Guidance for Reviewers:

Stage 3 in-depth review of emission inventories submitted under the UNECE LRTAP Convention and EU National Emissions Ceilings Directive

Introduction

1. This document presents general guidance to expert reviewers participating in the Stage 3 in-depth reviews of emission data reported under the UNECE Convention on Long-range Transboundary Air Pollution (LRTAP Convention) and the EU National Emissions Ceilings Directive (NECD) in line with the emission reporting obligations of countries.

2. The mandate and overall objectives for the emission inventory review process under the LRTAP Convention is given by the UNECE document 'Methods and Procedures for the Technical Review of Air Pollutant Emission Inventories reported under the Convention and its Protocols' ([1]) – hereafter referred to as the 'Methods and Procedures' document.

3. As described within the 'Methods and Procedures' document, the purpose of the technical Stage 3 review is to examine in detail, and in a transparent manner, the reported inventory information for consistency with the respective Reporting Guidelines and the EMEP/Corinair Guidebook.

4. This guidance for Stage 3 expert reviewers draws upon the experiences obtained during the 2006 voluntary Stage 3 review ([2]), the 'Methods and Procedures' document, and the emission inventory review guidelines ([3]) established in the context of the United Nations Framework Convention on Climate Change (UNFCCC). This is consistent with the objectives expressed in the 'Methods and Procedures' document - that the review of emission inventories reported under the LRTAP Convention is harmonised to the extent possible with that of the UNFCCC review process (with which many national experts are familiar and have experience).

5. The 'Methods and Procedures' document also describes the process by which the EMEP Centre on Emission Inventories and Projections (CEIP) shall select the members of the Stage 3 review teams.

Objective of Guidance

6. The objective of this guidance is to promote consistency in the detailed Stage 3 review of emissions data submitted by countries and to assist members of the Stage 3 review teams.

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[1] Methods and Procedures for the Technical Review of Air Pollutant Emission Inventories reported under the Convention and its Protocols. Note by the Task Force on Emission Inventories and Projections. ECE/EB.AIR/GE.1/2007/16 http://www.unece.org/env/documents/2007/eb/ge1/ece.eb.air.ge.1.2007.16.e.pdf

[2] EMEP-EEA (2006): Vestreng, V., Rigler, E., Adams, M., Kindbom, K., Pacyna, J. M., Denier van der Gon, H., Reis, S., and Travnikov, O.: Inventory Review 2006. Emission Data reported to the LRTAP Convention and NEC Directive: Stage 1, 2 and 3 review, and Evaluation of Inventories of HMs and POPs. MSC-W Technical Report 1/2006. ISSN 1504-6179, 2006. http://emep.int/publ/reports/2006/emep_technical_1_2006.pdf

[3] 'Guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention'. *In* 'Review of the Implementation of Commitments and of other Provisions of the Convention. National Communications: Greenhouse gas inventories from Parties included in Annex I to the Convention. UNFCCC Guidelines on Reporting and Review'. FCCC/CP/2002/8.

Expert Review Teams

7. Each expert review team will consist of both sectoral or general experts with 1 or 2 lead reviewers (an inventory expert(s) having substantial inventory review experience). Prior to the meeting of the expert review team, members of the team shall receive supporting documents and the data to be reviewed in a user-friendly format from CEIP. CEIP and Lead Reviewers will be able to provide support in using these data.

8. As described in the 'Methods and Procedures' document, each expert review team will:

(a) Examine the application of the requirements of the respective emission reporting guidelines ([4]) and the EMEP/CORINAIR Guidebook and identify non-compliance with these requirements;

(b) Examine whether the good practice guidance of the EMEP/CORINAIR Guidebook has been applied and documented in the IIR, in particular in relation to transparency, noting the identification of key categories, selection and use of methodologies and assumptions, development and selection of emission factors, collection and selection of activity data, reporting of recalculations and consistent time-series and quality assurance and quality control procedures, and identify any inconsistencies;

(c) Compare emission estimates, activity data, implied emission factors and any recalculations with data from previous submissions, to identify any irregularities or inconsistencies;

(d) Identify any missing sources and examine any explanatory information relating to their exclusion from the inventory;

(e) Identify the reasons for any differences between a Party's and CEIP's key category determination;

(f) Assess the consistency of information in the reporting tables with that in the IIR;

(g) Assess the extent to which issues raised in stages 1 and 2, as well as issues and questions raised by expert review teams in previous reports, in other ad-hoc reviews, or identified by the Task Force, have been addressed and resolved;

(h) Identify areas for further improvement of the inventories and note possible ways for improving the estimation and the reporting of inventory information;

(i) Consider the entire inventory process from the collection of data to the reported emission estimates and examine procedures and institutional arrangements for inventory development and management, including quality assurance and quality control, record-keeping and documentation procedures;

[4] a) UNECE: Emission Reporting Guidelines. Air Pollution Studies no. 15, 2003. Available from www.unece.org/env/eb/Air_Pollutionwithcover_15_ENG.pdf.
b) Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants. OJ L 309, 27.11.2001, p.22

(j) The review of historic emissions data shall focus on the emissions reported by Parties for a protocol base year and the latest year for which data are available. A focus shall be on ensuring a consistent approach has been taken in estimating emissions for these respective years.

(k) The expert review teams should pay particular attention to the key sources and to those areas of the inventory where problems have been identified in previous stages of the review (Stages 1 and 2), or where changes have been reported by the Party. Expert review teams will not perform an individual review in cases where an Informative Inventory Report (IIR) has not been provided.

(l) The expert review team may use other relevant technical information in the review process, such as information from international organizations;

(m) Contribute to the preparation of the necessary review reports as described below, particularly writing relevant sections including work to finalise these reports following the centralized meeting of the expert review team and completing the review transcript forms.

9. During the review process, communication between the expert review teams and the designated emission expert of the Party under review should be through the lead reviewers. Other members of the expert review team may communicate directly with the national experts involved in the inventory preparation only if a Party so agrees. Information thus obtained should be made available to other members of the team.

10. Review experts will be expected to have done some preparatory work before the review meeting and at least be familiar with the available data and documents. Ideally experts should come to the review week prepared with the priorities for their sector, points for discussion and any relevant questions for countries.

11. During the review, experts will be expected to maintain a transcript of issues relevant to the review and which will provide transparency to the reports prepared by the review team.

12. Experts will not participate in the review of their own country's submission.

Lead reviewers

13. Lead reviewers should ensure that the review in which they participate is conducted in line with the methods and procedures indicated in the present document and that the expert team carries out the reviews consistently across all Parties under review. They should also ensure the quality and the objectivity of the technical assessments in the reviews.

14. With the support of CEIP, a lead reviewer shall:

(a) Prepare a brief work plan for the review activity;

(b) Verify that the experts have all the necessary information provided by CEIP prior to the review activity;

(c) Monitor the progress of the review activity;

(d) Ensure that there is good communication within the expert review team;

(e) Coordinate queries of the expert review team to the Party's designated emission expert and coordinate the inclusion of the answers in the review reports;

(f) Provide technical advice to any ad hoc experts, if needed;

(g) Ensure that the review is performed and, in cooperation with the other members of the expert review team, ensure the review report is prepared in accordance with this guidance;

(h) Verify that the review team gives priority to individual source categories for review in accordance with this guidance.

(i) Compile the review report based on contributions from the other team members.

Role of CEIP

15. The EMEP Centre on Emission Inventories and Projections (CEIP) will act as review secretariat. Responsibilities of CEIP in the context of the Stage 3 reviews are provided in the 'Methods and Procedures' document. Those responsibilities relevant to the Stage 3 review are elaborated in the following sub-paragraphs:

(a) Submit an annual proposal to the EMEP Steering Body to suggest Parties (as well as topics and pollutants) to be reviewed;

(b) Organize centralized stage 3 review meetings (organize venues and timing for the meetings and provide technical support to the review team(s));

(c) Select reviewers and lead reviewers from the roster of experts;

(d) In advance of the meeting of the Stage 3 expert review team, prepare and make available data to be reviewed in a user-friendly format;

(e) Notify Parties about upcoming centralized reviews and identify the contact person(s) through whom enquiries could be directed. Act as contact point for the Parties' designated emission experts; and communicate with them and with other EMEP centres;

(f) Provide the required background material for the stage 3 review team's information, including the stage 1 and 2 review results, informative inventory reports (IIRs) and other ad hoc review findings;

(g) Prepare an overview of review findings, indicating priorities for improvements; forward it for consideration by the Parties' designated experts and the Task Force;

(h) Assist with the editing and formatting of the review reports prepared by the lead reviewers and expert review team.

(i) CEIP shall also produce an annual inventory review overview report for consideration by the EMEP Steering Body and for subsequent publication in electronic format on the CEIP website. The overview report will be based on the results of the supporting stage 1 and 2 reviews completed in that year.

Stage 3 Review Reports

16. Under its collective responsibility, the expert review team will produce, for each Party reviewed, an individual inventory review report ([5]) for publication on the CEIP website based on the results of the tasks listed above. This individual review report should contain an objective assessment of the adherence of the inventory information to the reporting Guidelines and thus should not contain any political judgement.

17. The report should not exceed 10 pages and should focus on particular strengths and identified problems, as well as on an overall appraisal of the quality and reliability of the inventory, emission trends, actual emission factors and activity data, and on the degree of adherence to the Emission Reporting Guidelines and the EMEP/Corinair Guidebook.

18. The individual review report will be prepared in two parts:

(a) *Key Review Findings*: Part One of the report with key review findings will be sent first as a draft for review by the designated emission expert of the Party being reviewed and, as a final document, to the Implementation Committee of the Convention ([6]) and the Party's representative to the Executive Body. It will include:

- A one-page summary including assessment of mandatory reporting requirements, timeliness, formats, completed tables.

- Key issues related to data quality, such as an assessment of transparency, major issues relating to completeness and use of methods, major inconsistencies in time series, issues with recalculations.

(b) *Recommendations to the Party:* Part Two of the report, with recommendations to the Party, will be first sent as a draft for review to the Party's designated emission expert and will include:

- Inventory system and QA/QC recommendations (one page);

- Sector specific recommendations for inventory improvements (one page each) on: (i) Energy and transport; (ii) Industrial processes and solvents; other products' use; and, waste; (iii) Agriculture.

19. The Stage 3 review reports shall be communicated to Parties and to other Convention bodies, as appropriate, by the Convention's Secretariat.

[5] The 'Methods and Procedures' document describes the reports that will be produced by the expert review team.
[6] The Implementation Committee will only receive information about inventory quality of the pollutants covered by one or more relevant protocols which are in force for a Party.