

# TFEIP

## TFEIP2024 Meeting Paper Preparing the 2027 EMEP/EEA Guidebook

*Drafted by the TFEIP Co-chairs, for discussion at TFEIP2024  
Issue1, 29/04/2024*

### 1 Introduction and Context

The EMEP/EEA Guidebook is updated every 3 to 4 years, and discussions at the 2023 TFEIP annual meeting confirmed that the next update is planned for 2027.

A significant amount of work is required before the process of drafting updated chapters begins, e.g. deciding which chapters are a priority for being updated, securing input and contributions from experts, establishing a platform for managing different versions of the chapters as they are drafted, agreeing the process for review and quality checking of the newly drafted chapters etc.

So, even though 2027 may seem like a long way in the future, it is sensible to take the first steps in planning the update process. The following sections provide some initial thinking on priority developments for the Guidebook, the need to secure contributions from experts, timelines etc. These have been drafted and circulated to support planning discussions that will be held at the 2024 TFEIP annual meeting in Dessau in May.

### 2 Draft Timeline

The table below provides a simple timeline for the work required to draft and publish an updated Guidebook in 2027.

It is envisaged that the majority of the drafting will take place across the second half of 2026, but rather than constrain the work into a limited period of time, the timeline allows for chapters to also be drafted in 2025.

	2024				2025				2026				2027			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Search for funding/contributions																
Discuss priority improvements																
Finalise update plan																
Drafting updated chapters																
TFEIP signoff																
Published by the EEA																
EMEP & EB sign-off																

#### Legend

Meetings:		General discussion/progress:		Task progression:	
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### 3 Cross-cutting points of focus

Currently, four priority cross-cutting points of focus have been identified:

**Improve the availability of regional EFs:** The Guidebook often provides a single tier 1 and/or tier 2 EF for a given pollutant from a given source. In reality, there is a large variation in the extent to

which emissions are controlled across the geographical extent of the Air Convention. Whilst some EFs in the Guidebook are sourced from “international” literature sources, many primarily represent the situation in Western European countries because the evidence base is dominated by studies in these countries. Consequently, there is a need to consider whether information should be added to the Guidebook to better explain which countries/regions the EFs are suitable for, and where possible provide EFs that are region specific and provide full geographical coverage.

**Better representation of temperature in methodologies:** Temperature is an important variable for emissions from some sources, and it is sensible to develop methodologies so that this is taken into account. This is not particularly driven by the impacts of climate change, but more to recognise that the geographical extent of the Air Convention ranges from countries with Nordic climate conditions to the warmest of the temperate climate zone.

**Better coverage of methodologies for “future” sources:** The 2023 Guidebook included some future sources, and to help Parties accurately report their emission inventory projections, we think it important that we continue to extend the information in the Guidebook on future sources and air pollutant emissions from net zero technologies. Examples include carbon capture and storage and the use of NH<sub>3</sub> as a fuel in shipping.

**Review data availability from satellite measurements:** Datasets are now becoming available from satellite measurements that, for selected sources, give a reliable alternative to the traditional emission calculation methods. Examples include NO<sub>x</sub> from soils and emissions from wildfires and crop residue burning. It is sensible to explore what is available to support national inventory compilers, and include relevant information in the Guidebook.

## 4 TFEIP Workplan & User Engagement expert panel items

There are some items in the current TFEIP workplan that would provide important input into the updating of the Guidebook.

### 4.1 TFEIP Workplan items

**CH<sub>4</sub> emissions reporting:** It is not clear what additional content may be required for the Guidebook if emissions reporting of CH<sub>4</sub> is added to the Gothenburg Protocol (see workplan Task 1.1.2.1). But this will be kept under review by the Co-Chairs.

**Condensable PM:** Information in the Guidebook on estimating and reporting condensable PM is expected to evolve in line with improved evidence and any revisions to reporting requirements (see workplan Tasks 1.1.1.4 and 1.1.2.3).

**Revisions to the scope of the Gothenburg Protocol:** The Guidebook will need to be updated in line with any changes to the scope of the Gothenburg Protocol – for example if new pollutants are added to the emissions reporting requirements.

### 4.2 User Engagement

The following are likely to be captured under the User Engagement expert panel, but could be progressed separately.

**Review & collate NMVOC speciation profiles:** Reviewing & collating NMVOC speciation profiles (and associated POCPs) is already included in the TFEIP workplan (Task 1.1.1.1), and is required to support ozone modelling.

**Review the quality of gridded emissions reported by Parties:** This is already included in the TFEIP workplan (Task 1.1.2.6). The intention is to use the findings from the review to then plan and deliver improved information in the Guidebook that supports Parties in improving their reporting of gridded emissions.

**Review the potential to collate & standardise time profiles:** This is of lower priority, but if resources allow, it would be sensible to consult with the pollutant transport modellers to review how they convert annual emissions inventories into fine time steps, discuss and reach consensus on best practice, and then publish these findings to both improve transparency and circulate agreed best practice.

**Develop improved tools for expressing uncertainties in emission estimates:** The mathematical tools that are currently used for expressing uncertainty are not particularly fit for purpose. There are ongoing activities to consider alternative approaches, but it is expected that it will take several years before viable alternatives can be proposed for consideration by the TFEIP.

## 5 Practicalities

The EEA has been supporting the publication of the EMEP/EEA Guidebook. This support includes:

1. Compiling all updates produced by sector experts, English-editing, layout, branding and online publication, and
2. Extracting the various emission factors and other key parameters for use by the inventory compilers and structures this information into the Emission Factors Database<sup>1</sup>, an online tool that can help automate emission inventory compilation and quality checking.

The EEA is willing to support a more structured approach for both the publication element (point 1 above) and the maintenance of the Emission Factor Database (point 2 above).

The first measure to be put in place would be to establish a Microsoft Teams site where all communication would be centralised, chapter documents would be edited directly via SharePoint links and communications would move from emailing to posting in channels.

The second measure could be the automation of the Guidebook writing. This would require structuring tables and emission factors in the database first and rendering of the Guidebook from the database instead of updating it via Microsoft Word. As this is a substantial change in the way TFEIP and its experts have worked, a limited trial could be undertaken for a chapter where the sectoral experts feel more confident trying out a new approach.

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<sup>1</sup> Accessible at:

[https://efdb.apps.eea.europa.eu/?source=%7B%22query%22%3A%7B%22match\\_all%22%3A%7B%7D%7D%2C%22display\\_type%22%3A%22tabular%22%7D](https://efdb.apps.eea.europa.eu/?source=%7B%22query%22%3A%7B%22match_all%22%3A%7B%7D%7D%2C%22display_type%22%3A%22tabular%22%7D)