

## TFEIP Newsletter February 2021

### Review of the Gothenburg Protocol

As you probably know, the CLRTAP has been planning the review of the Gothenburg Protocol. The Working Group on Strategies and Review (WGSR) circulated a paper outlining a proposed programme of work, which was discussed at the EMEP Steering Body Meeting in September. In December the CLRTAP Executive Body decided that “the scope of the review should remain broad at this time, and that the review should focus on information-gathering, and scientific and technical inputs, and assessing the collected information”.

We expect that work to support the review will dominate the work of the CLRTAP for the next two years. The WGSR have proposed a timeline for the review of September 2020 – December 2022, but it may be that the different scientific bodies of the CLRTAP need more time to complete the work outlined. After consulting with the TFEIP’s Expert Panel Leaders, the TFEIP Co-chairs provided comments to EMEP on the TFEIP’s involvement in the review. There are several work items where we expect to provide support to CEIP, and currently at least two items where the TFEIP will need to take a major role:

- 1.2.e. Is the EMEP/EEA air pollutant emission inventory guidebook sufficiently comprehensive and fit for purpose to support quality emission data? What are the main gaps and challenges? For which sectors and pollutants does the guidance need to be further improved? In what way?
- 4.1 What is the current coverage and quality of black carbon (elemental carbon and organic carbon) emission reporting?

More broadly, there are many different things to consider as part of the review. For example, it has been suggested that more pollutants could be added, and more detailed reporting of emissions could be put in place. The intention is for these changes to improve the quality of emission estimates and more generally improve the science and understanding that underpins policy formation. However, in deciding whether to support changes, we will always need to assess the benefits that the changes bring against the additional effort that would be needed from national inventory teams. We also need to recognise that sometimes improvements cannot be made because we are limited by the data/information that is currently available. We will make sure that we have enough time allocated to discussing these issues at TFEIP 2021.

There will clearly be a need for the TFEIP to respond to a range of questions associated with the review, and our responsiveness is currently limited by the fact that the TFEIP only meets once a year. So, at TFEIP 2021 the Co-chairs will propose that a Gothenburg Protocol Ad Hoc Group is formed, and that this group is authorised to represent the TFEIP on matters relating to the review. In addition it would be useful to discuss how we can best share information to ensure all interested TFEIP members are regularly informed of developments.



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#### Special points of interest

- TFEIP Meeting to be hosted remotely 4th-6th May, 2021
- New TFEIP website published



## What is the future of Adjustments?

The review of the Gothenburg Protocol provides an opportunity to review the Adjustments process. The challenge has always been that Adjustments are a compliance issue that the science community have had to design and implement. Given that it has been in place for several years, it is sensible to review how the process might be improved and/or streamlined.

From the perspective of Parties which currently rely on adjustments, there will have to be changes from 2022 onwards. This is because adjustments to date have been designed to generate compliance totals that fall below a given emission ceiling. Adjustments that are designed to allow a Party to comply with an emissions reduction commitment are different mathematically, and it is possible to have a “ceiling adjustment” that makes compliance with an emissions reduction commitment worse rather than better.

One potential complication is that (currently) the emission ceiling commitments are will continue after 2020. This may result in Parties requiring “ceiling adjustments” to show compliance with on-going emission ceilings, and a different set of “ERC adjustments” to show compliance with emission reduction commitments. We will discuss these types of issues with the EMEP Steering Body with the aim of designing a new adjustment process that is kept as simple as possible. Also, there are differences between the CLRTAP and NECD which impact on Adjustments. For example, NO<sub>x</sub> and NMVOC emissions from 3B Manure Management and 3D Agricultural Soils are not included in compliance totals under the NECD.

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## Condensables

Condensable primary organic aerosol emissions are a class of organic compounds that are vapour phase at stack conditions, but which undergo both condensation and evaporation processes as the stack air is cooled and diluted upon discharge into ambient air. Depending on how PM is measured, these condensables may or may not be included in the data that is used in inventories. This can result in inconsistencies PM emission inventories between different Parties. In March 2020 MSC-W hosted an expert workshop on condensable organic aerosol emissions (funded by the Nordic Council of Ministers), which brought together experts in emissions, measurements, emission inventories, atmospheric chemistry, air quality models and policy, in order to create a much better understanding of the issues and possible approaches for dealing with condensables. Key messages on the way forward include:

1. An interim solution where countries report the condensable fraction separately from the solids using consistent (or at least clearly specified) methods would aid transparency, and make it easier to compare and contrast country estimates. This might enable use of condensable EFs developed in some countries to gap-fill emissions in countries lacking in-country estimates of condensables.
2. The workshop agreed that a currently available scientific estimate (TNO Ref2 emissions) provide a good no-regret step towards a harmonised emission methodology, but that these top-down estimates should be increasingly replaced by national estimates once procedures for quantifying condensables in a more harmonised way are agreed on and implemented.
3. Such improvements will need detailed discussion among the emission inventory communities (e.g. TFEIP, TFTEI, national experts) as well as with modellers who will have to account for the complex issues regarding volatility within the condensables and PM fractions.
4. On the longer term, it should be considered in more detail how to deal with organic emissions across the whole spectrum, from very low-volatility components to volatile gases. Here, a scientific cooperation between different expert groups (emissions, modelling, measurements) is key.

The full workshop report can be found online: <https://emep.int/publ/reports/2020/>

## European Commission Projects to support the NECD

For European Union Member States there is, of course, particular interest in the emissions submissions that will be made in 2022 as they will show whether countries have met their 2020 NECD emission reduction commitments. There are several projects being delivered across this year which relate to this.

### Review of NECD Emissions Inventories

The annual review of NECD emissions inventories will take place in the Summer. The structure of the review will be similar to previous reviews, however CO, PM<sub>10</sub> and BC will be reviewed for the first time. There will also be a follow up of findings from the 2020 review, which will include gridded emission data and large point sources.

### Review of NECD Emissions Projections

This year there will be a review of NECD emissions projections. The format of the review is expected to be similar to the projections review undertaken in 2019. The outputs of the review will report on the quality of the projections submissions, and on the extent to which Member States project to comply with their emission reduction commitments (although compliance with the 2020 emissions reduction commitments will only become evident from the inventory submissions in 2022).

Careful thought has been given to how the timelines of these two projects can be co-ordinated with the annual CLRTAP reviews, to avoid Member States being overloaded with review questions. Information will be circulated in due course.

### NECD inventories Capacity Building Project

This project consists of working with Member States to improve the quality of future air pollutant emission inventories submitted under the NECD.

Common issues and problems with national inventories have been identified by assessing NECD review reports and consulting with Member States inventory teams. Nine Member States have volunteered for participation in the project.

A team of experts are currently working with the inventory teams from these nine Member States to develop individual action plans detailing priority improvement items and initial proposed solutions. These will be developed over the coming months in collaboration with Member State representatives so that the project provides hands on support and training in the most efficient way possible.

In addition to the support provided to individual Member States, new guidance material will be developed and circulated to all Member States to address common problems. From initial discussions it is likely that this will cover estimates from 2D3a Domestic Solvent Use and use of the N-flow tool for Agriculture. It is therefore hoped that all Member States will benefit from the outputs of the project.





## *COPERT version 5.4 is available for download!*

*The latest version of COPERT has been made available for download. New methodological elements include updated emission factors for Euro 5 diesel PCs and LCVs, new naming for Euro 6 PCs, LCVs and HDVs and updated emission factors for Euro 6 PCs and LCVs. New vehicle types are also included such as petrol and diesel plug-in hybrids and hybrid Buses. New software features have been implemented in the software and a number of bugs have been addressed. You can read more about the new version here: <https://www.emisia.com/utilities/copert/>*

## Mitigating GHG emissions from Livestock Systems (MELS)

Manure management is a very relevant part of the livestock emissions: most of the GHG and nitrogen emissions from livestock systems originate from manure storage, manure application, feed production and enteric fermentation.

Funded under the FACCE ERA-GAS, ERA-NET SusAn and ICT-AGRI 2018 Joint Call on “Novel technologies, solutions and systems to reduce the greenhouse gas emissions of animal production systems”, the MELS project (Mitigating greenhouse gas Emissions from Livestock Systems) aims to collate data from the global scientific literature on manure-related emissions and mitigation measures, decision support and options for inventory improvements ([www.mels-project.eu](http://www.mels-project.eu)).

The detailed and context-specific inventorying of the GHG and NH<sub>3</sub> emissions via appropriate activity data and emission factors is crucial to accurate reporting and the implementation of mitigation measures. A major impact of MELS will be to allow the context to be better taken into account, both at the national scale and at the farm scale. In this context, MELS will expand an existing emission database: DATAMAN, from the Global Research Alliance on Agricultural Greenhouse Gases, widening its geographical coverage in order to include data from Eastern and Southern Europe, China and Latin America. This will enable to model robust relationships between activity data and emissions under different management and environmental conditions.

Final goals of the project are:

1. The development of a prototype farm-scale decision-support system (DSS), designed to meet the requirements of different stakeholders (e.g. farmers associations, policy makers), and specifically tailored for countries currently lacking such a tool.
2. The improvement of national inventories and projections. MELS will interact with policy makers and inventory compilers to achieve higher accuracy and reportability of GHG and NH<sub>3</sub> emissions in National Inventory Reports, aiming to reduce the costs of collecting activity data and investigating how transparency can be retained in the more complex emission inventories that MELS foresees for the future.

## For Discussion at TFEIP 2021

### New Methodologies/Guidance



The next Guidebook update is not scheduled until 2023. Between the updates we typically only change the Guidebook to correct errors, or address transparency issues. However, there can be occasions where it is sensible for the TFEIP to agree a new methodology or revision. Whilst this would not be incorporated into the Guidebook until the next update, it can accompany the Guidebook as a guidance document that that been approved by the TFEIP as “best practice”.

At the TFEIP meeting this year we are expecting to review newly proposed guidance material or methodologies on estimating emissions from 2D3a Domestic Solvent Use. There may also be some other sources that we want to discuss and clarify. For example, the emission factors in the Guidebook for small-scale waste burning relate to green waste, and there have been suggestions that the addition of emission factors for burning domestic refuse/rubbish would be helpful.

If you have other suggestions for high priority improvements, then please let us know. We will make sure that the TFEIP Expert Panels have enough time to review and discuss the information available.

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### When is a Horse not a Horse?!

Recent discussions during an emissions inventory review have raised a question about how animals are categorised, and what should/shouldn't be included in 3 Agriculture. This might seem like a small issue, but for some countries it is linked to sensitive policy questions.

The issue is best illustrated by considering horses. In Western European countries, the number of horses used as working animals is very small indeed – most are kept for “leisure”. So it's possible to argue that they are not “agricultural” horses and should be considered as pets (currently reported in 6A Other). It is also fair to question whether horses can ever really be classified as “wild” animals (excluded from the national total).

Interestingly there is a footnote in the 2006 GHG emissions inventory guidance that says “Emissions should only be considered for livestock species used to produce food, fodder or raw materials used for industrial processes.”. That definition would exclude the vast majority of horses, which is probably not their intention, and current thinking within the Agriculture Expert Panel is that the vast majority of horses should be included in 3 Agriculture.

The Agriculture Expert Panel will discuss this issue, and may choose to draft some best practice guidance (which can be included in the Guidebook in due course).

## TFEIP Annual Meeting 2021

We are pleased to announce that the joint EIONET and TFEIP meeting will be held remotely across the 4th-6th May 2021. This conference will take place remotely in order to ensure safety during the continued pandemic. The annual meeting is likely to follow the same format as last years' online meeting. More information regarding the meeting will be circulated soon, alongside a detailed agenda and registration details. Below is a draft agenda subject to change (we haven't yet decided the scheduling for the four Expert Panels — Projections, Combustion & Industry, Transport, Agriculture & Nature).

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

4th May 10:30-12:30: **Introduction, EIONET, Update of the Gothenburg Protocol and other International News**

4th May 14:00-15:30: **Expert Panel 1**

5th May 10:30-12:00: **Expert Panel 2**

5th May 14:00-15:30: **Expert Panel 3**

6th May 10:30-12:00: **Expert Panel 4**

6th May 13:30-15:30: **New Science and Conclusions**

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*TFEIP Annual meeting to be held remotely, 4th-6th May 2021*

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## Black Carbon Initiative

TFEIP experts have been working on the current Guidebook methodologies to check the references and to classify the measurement methods into EC/equivalent-BC/refractory-BC/Unknown, in cases where the method is based on actual measurements. In 2021 the aim is to identify improvement needs and to collect new information to an online space. The group will have a webinar in spring 2021 to discuss, review progress, and decide on future work. If you have interest to join the work or have questions, please do not hesitate to contact [kristina.saarinen@environment.fi](mailto:kristina.saarinen@environment.fi) or [richard.claxton@aether-uk.com](mailto:richard.claxton@aether-uk.com).

## Updating the Reporting Template for Projections

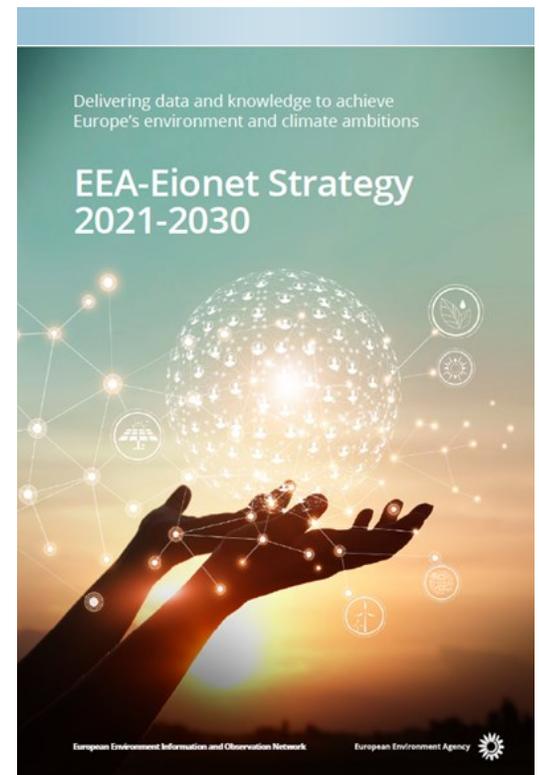
Following the review of Member State's emission projections in 2019 and subsequent support through a European Commission funded study, it has been proposed that the Annex IV reporting template for projections is modified to make it more transparent. This was discussed at the last Projections Expert Panel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

## New EEA-Eionet Strategy 2021-2030

Europe will need to tackle unprecedented environmental and climate challenges to move towards greater sustainability, and at the same time stimulate a recovery from the economic and social impacts of the COVID-19 pandemic. The strategy identifies five key objectives and five main areas of work that provide a focus for EEA and Eionet activities over the next decade. These will help EEA and Eionet inform the choices being made by policy makers, companies and citizens over the coming decade, and ensure they have the best available knowledge on Europe's environment.

*Have you seen the new TFEIP  
Website launched in 2020?*

Visit it here: <https://www.tfeip-secretariat.org/>



## Call for New European Topic Centres



The EEA has recently launched a call for proposals for seven new European Topic Centre (ETC) consortia having expertise in specific environmental and climate areas for support from 2022 to 2026.

ETCs are consortia of organisations from EEA member countries that provide a key role in supporting the EEA and Eionet across a broad range of activities, including developing environmental assessments, supporting the shaping and implementation of European policies, data handling, capacity building and supporting new innovative activities.

Activities on air pollution will be addressed mainly through a new ETC on Human Health and the Environment. Any organisation interested in seeing the specifications for the future ETCs are welcome to see [further details on the EEA's website](#).

## About

Co-chair of Projections  
Expert Panel  
Aether, the United  
Kingdom

We continue to  
introduce different  
members of the TFEIP  
team in the newsletter.  
Melanie Hobson, co-  
leader of the Projections  
Expert Panel, provides us  
with an overview of her  
work:

## Personal Profile: Melanie Hobson

Following a Master's degree in environmental technology at Imperial College in London in 2000, I joined AEA Technology (now Ricardo) in their emissions inventory team. The main focus of the work was the compilation of the UK's annual air pollutant and greenhouse gas emission inventories and projections and subsequent reporting. So, I quickly became familiar with NFR codes, IIRs, W(E)M and WAM scenarios.

The first TFEIP meeting that I attended was in Thessaloniki in 2006 where we discussed the need for a projections expert panel as the Task Force did not have one at that time. I soon after became one of the co-chairs of the panel along with Julio Lumbreras from Spain. A few years later Julio's job changed and I have since been working alongside Nadine Allemand from France. The aim of the panel is to improve emission projections reporting and in 2019 I contributed to a substantial update of the projections chapter of the EMEP/EEA Guidebook.



In addition to my role at the TFEIP I also work on projects for the European Commission to review and support Member States with their air pollutant inventories and projections submitted under the National Emission Ceilings Directive (NECD) and the CLRTAP. I undertake local air quality management work utilising dispersion modelling, and also work on the compilation of greenhouse gas inventories and the development of MRV systems for national governments in the Caribbean, Africa and Asia.

When not at work, I can be found triathlon training, dinghy sailing and attempting to grow fruit and vegetables.