ▶ countries with advanced inventories contribute a lot to the review by sending experts. It is possible that they would send less experts.

Review – thoughts for discussion

- ▶ Have one or two years only dedicated to the review of inventories that need major improvements
- ▶ Collect ideas at the TFEIP meeting:
 - ▶ What do emission inventory compilers think?

Plans for the additional budget 2024

- **Focus on the needs to support revision of the Gothenburg Protocol**
- Stronger involvement of countries from the ECCAA and Balkan region and from Türkiye
 - Support for improvement of emission inventories and projections
- Work on methane emissions that is required for the revision of the Gothenburg Protocol
- Improvement of the emissions management framework (web interface, work on shipping emissions, up-date of proxies used for gridding, ...)
- Ad hoc tasks connected to air emission data for the revision of the Gothenburg Protocol

Work Plan Item	Activity description	Resource requirements and/or funding source
1.1.1.4 and 1.1.2.3	Contribute to work on condensables	EMEP budget and additional resources required
1.1.2.1	Investigate practicalities and processes required for including CH ₄ in annual emissions inventory reporting	Additional resources required
1.1.2.4	Develop guidance on estimating and Party's reporting of emissions of BC	Additional resources required
1.1.2.5	Improve spatial distribution of emissions , assuring consistency across pollutants. Explore new data sources	Additional resources required
1.1.2.6	Improve data for modellers: comparison of EMEP gridded emissions with other sources (CAMS, GAINS, EDGAR, Fairmode)	EMEP budget
1.1.2.8	Refine gap-filling of reported shipping emissions	EMEP budget
1.1.2.9	Improve methods for gap-filling of HM and POPs data sets	EMEP budget
1.3.8	Cooperation with Arctic Council and AMAP	AMAP, Additional

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Stage 3 review 2023 – ad-hoc review

- ▶ In 2023 the review focused on
 - ▶ emissions from **agriculture** with a special emphasis on NH₃, NMVOC and NO_x emissions including **gridded** data
 - ▶ review of **41 Parties**
 - ▶ **17 reviewers** from 15 different Parties
 - ▶ travel/accommodation for five experts from the Western Balkan and the EECCA region was financed via two EU funded projects

Stage 3 review 2023 – ad-hoc review

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▶ The ERT raised 260 question in total and received 229 answers

▶ Good cooperation with most Parties during the review

▶ Positive feedback from countries and reviewers for ad-hoc review

