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### 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-sixth session**

Geneva, 17-19 September 2012

Item 7 (c) of the provisional agenda

**Progress in activities in 2012 and future work: emissions**

### **Emission inventories and projections**

### **Report by the co-Chairs of the Task Force on Emission Inventories and Projections**

#### *Summary*

The mandate of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) Steering Body, as set out in Executive Body for the Convention on Long-range Transboundary Air Pollution decision 1999/2 (ECE/EB.AIR/68, annex III, appendix III), is to provide sound scientific support for the Convention, inter alia, in the area of emission inventories and emission projections. In that connection, the EMEP Steering Body is tasked with providing the Executive Body and other subsidiary bodies annually with an overall analysis of transboundary air pollution (*ibid.*, para. 4 (a)).

In line with that mandate, the present report reflects progress made and conclusions agreed at the twenty-fifth meeting of the EMEP Task Force on Emission Inventories and Projections, in accordance with the 2012–2013 workplan of the Convention, approved by the Executive Body at its twenty-ninth session (ECE/EB.AIR/109/Add.2, item 2.1).

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## **I. Introduction**

1. The twenty-fifth meeting of the Task Force on Emission Inventories and Projections under the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) was held on 14 and 15 May 2012 in Bern. The meeting of the Task Force, which is a subsidiary body of the United Nations Economic Commission for Europe (ECE) Convention on Long-range Transboundary Air Pollution (Air Convention), was held jointly with the European Environment Information and Observation Network (EIONET), maintained by the European Environment Agency (EEA). It was followed by a scientific workshop, held jointly with EIONET, which focused on the emissions of persistent organic pollutants (POPs). Conclusions from the joint workshop are presented in the annex to this report. Presentations and documents from the Task Force meeting and from the workshop are available online.<sup>1</sup>

### **A. Attendance**

2. Over 130 participants attended the annual Task Force meeting, representing over 40 countries as well as international organizations, including the EMEP Centre on Emission Inventories and Projections (CEIP), the Centre for Integrated Assessment Modelling (CIAM), the Meteorological Synthesizing Centre-West (MSC-W), the Task Force on Reactive Nitrogen, and several representatives from industry.

3. The co-Chairs recognized the need to improve the way personal information is handled by the Task Force, and therefore made some additions to the registration process.

4. The European Commission was represented by members of the Joint Research Centre and EEA was represented by several members of staff and its European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM).

### **B. Organization of work**

5. Mr. C. Dore (United Kingdom of Great Britain and Northern Ireland), Mr. M. Adams (EEA) and Ms. K. Saarinen (Finland) co-chaired the meeting of the Task Force.

6. The co-Chairs informed participants about recent work associated with revisions and amendments to protocols to the Air Convention, and in particular the work of the Steering Body, the Executive Body, and the Working Group on Strategies and Review. In addition, the Task Force held expert panel sessions on combustion and industry, agriculture and nature, transport, and on projections.

## **II. Protocol to Abate Acidification, Eutrophication and Ground-level Ozone**

7. The Task Force discussed the request from the EMEP Steering Body for technical guidance on adjustments, which had been included in the most recent version of the draft text for the revised Protocol to Abate Acidification, Eutrophication and Ground-level

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<sup>1</sup> <http://www.tfeip-secretariat.org/meetings/>.

Ozone (Gothenburg Protocol). The Task Force agreed to set up an ad hoc group with a remit to draft the required technical guidance.

8. The Task Force recognized the need to revise the Guidelines for Reporting Emission Data under the Convention on Long-range Transboundary Air Pollution (Reporting Guidelines) (ECE/EB.AIR/97) and its annexes, in particular the emission reporting template (annex IV), as well as the nomenclature for reporting (NFRs), in the near future.

### **III. 2012 emissions reporting and review**

9. The representative of CEIP was pleased to note that submitted Informative Inventory Reports (IIRs) and national datasets continued to improve in quality and number, although there were still Parties that did not make complete submissions. A number of Parties had not submitted large point source (LPS) data or gridded emissions data, both of which had been requested in 2012 as part of the five-yearly reporting cycle for those datasets. The co-Chairs again encouraged communication from those Parties to establish how the Task Force could try to facilitate support that directly delivered improvements to reported emissions data and IIRs.

10. Informal awards were given to recognize a range of best practice activities concerning the reporting of emissions datasets and IIRs. Awards were given to the United Kingdom (comprehensive reporting), the Netherlands (best presentation), Germany (most user-friendly reporting), Ireland (best reporting from a small country), the former Yugoslav Republic of Macedonia (most improved) and Denmark (most reliable reporting).

### **IV. Proposed revision of the EMEP grid**

11. The Task Force discussed proposed changes to the EMEP grid that had been presented by the EMEP centres, and agreed to support the proposal to move to a latitude-longitude-based projection, with a resolution of  $0.1^\circ \times 0.1^\circ$ . The Task Force also expressed support for continuing the current procedures associated with reporting gridded data.

### **V. The *EMEP/EEA Air Pollutant Emissions Inventory Guidebook***

12. The Task Force received several focused presentations from Denmark on the European Commission-funded project to update a large number of *EMEP/EEA Air Pollutant Emissions Inventory Guidebook* chapters, including the addition of black carbon, and presentations from EEA on the updating of the gridding chapter. Detailed discussions were held on different aspects of that work. It was noted that the addition of new knowledge on non-methane volatile organic compounds emission estimates from agriculture into the Guidebook could substantially increase national emission estimates.

13. The working group to update the Guidebook was expected to deliver draft reports to the Task Force in time for the next annual meeting in May 2013. The Task Force could then forward a recommendation for endorsement to the EMEP Steering Body prior to its meeting in September 2013.

14. The Task Force received an update from EEA regarding the translation of the Guidebook into Russian. That work was now complete, and a Russian version of the

Guidebook was available on the EEA website. A Russian version of the COPERT<sup>2</sup> road transport model was also available from the Internet.

15. Finland provided an update on the Air Pollutant Emission Factor Library, which now held emission factors from numerous countries as well as the *EMEP/EEA Air Pollutant Emissions Inventory Guidebook*.

## VI. Twenty years of the Task Force

16. Presentations were given from former chairs of the Task Force reflecting on the work of the Task Force over the past 20 years. The Task Force thanked all past contributors to its work and particularly recognized the valuable work undertaken by a number of long-standing major contributors.

## VII. Emissions inventory verification

17. The Task Force discussed a number of techniques that had been used for verifying emission estimates. In particular, it was noted that there were now a substantial number of datasets from international research projects, covering a wide range of topics, that could be used to undertake verification studies by comparison with the emission estimates that were reported by Parties. Several presentations were given on the subject:

- (a) The Swiss Emissions Inventory and Verification (Switzerland);
- (b) Global Monitoring for Environment and Security (GMES)<sup>3</sup> and Emissions Verification from Remote Sensing (EEA);
- (c) The Monitoring Atmospheric Composition and Climate (MACC) Inventory and Emissions Verification (The Netherlands);<sup>4</sup>
- (d) Verification in the Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS) model (International Institute for Applied Systems Analysis (IIASA)).<sup>5</sup>

## VIII. Other issues

18. The Task Force noted with regret that the ECE secretariat was again not able to attend the meeting, but again welcomed the attendance of the EMEP Steering Body Chair.

19. The Task Force Chairs expressed their appreciation to the Swiss Federal Office for the Environment for hosting the meeting, and thanked EEA for providing financial support to allow certain representatives to participate in the meeting. The Chairs also welcomed Nadine Allemmand (France) as the new co-Chair of the Task Force's projections expert panel.

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<sup>2</sup> Available from <http://www.emisia.com/>.

<sup>3</sup> <http://www.eea.europa.eu/highlights/eea-set-to-improve-data-flows-for-gmes>.

<sup>4</sup> [http://www.empa.ch/plugin/template/empa/701/109241/---/l=3/changeLang=true/lartid=109241/orga=/type=/theme=/bestellbar=/new\\_abt=/uacc=](http://www.empa.ch/plugin/template/empa/701/109241/---/l=3/changeLang=true/lartid=109241/orga=/type=/theme=/bestellbar=/new_abt=/uacc=).

<sup>5</sup> <http://www.iiasa.ac.at/gains/documentation.html>.

## IX. Future work

20. The Task Force agreed on the following main activities planned for the remainder of 2012 and into 2013, which would be submitted to the EMEP Steering Body in September 2012 for approval:

(a) To continue to provide a focal point for technical discussion on air pollutant emissions, and maintain current communication routes (including promotion of the web forum);

(b) To work closely with the Danish team undertaking the project to make improvements to a substantial number of *EMEP/EEA Air Pollutant Emissions Inventory Guidebook* chapters. That would include reviewing updated chapters prior to the Task Force meeting in 2013;

(c) To undertake work to improve chapters of the Guidebook, including:

(i) Continuing to work with representatives from the solvent industry, with the aim of obtaining information to allow improved emission methodologies to be developed;

(ii) Capturing the newly available information on road transport emissions factors;

(iii) Finalizing the chapter on aviation emission estimates;

(iv) Reviewing ammonia emissions from crops, and whether new NFR reporting categories were needed;

(d) To hold a joint meeting with the Expert Panel on Mitigating Agricultural Nitrogen<sup>6</sup> within the Task Force on Reactive Nitrogen (scheduled for September 2012);

(e) To form an ad hoc group to compile and deliver an initial draft of technical guidance on adjustments under the Gothenburg Protocol;

(f) To revise the Reporting Guidelines, update the reporting template, and consider revising the review guidelines;

(g) To monitor activities in different parts of EMEP relating to the upcoming revision to the Protocol on Heavy Metals, and plan for any technical support that might be requested of the Task Force;

(h) To liaise with CEIP to review the usefulness of the country specific stage 1 and 2 reports;

(i) To continue to encourage participation by Parties in the stage 3 review processes;

(j) To continue to liaise with parties not submitting data or IIRs, to facilitate more complete reporting, and aiming to promote the active participation of those national representatives.

21. The Task Force agreed to hold its next meeting (and workshop) in April or May of 2013, at a venue to be decided.

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<sup>6</sup> <http://www.clrtap-tfrn.org/epman>.

## Annex

### **Conclusions of the Joint Technical Workshop of the Task Force on Emission Inventories and Projections and the European Environment Information and Observation Network: estimating emissions of persistent organic pollutants**

1. The meeting of the Joint Technical Workshop of the Task Force on Emission Inventories and Projections and EIONET was attended by 43 participants representing 29 countries. The objective of the workshop was, in accordance with decision 2011/13 of the Executive Body, to discuss issues associated with estimating emissions of POPs and to establish some practical steps that could be taken to improve national data reporting.
2. The workshop received a number of informative presentations:
  - (a) ETC/ACM provided an overview of the current POPs reporting;
  - (b) Germany and Italy gave a Party perspective on estimating emissions of POPs;
  - (c) Denmark provided a progress report on the project to update the POPs information in the EMEP/EEA Guidebook.
3. Discussion groups were then formed, and the main conclusions from the discussion sessions were that:
  - (a) The first steps in compiling POPs estimates did not need to be large/difficult tasks. Parties not reporting data were therefore strongly encouraged to take the first steps in compiling an inventory. There should be nothing preventing Parties from using the default emission factors in the EMEP/EEA Guidebook to provide a first estimate of POPs emissions, if an activity was known to occur in their country;
  - (b) There was a need for more information on historic emission factors, to allow time series to be made (an issue not just common to POPs). Luxembourg offered to start a paper listing the issues, and possible approaches to address them;
  - (c) The Netherlands had developed a polycyclic aromatic hydrocarbons “conversion” table. That will be made available;
  - (d) A list of sources not currently included in the Guidebook would be compiled, and a more detailed list of sources was required for NFR 2F;
  - (e) The United Kingdom would lead the drafting of a template/survey questionnaire that could be used for national representatives to provide details of POPs measurements;
  - (f) The use of other datasets, such as pollutant release and transfer registers/point sources, could be valuable where there was no/limited activity data for relevant sources;
  - (g) The emissions inventory community would endeavour to better explain to policy representatives the limitations associated with POPs emission estimates, particularly in terms of the uncertainty inherent in the data.
4. The activities which were already being undertaken by an informal United Kingdom-led POPs network would continue, and information added to the Task Force website. The co-Chairs thanked the United Kingdom and EEA for taking the lead on that.