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ECONOMIC COMMISSION FOR EUROPE
EXECUTIVE BODY FOR THE CONVENTION ON
LONG-RANGE TRANSBOUNDARY AIR POLLUTION
Working Group on Strategies and Review
(Thirty-sixth session, Geneva, 13-16 September 2004)
Item 4 on the provisional agenda

TECHNO-ECONOMIC DATABASE DEVELOPMENT

Prepared by the Chairman and members of the
Expert Group on Techno-economic Issues in consultation with the secretariat

Introduction

1. This progress report covers the past two meetings of the Expert Group on Techno-economic Issues. The fifth meeting took place in Angers (France) on 9-10 October 2003 and the sixth in Paris on 18 June 2004. The conclusions and recommendations from both meetings are set out in chapter III below. The minutes and presentations are available at: http://www.citepa.org/forums/egtei/egtei_index.htm.

2. Both meetings were organized by the Interprofessional Technical Centre for Studies on Atmospheric Pollution (CITEPA) and the French-German Institute for Environmental Research (IFARE). Representatives of the French Agency for Environment and Energy Management (ADEME), the French Ministry of Ecology and Sustainable Development and experts from the following Parties participated in one or both meetings: Czech Republic, Finland, France, Germany, Italy, Latvia, United Kingdom. A member of the secretariat attended, as did a representative of the Centre for Integrated Assessment Modelling (CIAM).

3. The following industry groups were represented: Association of European Automobile Manufacturers (ACEA), European Chemical Industry Association (CEFIC), European Federation of Iron and Steel Industries (EUROFER), European Metals Association (EUROMETAUX), Oil Companies' European Organization for Environment, Health and Safety (CONCAWE), National Association of Electricity and Thermal Energy (SNET), Technical Association of Hydraulic Industry (ATILH), British Petroleum (BP) International Ltd., Electricity of France (EDF), and Renault

4. Mr. O. Rentz (IFARE) chaired the first meeting; Mr. R. Bouscaren (CITEPA) chaired the second meeting.

I. FIFTH MEETING OF THE EXPERT GROUP (9-10 October 2003, Angers)

A. Progress made on techno-economic database development

5. The Expert Group met from 9 to 10 October 2004 in Angers to assess progress in the collection of data through the newly developed ECODAT, the database developed under the Expert Group to determine the costs of air pollution abatement technologies and their applicability among Parties to the Convention. The data were to be used in the RAINS model maintained by CIAM.

6. The Chairman noted the need to clarify the work-plan of the Expert Group for the coming years (2004-2005) and to set priorities, especially in the light of the data that had been delivered to CIAM and the work done in the context of the European Commission's Clean Air for Europe (CAFE) programme.

7. Mr. M. B. Calaminus (IFARE) gave an overview of the work to date of the Expert Group, noting the participation by an expert from Serbia and Montenegro and the encouraging participation from other Parties. He described the data flow within the Expert Group, from each country into ECODAT, and thereafter to CIAM for the revision of protocols to the Convention and for CAFE. The first transfer of information from ECODAT to CIAM had taken place, beginning with data on sectors emitting volatile organic compounds (VOCs). As CAFE requirements had influenced the work of the Expert Group until now, the Expert Group would need to decide what its future focus would be.

8. Mr. Ball (IFARE) described the new features that had been added to ECODAT since the steering group's meeting in April 2003 and presented the database on CD-ROM. ECODAT now included parameters showing variable operating costs, using the example of service stations. It was now also possible to derive emissions projected for 2020 using an import-export feature to transfer data to other users and organizations. Also newly implemented was the calculation of

costs per ton of VOC abated, a change in the presentation of application rates and the ability to aggregate detailed data so that they could be more readily transferred to CIAM.

B. Synergies with other groups: Working Group on Strategies and Review, Expert Group on Ammonia Abatement, Task Force on Emission Inventories and Projections

9. Working Group on Strategies and Review and Executive Body. The secretariat informed the Expert Group about the reporting of its work to the Working Group on Strategies and Review at its thirty-fifth session. The Expert Group agreed to request guidance from the Working Group on priorities and procedures for the updating of technical annexes to protocols that would be entering into force.

10. Expert Group on Ammonia Abatement. Ms. N. Allemand (CITEPA) reported the results of the joint meeting of the Expert Group on Techno-economic Issues and the Expert Group on Ammonia Abatement, in cooperation with the agriculture and nature panel of the Task Force on Emission Inventories and Projections (11-12 June 2003, Paris). She noted, in particular, the circulation of a questionnaire to Parties to fill statistical gaps and to improve the quality of reporting on ammonia emissions and abatement measures. She described a project initiated by CITEPA on costs and benefits of emission equipment on all types of cars and trucks, for import into RAINS. The objectives were to determine mainstream technologies for each category and level of European emission legislation, to understand the effect of these technologies from a quantitative and theoretical perspective, and to determine secondary technologies and future expectations of technology penetration.

11. Task Force on Emission Inventories and Projections. Mr. M. Woodfield, Chairman of the Task Force on Emission Inventories and Projection, noted its recommendations to coordinate work with the Expert Group to draw on the information in ECODAT in estimating emissions and projections.

12. Centre for Integrated Assessment Modelling. Mr. Z. Klimont (CIAM) noted that the use of ECODAT to generate emission inventories had produced certain discrepancies. From the perspective of CIAM, the next step was bilateral meetings with countries to verify data provided for ECODAT. He reported on the usefulness of ECODAT to CIAM and of its collaboration with the Expert Group, recalling that one of the objectives of the Expert Group was to establish a good understanding by integrated assessment modellors of real control technologies. CIAM had used the background documents on various sectors to verify information on costs with data used in integrated assessment modelling. CIAM took the chemical industry and service stations as sample sectors and found that the information in ECODAT was of high quality, provided an understanding of these sectors, and was useful in communicating basic information about

abatement technologies. This would help in the forthcoming bilateral meetings with countries because it provided a common language in terms of techno-economic parameters.

13. European Commission's Clean Air for Europe programme. Mr. Klimont reported on progress made under CAFE. He noted that the European Commission must present its thematic strategy no later than 22 July 2005. A synthesis of results would therefore be available by the end of 2004. The objective was to have CAFE baseline scenarios ready by March 2004. Several countries would be meeting to confirm the baselines used by modelling groups. CIAM and the European Commission had met to work towards better communications with countries on data and assumptions used in providing data, including data provided for ECODAT. He reported that there would be a new Internet application of RAINS.

C. Experience gained by national experts

14. Mr. J. Vincent (CITEPA) reported on the experience gained by countries' experts in collecting techno-economic data for VOC-emitting sectors and off-road sources in consultation with CIAM and industry representatives. Technical presentations were given on the glass and cement sectors. The expert from Serbia and Montenegro represented her country's work under the Integrated Pollution Prevention and Control (IPPC) Directive using the example of the cement industry.

15. The expert from Georgia explained that in the newly independent States it was often difficult to use the background documents produced by the Expert Group and requested it to find ways to make the documents more useful for local conditions.

16. The expert from the United Kingdom said his Government had expressed concerns about the work of the Expert Group. He said there was scepticism among his colleagues of whether it was possible to create "reference" installations in the United Kingdom. There were also concerns about providing data for ECODAT that were not validated.

17. The expert from Norway noted that despite initial scepticism about the feasibility of the database, his experience showed that ECODAT was a useful tool, though only a limited number of sectoral data could be submitted by the end of October 2003.

18. The expert from France noted practical difficulties with the database; it was not possible to compare costs data in ECODAT with RAINS. The data collection process had proved a good experience for France, however, by allowing an improvement of knowledge and new and better estimations of current emission levels. He noted that it was important to reinforce relations between the Expert Group and the IPPC Bureau in Seville (Spain) for help using the definitions

for best available techniques (BAT) from the economic point of view.

19. The expert from Belgium noted difficulties since it was necessary to collate information from its three regions (Wallonia, Flanders and Brussels). Belgium had data from official emission submissions, but needed additional activity data to produce marginal cost curves. It was difficult to transpose data for ECODAT, for example on the coating of cars, trucks and buses. In the decorative paint sector there were entirely different default values (and hence different emission factors) given by the different industry associations. It was thus difficult to know which were the most reliable figures.

II. SIXTH MEETING OF THE EXPERT GROUP (18 June 2004, Paris)

20. The Expert Group met on 18 June 2004 in Paris to assess the current state of ECODAT as well as to prepare for the revision of the Gothenburg Protocol once it entered into force. As the information provided by countries' experts for use in ECODAT was also used by CIAM, the Expert Group also discussed the usefulness of the data for RAINS and in the preparation by CIAM of a baseline scenario in the context of CAFE.

21. The secretariat and the Chairman of the Working Group on Strategies and Review, Mr. R. Ballaman, informed the Expert Group about the status of ratifications of the 1999 Gothenburg Protocol; as of 9 June, 11 Parties had ratified, with another 5 required for entry into force. They also drew attention to the work-plan approved by the Executive Body at its twenty-first session (ECE/EB.AIR/79/Add.2, annex XII, item 1.7).

22. Mr. B. Calaminus noted that 20 Parties had officially designated experts to the Expert Group. He noted that at present the main focus of the Expert Group was on development of the methodology and tools to collect the data required for ECODAT, assistance to Parties in providing the data and assessment of uncertainties. Ms. N. Allemand noted that all data from France collected for ECODAT had been transmitted to CIAM, which was using France as a case study.

23. Mr. Z. Klimont informed the Expert Group about progress made on consultations with industry to help in attaining data needed for ECODAT and to fill the gap between cost estimates and application rates in RAINS and the real situation. However, he noted that the view of industry was not always the same as the national view. Each country should find a consensus view regarding costs and application rates of control options in the various sectors.

24. Mr. F. Delacroix (ADEME) reported on the status of the work of the Expert Group including progress made on new background documents and updates in ECODAT. He confirmed that CITEPA was focusing its work on VOC-emitting sectors as well as mobile sources, agriculture and wood combustion, while ADEME was focused on sulphur and nitrogen oxides.

25. Mr. M. Ball reported on developments in ECODAT, which he described as a user-friendly tool facilitating data collection to define emission reduction strategies and associated costs. Since the meeting of the Expert Group in Angers, data on VOC-emitting sectors had been integrated, as well as glass, cement and large combustion plants > 500 MW_{th}. He also noted the improved layout of the database, which was extendable to other sectors. So far the following countries had provided data to ECODAT: Belgium, Czech Republic, Finland, France, Italy, Norway and Switzerland. The Expert Group would soon extend its work to consider not only existing technologies but also emerging technologies, in cooperation with the European Commission. It would also include greenhouse gases.

III. CONCLUSIONS AND RECOMMENDATIONS

26. As a result of the discussions at the two meetings, the Expert Group:

(a) Recognized that much progress had been made in improving the structure and flexibility of the techno-economic database, ECODAT, especially regarding the large combustion plant sector, and that a valuable data set had been generated and made available to CIAM for input to the RAINS model. The database development exercise had allowed for bilateral consultations at CIAM with experts and industry, which were useful also in the calculation of baseline scenarios under CAFE;

(b) Noted that effective cooperation between the Expert Group, CIAM and industry had allowed for a relatively accurate assessment of the abatement potential for several sectors and that cooperation should be maintained and intensified; the active and constructive role of industrial representatives at meetings was especially appreciated;

(c) Welcomed presentations from several countries on the obstacles and progress towards providing comprehensive information for the completion of ECODAT and appreciated firm commitments from some to providing additional data while recognizing the efforts made so far by: Belgium, Czech Republic, Finland, France, Italy, Norway and Switzerland;

(d) Recognized the importance of the case study of France (in large combustion plant, cement and glass sectors) in demonstrating the usefulness of a more detailed modelling approach than used in current integrated assessment models; this more disaggregated approach allowed for a more realistic representation of the actual situation of emitting sectors and control options;

(e) Underlined several possibilities for Parties to use ECODAT as an input to different studies, measures and policies at the sectoral, national, European (especially for the IPPC BAT reference (BREF) documents) levels, since ECODAT followed an approach that could be used by others;

(f) Noted that the collaboration with other groups under the Convention such as the Task Force on Emission Inventories and Projections and the exchange of information with other international activities like IPPC/BREF should be intensified in order to harmonize techno-economic data for abatement technologies and emission factor information for inventories; this cooperation would allow the Expert Group to compare emissions, one important parameter of the database;

(g) Noted that countries with economies in transition often did not have the capacity to provide the data required for ECODAT; the Expert Group would consider ways to make the background documents and the database more accessible to these countries;

(h) Noted that experts from countries with economies in transition recognized the potential use of ECODAT and had expressed the need for further assistance and collaboration in developing emission factors and emission projections; it therefore considered it helpful that the Task Force on Emission Inventories and Projections would further develop its work in this area;

(i) Agreed to encourage participation by experts from countries not so far represented in the Expert Group, in particular from countries with economies in transition;

(j) Expressed its appreciation to France for continuing to lead the Expert Group, but encouraged other Parties to come forward with funding to ensure that the database could be completed, updated and maintained as required over the long term;

(k) Welcomed the European Commission's activities on emerging technologies and looked forward to the outcome; and

(l) Invited the Working Group on Strategies and Review to consider the timetable, approach and prioritization of the work of the Expert Group, in particular its role in the revision of technical annexes of protocols.