



SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE
Twelfth session
Bonn, 12-16 June 2000
Agenda item 8 (b)

METHODOLOGICAL ISSUES

GUIDELINES UNDER ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

Draft conclusions by the Chairman

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) agreed upon guidelines for national systems for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol under Article 5.1 of the Kyoto Protocol (see annex), and decided to prepare, at its thirteenth session, a draft decision on this issue to be recommended for adoption by the Conference of the Parties (COP) at its sixth session.
2. The SBSTA recalled the provisions of Article 5.1 of the Kyoto Protocol, which state that each Party included in Annex I shall have in place a national system, no later than one year prior to the start of the first commitment period. The SBSTA advised the SBI to encourage Annex I Parties to establish national systems in accordance with the guidelines under Article 5.1 as soon as possible, with the aim of gaining early experience with their implementation. The SBSTA may consider the possible future revision of these guidelines in accordance with the provision of paragraph 18 of these guidelines and taking into account the relevant experience of Parties.
3. The SBSTA agreed to consider, at its thirteenth session, guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol, taking into account information contained in document FCCC/SBSTA/2000/INF.5/Add.2 and the views of Parties, with the aim of recommending such guidelines for adoption by the COP, at its sixth session. The SBSTA recognized that some elements of these guidelines will be further elaborated at a later stage.

4. The SBSTA requested the secretariat to prepare draft guidelines, for consideration by the SBSTA at its thirteenth session, for the review process under Article 8 of the Kyoto Protocol, taking into account the report of the workshop on methodological issues related to Articles 5, 7 and 8 of the Kyoto Protocol, held in Bonn from 14 to 16 March 2000, contained in document FCCC/SBSTA/2000/INF.5 and Add.2, submissions by Parties and issues raised by Parties during the twelfth session of the SBSTA, including elements of draft guidelines as elaborated by Parties. The SBSTA made this request with the aim of recommending the adoption of guidelines for the review process under Article 8 of the Kyoto Protocol by the COP at its sixth session. The SBSTA recognized that some elements of these guidelines will be further elaborated at a later stage.

5. The SBSTA agreed to consider, at its thirteenth session, the information related to methodologies for adjustments contained in document FCCC/SBSTA/2000/INF.5/Add.2, and the views of Parties, with the aim of recommending a decision on initial guidance on these methodologies by the COP at its sixth session and initiating a process for further elaborating these methodologies at a later stage. Parties are invited to consider what further methodological work is needed and how such work should proceed, including whether the SBSTA should invite the IPCC National Greenhouse Gas Inventory Programme to develop methods for adjustments.

6. The SBSTA invited Parties to consider, at its thirteenth session, when the guidelines and guidance to be adopted by the COP at its sixth session, as mentioned in paragraphs 3 to 5 above, should be further elaborated and compiled. In doing so, Parties are invited to take into account the expected outcome of discussions by Parties on mechanisms under the Kyoto Protocol, compliance, land-use, land-use change and forestry, the results of the trial period for the technical review of greenhouse gas inventories from Annex I Parties in accordance with decision 6/CP.5, and possible input of the IPCC, as mentioned in paragraph 5 above.

7. The SBSTA took note of the information on some aspects related to modalities of accounting for assigned amounts contained in document FCCC/SBSTA/2000/INF.7 and it invited Parties to address, at its thirteenth session, the issues raised in this document, including the review of the base year inventories and whether a decision should be taken by the COP, at its sixth session, on this issue. The SBSTA also invited Parties to consider, at its thirteenth session, other aspects of modalities of accounting for assigned amounts.

8. The SBSTA invited Parties to submit, by 1 August 2000, comments on issues related to Articles 5, 7 and 8, particularly on those issues mentioned in paragraphs 3 to 7 above. It requested the secretariat to compile these views into a miscellaneous document.

Annex

**GUIDELINES FOR NATIONAL SYSTEMS FOR THE ESTIMATION OF
ANTHROPOGENIC GREENHOUSE GAS EMISSIONS BY SOURCES
AND REMOVALS BY SINKS UNDER ARTICLE 5.1
OF THE KYOTO PROTOCOL¹**

I. APPLICABILITY

1. The application of these provisions is mandatory, except for those expressed in non-mandatory language. Parties' implementation of national system requirements may differ according to national circumstances, but shall include the elements described in these guidelines. Any differences in implementation shall not impair the performance of the functions described in these guidelines.

II. DEFINITIONS

A. Definition of national system

2. A national system includes all institutional, legal and procedural arrangements made within a Party included in Annex I to the Convention (Annex I Party) for estimating anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, and for reporting and archiving inventory information.

B. Other definitions

3. The meaning of the following terms in these guidelines for national systems² is the same as in the glossary of the Intergovernmental Panel on Climate Change (IPCC) good practice guidance,³ accepted by the IPCC at its XVI Plenary:⁴

(a) Good practice is a set of procedures intended to ensure that greenhouse gas inventories are accurate in the sense that they are systematically neither over- nor underestimated as far as can be judged, and that uncertainties are reduced as far as possible. Good practice

¹ All articles referred to in these guidelines are those of the Kyoto Protocol. For the sake of brevity, the Kyoto Protocol is not specified after each article.

² The guidelines for national systems for the estimation of anthropogenic greenhouse gas emissions by sources and removals by sinks under Article 5.1 of the Kyoto Protocol are referred to as "guidelines for national systems" in this document.

³ The IPCC "Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories" is referred to as the "IPCC good practice guidance" in these guidelines for national systems.

⁴ Montreal, 1-8 May 2000.

covers choice of estimation methods appropriate to national circumstances, quality assurance and quality control at the national level, quantification of uncertainties, and data archiving and reporting to promote transparency.

(b) Quality control (QC) is a system of routine technical activities to measure and control the quality of the inventory as it is being developed. The QC system is designed to:

- (i) Provide routine and consistent checks to ensure data integrity, correctness and completeness;
- (ii) Identify and address errors and omissions;
- (iii) Document and archive inventory material and record all QC activities.

QC activities include general methods such as accuracy checks on data acquisition and calculations and the use of approved standardized procedures for emission calculations, measurements, estimating uncertainties, archiving information and reporting. Higher tier QC activities also include technical reviews of source categories, activity and emission factor data and methods.

(c) Quality assurance (QA) activities include a planned system of review procedures conducted by personnel not directly involved in the inventory compilation development process, to verify that data quality objectives were met, ensure that the inventory represents the best possible estimate of emissions and sinks given the current state of scientific knowledge and data available, and support the effectiveness of the QC programme;

(d) Key source category is one that is prioritized within the national inventory because its estimate has a significant influence on a country's total inventory of direct greenhouse gases in terms of the absolute level of emissions, the trend in emissions, or both;

(e) Decision tree is a flow-chart describing the specific ordered steps which need to be followed to develop an inventory or an inventory component in accordance with the principles of good practice.

4. Recalculation, consistent with the UNFCCC reporting guidelines on annual inventories,⁵ is a procedure for re-estimating anthropogenic greenhouse gas (GHG)⁶ emissions by sources and removals by sinks of previously submitted inventories⁷ as a consequence of changes in

⁵ FCCC/CP/1999/7.

⁶ References to greenhouse gases (GHGs) in these guidelines for national systems refer to GHGs not controlled by the Montreal Protocol.

⁷ "National GHG inventories" are referred to simply as "inventories" in these guidelines for the sake of brevity.

methodologies, changes in the manner in which emission factors and activity data are obtained and used, or the inclusion of new source and sink categories.

III. OBJECTIVES

5. The objectives of national systems under Article 5.1 for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, referred to below as national systems, are:

(a) To enable Annex I Parties to estimate anthropogenic GHG emissions by sources and removals by sinks, as required by Article 5, and to report these emissions by sources and removals by sinks in accordance with Article 7.1 and relevant decisions of the Conference of the Parties (COP) and/or the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (COP/MOP);

(b) To assist Annex I Parties in meeting their commitments under Articles 3 and 7;

(c) To facilitate the review of the information submitted under Article 7 by Annex I Parties, as required by Article 8; and

(d) To assist Annex I Parties to ensure and improve the quality of their inventories.

IV. CHARACTERISTICS

6. National systems should be designed and operated to ensure the transparency, consistency, comparability, completeness and accuracy of inventories as defined in the guidelines for the preparation of inventories by Annex I Parties, in accordance with relevant decisions of the COP and/or COP/MOP.

7. National systems should be designed and operated to ensure the quality of the inventory through planning, preparation and management of inventory activities. Inventory activities include collecting activity data, selecting methods and emission factors appropriately, estimating anthropogenic GHG emissions by sources and removals by sinks, implementing uncertainty assessment and quality assurance/quality control (QA/QC) activities, and carrying out procedures for the verification of the inventory data at the national level, as described in these guidelines for national systems.

8. National systems should be designed and operated to support compliance with Kyoto Protocol commitments related to the estimation of anthropogenic GHG emissions by sources and removals by sinks.

9. National systems should be designed and operated to enable Annex I Parties to consistently estimate anthropogenic emissions by all sources and removals by all sinks of all GHGs, as covered by the Revised 1996 IPCC Guidelines for National Greenhouse Gas

Inventories and IPCC good practice guidance, in accordance with relevant decisions of the COP and/or COP/MOP.

V. GENERAL FUNCTIONS

10. In the implementation of its national system, each Annex I Party shall:

(a) Establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions defined in these guidelines for national systems, as appropriate, between the government agencies and other entities responsible for the performance of all functions defined in these guidelines;

(b) Ensure sufficient capacity for timely performance of the functions defined in these guidelines for national systems, including data collection for estimating anthropogenic GHG emissions by sources and removals by sinks and arrangements for technical competence of the staff involved in the inventory development process;

(c) Designate a single national entity with overall responsibility for the national inventory;

(d) Prepare national annual inventories and supplementary information in a timely manner in accordance with Articles 5, 7.1 and 7.2 and relevant decisions of the COP and/or COP/MOP;

(e) Provide information necessary to meet the reporting requirements defined in the guidelines under Article 7 in accordance with the relevant decisions of the COP and/or COP/MOP.

VI. SPECIFIC FUNCTIONS

11. In order to meet the objectives and perform the general functions described above, each Annex I Party shall undertake specific functions related to inventory planning, preparation and management.⁸

A. Inventory planning

12. As part of its inventory planning, each Annex I Party shall:

⁸ For the purpose of these guidelines for national systems, the inventory development process encompasses inventory planning, preparation and management. These steps of the inventory development process are considered in these guidelines only in order to clearly identify the functions to be performed by the national systems, as described in paragraphs 12 to 17 below.

- (a) Designate a single national entity with overall responsibility for the national inventory;
- (b) Make available the postal and electronic addresses of the national entity responsible for the inventory;
- (c) Define and allocate specific responsibilities in the inventory development process, including those related to choice of methods, data collection, particularly activity data and emission factors from statistical services and other entities, processing and archiving, and QC and QA. This definition shall specify the roles of, and cooperation between, government agencies and other entities involved in the preparation of the inventory, as well as the institutional, legal and procedural arrangements made to prepare the inventory;
- (d) Elaborate an inventory QA/QC plan which describes specific QC procedures to be implemented during the inventory development process, facilitate the overall QA procedures to be conducted, to the extent possible, on the entire inventory and establish quality objectives;
- (e) Establish processes for the official consideration and approval of the inventory, including any recalculations, prior to its submission and to respond to any issues raised by the inventory review process under Article 8.

13. As part of its inventory planning, each Annex I Party should consider ways to improve the quality of activity data, emission factors, methods and other relevant technical elements of inventories. Information obtained from the implementation of the QA/QC programme, the review process under Article 8 and other reviews should be considered in the development and/or revision of the QA/QC plan and the quality objectives.

B. Inventory preparation

14. As part of its inventory preparation, each Annex I Party shall:
- (a) Identify key source categories following the methods described in the IPCC good practice guidance (chapter 7, section 7.2);
 - (b) Prepare estimates in accordance with the methods described in the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, as elaborated by the IPCC good practice guidance, and ensure that appropriate methods are used to estimate emissions from key source categories;
 - (c) Collect sufficient activity data, process information, and emission factors as are necessary to support the methods selected for estimating anthropogenic GHG emissions by sources and removals by sinks;
 - (d) Make a quantitative estimate of inventory uncertainty for each source category and for the inventory in total, following the IPCC good practice guidance;

(e) Ensure that any recalculations of previously submitted estimates of anthropogenic GHG emissions by sources and removals by sinks are prepared in accordance with the IPCC good practice guidance and relevant decisions of the COP and/or COP/MOP;

(f) Compile the national inventory in accordance with Article 7.1 and relevant decisions of the COP and/or COP/MOP;

(g) Implement general inventory QC procedures (tier 1) in accordance with its QA/QC plan following the IPCC good practice guidance.

15. As part of its inventory preparation, each Annex I Party should:

(a) Apply source category specific QC procedures (tier 2) for key source categories and for those individual source categories in which significant methodological and/or data revisions have occurred, in accordance with the IPCC good practice guidance;

(b) Provide for a basic review of the inventory by personnel that have not been involved in the inventory development, preferably an independent third party, before the submission of the inventory, in accordance with the planned QA procedures referred to in paragraph 12 (d) above;

(c) Provide for a more extensive review of the inventory for key source categories, as well as source categories where significant changes in methods or data have been made;

(d) Based on the reviews described in paragraphs 15 (b) and (c) and periodic internal evaluations of the inventory preparation process, re-evaluate the inventory planning process in order to meet the established quality objectives referred to in paragraph 12 (d).

C. Inventory management

16. As part of its inventory management, each Annex I Party shall:

(a) Archive inventory information for each year in accordance with relevant decisions of the COP and/or COP/MOP. This information shall include all disaggregated emission factors, activity data, and documentation about how these factors and data have been generated and aggregated for the preparation of the inventory. This information shall also include internal documentation on QA/QC procedures, external and internal reviews, documentation on annual key sources and key source identification and planned inventory improvements;

(b) Provide review teams under Article 8 with access to all archived information used by the Party to prepare the inventory, in accordance with relevant decisions of the COP and/or COP/MOP;

(c) Respond to requests for clarifying inventory information resulting from the different stages of the review process of the inventory information, and information on the national system, in a timely manner in accordance with Article 8.

17. As part of its inventory management, each Annex I Party should make the archived information accessible by collecting and gathering it at a single location.

VII. ADOPTION AND UPDATING OF THE GUIDELINES

18. These guidelines for national systems shall be adopted, reviewed and revised, as appropriate, according to the decisions of the COP/MOP, taking into account any relevant decision of the COP.
