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

PROGRESS IN ACTIVITIES IN 2009 AND FUTURE WORK

EMISSIONS

EMISSION INVENTORIES AND PROJECTIONS

Report by the Co-Chairs of the Task Force on Emission Inventories and Projections

1. This report reflects progress made and conclusions agreed at the twenty-first and twenty-second meetings of the Task Force on Emission Inventories and Projections. It has been drafted in accordance with item 2.1 of the 2008 and 2009 workplans for the implementation of the Convention (ECE/EB.AIR/91/Add.2 and ECE/EB.AIR/96/Add.2), approved by the Executive Body at its twenty-fifth and twenty-sixth sessions.
2. The twenty-first meeting was held on 10 and 11 November 2008 in Milan, Italy. A scientific workshop on scales in emission inventories with a focus on special needs for global, regional and local emission inventories was held back-to-back to this meeting. The meeting was

jointly organized with the Joint Research Centre (DG-JRC) Institute for Environment and Sustainability. The twenty-second meeting was held on 11 and 12 May 2009 in Vienna. The Vienna meeting was held jointly with the European Information Observation Network (EIONET) maintained by the European Environment Agency (EEA). The outcomes of the twenty-first meeting can be found in chapters I and II and those of the twenty-second meeting in chapters III and IV. Conclusions from the workshop are presented in the annex to the report. Presentations and documents from both Task Force meetings and from the workshop are available at: www.tfeip-secretariat.org.

A. Attendance

3. Experts from the following Parties to the Convention attended at least one of these two meetings of the Task Force: Albania, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, The former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, United States of America and the European Community.

4. The cooperating bodies of the European Commission present at one or both meetings included the European Commission's Directorate-General on Environment and the DG-JRC Institute for Environment and Sustainability. Representatives from EEA and its European Topic Centre on Air and Climate Change (ETC/ACC) were present at both meetings. Representatives of the two centres of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP) were present: the Centre for the Emission Inventories and Projections (CEIP) and the Centre for Integrated Assessment Modelling (CIAM). A representative of the United Nations Framework Convention on Climate Change (UNFCCC) attended. A member of the Oil Companies' European Organization for Environment, Health and Safety (CONCAWE) was present, as was a member of the Convention secretariat.

B. Organization of work

5. Mr. C. Dore (United Kingdom), Ms. A. Mourelatou (EEA), Ms. K. Kindbom (Sweden), Mr. M. Adams (EEA) and Ms. K. Saarinen (Finland) co-chaired one or both meetings of the Task Force.

I. REPORT OF THE TWENTY-FIRST MEETING

6. The Head of Transport and Air Quality Unit, opened the twenty-first meeting of the Task Force on behalf of DG-JRC.

7. The meeting considered results of the 2008 reporting round and progress made with respect to improving the inventory reporting, with a specific focus on the needs and challenges of the non-European Union (EU) countries. It considered a number of research projects with the potential to contribute to the improvement of the emission inventories. It focused on reviewing progress in updating the *EMEP/EEA Air Pollutant Emission Inventory Guidebook* and agreed on plans for the finalization of the remaining chapters. In addition, it held initial discussions on the future maintenance and improvement of the *Guidebook* and agreed to prepare a plan to this end.

8. A representative of the secretariat presented the conclusions of the EMEP Steering Body from its thirty-third session, in September 2008, including the acknowledgement of the lack of dedicated resources and the absence of a systematic approach for maintaining and improving the *Guidebook* as well as an invitation to the Task Force to present to its thirty-third session in September 2009 a draft maintenance plan specifying tasks, responsibilities and estimated costs for the *Guidebook*'s maintenance. Furthermore, the secretariat informed the meeting about a new workplan item of the EMEP Steering Body related to enhancing cooperation with Eastern Europe, Caucasus and Central Asia (EECCA). An update on the revision of the Gothenburg Protocol¹ and the 1998 Protocol on Persistent Organic Pollutants (POPs) was also provided.

9. In parallel with the meeting, informal consultations with countries in EECCA and South-Eastern Europe (SEE) were held to discuss ways to improve emission reporting from these countries. In addition, EEA provided an informal training session on the use of the CollectER emission inventory software tools it had developed together with ETC/ACC.

A. Inventory reporting and improvements

10. A representative of CEIP presented preliminary information about the 2008 reporting round. She highlighted that out of the 51 Parties to the Convention, only 40 were Parties to the protocols and consequently subject to reporting obligations. Therefore, the importance of receiving data also from non-Parties in order to fill data gaps in the extended EMEP region was stressed. The Task Force was updated on the work of the stage 3 expert review team that had met in Copenhagen from 6 to 10 October 2008 to review the emission inventories and informative

¹ The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.

inventory reports (IIRs) of the four Parties that had volunteered for the review in 2008: France, Norway, Portugal and Sweden. The representative of CEIP acknowledged the review team for its excellent work, stressing that the review was a time-consuming exercise that had involved a substantive amount of preparatory work prior to the review meeting. She informed the Task Force that, to ensure the success of the future reviews, availability of training of the review experts would be beneficial.

B. Recent research projects

11. A representative of AEA Energy and Environment² presented an update and findings of a European Commission-funded project for streamlining climate change and air pollution reporting obligations, with the objective of reducing duplicative reporting and increasing transparency between different emissions-related data sets, including those reported under the Convention and UNFCCC. The presentation also considered the reporting of point-source data, and how these meshed with existing requirements for national-level emissions inventories. The Task Force noted that steps taken to streamline reporting, at all spatial scales, would result in a significant reduction in the reporting burden to Parties, and agreed that an assessment of the options available to undertake this was of significant value.

12. A representative of TNO³ informed the Task Force about the use of the European Pollutant Register (EPER) in assessing benefits of abatement policies in industry. He stressed the need for better enforcement of the abatement policies to cover all facilities and all threshold pollutants as well as the need to better streamlining reported facility data with national-level inventories. He presented some innovative analysis of overlapping data sets, and explained the insight that can be obtained in assessing the shortcomings of some officially reported data.

13. A representative of the Aristotle University of Thessaloniki, Greece, presented FLEETS, a European Commission-funded European Database of Vehicle Stock for the Calculation and Forecast of Pollutant and Greenhouse Gases Emissions with the TREMOVE and COPERT models. The database covers the vehicle stock of a number of European countries. More information and data may be accessed at: <http://lat.eng.auth.gr/copert/>. The project has undertaken the significant task of collecting data from countries and unifying these into one consistent data set. The inconsistencies that arise were explained, and solutions were presented.

² An international consulting company.

³ Netherlands Organization for Applied Scientific research.

14. A representative of DG-JRC informed the meeting about modelling of emissions from transport carried out within DG-JRC. She presented the use of portable emissions measurements (PEMS) as an example of the research undertaken, and illustrated the uses of the PEMS data in the emission modelling. Difficulties associated with the use of data from different sources were discussed.

15. A representative of TRT Trasporti e Territorio Srl⁴ presented EX~TREMIS (Exploring non-road transport emissions in Europe), a reference system on fleet and transport activity data, specific energy consumption, emission factors and total emissions for non-road transport modes (maritime, rail and aviation). The data set covers the 27 EU Member States for the years 1980–2005, with projections for their development up to 2030. The Task Force noted the value of this information, and experts were encouraged to consult the wealth of information available on the dedicated website (<http://www.ex-tremis.eu/>).

C. Updating the Emission Inventory Guidebook

16. A representative of Belarus informed the meeting about the needs and expectations of the EECCA countries regarding the *Guidebook* as well as presented an in-kind contribution of Belarus to the development of the *Guidebook*.

17. The Chair provided an overview of the work carried out by the Task Force, its expert panels and consultants to update the *Guidebook* during and in between its meetings, starting from the Task Force's meeting in Dessau, Germany, in May 2007 up to the acceptance of the majority of the updated chapters at its meeting in Tallinn in May 2008. In Tallinn, the Task Force had requested the consultants to implement further changes and had set up an ad hoc group of national experts to verify, with the support of the expert panels, that the problems identified had been properly addressed. On that basis, the Task Force had mandated the ad hoc group, on its behalf, to recommend or not to the EMEP Steering Body to consider adopting the *Guidebook* at its thirty-second session in September 2008. In spite of the further improvements to the remaining chapters, however, the ad hoc group had not been able to approve all of the chapters, and had flagged a number of problems that required further work.

18. The Task Force worked further on the remaining issues in sectoral break-out groups chaired by the Chairs of the Task Force's expert panels on combustion and industry, transport, agriculture and nature, and projections. In addition, the Task Force considered the needs and requirements for the future maintenance and improvement of the *Guidebook*.

⁴ An Italian consultancy specializing in transport and land use policies.

II. CONCLUSIONS OF THE TWENTY-FIRST MEETING

A. General conclusions

19. The Task Force:

(a) Expressed its appreciation to DG- JRC for hosting the meeting as well as for organizing with the Task Force back-to-back with the meeting a joint workshop on scales in emission inventories;

(b) Echoed the EMEP Steering Body in warmly welcoming the offer of the United Kingdom to lead the Task Force, as well as its nomination of Mr. C. Dore as its new Chair, which would be presented to the Executive Body in December 2008;

(c) Welcomed the organization of the consultations with EECCA and SEE representatives on ways to improve emission inventory reporting from those countries, and thanked Norway for financially assisting the participation of experts from these countries. The Task Force also noted the conclusion on the general need for financial and technical assistance;

(d) Appreciated the initiative of the Russian research institute, SRI Atmosphere, to host a joint workshop of the Task Force with the Task Force on Hemispheric Transport of Air Pollution in early 2009 in Saint Petersburg;

(e) Expressed its appreciation for the training provided by EEA on the use of the CollectER software;

(f) Took note of the update provided by the Convention secretariat on the revision of the Gothenburg and POPs Protocols;

(g) Took note as well of the information from the Convention secretariat on the conclusions and the draft workplan for 2009 adopted by the EMEP Steering Body at its thirty-second session. These included on the Steering Body's invitation to the Task Force to present to the former's thirty-third session in September 2009 a draft maintenance plan specifying tasks, responsibilities and estimated costs for the *Guidebook's* maintenance, as well as on a new workplan item for enhancing cooperation with EECCA and SEE, in particular with a view to obtaining emission data and establishing monitoring and modelling activities.

B. Inventory reporting and improvements

20. The Task Force:

(a) Noted that the draft revised *Emission Reporting Guidelines*, as amended by the Working Group on Strategies and Review in consultation with legal experts, together with the draft decision by the Executive Body on emission data reporting under the Convention and its protocols, had been submitted for adoption to the Executive Body at its twenty-sixth session in

December 2008. The draft Guidelines were to be used by Parties as a basis for their data reporting in 2009;

(b) Took note of the preliminary information about the 2009 reporting round, templates and procedure for data submission to CEIP, as well as of the invitation to Parties to revise their energy projections, including climate change policy measures and national shipping emissions, and to submit them to CIAM for use in the ongoing revision of the Gothenburg Protocol;

(c) Welcomed the information provided by CEIP on the voluntary stage 3 review of the emission inventories carried out in October 2008, and thanked both the national representatives who participated as expert reviewers in the voluntary review and the respective Parties that had funded their participation.

C. Recent research projects

21. The Task Force:

(a) Welcomed the following five presentations provided by the research community on projects with the potential to contribute to the improvement of the emission inventories (see paras. 11–15);

(b) Acknowledged that some of the activities relating to climate change mitigation may have adverse impacts on air quality, and urged that this be taken into account in the work under the Convention.

D. Updating the Emission Inventory Guidebook

22. The Task Force:

(a) Welcomed the information update provided by Mr. Kakareka regarding the in-kind contribution of Belarus to the *Guidebook's* development;

(b) Noted introductory comments from the Chair regarding the finalization of the *Guidebook* and its maintenance;

(c) Thanked the ad hoc group of experts for its consideration of the *Guidebook* chapters;

(d) Took note of the Chairs from the Task Force's expert panels reporting back on their discussions regarding the remaining 12 chapters, and of the endorsement of the two remaining chapters by the expert panel on agriculture and nature as well as the endorsement of the remaining 10 chapters (subject to amendments) by the combustion and industry expert panel;

(e) Agreed a process to finalize the remaining chapters by the consultants and the expert panels, with a view to recommending their acceptance by the EMEP Steering Body at its thirty-third session;

(g) Welcomed comments from its expert panels on the elements of a maintenance and improvement plan (MIP) for the *Guidebook*, and invited discussion of further inputs to the MIP at the Task Force's spring meeting;

(h) Agreed that an electronic version of the *Guidebook* tables, in the form of an electronic emission factor tool, would be useful as an editorial tool and for users of the *Guidebook*;

(i) Acknowledged the need for identifying a country or organization with responsibility for hosting the electronic emission factor tool;

(j) Noted as well that the transport expert panel and the agriculture and nature expert panel did not consider an electronic emission factor database to be necessary per se for their work, whereas the combustion and industry expert panel considered it to be a potentially useful tool for developing its work.

E. Closing of the meeting

23. The Task Force:

(a) Adopted the decisions taken during the meeting;

(b) Expressed its preference for holding only one annual meeting of the Task Force each spring, but leaving its expert panels free to meet more frequently as needed.

III. REPORT OF THE TWENTY-SECOND MEETING

24. The Task Force's twenty-second meeting in Vienna was opened by representatives of the University of Natural Resources and Applied Life Sciences (BOKU) and the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management. The meeting was held jointly with EIONET.

25. A representative of the Convention secretariat presented the conclusions of the Executive Body from its twenty-sixth session in December 2008 as well as those of its Bureau. She stressed the approval of the *Guidelines for Reporting Emission Data* as amended at the session (ECE/EB.AIR/97), would provide a basis for the emission reporting by the Parties, as well as the adoption of decision 2008/16 on emission data reporting. Regarding the stage 3 emission inventory reviews of 2009, she informed the meeting that on the basis of the recommendations of CEIP and the EMEP Steering Body Chair, the Executive Body Bureau had approved a list of the following 10 Parties to be reviewed in 2009: Belgium, Bulgaria, Denmark, Finland, Hungary,

Ireland, Latvia, Lithuania, Poland and Spain. At the Bureau's request, the secretariat had informed the Parties to be reviewed by official letter. Furthermore, the Bureau had invited the EMEP Steering Body to submit, for approval of the Executive Body at its twenty-seventh session, a proposed schedule for Parties to be reviewed in the next five years (2010–2015).

26. A representative of Kazakhstan presented an overview of the main challenges related to the emission inventories in the EECCA countries that had been discussed at the workshop organized by the Russian Federation Atmospheric Institute SRI in Saint Petersburg in April 2009. She emphasized the lack of emissions reporting experience and the need for assistance in the form of a project that was specific to inventory preparation and emissions reporting. She also highlighted the request made by the EECCA countries that a translation of the latest *EMEP/EEA Air Pollutant Emission Inventory Guidebook* into Russian be made available as soon as possible.

A. 2009 emissions reporting and review

27. Representatives of CEIP informed the Task Force about the preliminary outcomes of the 2009 reporting round, focusing on lessons learned from the 2008 voluntary stage 3 review of emission inventories of France, Norway, Portugal and Sweden and from the preparations for the stage 3 review of 10 Parties in 2009. They pointed out that the timeliness of reporting in 2009 had improved compared to the 2008 reporting round. Forty-one of the 51 Parties to the Convention had reported data, 26 of them within the deadline. All 27 EU Member States under the EU National Emission Ceiling (NEC) Directive had submitted at least some data (19 within the deadline). A number of countries had not used the updated templates (NFR08) requested in the *Emission Reporting Guidelines* or did not report all of the information as requested in templates. As a result, CEIP had to spend additional resources processing the data before the review. Syntheses and assessment country reports from the stage 1 and 2 reviews would be available on the CEIP website by the end of May 2009. Parties should respond to the review findings within four weeks after publication. Summary results would be published by CEIP jointly with EEA in a review report in July 2009.

28. The AEA Energy and Environment representative presented the lead reviewer perspective to the stage 3 reviews. He indicated the importance of the responsiveness of the Parties being reviewed, and noted that this had been appreciated in 2008. He also explained the importance of the reviewers having a good command of English, as it was the working language of the review team, as well as the importance of the availability of IIRs in English – or at least a summary of the main information they contained – as this would promote transparency in the resources available. He reflected on the need of Lead Reviewers to ensure that technical questions from the expert review team were posed to countries in a clear and consistent manner, and thanked EEA for providing information technology resources to the expert review team

during the 2008 review meeting. Some amendments to the working templates used in the review process had been flagged, and would be addressed before the 2009 stage 3 review.

29. Representatives of two of the Parties that had volunteered for the review in 2008 presented their views, reporting that while the review process was demanding in terms of time and resources, there were clear benefits to being both a reviewer and a reviewed Party. The French representative commented that October had not been the most convenient time of year for the review. He was informed that this had been addressed for the 2009 stage 3 reviews being held in June. He concluded that the review process had highlighted a number of improvement areas, which would be addressed in the national inventory in the following cycle. The Swedish representative explained that there had been a good understanding between the Swedish Environmental Protection Agency and the Expert Review Team (ERT), reflected by the timely response for the questions raised by ERT. He indicated that ERT had done excellent work, which was reflected in the quality of their recommendations. He concluded that the findings and recommendations provided by ERT would promote the quality of future reporting from Sweden.

30. The representative of CEIP informed the meeting about the changes to the reporting templates following the revision of the *Guidelines for Reporting Emission Data* (ECE/EB.AIR/97), adopted by the Executive Body in December 2008 and published in January 2009 (available in English, French and Russian). The Guidelines have seven technical annexes, including the reporting formats for Parties in annex VI. She reported that some minor inconsistencies in the templates had been identified which would be corrected by the Task Force in cooperation with CEIP. The slightly revised nomenclature for report (NFR) version for 2010 reporting round would be posted on the CEIP website (<http://www.ceip.at/reporting-instructions/>) before the end of September 2009.

B. Research projects and emission inventory developments

31. Four presentations were given by the research community on projects with the potential to contribute to the improvement of the emission inventories:

(a) An update of Austrian particulate matter (PM) emission inventory was presented by a representative of International Institute for Applied Systems Analysis (IIASA), including a number of recent improvements made to the emissions estimates. Importantly, this presentation raised a number of questions associated with the emission factors applied at different distances from the source. For PM, this was particularly important as it was known that there was considerable deposition at short distances, and hence some literature emission factors derived from measurement may give rise to overestimation of the emissions actually emitted and

transported over larger distances. The concepts of “potential” and “actual” release were introduced. This was also discussed in the context of emissions from agriculture more generally;

(b) The findings of the European Commission-funded project, Streamlining Greenhouse Gas and Air Pollution Reporting were presented. These included an overview of the benefits of streamlining, and how easily existing reporting requirements could be amended to provide a more streamlined situation for both national and installation reporting levels;

(c) A representative of TNO presented improvements to metal emission estimates. He explained the ongoing problem that the current emissions inventory knowledge was not always able to explain the ambient concentrations of many heavy metals. The presentation made a number of conclusions. Road transport engine and brake-wear emissions were important metal sources, and updates to the literature may be needed due to changes in materials. Based on a measurement campaign, the concentrations of the heavy metals in road transport fuels across Europe were generally low (below 10 µg/kg). Through identification of major sources and uncertainties for a particular metal, source hypotheses could be formulated, verified or proven wrong. This helped reduce uncertainties. Further measurement campaigns were needed to move away from the speculation caused by a lack of data, and the use of emission estimates and models should be used to define and help prioritize further investigation;

(d) The representative of Belarus presented proposed additions to the Nickel Production chapter, an in-kind contribution by Belarus to the *Guidebook*'s revision. Specific improvements were proposed for chapter 2C5c, and tables of emission factors were presented. A number of challenges were identified, in particular the difficulties associated with estimating emissions from plants producing different kinds of metal products. It was also noted that detailed contextual information was needed when emission factors were provided in the *Guidebook*, to ensure their appropriate use.

C. European Information Observation Network

32. National EIONET representatives and Task Force participants were given an update concerning recent EIONET-related activities and projects.

(a) A representative of EEA provided an update concerning recent and foreseen EEA and EIONET activities in the field of air pollutant emissions. This included a short description of the new EEA new strategy for the five-year period 2009–2013 and the internal reorganization, recently published and planned reports (including the EEA State and Environment Outlook 2010 report), key data activities foreseen in 2009 (including the launch of the European Pollutant Release and Transfer Register (E-PRTR) in October 2009) and a summary of foreseen requests for EIONET support during the remainder of 2009;

(b) A number of different options concerning potential technical procedures to fill gaps in emissions data in the European Community's annual emission inventory submission

under the Convention were presented. Available data was summarized to demonstrate how these might be used. Any gap filling would be conducted in a transparent manner, accompanied by consultation with the relevant Party, and emissions data already officially submitted by the Party would be used in the European Community inventory wherever possible;

(c) A comparison between European modelled and reported national transport emission inventory estimates was made by a representative of ETC/ACC. The results of the study would be published later this year by ETC/ACC, and national experts were invited to comment upon the results;

(d) Another representative of ETC/ACC presented impacts of selected EU emission policies on European emissions and air quality levels. His presentation included an analysis of the effects of road transport emission reduction measures in Europe on both trends of emissions and air quality and clearly showed that a significant reduction has already been obtained both in emissions and in ambient concentrations of particulates. The picture for tropospheric ozone was more complicated. Additional reductions were possible if all abatement measurements were fully implemented. Preliminary analyses for emission reduction measures in large combustion plants were also presented. The results of the study would be published later this year by EEA.

D. The Guidebook and expert panel sessions

33. The Chair presented a recap of the timeline proposed for the *Guidebook* update and reminded the Task Force that it was scheduled to accept all remaining chapters in the course of the meeting. He stressed the importance of this task and provided an update on the progress of compiling an MIP for the *Guidebook*, explaining the timeline of actions associated with this. He presented some points that had already been identified as priorities for the MIP.

34. The representative of Finland, and Task Force co-Chair, Ms. Saarinen, provided an overview of what the Finnish Environment Agency would be prepared to undertake as part of developing an electronic emission factor library. There was extensive discussion regarding the audience for such a tool, and hence its required functionality. The Chair of the Task Force's combustion and industry expert panel, noted that a different tool (a "Guidebook emission factor compiler") would be of value in maintaining the *Guidebook's* emission factors. It was agreed that Ms. Saarinen would liaise with the other Task Force Co-Chairs in moving this initiative forward. EEA also offered to investigate the future publishing, where appropriate, of emission factors from the revised *Guidebook* in an electronic format online

35. The following is a summary of the parallel meetings of the Task Force's expert panels on the *Guidebook*:

(a) Agriculture and nature expert panel: The Chair of the panel reported that all outstanding *Guidebook* chapters had been discussed and recommended for acceptance. It had been decided that more research would be needed before non-methane volatile organic compounds (NMVOCs) emissions could be included in chapter 4B. Two chapters under Nature (11B Forest fires and B1109 Gas seep) had been updated since the last Task Force meeting, and hence were also recommended for acceptance. An outline of priorities going forward was presented; this included topics both within and outside the scope of the expert panel with its current level of funding;

(b) Combustion and industry expert panel: The Chair of the panel reported that all 10 outstanding chapters had been discussed and were recommended for acceptance. A list of ongoing updates to the *Guidebook* was in the process of being compiled. TNO had offered to support the panel by providing and funding a co-chair. In discussions on the possible restructuring of the expert panel, it was recommended that the expert panel stayed as one panel, but that its co-chairs have clearly defined responsibilities for different source sectors;

(c) Transport panel: The Chair of the panel reported that some editorial amendments to the chapters had been discussed, and all had been accepted. He underlined the need to reflect the authorship of the *Guidebook* more clearly, and it was agreed that this would be addressed as part of the EEA publication procedure. The transport panel had indicated its willingness to help with capacity-building activities and encouraged the EEA and JRC to consider funding options. Mr. Ntziachristos noted that there were a number of relevant projects being undertaken, and explained that the expert panel would ensure linkages to capture any relevant outcomes;

(d) Projections expert panel: The Chair of the panel reported that at this expert panel meeting presentations from the European Commission, Ireland and Slovakia had been followed by discussions of recent meetings. Revisions had been made to the projections chapter in the *Guidebook*, and the current version was considered to be suitable for acceptance. A number of other topics had been discussed, including communications within the expert panel.

E. Concluding session

36. The representative of EEA gave a short presentation regarding article 7 of the draft Gothenburg Protocol text as discussed at the April meeting of the Working Group on Strategies and Review, with possible options for revising it for reinforcing the reporting obligations under the Protocol. The Working Group had concluded that as the Task Force did not operate under the Working Group and could not report directly to it, the Chair of the EMEP Steering Body could be invited to bring the Task Force's input to the attention to the Working Group. Furthermore, the participating experts were encouraged to provide input through their governmental representative in the Working Group.

37. Participants were also informed participants of the planned publication process during 2009 of the revised *Guidebook*. In response to the 2008 request made by the EMEP Steering Body, the draft chapters as endorsed by the Task Force would be made available to national experts to allow their use in national inventory compilation, prior to their anticipated formal approval by the Steering Body in September 2009, followed by endorsement by the Executive Body in December 2009. EEA would have discussions with representatives of the Convention to identify a suitable time for a joint launch of the revised and substantially updated *Guidebook*.

38. The conclusions of the meeting were presented and agreed. Certain other more general topics were discussed. In particular, representatives were encouraged to seek opportunities for additional support to the Task Force and to support EECCA country activities where this was possible. Cyprus offered to host the Task Force's 2010 meeting, and was warmly thanked for its offer.

39. Changes to the Task Force Co-Chairs were explained. The outgoing Co-Chairs, Ms. Mourelatou (EEA) and Ms. Kindbom (Sweden) were thanked for their contributions and hard work over the last several years. The Chair welcomed the nomination of Mr. Adams (EEA) and Ms. Saarinen (Finland) as the new Co-Chairs.

IV. CONCLUSIONS OF THE TWENTY-SECOND MEETING

A. General conclusions

40. The Task Force:

(a) Expressed its appreciation to the University of Natural Resources and Applied Life Sciences (BOKU) for hosting the meeting and to the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management for providing financial support;

(b) Thanked the outgoing Co-Chairs, Ms. Mourelatou and Ms. Kindbom and welcomed the nominations of Mr. Adams and Ms. Saarinen as the new Co-Chairs;

(c) Thanked Norway for providing financial support to experts of EECCA countries, thus facilitating their attendance at the meeting;

(d) Took note of the update provided by the secretariat on the Executive Body's decisions made at its twenty-sixth session, including on the approval of the revised *Guidelines for Reporting Emission Data*. These would provide a basis for the reporting by Parties as of 2009, as well as for the update on the revision of the Gothenburg and POPs Protocols;

(e) Noted with appreciation the presentation of the representative of Kazakhstan on the current state of emission inventories in EECCA countries, and welcomed the links made with

the Task Force on Hemispheric Transport of Air Pollution at the workshop hosted by the Russian Federation in St Petersburg in April 2009;

- (f) Agreed to compile information from EECCA countries on priority issues.

B. 2009 emissions reporting and review

41. The Task Force:

- (a) Took note of the information presented by CEIP on the current emission inventory reporting status, as indicated by the stage 1 and 2 assessments, as well as on the stage 3 reviews;

- (b) Thanked the stage 3 review teams from Austria, the Czech Republic, Denmark, France, Ireland and the European Community, and thanked CEIP and the national emission experts of France, Norway, Portugal and Sweden for participating in the 2008 voluntary reviews;

- (c) Welcomed the feedback from the stage 3 lead reviewer, as well as from France and Sweden, and noted with appreciation that lessons learned from the 2008 review were being used to improve the stage 3 reviews carried out as a mandatory exercise as of June 2009;

- (d) Agreed to explore opportunities at the national level for increasing nominations of stage 3 review experts to enable conducting of the reviews and beyond, and noted that the next stage 3 review was scheduled for 22–26 June 2009;

- (e) Took note of the information provided by CEIP on the changes to the reporting formats and annexes to the *Guidelines* following their revision. The revised reporting templates for the 2010 reporting round would be made available in September 2009 via the CEIP website;

C. Recent research projects and emission inventory developments

The Task Force welcomed the four presentations provided by the research community on projects with the potential to contribute to the improvement of the emission inventories (see para. 31).

D. European Information Observation Network

42. The Task Force and EIONET:

- (a) Took note of the update on EEA and EIONET activities;

- (b) Noted the information on the gap-filling process for the European Community's inventory under the Convention;

- (c) Welcomed the information provided on the following ETC/ACC research projects.

E. The Guidebook

43. The Task Force:

- (a) Thanked the expert panels for their work in finalizing the update of the *Guidebook*, and took note of their conclusions regarding the remaining chapters;
- (b) Specifically thanked experts from Denmark, the Netherlands, Spain, the United Kingdom and EEA for their work in finalizing specific chapters;
- (c) Agreed to recommend the adoption of all chapters;
- (d) Noted that a number of proposed amendments to the *Guidebook* were planned in the future as part of the MIP;
- (e) Approved elements for the draft MIP to be finalized by the Co-Chairs together with the expert panel leaders in time for submission to the EMEP Steering Body at its thirty-third session;
- (f) Thanked the Finnish Environment Agency for its offer to host an “Emission Factor Library”, and noted the offer of EEA to investigate the future publishing, where appropriate, of emission factors from the revised *Guidebook* in an electronic format online;
- (g) Noted that the draft *Guidebook* as endorsed by the Task Force would be published by the EEA in line with the Steering Body’s request;
- (h) Thanked the EEA for undertaking the proofing and publication of the *Guidebook* prior to its formal publication later in 2009.

F. Workplan 2010

44. The Task Force:

- (a) Discussed its main activities in 2010 to be included in the workplan to be approved by the EMEP Steering Body at its thirty-third session;
- (b) Agreed to review opportunities to increase national contributions to the activities of the Task Force;
- (c) Agreed to review the guidelines for stage 3 review participants and reviewers;
- (d) Agreed to hold its next meeting in spring 2010 (preliminarily scheduled for late April), and warmly thanked Cyprus for its offer to host the meeting.

G. Other issues

45. The Task Force considered reinforcing of the reporting obligations under the Gothenburg Protocol and suggested that the EMEP Steering Body Chair bring these considerations to the attention of the Working Group on Strategies and Review.

Annex

SUMMARY AND CONCLUSIONS FROM THE WORKSHOP ON SCALES IN EMISSION INVENTORIES

Summary, action points and recommendations from the workshop on issues of scales in emission inventories

(Milan, Italy, 12 November 2008)

1. Introduction and objective. A workshop on “Issues of scales in emission inventories: Special needs for global, regional and local emission inventories” was organized by the European Commission’s Joint Research Centre in collaboration with the Task Force on Emission Inventories and Projections. The objective of the workshop was to address the issue of scales in emission inventories from facility-level emissions to global-scale emissions and their relevant uses. National experiences were also discussed and experiences from new research in the field were illustrated. The meeting Chairs were Ms. P. Dilara and Mr. J. van Aardenne.

2. Summary of the presentations given in plenary:

(a) The Co-Chair of the Task Force on Measurements and Modelling presented the outcome of the workshop organized by the Task Force on the issue of scales in air quality modelling and their links with the same issues in emission inventories;

(b) Representatives of ETC/ACC presented the inconsistency between facility-level data and national submissions, identifying the need to integrate regulated data, such as EPER or data available through the European Trading Scheme, into national statistics;

(c) A new method for calculating emissions from road transport and the ARTEMIS Embedded Computing Systems Initiative, involving the European Commission and the EU Member States, were presented;

(d) Italian, French and Dutch experiences from inventory compilers at the regional and national levels were presented;

(e) Representatives of CEIP presented the procedures adopted at the new CEIP for compiling emission data and preparing data sets for modellers;

(f) The development of high spatial and temporal resolution emission models for the whole of Europe and the development of an emission inventory for global modelling for use by the Task Force on Hemispheric Transport of Air Pollution were presented. The associated emission inventories were compiled using a variety of sources, such as EMEP and UNFCCC submissions, GAINS-Asia, Regional Emission Inventory for Asia (REAS) and Emission

Database for Global Atmospheric Research (EDGARv4);

(g) A new method that allowed the significant detail contained into emission inventories to be transported into and used by the air quality models was presented. This bridges the gap between the details of emission inventories and what could be used by models up to now.

3. Conclusions. The workshop provided some insight into key issues and possible future activities, including:

(a) The need to hold regular joint workshops between the emission inventory and air quality modelling communities and to enhance communication in order to identify common areas of improvement;

(b) The need to make use of all available data, from detailed facility data reported for other purposes, and data reported at different scales, including satellite data, to improve and/or validate emission inventories;

(c) More effort was needed in the temporal resolution of emission inventories, especially for those sectors that depend on meteorology, such as agriculture, small combustion sources, etc.

(d) Use should be made of available tools such as wikis, Google Earth and geographic information systems (GIS), to facilitate visualization and information exchange between inventory compilers;

(e) New methods were now available to transport sub-grid emission inventory variability into air quality models.
