

## TFEIP Newsletter March 2022

### Key outcomes of the EMEP/WGE Steering Body Meeting

#### Review of the Gothenburg Protocol

As expected, this topic is the main focus of work for many of the groups within the Convention. Scientific groups within EMEP have provided input a report assessing the effectiveness of the Gothenburg Protocol (GP) and indicating where improvements could be made, and where there is a need to build the scientific knowledge/understanding. There is still a significant amount of time before the review is complete, and activities can move on to considering GP updates.

#### TFEIP Workplan and Priorities

The TFEIP Co-Chairs presented a reflection on recent achievements and the priority workplan items. Key points included:

- The TFEIP have contributed to the review of the GP as requested, and will continue to support discussions.
- Several ad hoc groups were formed, and since the meeting:
  - Updated technical guidance has been published on: Road Transport, Navigation, Solvent Use, and Food & Beverages
  - Updated guidance on agriculture has been discussed, but requires further discussion with the TFEIP as a whole before publication.
  - Additional technical guidance on Adjustments (in an emissions reduction commitment framework) has been published.

The TFEIP is also preparing a list of priority updates that it hopes to make ahead of publishing a 2023 version of the EMEP/EEA Emissions Inventory Guidebook. This may include developing methods that account for climate change, and regionally specific emission factors.

This and several other key points are covered in later sections of this newsletter.

#### Condensable PM

This continues to be a key discussion topic, and an EMEP ad hoc group has been formed to discuss various aspects, such as metrics and emissions reporting in the future.

#### Forum for International Co-operation on Air Pollution

As planned, a new forum has been set up to share information on policy, science, capacity building and funding opportunities. It is being led by the UK and Sweden, and is co-ordinating with the WMO, UNEP, WHO and other international organisations.

Contributions are being invited on outreach activities to non-UN/ECE countries, and suggestions are welcome on guidance and toolkits etc. that it would be helpful to make widely available.



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#### Special points of interest

- TFEIP Meeting to be hosted remotely 9th-12th May, 2022



## Updated Technical Guidance on Adjustments

As you may know, the TFEIP was asked to draft some technical guidance on inventory adjustments in an emissions reduction commitment (ERC) framework, for Parties that are signatories to the amended Gothenburg Protocol. This is now available from the CEIP website: <https://www.ceip.at/gothenburg-protocol/adjustments>

There is also a new adjustment application Excel template (“Annex IIa”), specifically for applying for an inventory adjustment in an ERC framework. The guidance and template must be used from this year onwards for inventory adjustment applications that relate to ERCs. Our thanks go to the team of experts who contributed to the new guidance document and Excel template.

Please note that this guidance is in addition to the existing technical guidance on adjustments (in a ceilings framework). Parties that are signatories to the Gothenburg Protocol, but not the amended Gothenburg Protocol, should continue to use this existing technical guidance and associated templates for their adjustment applications/reporting that relate to emission ceilings.

Whilst this is CLRTAP guidance, we recognise that it is important for Parties who are also EU Member States, as it is relevant for reporting under the European Commission’s NECD.

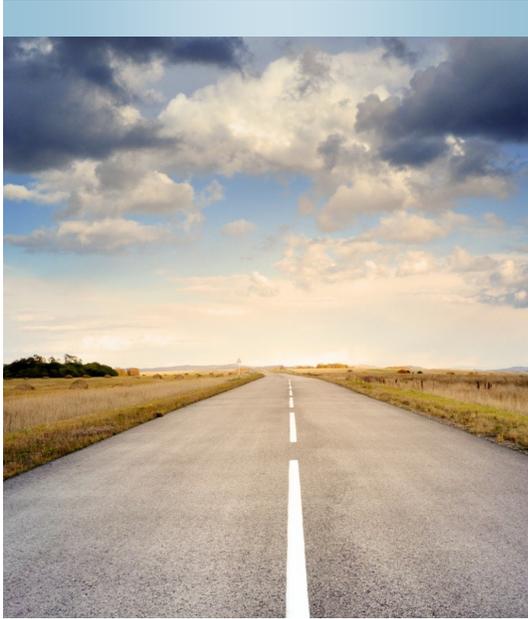
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## Updated Technical Guidance on Solvents

Updated guidance from the European Commission’s Capacity Building project on the Solvent Sector has been uploaded to the EMEP/EEA Guidebook website. The updated guidance can be found here: <https://www.eea.europa.eu/publications/emep-eea-guidebook-2019/part-b-sectoral-guidance-chapters/2-industrial-processes/2-d-1-other-solvent/2-d-3-emep-eea/view>.

The document provides guidance on the estimation of NMVOC emissions and, wherever possible, gives some detailed examples of methods being used in Europe to estimate emissions. NFR 2D3 has nine sub-divisions, but much of the guidance is equally applicable across all or many of those sub-divisions. Therefore, to avoid duplication of information, this section starts with some cross-cutting information, followed by sections dealing with selected sub-parts of 2D3. Our thanks go to the team of experts who contributed to the new guidance.

There have been discussions about how this chapter of the Guidebook should be developed, and there is a recognition that there is a need for regionally specific Tier 1 emission factors. This is because legislative controls, and hence emission factors, within e.g. the European Union, are very different to countries in e.g. central Asia. It is sensible to make this distinction in the Guidebook, and this is an approach which may be used for other sources if sufficient supporting information is available.



## Updating the Reporting Template for Projections

Following the review of Member State's emission projections in 2019 and subsequent support through a European Commission funded study, it was proposed that the Annex IV reporting template for projections was modified to make it more transparent. One possibility is that the projections reporting template is moved to be more in line with historical reporting. This was discussed at the last Projections Expert Panel (PEP) session and an ad-hoc group formed to take this forward. No conclusion has been reached, but comments that have been received will be presented and discussed at the PEP meeting in May this year. A conclusion will then be made.

## Transport Priority Guidebook Improvements

1. Non-Road Mobile Machinery is the least developed chapter and potentially the one with the highest uncertainty. One needs a comprehensive study to understand density and use patterns of such machinery. We need to advance this message to policy makers, there is not much we can do now as no reliable data exist for most countries.

- We need to perform field campaigns in several countries (different parts of EU) to collect fleet size, fleet stratification, and operation patterns of these vehicles.
- We need to fit recorders on several of such vehicles to see realistic operation patterns.
- We need to measure emissions with PEMS to develop emission factors.

2. Non-regulated pollutants and heavy metals are always a point of concern, as new technologies appear. In particular for shipping, we know little and new fuels produce new pollutants. Again, this is an area we need to continuously have an eye on but I do not know how much we can add now.

- Campaigns on emission measurement of vessels need to continue. Although the previous Horizon transport call funded two projects, the new one funds none.
- We completely lack performance of cruise ships, hybrid drivetrains, Tier III ships especially at low load, biofuel impacts, NH<sub>3</sub> combustion emission factors and we know very little on methanol combustion.

3. Non-exhaust PM and electrified vehicles. We are working on this, this year with the help of EEA and JRC. It is again very variable and little information exists. We need more certain emission factors for brakes and we need to understand tyre/road interactions better.

- A research project on brake emissions has been recently funded but there is practically nothing on tyre/road interaction except activities in Nordic countries, but these are under specific winter conditions in the North. We practically know nothing on summer temperature tyre wear.

## Combustion and Industry Priority Guidebook Improvements

The table below was developed by the Combustion and Industry Expert Panel Co-chairs, and outlines some of the key priority improvements for the Combustion and Industry section in the EMEP/EEA Guidebook.

Specific GB improvements foreseen	Issue	Comment
General	Make an assessment of the Tier used by the different Parties for some key sectors (we know that in some cases Tier 1 is used where a higher Tier should be used e.g. for key sources)	Done for 2021 TFEIP meeting as mentimeter questions - no big surprises in the outcome, but good to revisit and see if more should be added to this list based on the responses.
2D3 (solvents)	Develop Tier 1.5 methodologies for solvents (to help countries that still use Tier 1 for key sources)	Resource need uncertain since depending on what information we can get from other countries. Potentially something is available from Commission project - not sure
2D3 (solvents)	NMVOC from solvents: update chapters with new information e.g. from ESIG	Should be fairly straightforward. Maybe part of Commission project already
1A4 (small combustion)	Model development as Tier 3 (taking into account burning conditions etc.)	Develop model (could be simple Excel-based) taking into account anything which is beyond a Tier 1. Depending on information available at country level, an emission estimate could be produced. This would then be formally a Tier 3, but need to be careful in how to communicate the outcomes (maybe give a ranking with the output corresponding to the "quality" of the estimate). In principle not very difficult, but a sensitive topic with high emissions, so needs to be approached carefully
1A4 (small combustion)	Update existing information in Guidebook with new research	Review literature: update emission factors, appliance type split, pellet quality etc.
Heavy metals and POPs	Potential large uncertainties, for many sources the EFs have not been revisited for a long time. Metals, dioxins, etc.	Review and update where possible. Some of the most pressing updates were already done following HM/POP NECD review in 2018/19 but much more would be needed. Requires a major review of all sectors and literature survey for each main sector of this set of pollutants (so basically almost all C&I sectors)

### TFEIP User Engagement

Jeroen Kuenen (TNO, Netherlands) will change his role in the TFEIP. He will step down as co-chair of the Expert Panel on Combustion & Industry and instead focus on building a stronger connection to the users of our emission data such as the air quality modelling community. This will help TFEIP in discussions with other UNECE Task Forces and users of emission data beyond the Convention. First ideas are to improve the Guidebook chapter on spatial emissions mapping, and to make an overview of emission-related data which are not part of the inventories (speciation profiles, temporal profiles, etc.). We would be very happy to involve some more people from the TFEIP community, please contact Jeroen ([Jeroen.Kuenen@tno.nl](mailto:Jeroen.Kuenen@tno.nl)) if you are interested to discuss about and/or contribute to this work!



## Waste Priority Guidebook Improvements

The table below was developed by the Waste Expert Panel Chair Celine, and outlines some of the key priority improvements for the Waste sector in the EMEP/EEA Guidebook.

5A-1	NMVOG (Accuracy) Update the default Tier 1 with the methodology recommended during ESD Reviews <i>Rational: the current EF proposed in the 2019 EMEP/EEA is based on UK data which appears as less accurate for other MS. Using the current Tier 1 result often in a KC which is unlikely.</i>
5A-2	TSP (Transparency / Accuracy) Define more clearly associated AD
5C1-1	5C1bi - All pollutants (Completeness / Accuracy) Identify EF for uncontrolled incinerators of hazardous waste for uncontrolled (tier 2) <i>Rational: uncontrolled EF are documented only for sewage sludge incinerators</i>
5C1-2	5C1biii - All pollutants (Completeness / Accuracy) Update the tier 1 for clinical waste incineration <i>Rational: the tier 1 EF corresponds to "uncontrolled" rotary kiln in the 2019 version of the GB based on US-EPA (1993); tier 1 and tier 2 EFs are not consistent</i>
5C1-3	All sub-sectors - All pollutants (Completeness / Accuracy) Add a warning that when using concentration measurements to derive the mean annual EFs the confidence interval must not be subtracted <i>Rational: some MS may apply underestimated EF based on data reported by operators (automatically reduced by the IC95 in their continuous Emissions Monitoring system)</i>
5C1	All sub-sectors - All pollutants (Accuracy) Identify /propose more recent EF <i>Rational: many EF are coming from outdated sources</i>
5C2-1	All pollutants (completeness / Accuracy) Define of a more complete/relevant methodology related to open burning of waste (all types of waste, including mixed MSW waste) – landfill fires, domestic backyard burning (green and/or mixed waste), accidental tires fires, agriculture / orchard / forestry burning (existing in the 2019 EMEP/EEA GB). There is a need to review methodologies for AD, EFs, and allocation rules. <i>Rational: improving the completeness is necessary because the source may be important in some MS</i>
5D-1	NMVOG (Accuracy) Confirm/update the EFs from wastewater treatment plants <i>Rational: the current value is from a measurement campaign done many years ago in a Turkish WWTP</i>
5E-1	All pollutants (Accuracy) Check/ update the methodology proposed for building fires (often KC for PCCDF when applying the tier 1 methodology) <i>Rational: more and more MSs are "adapting" the default methodologies and it is getting difficult for reviewers to make a decision.</i>

## Agriculture and Nature Priority Guidebook Improvements



- We have consistently failed to develop a method to estimate the emission of  $\text{NH}_3$  from living crops and development of a method would be difficult (crops sometimes emit  $\text{NH}_3$  and sometimes absorb it). We do not think we could make sufficient progress on this topic. However,  $\text{NH}_3$  emissions also occur from crop residues and a recent paper proposes a method for estimating national emissions. We think this could form the basis of a GB methodology and would suggest this as a priority for the next GB update.
- Germany has funded a project to develop a Tier 3 methodology for  $\text{NH}_3$  emissions from manures and this could form the basis for a revision of the GB Tier 2 methodology. However, the project has been delayed by Covid and will not be completed in time for the current update. We suggest that a revision of this methodology in the GB wait until the next update.
- Updating the methodology for  $\text{NH}_3$  emission from synthetic fertilisers is a priority and work is already underway at Aarhus University. This effort has recently been linked with work ongoing at the Thünen Institute and KTBL in Germany. We hope that this will be completed in time for the inclusion of an updated methodology in the next Guidebook revision.
- Finally, the methodologies in 3B and 3D would benefit from improvement aimed at increasing the clarity of the text. This is particularly true of the appendices. It would be good to improve and tidy these chapters.

## Projections Priority Guidebook Improvements

Quite a large update has recently taken place, so there are no major updates planned in the next Guidebook update. Priorities are to finalise and get an agreement on the updated Annex IV reporting template (for projections). The EP leaders will try to get more feedback on what people would be happy to see with suggested changes. There is a general move to have the template in the similar structure as we use for the historical data (i.e. much more sector detail). The plan is to have the updated template drafted before the TFEIP's annual meeting so that it can be approved in May.

## TFEIP Annual Meeting 2022

We are pleased to announce that the TFEIP meeting will be held remotely across the 9th-12th May 2022. This conference will take place remotely, with aims of hosting next year's in person, kindly hosted by the United Kingdom. The annual meeting is likely to follow the same format as last years' online meeting with longer sessions. More information regarding the meeting will be circulated soon, alongside a detailed agenda and registration details. Below is a draft agenda subject to change.

### Draft Agenda (Subject to Change) (CET)

**9th May 09:30-12:30:** Introduction, Update of the Gothenburg Protocol and other International News

**9th May 14:00-16:00:** Projections Expert Panel

**10th May 09:30-12:30:** Transport Expert Panel

**10th May 14:00-16:00:** Waste Expert Panel

**10th May 16:00-16:30:** Engaging Users and Spatial Mapping (Jeroen Kuenen)

**11th May 09:30-12:30:** Agriculture and Nature Expert Panel

**11th May 14:00-16:00:** Combustion and Industry Expert Panel

**12th May 09:30-12:30:** New Science

**12th May 14:00-16:00:** Feedback, Guidebook Planning, Formal Decisions and Close

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*TFEIP Annual meeting to be held remotely, 9th-12th May 2022*

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## New Co-Chair for the Combustion and Industry Expert Panel

As mentioned on page 4, Jeroen is changing his role in the TFEIP. We are therefore seeking a new co-chair of the Combustion & Industry expert panel. The role is primarily to act as an independent expert, leading the Combustion & Industry expert panel session at the TFEIP annual meeting, although there are also other planning and communication tasks through the year. You would need to have funding for a minimum of 10 days/year, and more than this when we update the Guidebook (every three years).

We are hoping to be able to make an appointment at the annual meeting in May. If there is enough interest, then we have the flexibility to appoint more than one person.

Please contact us if you are interested, and we can provide more information.

## News from the European Environment Agency (EEA)



### European Topic Centres (ETCs)

New ETCs started work with EEA in January 2022. The new ETC on *'Human Health and the Environment'* brings together ten organisations who will support EEA and its Eionet country network over the coming years, including on air pollutant emission activities. The new ETC-HE consortium is led by the Norwegian Institute for Air Research (NILU) and includes a number of partners with experience working across data and assessment dimensions: NILU, Aether (U.K), Czech Hydrometeorological Institute (CHMI), German Federal Environment Agency (UBA), KlarFakt (Austria), and the National Institute for Industrial Environment and Risks (INERIS France). The ETC will be supporting EEA and countries with emissions data reporting under the EU's NEC Directive and the LRTAP Convention.

### Eionet Modernisation

Over the past 18 months, the EEA Eionet country network has been undergoing a comprehensive modernisation. This process will help ensure that the network remains fit for purpose against Europe's changing environment and climate policy priorities, and will help strengthen its added value for countries and the EEA. Amongst a number of changes, a new structure for groups within Eionet has been agreed. The previous thematic-specific groups have been reduced in number, with the new groups reflecting a more integrated knowledge focus rather than data provision. A new Eionet group on *'Human health and the environment'* will include a number of health-relevant topics including air pollution. The links between the work of the new Eionet group and TFEIP will no longer be as direct in the past, and so the annual TFEIP meetings will no longer be held jointly with Eionet.

### Updated Industrial Pollution Emissions Datasets

Updated industrial pollution emissions datasets were recently published, including data reported to the European Pollutant Release and Transfer Register, the EU Industrial Emission Directive, and for EU Large Combustion Plants. The [European Industrial Emission Portal](#) provides access to the updated data.

For further information on EEA's activities you are welcome to contact Martin.



## About

Chair of this year's  
Temporary Waste Expert  
Panel, France

We continue to introduce different members of the TFEIP team in the newsletter. Céline, has kindly offered to chair this year's first Waste Expert Panel. This position is temporary, and will be formally agreed at this year's 2022 TFEIP meeting. Céline provides us with an overview of her work:

## Personal Profile: Céline Gueguen

Atmospheric emissions? I fell into it from my first professional experience and since then I never left it!

It all started in a cultivated agricultural plot where, as an intern in a research institute, I was in charge of in-situ gas sampling and laboratory analysis in order to estimate N<sub>2</sub>O emissions. Then, going on with emissions issues, I became an engineer in a design office for 8 years, participating in the development of the calculation module dedicated to the estimation of emissions (all sectors) of an air quality modelling tool at urban and regional scales.

I then joined Citepa, the French reference centre for emissions inventories, where I worked for 14 years, starting as a waste inventory compiler and ending as assistant to the inventory manager. I participated in the international development of Citepa through training and capacity building activities on waste, inventory systems and MRV aspects and through GHG and pollutants inventory reviews for the waste sector. I had the great honour to be one of the Lead Authors for the 2019 Refinement of the 2006 IPCC Guidelines.



Since 2020, as independent consultant in Transparency for Life, my aim is to contribute to reducing GHG and atmospheric pollutants emissions through the analysis of inventories, training and capacity building of stakeholders and national experts, by supporting countries in choosing their mitigation actions and evaluating their impact.