



**Economic and Social  
Council**

Distr.  
GENERAL

EB.AIR/WG.5/2001/8  
12 July 2001

ORIGINAL : ENGLISH

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**ECONOMIC COMMISSION FOR EUROPE**

CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION

Working Group on Strategies and Review

(Thirty-third session, Geneva, 24-27 September 2001)

(Item 6 of the Provisional agenda)

**CREATION OF AN EXPERT GROUP ON TECHNO-ECONOMIC ISSUES**

**Prepared by CITEPA (France) and the UNECE secretariat \*/**

**Introduction**

1. At its thirty-second session, the Working Group accepted an offer by France to host a workshop on further work on techno-economic databases and agreed that it would come back to the proposal to establish an ad hoc expert group for this work at its thirty-third session. An expert meeting on the further work on air pollution abatement options and their costs was held in Paris on 21 May 2001 and a follow-up meeting was convened on 7 June 2001, also in Paris. The meetings brought together French and German experts, representatives of the Centre for Integrated Assessment Modelling (CIAM), the Working Group on Strategies and Review and the Task Force on the Assessment of Abatement Options/Techniques for Volatile Organic Compounds and Nitrous Oxides, a representative of the European Integrated Pollution Prevention and Control Bureau (EIPPCB), and members of the UNECE secretariat. The results of those meetings are reflected in the following proposal.

**\*/** This document has not been formally edited.

## I. CONTEXT

2. Good knowledge of detailed technical and economics data on relevant production processes and their abatement options is crucial for credible integrated assessment modelling (IAM), the results of which are used as a common frame of reference to the negotiations between Parties to the Convention. Since the modelling results (e.g. the estimation of national emission reduction levels) may have significant political and economic impacts through the specific pollution controls required by Parties, the validity of the results is a key issue. To derive accurate cost functions, relevant sources and available reduction options must be considered.

3. An international workshop was held in Angers, France [1] in October 1999, in accordance with the work-plan of the seventeenth session of the Executive Body. The workshop was hosted by France, who offered to take over the lead role in the review of methods and data. The initiative was supported by Germany. It was the aim of the workshop to review the currently applied methodologies used to generate cost curves together with the related techno-economic databases in order to recommend approaches to improve both methods and emission inventories. The importance of such work had been previously pointed out by various authors from different Parties ([2], [3], [4], [5]).

## II. ESTABLISHING AN EXPERT GROUP ON TECHNO-ECONOMIC ISSUES

4. In accordance with the proposal made to the seventeenth session of the Executive Body, France will establish and lead an expert group on techno-economic issues. The two main tasks of this group will be to:

- update existing techno-economic databases on emission reduction technologies;
- prepare, at the request of the Working Group on Strategies and Review, draft revisions of text on techno-economic issues included in or annexed to existing protocols.

### A. Updating of the techno-economic databases on emission reduction technologies

5. A good knowledge of technical and economic data on relevant production processes and their abatement options is vital to elaborate cost functions. Today, many techno-economic databases are available (International Institute of Applied Systems Analysis (IIASA), EIPPCB, Task Force on the assessment options/techniques for NO<sub>x</sub> and VOC, Flemish Institute for Technological Research (VITO), AEA Technology, etc.) that have been developed to serve various objectives. The Expert Group should make an inventory of the existing databases and gather existing expertise in order to make use of available information and to complete and update it rapidly. A strong link has to be developed with EIPPCB which has, in the frame of the European Union's Integrated Pollution Prevention and Control (IPPC) Directive, carried out important work describing emission abatement

techniques, their efficiency and cost evaluation in a best available technology (BAT) reference document, for sectors covered by European Union (EU) Directive 96/61/EC.

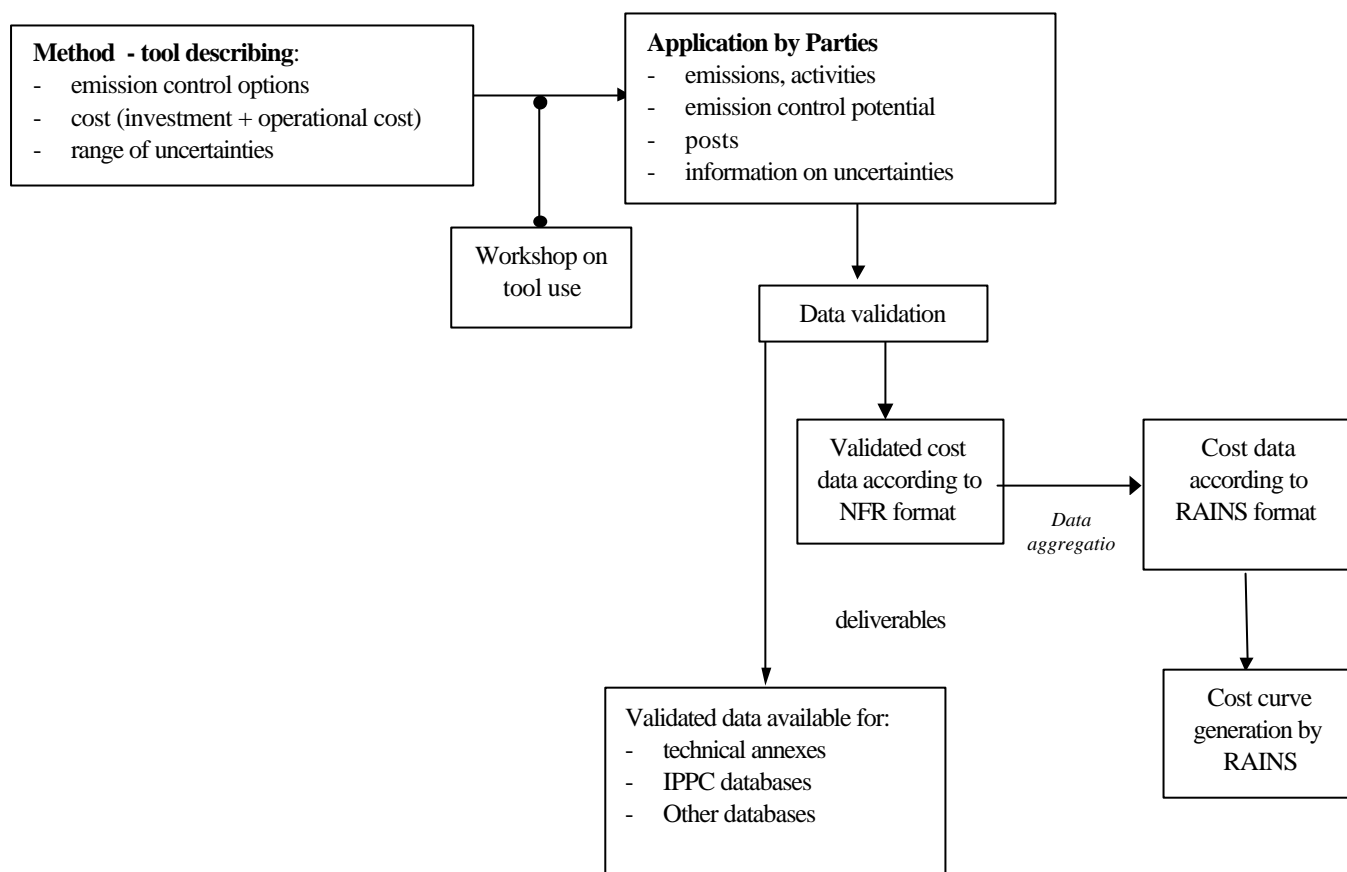
6. The work must be completed for sectors not covered by the IPPC Directive and for the transport sector. Concerning the transport sector, the Expert Group should contact the TREMOVE model developer (Leuven University, Belgium) to take into account of the last available data for this sector and to update them if necessary.

7. The Expert Group should develop, adapt and make available operational tools for describing emission reduction technologies. These methodologies should be disseminated to Parties, documented and presented to a workshop. The Expert Group should evaluate uncertainties of the estimated costs of proposed emission reduction technologies.

8. The Expert Group should develop software describing emission reduction options for activity sectors according to the NFR (Nomenclature For Reporting) developed by the Task Force on Emission Inventories and Projections. This nomenclature should help provide more detailed data than those presently used by the RAINS model. These data should be estimated more precisely and be easily aggregated according to the RAINS format.

9. The methodology for evaluating the techno-economic data uncertainties should be integrated into the software developed by the Expert Group. This software should be disseminated to Parties applying this tool to obtain country-specific information on techno-economic data and, if available, on associated uncertainties. After data validation by the Expert Group, in collaboration with Parties and CIAM, these data should be used to generate cost curves and update existing databases, as well as for updating annexes of existing protocols.

10. The following scheme presents the possible organization of the techno-economic data updating process:



The Expert Group should provide CIAM with validated data from Parties supplying the required information to enable it to aggregate these data according to the RAINS format and thereby to generate validated cost curves. For countries not responding to requests for information, CIAM should continue to use its existing database to generate cost curves.

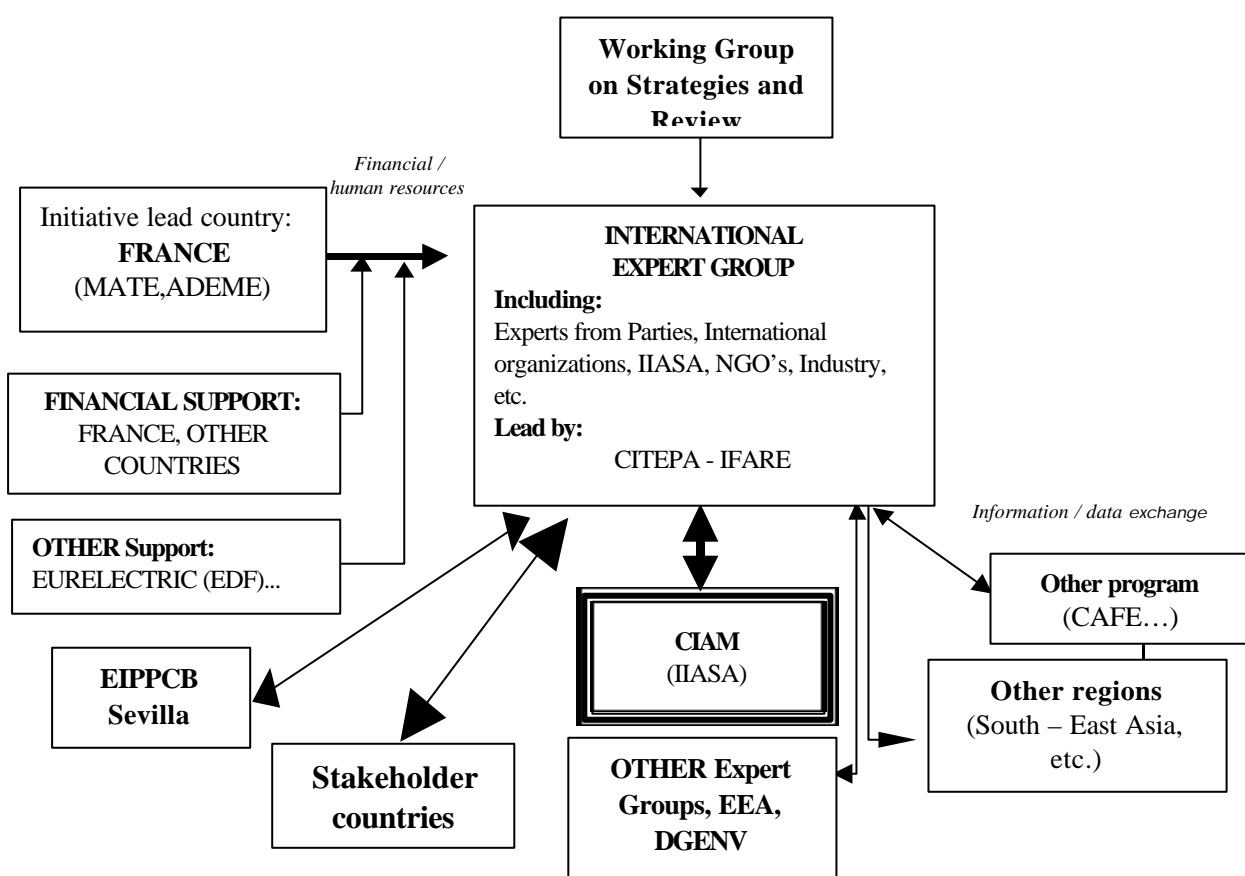
**B. Preparation of draft revisions of techno-economic issues included in or annexed to existing protocols**

11. The Expert Group should consider the updating of the techno-economic text included in or annexed to existing protocols (e.g. the 1999 Gothenburg Protocol and the two 1998 Aarhus Protocols). In particular, the annexes often contain techno-economic information and emission limit

values, some of which are to be applied by Parties. The consideration of the revision of the Gothenburg Protocol in 2004 is likely to require the revision of its annexes, as well as the Guidance Documents (EB.AIR/1999/2) adopted by the Executive Body at its seventeenth session. The Expert Group should be in charge of preparing a draft revision of these annexes which should be submitted to the Working Group on Strategies and Review.

### III. ORGANIZATION OF THE EXPERT GROUP

12. The following scheme presents a possible framework within which the Expert Group will work. The group will be led by and financially supported by France.



ADEME – Agence de l'Environnement et de la Maîtrise de l'Energie

CAFE – Clean Air for Europe

EURELECTRIC – Union of the Electric Industry

CITEPA – Centre Interprofessionnel Technique d'Etudes de la Pollution Atmosphérique

IIASA – International Institute for Applied Systems Analysis

IFARE – Institut Franco – Allemand de Recherche sur l'Environnement

EEA – European Environment Agency

DGENV – Directorate General for Environment

France (through MATE and ADEME) will commission CITEPA and IFARE to provide the secretariat (with the resources) to organize meetings and coordinate the work to be carried out by the Expert Group. The mandate of the expert group must be approved by the Executive Body.

13. CITEPA and IFARE will:

- (a) Provide the Chairman and secretariat of the expert group;
- (b) Provide an overview of available databases and models for controlling emissions from stationary and mobile sources which are relevant to the work of the Expert Group (e.g. IIASA, AEA Technology, the Netherlands consultancy firm TNO, Merlin, Leuven University, EIPPCB);
- (c) In collaboration with the Task Force on Integrated Assessment Modelling and CIAM, develop and support the application of transparent methodologies to derive input data for IAM, as well as developing draft technical annexes from more detailed country and technology information and also assessing uncertainties where appropriate. In particular to:
  - (i) Propose and make available a practical method and tool for describing emission control options and remaining potential sectoral control;
  - (ii) Disseminate the method to Parties and provide documentation on and support for its application; organize a user workshop;
  - (iii) Validate national data in collaboration with national experts and identify differences between countries;
  - (iv) Evaluate uncertainties;
  - (v) Provide support to countries for providing validated input data for generating cost functions;
  - (vi) Conduct reference studies on selected countries;
- (d) Promote, develop and update techno-economic data bases.

#### **IV. TIMETABLE FOR TASKS**

14. The proposed timetable (below) aims to be consistent with a review of the 1999 Gothenburg Protocol in 2004 and the requirements of IAM for this purpose. It is recognized that this will be a tight schedule.

Year	01				02				03				04			
Quarter	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Task 1																
Task 2																
Task 3a																
Task 3b																
Task 3c																
Task 3d																
Task 3e																
Task 3f																
Task 4																

## V. REFERENCES

- [1] Revue Pollution Atmosphérique, numéro spécial « Workshop on techno-economical data bases on production process and related emission abatement options » ; organised by IFARE, ADEME and UN/ECE, Angers, 28, 29 october 1999
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- [6] Workshop on Techno-Economic Databases on Production Processes and Related Emission Abatement Options; EB-CLRTAP (UNECE); ref. EB.AIR/WG.5/2000/5, dated May 30, 2000

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