

TFEIP Newsletter

Summer 2014



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From the Chairs

For most National inventory compilers this time of year is often the “calm before the storm”. We can look ahead and see an Autumn/Winter full of compilation tasks, and a Spring full of reporting. But even before the main work on the national inventories reaches its peak, there are things to consider, and meetings to go to.

We are publishing this edition of the newsletter just ahead of the EMEP Steering Body Meeting, so that we can highlight some of the things that will be discussed there (Section 1). It’s important that inventory compilers are in contact with the national representatives who go to this meeting (and also the CLRTAP Executive Body Meeting in December), otherwise our views are not fully reflected in the discussions and decisions that are made. We can certainly expect some interesting discussion on the recent Adjustment reviews.

This edition also gives us the opportunity to circulate information about our recently updated EMEP/EEA Emissions Inventory Guidebook Maintenance & Improvement Plan. This provides a list of items that we consider as being priority improvements for the Guidebook. There is also news about the Russian translation of the Guidebook. This is all included in Section 2.

If you need help with anything concerning emissions, then please feel free to get in touch.

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1 EMEP Steering Body Meeting, Sept 2014

Introduction

The EMEP Steering Body Meeting will take place in Geneva next week (15th – 17th September). This is where all of the different Task Forces and Centres in EMEP come together and report on their work. Each provides a review of their work across the last year, and the plan for future work.

There are often important discussions about the direction of the technical work under EMEP, and also specific tasks/activities which are relevant to the emissions inventory community. EMEP Centres and the Task Forces will give presentations on the work that they have achieved in the last year, and their workplan for the year ahead. There are some important differences between the Centres and the Task Forces. As a general rule, the Centres receive EMEP funding for undertaking key tasks that are usually annual (e.g. CEIP collecting the national emissions data, checking it and publishing it on their website). The Task Forces have a more scientific/development focus and rely completely on voluntary contributions from the Parties.

Points of Interest from the TFEIP

Chris Dore will present the work of the TFEIP across the last year, and the current workplan. Most of the work across the last 12 months has been discussed/presented at our annual meeting in Ghent in May. There are some specific issues which need to be raised, and considered by the Steering Body:

Definition of PM

Different emission measurement techniques for PM give rise to estimates which do/don't include the condensable component of PM. The inclusion/exclusion of condensables (condensable particulate matter) can have a very large impact on the resulting emission estimate.

At the moment, the Guidebook includes EFs both with and without the condensables component. There is therefore a need to not only improve the transparency of the Guidebook, but also consider whether we should standardise on a more clearly identified definition of PM. This is a political decision, rather than a technical/scientific one, but it is interesting to note that there may be different views from the technical groups. The modellers require information that includes all of the PM (whether it is in the gaseous phase coming out of the stack or not). However, the inventory community might argue that it is not their responsibility to consider atmospheric chemistry, and therefore only report the PM at the exit of the stack. We will raise and discuss the issue at the SB meeting, and recommendations may be passed up to the Executive Body, who will be responsible for making a decision.

Adjustment Reviews

The first Adjustment Reviews were completed recently. The SB meeting will be a good forum for reviewing and discussing the application and review process.

Six parties — Belgium, Croatia, Denmark, France, Germany and Spain — submitted applications for adjustments to the Convention secretariat in early 2014. The applications were subsequently reviewed in June in parallel with the annual Stage 3 emission inventory review process, using experts nominated by Parties to the CEIP roster of review experts.

The review team found that additional information was needed from all six Parties to enable a sufficiently detailed review, and in many cases the parties were able to provide this information during the review week. However it was not always possible to complete the review of all adjustment applications due to the information, time and resource constraints. We noted as well that the fact that reviewers were needed for the review of adjustments in 2014 had an adverse impact on Parties making reviewers available for the stage 3 review.

In addition to a summary report providing the recommendations for the different applications, the review teams also prepared detailed country reports which document their findings and recommendations to the EMEP Steering Body. These documents are all available on the website for the next Steering Body meeting: <http://www.unece.org/env/clrtap/emep38.html>.

One issue to discuss in particular is that application for adjustments in the road transport sector proved to be much more complicated than expected. Parties were asked to provide more data to support their applications, and where Parties were able to provide this quickly, the expert reviewers needed more time to fully assess and understand the impacts of revisions to calculations methodologies. As a result, the reviews for some countries could not be completed within the available time window, and it was necessary to report these as having an “open” status.

It will also be useful to hear feedback from the Parties about the application process. We suspect that there are parts of the process which require improved guidance.

Other Task Forces and Centres of the EMEP Steering Body

MSC-West, MSC-East

These two modelling groups are the EMEP Centres that are the main users of the national emissions data, and we need to support them in their work. We have given more profile to them in recent TFEIP meetings, and their input has allowed us to highlight particular areas where we would like to see improvements in the national emissions inventory submissions.

Task Force on Hemispheric Transboundary Air Pollution (TFHTAP)

The TFHTAP are planning to hold a meeting on global emission scenarios early in 2015 (details are available from Terry Keating, Keating.Terry@epa.gov). They need these emissions estimates as input into their modelling studies.

To date, the TFEIP hasn't been very active in supporting the work of the TFHTAP, due to resource constraints. But looking ahead, we will try to support the work of the TFHTAP if we are able to offer input from emission experts.

Task Force on Measurement and Modelling (TFMM)

We need to improve the way we work with the measurement community. We have identified several parts of the Guidebook that we would like to improve, and in most cases we need more/new emissions measurement data.

To help start closer working, we are in the process of drafting a briefing note for the TFMM Chair. Hopefully in the longer term this will help us address some existing gaps in the Guidebook.

Task Force on Integrated Assessment Modelling (TFIAM)

A core activity of the TFIAM is to inform the policy decisions being taken under the Convention through the provision of integrated assessment modelling and scenario information. Their recent activities include reviewing recent changes in the Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS) model and results of scenario analyses, as well as the exchange of national and international experiences with integrated assessment modelling.

The Implementation Committee

The Implementation Committee (IC) do not come under the EMEP part of the Convention. But as an important body under the Convention it is sensible to include some comments about them here.

Their primary role is to review whether Parties are meeting all of their formal requirements under the Convention and its protocols. They therefore sometimes pass technical questions to the TFEIP to help clarify the emissions reporting from specific Parties.

We have been making efforts to improve the communication between the TFEIP and the Implementation Committee. In the past, we have sometimes found it challenging to address all of the questions received. There are several reasons for this – primarily the TFEIP doesn't have resources to look into the sometimes very detailed questions from the IC, and our group isn't structured in a way that easily allows us to review national submissions and make a judgement on compliance/non-compliance. In addition, the TFEIP is a "scientific" group, and the Implementation Committee deals with compliance issues, and these elements do not always easily align.

The TFEIP will continue to help support the IC as best as we can going forward.

2 The EMEP/EEA Emissions Inventory Guidebook

Guidebook Maintenance and Improvement Plan

We are constantly striving to improve the Guidebook (GB). This covers many different aspects – not just adding EFs and methodologies for new sources, but constantly reviewing the content that we already have for completeness, consistency, accuracy and detail level. Obviously this is a big task, and gets even bigger as the Guidebook grows. We are always faced with the challenge of finding (or steering) resources to help with this work.

We are, of course, always happy to hear about new work that might help provide information to support the GB. Following the TFEIP's meeting in May, our Expert Panel Leaders have made the following list of priority tasks for improving the GB. We would be grateful if you could bear this in mind if you are commissioning research projects.

Urgent Improvement Tasks
<p>PM Condensable vs Filterable EFs</p> <p>PM emission factors derived from different measurement techniques give widely differing results, and there is therefore a need to review in the information in the GB.</p> <p>The use of condensable and filterable PM EFs throughout the GB will be reviewed and clearly labelled, to ensure that users can improve consistency in their inventories.</p>
<p>Small-scale Combustion: Improved Methodologies</p> <p>Only relatively simple methodologies are included in the GB, and improvements are needed in several areas:</p> <ul style="list-style-type: none"> • The EFs for solid fuel have not been updated for a number of years and require review and improvement. • Development of a Tier2/Tier3 methodology for small combustion (particularly biomass) is required. • New technologies are being introduced that are not included in the GB. <p>Available information will be reviewed and incorporated into the GB as appropriate.</p>
<p>Non-road Mobile Machinery: Improved Methodologies</p> <p>Substantial information is available to help improve the accuracy of emission estimates for this increasingly important source. A systematic analysis is required of operation patterns, review of EFs, fuel consumption, new technologies etc.</p> <p>Specific updates that are required include:</p> <ul style="list-style-type: none"> • The Tier1 & Tier2 methodologies need to be updated for years after 2010, with new EFs, & fuel split info. • The Tier 3 methodology needs updated EFs based on measured values, and new technologies added. <p>There is also information from countries that could be used to derive Tier 1 indicators.</p>
<p>NH₃ from Fertiliser Use</p> <p>Issues have been raised about the methodology used to generate the current EFs from the literature. This is a particularly high priority, not just for estimating NH₃ emissions, but also because the methodology is referred to from the 2006 GHG Guidelines. The data collated from the literature during the last Guidebook update has been reanalysed in order to refine the definition of the EFs. The data available are inadequate (e.g. lack of a standardised measurement methodology, data lacking for some fertilisers) and new measurements are required. In the interim, the methodology in the Guidebook needs to be updated to take account of the results of the reanalysis.</p>
<p>NH₃ from Standing Crops</p> <p>The ammonia emission from standing crops has been discussed frequently at Task Force meeting and was recently identified as an area where greater collaboration with the modelling community was required. There are currently</p>

<p>provisional Tier 1 and 2 methodologies in the Guidebook but work together with the modelling community is needed to provide more coherent methodologies.</p>
<p>Updating Agriculture Chapters, and a Gap Analysis of Methodologies</p> <p>The recent revision of the reporting guidelines has led to a reorganisation of the reporting categories, including the addition of new categories. There is therefore a need to substantially restructure the Agriculture chapters. In addition, before undertaking further revisions to the agriculture chapters, it is necessary to review the available literature and plan what can reasonably be improved in the existing agriculture Chapters (e.g. addition of PM and NO to NH₃ methodologies and new source categories). A gap analysis would deliver:</p> <ul style="list-style-type: none"> • An overview of the pollutants arising from existing and new source categories. • Identification of those pollutants for which lack Guidebook methodologies. • An assessment of how much data are available. • An assessment of the resources required to review these data, prepare Tier 1 and possibly Tier 2 methodologies and manage requesting and treatment of external comments.
<p>Road Transport: Cold Start Modeling</p> <p>The modeling of road vehicle cold-start emissions requires improvement by drawing on the literature.</p>
<p>High Priority Improvement Tasks</p>
<p>Fine Timescale Emissions Guidance</p> <p>The modelling community currently divide the national emissions inventory estimates into fine timescale data. This approach is not consistent between the modelling groups, and does not use the information that is held by the emissions inventory community. Guidance is needed on the generation of fine timescale emission estimates to ensure consistency across the inventory and modelling groups, and more importantly to ensure that best practise is being used by the modellers.</p>
<p>Methodologies for Emissions from Construction and Construction Sites</p> <p>There are methodologies in the GB that relate to the use of non-road mobile machinery and the handling of bulk material. However, these do not sufficiently address the emissions from construction activities. It would be a considerable improvement to include a methodology that was comprehensive terms of the relevant sources. The literature (including the USEPA's AP40) will be reviewed for information that supports the generation of methodologies for estimating emissions from construction.</p>
<p>NH₃ from Biogas</p> <p>There is currently very limited information in the Guidebook on the NH₃ emissions from biogas. A literature data review is required, and subsequent compilation of a method for estimating NH₃ emissions from biogas facilities.</p>
<p>Priority Improvement Tasks</p>
<p>Other Solvent Use: Tier 2/3 Methodologies: A Tier 2/3 methodology for the other solvent use sectors (3.D.2/3.D.3) is needed to support Parties in improving their inventories.</p>
<p>Bulk Material Storage/Handling: Tier 2/3 Methodologies: Development of a Tier 2/3 methodology for storage and handling in the industrial sectors is required to improve the accuracy of emission estimates.</p>
<p>Manure Management: NMVOC and PM Emissions: Information from the literature is very varied on the emissions of both NMVOC and PM from manure management. Time is required to review the literature and ensure full and detailed interpretation before incorporation into the GB.</p>
<p>NMVOC Emissions from Natural Vegetation: Reporting natural emissions is not required under the Convention, but information is required by the modelling community. There is extensive literature to review on this topic, and the aim is to distil information into Tier1, 2 and 3 methodologies which can be used by emission inventory compilers, and will be consistent with the modelling community to the extent possible.</p>

We also have numerous other tasks that we would like to undertake, but this 'priority' list is long enough for the time being! Please contact the Co-Chairs if you would like more information.

Russian Language Version of the Guidebook

The European Environment Agency (EEA) is pleased to announce the recent publication of a new Russian-language version of the 2013 EMEP/EEA air pollutant emission inventory guidebook.

The Guidebook provides guidance on estimating emissions of air pollutants from both anthropogenic and natural sources. It is designed to assist countries that report emission inventories to the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP Convention) and for EU Member States under the EU National Emission Ceilings Directive. The Guidebook is maintained by the UNECE/EMEP Task Force on Emission Inventories and Projections (TFEIP) and is published by the EEA.

The new [Russian language version of the Guidebook may be found on EEA's website.](#)

The translation was funded by EEA through the [ENPI-SEIS project.](#)

Европейское агентство по окружающей среде (ЕАОС) с радостью сообщает о появлении русскоязычной версии Руководства ЕМЕП/ЕАОС по инвентаризации

выбросов загрязняющих веществ 2013 (ранее именовавшегося Руководством по инвентаризации выбросов загрязняющих веществ ЕМЕП/CORINAIR).

Путеводитель содержит правила оценки выбросов загрязняющих веществ как от антропогенных, так и природных источников. Целью его создания было облегчение процесса предоставления странами отчетов по инвентаризации выбросов в рамках Конвенции ЕЭК ООН о трансграничном загрязнении воздуха на большие расстояния (КТЗВБР), а также странами ЕС в рамках Директивы ЕС по пределам национальных выбросов. Руководства был разработан Целевой группой ЕЭК ООН/ЕМЕП по инвентаризации и прогнозам выбросов (TFEIP); публикация осуществляется ЕАОС.

С новой [русскоязычной версией Руководства можно ознакомиться на сайте Европейского агентства по окружающей среде.](#)

Финансовая поддержка перевода также была оказана Европейским агентством по окружающей среде в рамках проекта по созданию совместной системы экологической информации [ENPI-SEIS.](#)

3 Personal Profile: Melanie Hobson

Co-chair of the Projections Expert Panel

Director, Aether

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

Melanie has a degree in Environmental Sciences and a Masters in Environmental Technology, in which she specialised in pollution management. She worked at ICF in Washington DC compiling US State greenhouse gas emission inventories and assessing mitigation options. She then returned to the UK and worked at AEA Technology (now Ricardo-AEA) for 8 years on the UK's National Atmospheric Emissions Inventory programme for the UK Government. There she focused on compiling historical emissions from the transport sector (primarily road and rail) and on projections across all sources. For the last six years Melanie has been a Director at Aether, a co-chair of the TFEIP Projections Expert Panel, and continues to work on emission projections alongside other UK experts. The aim of the Projections Expert Panel is to support the TFEIP in improving emission projections and to understand the implications for policy.



As well as compiling the core emission projections for the UK, Melanie's work has included estimating emissions under different activity and environmental legislation scenarios. Melanie was also a member of the LRTAP ad-hoc expert group on black carbon. The group identified options for potential revisions to the Gothenburg Protocol that would enable parties to mitigate black carbon as a component of PM for health purposes while also achieving climate co-benefits.

At the last meeting in Ghent in May 2014, it was decided that it would be preferable to hold the Projections Expert Panel meeting at a different time to the other expert panels, so that people could attend a sector specific expert panel as well as the Projections meeting. The best way forward for this has yet to be finalised, but one suggestion is to hold the meeting following the workshop on the first day. Comments are welcome.

Away from work, Melanie enjoys sailing and competing in triathlons.

4 Other News

2015 TFEIP Meeting

We are very pleased to announce that the European Commission's Joint Research Centre has offered to host us in 2015. At the moment we are not sure of the exact venue in Italy, but we will keep you informed. The meeting will be in the first half of May as usual.

Vacancy at the European Environment Agency

The EEA presently has a vacancy in the area of air pollution and climate change mitigation monitoring, reporting and verification. Details of the position and eligibility requirements are available on the [EEA's website](#). The closing date for applications is Friday 26 September 2014 at 12.00 (CET)

Correspondences for Reporting Codes

To assist parties to prepare for the next reporting round a table for correspondences between different reporting codes is available at CEIP website (www.ceip.at). The table covers a wide range of codes (NFR, SNAP, CRF, NACE, GAINS) and is subject to improvements where relevant.

If you would like to publicise details of your forthcoming relevant meetings or workshops in the next TFEIP newsletter, you are welcome to email the Chairs with information.

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