



**Economic and Social
Council**

Distr.
GENERAL

ECE/EB.AIR/GE.1/2009/8
23 June 2009

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

**EXECUTIVE BODY FOR THE CONVENTION ON LONG-RANGE
TRANSBOUNDARY AIR POLLUTION**

Steering Body to the Cooperative Programme for Monitoring and
Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)

Thirty-third session
Geneva, 7–9 September 2009
Item 6 (c) of the provisional agenda

PROGRESS IN ACTIVITIES IN 2009 AND FUTURE WORK

EMISSIONS

STAGE 3 IN-DEPTH REVIEW OF EMISSION INVENTORIES

Report by the Centre on Emission Inventories and Projections

1. This report reflects progress achieved in the technical reviews of air pollutant emission inventories reported under the Convention and its Protocols, with a focus on the outcomes of the stage 3 in-depth reviews in 2008 and plans for the future reviews in the next three years (2010–2013). Furthermore, the report summarizes the main conclusions of the 2008 review of emission data carried out under the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP)¹. It has been prepared by the EMEP

¹ This work is carried out in cooperation with the European Environment Agency and its European Topic Centre on Air and Climate Change.

Centre on Emission Inventories and Projection (CEIP)² in accordance with item 2.1 of the 2009 workplan for the implementation of the Convention (ECE/EB.AIR/96/Add.2), approved by the Executive Body at its twenty-sixth session.

A. Background

2. At its twenty-fifth session in December 2007, the Executive Body approved methods and procedures for technical reviews of the emission inventories³ with a view to further improving the quality of the data and associated information reported to the Convention as well as to harmonizing the inventory improvements under the Convention the United Nations Framework Convention on Climate Change and the European Union National Emission Ceilings (NEC) Directive (2001/81/EC).

3. The review process of emission data has been developed on the basis of feedback from Parties and from the Task Force on Emission Inventories and Projections and is seen by Parties as a valuable tool for the improvement of their national emission inventories. The review has contributed to flagging issues to be improved, notably: (a) strengthening the reporting requirements for informative inventory reports (IIRs); (b) harmonizing reporting with the emission reporting under the NEC Directive; and (c) extending the nomenclature for reporting (NFR) sectors to accommodate reporting of persistent organic pollutants (POPs), heavy metals, particulate matter (PM) and non-methane volatile organic compounds (NMVOCs).

4. The technical review of reported inventories is carried out in the three stages in accordance with a detailed annual workplan prepared in cooperation with the European Environment Agency (EEA) and the Task Force on Emission Inventories and Projections. At each stage, Parties have the opportunity to clarify issues and to provide additional information. The review process covers data reported under the Convention as well as under the amended NEC Directive. It is supported by EEA.

5. Stage 1 is an initial semi-automated check of submissions for timeliness and completeness.

² The Centre on Emission Inventories and Projections (<http://www.emep-emissions.at/>) began operating under the Austria's Federal Environment Agency (Umweltbundesamt-Vienna) in January 2008, following its establishment by the Executive Body by at its twenty fifth session (ECE/EB.AIR/91, para. 27 (f)). CEIP builds on the current emission-related work under EMEP.

³ Document ECE/EB.AIR/GE.1./2007/16, prepared by the Task Force on Emission Inventories and Projections.

6. Stage 2 is a synthesis and assessment of all national submissions with respect to consistency and comparability of data with recommendations for data quality improvements. It is performed in cooperation with EEA.

7. Stage 3 is an in-depth review of inventories from selected Parties, by pollutant, country and sector, as specified in the workplan agreed by the Executive Body. The stage 3 review is conducted by an expert review team selected from the roster of experts nominated by Parties that meets once a year in a “centralized” location to review the inventories of up to 10 Parties. Under its collective responsibility, the expert review team produces an individual inventory review report for publication in electronic format on the CEIP website. These individual review reports are designed to provide an objective assessment of the adherence of the inventory information to the *Emission Reporting Guidelines*⁴.

B. Progress in stage 1 and 2 review of emission inventories in 2009

8. In 2009, in carrying out the stage 1 and stage 2 reviews, CEIP communicated actively with the Parties’ designated emission experts, both through bilateral contacts and through the publishing of country-specific review reports.

9. The findings of stage 1 reviews were communicated to the national designated experts through the country-specific “status reports” by 15 March 2009. Countries were given two weeks to respond with comments and clarifications concerning their submissions.

10. The findings from the stage 2 review were included in “synthesis and assessment reports”⁵, which were posted on the CEIP website by 26 May 2009 to allow countries to provide comments and/or re-submissions within four weeks. The main objective of these reports is to assist countries in improving their data for the next reporting round. An overview of the stage 1 and 2 review findings will be summarized in the CEIP and EEA Technical Review Report 2009.

C. Progress in stage 3 review of inventories

11. At its twenty-fifth session in 2007, the Executive Body had encouraged Parties to nominate experts for the roster of stage 3 review experts maintained by the secretariat. At its twenty-sixth session in 2008, the Executive Body repeated its call for nominations as well as

⁴ *Guidelines for Reporting Emission Data under the Convention on Long-range Transboundary Air Pollution* (EC/EB.AIR/97) approved by the Executive Body at its twenty-sixth session in December 2008 (ECE/EB.AIR/96, para. 83(b)).

⁵ <http://www.ceip.at/review-process/review-2009/review-data-2009/>

invited Parties to provide financial support to enable participation of experts from Eastern Europe, Caucasus and Central Asia (EECCA) in the reviews⁶.

12. In spite of the repeated calls for nominations, only 11 Parties to the Convention (out of 51) have nominated experts to the roster. With nominations from Austria, the Czech Republic, Denmark, the European Community, Finland, France, Germany, Ireland, Norway, the Netherlands, Sweden and the United Kingdom of Great Britain and Northern Ireland, the roster currently contains a total of 41 inventory experts. These nominated experts are suitably qualified to review all emission sectors as well as general inventory issues, such as good practice, uncertainties, and quality assessment and quality control (QA/QC). For certain technical areas of expertise, such as the waste and energy sectors, only a few nominations were received.

1. 2008 voluntary in-depth reviews

13. In 2008, the centralized stage 3 review took place in Copenhagen at the premises of EEA from 6 to 10 October 2008. It covered the emission inventories of four volunteering Parties: France, Norway, Portugal and Sweden. The expert review team consisted of six sectoral experts and one lead reviewer from Austria, the European Community, the Czech Republic, Denmark, France, Ireland and the United Kingdom, supported by CEIP. In the weeks following the review meeting, the expert review team sent draft country-specific review reports to the nominated emission expert in each country for comments, before their finalization and publication on the CEIP website (<http://www.ceip.at/review-process/review-2008/>).

14. The reports contained review findings for all but one inventory sector, namely “industrial processes”. This omission was due to the difficulties experienced by the review expert with this demanding sector as well as with the English language.

15. Both prior to and during the review meeting, the expert review team identified a number of questions that were communicated to Parties. In addition, as part of its “review secretariat” role, CEIP prepared and distributed technical materials to the expert review team in advance of the centralized review in cooperation with EEA and its European Topic Centre on Air and Climate Change, elaborated templates for review reports, review transcripts and guidelines for reviewers to ensure consistency in the reviews. CEIP was also responsible for ensuring good communication between the reviewed Parties and the expert review team, which was considered critical for the success of the process.

⁶ ECE/EB.AIR/96, para. 20 (h).

16. The centralized review process requires resources from members of the expert review team, experts in the reviewed Parties and CEIP. It is estimated that members of the expert review team must devote about 10 to 15 days to preparing the review meeting in addition to the participating at the one week-long centralized review meeting and at the follow-up activities, including the finalization of the review reports. The four inventories that were reviewed in 2008 were generally of a high quality, therefore the workload for the review team is likely to increase somewhat when checking less consistent inventories.

17. The 2008 voluntary review indicated that the review guidelines and templates used by the expert review team generally provided a good basis for the review and enabled a review of the Parties that followed a consistent approach. These templates have been recently updated to ensure consistency with the revised *Emissions Reporting Guidelines*.

2. 2009 compulsory in-depth review

18. The 2009 stage 3 in-depth review of emission inventories is scheduled to be held from 22 to 26 June in Copenhagen hosted by EEA. As approved by the Executive Body Bureau at its meeting in March, the review will cover the inventories of the following 10 Parties: Belgium, Bulgaria, Denmark, Hungary, Finland, Ireland, Latvia, Lithuania, Poland and Spain.

19. Two expert review teams will review the inventories of these 10 Parties. Each team will comprise of six sectoral experts, one generalist and one lead reviewer. The establishment of the two review teams proved difficult, primarily because of the limited number of nominated experts in the roster of review experts. As a result, the review teams can only focus on the key emission sources of the main pollutants (nitrogen oxide, sulphur dioxide, carbon monoxide, ammonia, NMVOCs and PM). Furthermore, due to the limited number of reviewers available, it may not be possible to review the heavy metals data submitted or POPs emission estimates.

C. Plans and proposals for the future stage-3 in depth reviews

20. The main objectives for the in-depth centralized reviews are: (a) to complement the reporting guidelines in supporting Parties to compile and submit high quality inventories; and (b) to support Parties in meeting their reporting obligations under the Protocols as well as to increase policymakers' confidence in the data used for air pollution modelling.

21. The aim is to check in detail the inventories of each Party at least once every five years and to review approximately 10 Parties annually. CEIP recommends that non-Parties to the Protocols (i.e. those Parties that do not have formal obligations to report data under any of the

Protocols) should also submit their inventories to be reviewed in-depth to benefit from the review process, so as to build the national capacity to compile and submit emission inventories.

22. The table below presents a proposed schedule for in-depth reviews of Parties from 2008 to 2013 for consideration by the EMEP Steering Body at its thirty-third session and for subsequent submission to the Executive Body at its twenty-sixth session.

Table: Proposed schedule for stage 3 in-depth reviews of Parties

2008	France, Norway, Portugal and Sweden (this voluntary round of stage 3 reviews has been completed)
2009	Belgium, Bulgaria, Denmark, Finland, Hungary, Ireland, Latvia, Lithuania, Poland and Spain (the list of Parties to be reviewed was approved the Executive Body Bureau at its meeting in April 2009)
2010	Czech Republic, Cyprus, Germany, Italy, Netherlands, Romania, Russian Federation*, Switzerland and United Kingdom
2011	Austria, Belarus*, Croatia, Estonia*, Greece*, Iceland*, Luxembourg*, Malta*, Slovenia and Ukraine*
2012	Georgia**, European Community, Kazakhstan**, Kyrgyzstan*, Liechtenstein*, Monaco*, Republic of Moldova*, Serbia*, the former Yugoslav Republic of Macedonia and Turkey**
2013	Albania**, Armenia**, Azerbaijan*, Bosnia and Herzegovina**, France, Montenegro**, Norway, Portugal and Sweden

*/ Did not submit a complete emission inventory nor/or did not submit an IIR during the 2008 and 2009 reporting rounds.

**/ Did not submit neither inventory data nor an IIR for the last three reporting rounds.

23. In line with the methods and procedures for the stage 3 review, (ECE/EB.AIR/GE.1/2007/16), submission of an IIR is a prerequisite for a Party to be reviewed in an in-depth review. The purpose of the IIR is to transparently document the submitted data, providing an explanation of methods used, relevant activity data and key assumptions and also reasons for trends and changes therein.

24. It is important to note that the proposed review schedule can be implemented only if several Parties (indicated above by an * or **) that have not submitted their emission data and/or IIRs significantly improve their reporting. In view of this, the proposed plans for the years 2010 to 2013 may need to be amended by the Steering Body on the basis of the availability of the required information.

25. Participation of the United States of America and Canada in the in-depth review process of emission inventories would require clarification.

26. As noted earlier, the limited number of nominations to the roster of review experts constitutes another serious constraint to the successful conducting of the reviews and should be supplemented to ensure the availability of sufficient number of experts to cover all the requirements of the expert review teams. This can only be possible if all Parties nominate further national experts to the roster of review experts and support their participation in the review process; they have clearly recognized the value of this in terms of improving the quality of their national inventories. Furthermore, the EMEP Steering Body could discuss how to best support the participation of experts from EECCA and South-East European countries in the review process.

27. To increase efficiency and consistency of the review process, the EMEP Steering Body could also consider the following actions:

- (a) Development of review tools (e.g. data tools/locator tools/implied emission factors);
- (b) Further development of the Review Guidelines and templates;
- (c) Organizing training for review experts (on line and/ or training workshop);
- (d) Development of review procedures for point source data.
