

TFEIP Meeting 2024 – Minutes and decisions

The 2024 TFEIP Meeting took place in Dessau, Germany across the 14th – 16th May.

The presentations given during the meeting will be made available on the TFEIP website.

1. International News

Susan Dröge (Germany) opened the meeting and welcomed participants.

Presentations were given on the following topics:

- Update on the review of the NECD (Bettina Kretschmer, European Commission)
- Update on plans for the Gothenburg Protocol revision (John Salter, WGSR vice chair)
- Expected changes in PRTR reporting (Daniel Montalvo, EEA)
- Methodology Report on SLCFs and IPCC activities (Pavel Shermanau, IPCC)
- Update on the Task Force for International Cooperation on Air Pollution (John Salter, TFICAP co-chair)
- Climate and Clean Air Coalition (Scarlett Quinn-Savory, CCAC)

The TFEIP took note of the presentations and the work being undertaken in the international arena, and discussed the implications for the TFEIP's workplan (see section 3 below).

2. Agriculture Expert Panel

The following topics were discussed:

- Matters arising from the Guidebook update – some software bugs and additions. We still have Excel and AgrEE online tools. Note that the AgrEE tool also does greenhouse gases.
- Tier 3 methodologies for ammonia emission – methods discussed for ammonia emissions from synthetic nitrogen fertilisers and field-applied slurry applications. Tier 2+ emission factors would be possible but this relies on measurements made in the respective region. There is an under-representation of measurements in East and South Europe. Tier 3 methodologies create some issues concerning the availability of good quality activity data. There is a conflict with data confidentiality in some countries, so some modelling of activity data might be necessary. The question was raised whether Tier 3 methodologies should aim to reflect the local climate or the local weather. The latter would make the inventory more useful for modellers but the interannual variation would be problematic for policymakers, unless some form of averaging was used.
- Collaboration with TFRN is ongoing. This includes general guidance on management of nitrogen in agriculture, food processing and residue recycling. Over the next two years, there will be a revision of the Ammonia Guidance Document. TFEIP needs to actively engage with TFRN concerning ammonia abatement measures (contributions from TFEIP members welcome but no funding available).
- TFEIP needs to provide guidance in the Guidebook concerning the criteria that must be fulfilled before the effects of abatement measures can be included in emission inventories.

Action: The panel will compile a prioritised improvement list for relevant Guidebook chapters, for discussion at the 2025 TFEIP meeting.

Nicholas Hutchings (Denmark) will be stepping down from his role as co-chair of the agriculture and nature panel at the end of 2024. **Bernard Hyde (Ireland)** has joined as a new co-chair. Nick was thanked very much for his many years of contribution to the work of the TFEIP.

3. Combustion and Industry Expert Panel

The key discussion topics at the Combustion and Industry Expert Panel were as follows:

- There continue to be problems with summarizing **PCB emission** data from different source categories due to different units/ congeners and order of magnitudes
- **asphalt mixing plants**: Data exchange has been agreed with the Netherlands to gain a better understanding of the information that may be available on this source, which is not currently included in the Guidebook. Developing a good quality methodology for this source is expected to be challenging because it would need to consider the use of different fuels, recycling rates, fluctuating production rates, and give estimates for several pollutants. The emissions are also not expected to make large contributions to national totals, but this may not be the case at a local level. Asphalt mixing plant will be added to the Guidebook's prioritized improvement list, and in due course will be considered in context with other priority items and the availability of funding/support.
- Updated emission factor data for **fireworks** will be provided for the next Guidebook version.
- A new method for calculating **HM emissions from coal fired plants** may be introduced (emission factors as a share of TSP). There are some additional quality checks that will be necessary, but it seems to be a promising approach for the next Guidebook revision.
- Presentations on **small combustion** were given from Finland, Italy and the JRC. There was agreement that revising the small combustion Guidebook chapter is a high priority. The first step will involve collecting all available information on recent studies.

Action: The panel will compile a prioritised improvement list for relevant Guidebook chapters, for discussion at the 2025 TFEIP meeting.

4. Transport Expert Panel

Presentations were given by JRC and EMISIA focusing on road transport research activities and showed the ongoing work to improve emission estimation tools that provide new or updated emission factors especially for new vehicles (EURO 6 and EURO 7), alternative fuels (LPG and CNG), new categories (HEV/PHEV cars) and the methodologies of emission sources that need to be improved (non-exhaust emissions, VOC speciation, cold emissions). EURO 7 introduces for the first-time limits for non-exhaust emissions from brakes and tyres.

Recent improvements will be included in COPERT by September 2024.

New emission factors on non-exhaust emissions from brakes for car should be available by 2025, and by 2026 for LDV and HDV.

A presentation by ISPRA focused on the emissions in harbours, and the correlation with air quality and health issues in nearby urban areas. The challenge was to collect the relevant information on maritime movements that can be used in a Tier3 Guidebook methodology, providing a time series of emissions at the individual port level for different Italian harbours.

A presentation by Ricardo on UK road transport emissions focused on the comparison of emission results using COPERT and/or HBEFA models and verification of emission factors by using roadside remote sensing data for NO_x and NH₃ (more than 75,000 measurements). The analysis suggested that NO_x emissions are dependent on outdoor temperature, that NH₃ emissions are dependent on vehicle speed. However, of most importance, the results of the showed that HBEFA and roadside

measurements gave different emission factors to COPERT for PM and NO_x for HDV, and that this requires further investigation.

Ricardo has been invited to participate and present these results to the ERMES expert group to further discuss with the experts these differences.

The panel identified the need to take in account the use of alternative fuels in maritime and aviation emissions, and update the guidebook methodologies accordingly.

Action: The panel will compile a prioritised improvement list for the Guidebook for discussion at the 2025 TFEIP meeting. However, some improvement activities (such as maintaining the road transport chapter) will be undertaken ahead of the 2025 TFEIP meeting as funding for this is provided by the European Topic Centre on Climate Change Mitigation.

3. CEIP and TFEIP workplans and discussion sessions

CEIP workplan

CEIP presented summary information on the 2024 emissions inventory reporting round. More Parties made submissions in 2024 than in any previous year.

CEIP asked for the TFEIP's views on several different aspects of the emissions inventory review. The TFEIP indicated:

- a strong preference for continuing with annual sector-specific reviews (rather than less frequent all-sector reviews).
- a slight preference for reviewing lower quality emission inventories more frequently.
- that in-country reviews should be arranged where inventories need major improvements
- that national inventory systems be included in the scope of the in-depth reviews
- that solvent use and uncertainties were high priority topics for future in-depth reviews

The CEIP will use this information in their planning of future in-depth emission inventory reviews.

TFEIP Workplan

1.1.2.1 Including CH₄ in emissions reporting

Action: the TFEIP agreed to form an ad hoc group to draft a paper on the practicalities/processes of reporting CH₄ emissions, to be submitted to the WGE/EMEP SB 2024 meeting in September.

1.1.2.3 Guidance on reporting condensable PM (Pt 1/2)

Action: The TFEIP agreed to form an ad hoc group to consult with emission inventory users in the Convention, to identify their needs relating to condensable PM, and then draft a "needs" paper for the WGE/EMEP SB 2024 meeting in September.

Action: This ad hoc group will then use the "needs" paper to do a gap analysis and will draft proposals to address the current gaps in the needs of the data users. A paper is tentatively planned for the 2025 meeting of the TFEIP.

1.1.2.6 Improve data for modellers: Updated EMEP gridded emissions

Several activities under this task were identified:

- Reviewing the current weaknesses of reporting, and identify opportunities for improvements in CEIP's gap filling processes by using newly identified datasets & transparent methodologies. CEIP and the TFEIP Co-chairs will work on this if resources permit, and will report back at the 2025 TFEIP meeting.
- Updating the EMEP/EEA Guidebook chapters. Jeroen Kuenen is available to lead the updating of the Guidebook chapter, but current resources are very limited.

-
 The TFEIP did not identify resources or voluntary contributions to sufficiently support these tasks. Consequently little, or no, progress is expected.

1.1.2.7 Investigate “centralizing” the compilation of some sources

The TFEIP agreed that they were not in favour of a single organisation taking over the responsibility of compiling emission estimates included within the national totals for all Parties. However, it was agreed that there are benefits to “centralisation” in the form of creating tools or providing new datasets that could be used by any Party that considered it beneficial.

Action: An ad hoc group will be formed to draft a paper summarising the views on “centralisation”, which will be presented at the 2025 TFEIP meeting.

1.1.1.1 Support the work of the TFMM on assessing the contribution of VOCs on high O3 pollution episodes

Action: The TFEIP agreed to form an ad hoc group, led by Jeroen Kuenen, to review & compile information on NMVOC speciation profiles. Progress will be discussed at the 2025 TFEIP meeting.

1.1.1.4 Working with the TFMM on intermediate & semi-volatile condensable PM emissions

The TFEIP did not identify resources to be able to make a contribution to the work of the TFMM on condensable PM.

1.1.2.4 Develop guidance on estimating BC emissions

The TFEIP co-chairs will explain to the WGE/EMEP Steering Body that we consider this task to be on hold until there is clarity on the purpose of reporting BC emission estimates, and whether concentrating efforts on reporting PM metrics, as used in different modelling systems, is a higher priority.

1.1.2.2 Investigate revisions to emissions inventory reporting

The co-chairs will represent the TFEIP in supporting Convention activities investigating revisions to emissions inventory reporting and practicalities of inventory reporting commitments specified under Gothenburg Protocol commitments. They will liaise with the TFEIP community as necessary.

1.3.1 Contributing to outreach work of TFICAP

TFEIP Co-chairs will take the lead in supporting the goals of TFICAP, but would welcome other contributions.

1.3.7 Cooperation with CCAC

The TFEIP identified some individuals who can act as a TFEIP representative at CCAC meetings.

Updating the EMEP/EEA Guidebook

The timelines for updating the EMEP/EEA Guidebook were presented, discussed, and agreed.

Actions: Ahead of the TFEIP 2025 meeting, the TFEIP co-chairs will explore options for securing support/contributions that will allow items on the expert panel's priority improvement lists to be completed. This will be discussed at the TFEIP 2025 meeting.

Including previously approved adjustments in projections reporting

The TFEIP meeting paper was briefly discussed.

Decision: It was agreed that the paper will be forwarded to the EMEP/WGE Steering Body as a meeting paper, but prior to this, attendees were given the opportunity to send written comments before the 24th May, which the co-chairs will then address and incorporate as required.

4. International Collaboration

The following presentations were given:

- Kayla McCauley (US EPA) gave a presentation on US inventories and possible areas for TFEIP collaboration with the US EPA on shared topics of interest.
- Daniel Montalvo (EEA) gave a presentation on the EEA's use of inventory data in policy formation and highlighted the importance of continued work on emission inventories.
- World Bank presentation (Vasil Borislavov Zlatev, World Bank)

Action: The Co-Chairs of the TFEIP will work with the US EPA to identify collaborative opportunities. Initial discussions have identified that creating a model for residential combustion is a high priority.

5. Waste

Celine Gueguen presented a list of potential future updates for the waste chapters of the Guidebook and invited participants to contact her with questions or offers of support with this work.

6. Projections expert panel

Melanie Hobson and Nadine Allemand opened the session. Presentations were given on the following topics:

- IIASA's work for the Convention and EU on baseline emission projections used in GAINS (Zig Klimont)
- France's air pollutant and GHG emission projections methodology (Samuel Laval, French Ministry for an Ecological Transition)
- Shipping scenarios during COVID and the impact of the subsequent Tiers of Marpol Annex VI, foreseen and hypothesized, in the Mediterranean area (Carlo Trozzi)
- Lessons learnt and recommendations from the review of emission projections reported under the NECD (Chris Dore, Aether)

The TFEIP discussed the conclusions from the emission projections review, and considered whether there were relevant actions that could be taken to better support EU member states and Parties to the Convention with their projections compilation and submissions.

- **Reporting deadlines:** The TFEIP were of the view that a review of reporting deadlines is required. There are currently many reporting commitments in March/April, and it may be that requiring the IIR to be submitted later (or the projections section of the IIR in a separate document) may result in far more comprehensive reporting of projections methodologies.

- **Action:** This will be raised by the Co-Chairs at the 2024 WGE/EMEP Steering Body meeting (September) for consideration.
- **Improving transparency of reporting:** The TFEIP agreed that there is a need to improve the current IIR template, to provide more information on the expected reporting of projections methodologies and associated datasets.
 - **Action:** The TFEIP co-chairs will work on this with CEIP urgently, to determine whether it is possible to draft an updated template that can be approved at the 2024 EMEP/WGE Steering Body Meeting.
- **Improving accuracy:** The TFEIP agreed that capacity building on projections compilation and reporting would be helpful, but were not able to identify resources to support such activities.
- **Agriculture PaMs:** The difficulty of reporting sufficiently detailed information on agriculture PaMs was discussed, but no immediate solution was reached beyond comments already noted (above).

The co-chairs invited participants to raise any issues that they thought should be considered for future Guidebook updates.

It was agreed that the technical aspects of compiling projections by sector would be best placed in the individual sector chapters, but that the Projections Expert Panel would liaise closely with the co-chairs of the other sector panels regarding future emission sources.

Nadine Allemand (France) will be standing down from the position of co-chair of the Projections Expert Panel and her colleague **Grégoire Bongrand (France)** will be taking over. Nadine was thanked very much for her significant contribution and inputs over the last 12 years.

7. User Engagement

Jeroen Kuenen outlined the aims of the user engagement expert panel, and the contributions to the TFEIP workplan (see section 3). He also noted the ambition of the expert panel to work on: time profiles, pollutant speciation in addition to NMVOC (NO_x, SO_x, and PM), and uncertainties. But noted that this was all dependent on the availability of resources.

8. Satellite Data

Leonor Tarrason (NILU) presented results from the SEEDS project (Sentinel EO-based Emission and Deposition Service). This showed several emissions datasets which are now available, and are of direct relevance to the work of the TFEIP.

9. New Science

Presentations were given on the following topics:

- HTAPv3 global emissions mosaic (Monica Crippa, JRC)
- The use of inverse modelling for emission reporting verification (EEA)
- Emissions from commercial cooking (Tim Murrells, Ricardo)

Decisions and close

The Co-Chairs then presented the minutes, actions and decisions of the meeting, which were agreed by the TFEIP (subject to minor editorial amendments), and thanked all presenters and contributors to the meeting.

They explained that they will be proactively approaching key experts across the next ~12 months to try to secure their input into updating the Guidebook across the next several years.

The Co-chairs warmly thanked UBA for hosting the meeting, and asked the TFEIP community to consider hosting the 2025 TFEIP meeting.

The Co-chairs then closed the meeting.