

4 September 2000

ENGLISH ONLY

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Thirteenth session

Lyon, 11-15 September 2000

Item 9 (b) of the provisional agenda

## METHODOLOGICAL ISSUES

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

#### Submissions from Parties

#### Note by the secretariat

#### Addendum

1. At its twelfth session, the Subsidiary Body for Scientific and Technological Advice invited Parties to submit, by 1 August 2000, comments on issues related to Articles 5, 7 and 8 of the Kyoto Protocol, particularly on guidelines for preparation of the information required under Article 7, guidelines for the review process under Article 8, methodologies for adjustments under Article 5.2, and on some aspects related to modalities for the accounting of assigned amounts contained in document FCCC/SBSTA/2000/INF.7. It requested the secretariat to compile these views into a miscellaneous document (FCCC/SBSTA/2000/5, para. 36 (h)).

2. In addition to the submissions already received and included in document FCCC/SBSTA/2000/MISC.7, a further submission\* has been received from France (on behalf of the European Community and its member States). In accordance with the procedure for miscellaneous documents, this submission is attached and reproduced in the language in which it was received and without formal editing.

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\* In order to make this submission available on electronic systems, including the World Wide Web, this submission has been electronically scanned and/or retyped. The secretariat has made every effort to ensure the correct reproduction of the text submitted.

**FCCC/SBSTA/2000/MISC.7/Add.1**

GE.00-70329

FRANCE  
on behalf of the European Community and its member States  
(received on 4 September 2000)

## **GUIDANCE UNDER ARTICLE 5.2**

### **Decision [--CP.6]: Adjustments under Article 5.2**

*The Conference of Parties,*

*Recognizing .....*

*Acknowledging....*

*Recommends* that the Conference of the Parties serving as the meeting of the Parties to the Protocol, at its first session, adopt the following decision:

#### **Decision -/[CMP.1]**

#### **Adjustments under Article 5.2**

The Conference of the Parties serving as the meeting of the Parties to the Protocol:

*Decides:*

- (a) that adjustments referred to in Article 5.2 should only be applied when inventory data submitted by Parties are incomplete and/or are calculated in a way that is not consistent with the IPCC 1996 Revised Guidelines as elaborated by IPCC Good Practice Guidance and Uncertainty Management in Greenhouse Gas Inventories;
- (b) that the calculation of adjustments shall commence only when other attempts to correct the inventory problem by the respective Annex I Parties have failed, in accordance with the procedures contained in the guidelines for review under Article 8, part II review of annual inventories;
- (c) that adjusted emission estimates shall be calculated in accordance with the guidance on methodologies for adjustments as contained in the Annex to this decision;
- (d) that adjusted emission estimates will substitute the original emission or removal estimate in the final accounting of the Parties' emissions and assigned amounts under Article 8.

## **ANNEX**

### **Guidance on methodologies for adjustments under Article 5.2**

#### **I. Objectives**

1. The objectives of this guidance on methodologies for adjustments under Article 5.2 are:
  - (a) To ensure that adjustments are calculated in an objective, transparent and consistent manner;
  - (b) To ensure that adjustments are calculated in a way to provide assurance that emission estimates from sources during the commitment period are not underestimated and that emissions estimates for the base year and removal estimates are not overestimated;
  - (c) To facilitate the use of adequate methods for adjustments for inventory problems identified by the expert review team during the review of inventories according to guidelines under Article 8;

#### **II. Definition**

2. An adjustment under Article 5.2 is a revised technical estimate of emissions or removals for a particular source category in a greenhouse gas inventory which is calculated during the review of annual greenhouse gas inventories of Annex I Parties according to procedures in guidelines for review under Article 8.

#### **III. Principles**

3. Adjustments shall be conservative, i.e emissions should be adjusted downwards when applied to a base year emission estimate and a removal estimate and adjusted upwards when applied to emission estimates during the commitment period, to ensure that adjustments do not overestimate emissions in the base year<sup>1</sup> and do not underestimate emissions in other years.
4. Adjustments are intended to correct inventory problems in specific source categories. They are intended to substitute an entire greenhouse gas inventory not submitted by a Party. Adjustments are intended to provide an incentive for Parties to provide complete and accurate annual inventories prepared in accordance with the IPCC guidelines.
5. Adjustments should be calculated at the most disaggregated level that is appropriate to correct the inventory problem. Adjustments should not be calculated at source category level higher than the level of the summary table 1.A of the Common Reporting Format.
6. Experts shall use similar methods for similar problems as far as possible across all Annex I Parties and across review years during a commitment period.

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<sup>1</sup> In the case that for a Party Article 7 applies, emissions include those from LULUCF

#### **IV. General approach**

7. When calculating an adjustment, experts shall follow the methodological guidance provided in section V and ensure the conservativeness of the revised estimate. Results shall be documented and reported in accordance with section VI.
8. This guidance is not comprehensive and does not cover all possible problems. If some aspects of a particular case are not covered by this guidance, the experts calculating the adjustment shall adhere to this guidance and its principles as closely as possible. The SBSTA could decide to revise this methodological guidance by adding additional methods or by refining recommendations if this deems necessary based on the experiences with adjustment methodologies. The SBSTA shall request the expert review team and/or input of relevant international organizations to elaborate revisions or additions to the guidance and recommend a subsequent decision by the COP/MOP.

#### **V. Choice of methods**

9. Experts should decide which methods are appropriate to calculate the adjustment in a specific case. This decision shall take into account
  - (a) the availability of data in the source category at the respective level of aggregation that is required by the different methods in paragraph 12;
  - (b) the uncertainties of the available data;
  - (c) relevant national circumstances that affect emissions or removals in the respective source category;
  - (d) consistency in time series.
10. Expert should use the most reliable data available for the source category at the respective level of aggregation.
11. An emissions estimate for a specific source category could be adjusted in its entirety if inappropriate methods were used according to decision -/CMP.1<sup>2</sup>, or part of the estimate could be adjusted if specific parameters are deficient according to decision -/CMP.1.
12. The following methods could be applied to calculate adjustments:
  - (a) Interpolation  
Interpolation is applicable for the cases of incomplete estimates or inappropriate estimates where emission estimates of the adjacent years are available. Guidance on interpolation as provided in IPCC Good Practice Guidance, section 7.3.2.2, should be followed if interpolation is used.
  - (b) Extrapolation  
If emissions estimates are available for some years, but missing for the required year, the missing estimates could be extrapolated from historical data. The experts should thoroughly analyze data for available historic years to determine the functional form of the extrapolation chosen (for example linear or polynomial) and should report the number

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<sup>2</sup> The reference to the decision above aims to specify the term "inappropriate methods".

of existing emission estimates considered to derive the extrapolated estimate as well as the year-to-year fluctuations of estimates in previous years and the assumptions made to calculate the extrapolation. Guidance on trend extrapolation provided in IPCC Good Practice Guidance, section 7.3.2.2, should be followed if this method is used.

(c) Extrapolation using drivers or surrogate data

If emissions estimates, activity data or emission factors are available for some years, but missing for the required year, the missing data could be extrapolated for subsequent years using an index of the driving force, if significant correlations between the driver and the emissions exist. Emission factors or activity data used need to be strongly correlated with other well-known and more readily available indicative data. Experts shall demonstrate and report the significance of the relationship of the drivers they used to calculate a missing estimate and shall report the assumptions made to calculate the extrapolation. This method could also be used where coverage problems exist within a source category in terms of the number of emissions sources, activity data or geographic area. Guidance on surrogate method provided in IPCC Good Practice Guidance, section 7.3.2.2, should be followed if this method is used.

(d) IPCC tier 1 methods

For most emission source categories, international activity data and IPCC default emission factors are available to estimate emissions according to the tier 1 method of IPCC guidelines. The use of IPCC tier 1 method is applicable if an inventory estimate is lacking, if reliable activity data for the IPCC tier 1 methods is available and if the default emission factors reflect the national circumstances of the respective Party. All assumptions made to calculate emissions using IPCC tier 1 method should be reported.<sup>3</sup>

(e) Correction of emission factors or other calculation parameters

If emission factors or other parameters (e.g. gas conversion factors, caloric values or model parameters) are lacking or are inappropriate according to decision -/CMP.1, the experts should

1. derive average emission factors or parameters for a cluster of countries with comparable national circumstances for the respective source category, such as inter alia the design, operation or management practices, types of oil and gas activity, the age of equipment or installations and their technical features. Assumptions made for the composition of the cluster should be reported;
2. compare emission factors for the cluster with IPCC default emission factors, parameters or ranges provided for IPCC tier 1 methods;
3. compare if the condition, that national circumstances are similar, applies for IPCC default emission factor;
4. provide substantiated information for an adjusted emission factor or parameter.

Preference should be given to the approach that disaggregates the estimate to all individual parameters used. The adjustment should be performed at the most disaggregated level, while retaining valid and representative national data.

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<sup>3</sup> If the source category for which the adjustment was calculated forms part of the key source categories for a Annex I Party, this approach would not be consistent with IPCC Good Practice Guidance, this deficiency is taken into account by applying a conservative estimate.

(f) Linkage of emissions between gases or source categories

In some cases estimation of emissions of one gas or source category can be based on the linkage to emissions of another gas or source category, e.g. CH<sub>4</sub> and N<sub>2</sub>O emissions for fuel combustion activities could be calculated from CO<sub>2</sub> emissions. The experts should carefully assess if such a relationship between gases exist for the respective source category when this approach is used.

(g) Reallocation of emission estimates between source categories

If emission estimates have been accounted according to IPCC methodologies, but misallocated among source categories or sectors, the adjustment should reallocate the emission estimate to the correct source category. If double counting of removals occurs, the adjustment should eliminate the doubled estimates.

(h) Lack of activity data

If activity data are lacking for reliable emission estimates, the adjustment could be based on activity data derived from international databases where appropriate.

13. The following general guidance should be taken into account when applying the methods in paragraph 12:

- (a) If the estimation method used by the Party is determined to be entirely inappropriate and if there is an IPCC tier 1 method available, a new calculation of emissions for the source category should be prepared using the IPCC tier 1 method.
- (b) If the estimation method used by the Party is determined to be entirely inappropriate, if there is no IPCC tier 1 method available, and if accepted data for historical inventories is available, the extrapolation methods described in paragraph 12 should be used.
- (c) If the estimation method used by the Party is determined to be entirely inappropriate because of inappropriate activity data used, experts should develop appropriate case-specific approaches to get activity data for a simple calculation method for the respective source category, for example by using international data or significant relationships to other activities.

14. A conservative estimate should be achieved by selecting methods that tend to produce conservative estimates, and by selecting conservative parameters for the method used. The experts should provide evidence in the specific cases why the chosen adjustment is seen as conservative. Conservative estimates should still be in the range of those methods and parameters used by Annex I Parties and/or included in the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories. They should aim to be at the [25% percentile] for base year adjustments or removals and at the [75% percentile] for emission estimates for other years as estimated from uncertainty data available from other Annex I Parties and/or from IPCC Good Practice Guidance.

15. Experts should provide an estimate for the additional uncertainty introduced with the application of adjustments in a specific source category estimate probably based on expert judgement. This estimate should be compared with the average uncertainties in the same source categories provided by other Annex I Parties.

## **VI. Reporting**

16. Experts shall report:

- (a) the adjusted and the original estimate if available;
- (b) the percentage share of emissions from adjusted source category compared to the total emissions of the inventory;
- (c) the rationale for the adjustment and the underlying problem;
- (d) the method selected and the rationale for this selection;
- (e) the specific methodological requirements as outlined in section V;
- (f) the data and data sources used for the calculation of the adjusted estimate;
- (g) all assumptions made to calculate the adjustments;
- (h) the uncertainty of the adjusted estimate;
- (i) a justification why the adjustment is conservative;
- (j) a recommendation of possible ways for the Annex I Party to address the underlying problem and to resolve the problem in subsequent inventories if appropriate.

## **EU PROPOSAL FOR GUIDELINES FOR REPORTING UNDER ARTICLE 7**

### **Elements of a CoP/moP decision**

#### **Reporting under Article 7.1**

....

Decides that Parties included in Annex I to the Convention and having ratified the Kyoto Protocol shall submit information prepared in accordance with guidelines for reporting of supplementary information under Article 7.1 of the Kyoto Protocol contained in Annex I of this decision.

Under Article 12 of the Convention, each Party shall also submit an inventory of anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol, prepared in accordance with the (*Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*,) UNFCCC reporting guidelines on annual inventories<sup>1</sup> and other relevant decisions of the COP and the COP/MOP.

Unless otherwise specified in the attached guidelines, supplementary information under Article 7.1 of the Kyoto Protocol shall be incorporated in the annual inventory submission (in a single report).

#### **Annex I to the Decision**

### **I. GUIDELINES FOR REPORTING OF SUPPLEMENTARY INFORMATION UNDER ARTICLE 7.1 OF THE KYOTO PROTOCOL**

The objectives of these guidelines are:

- (a) To enable Annex I Parties<sup>2</sup> to meet their commitments for reporting information in accordance with Article 7.1<sup>3</sup> of the Kyoto Protocol;
- (b) To promote the reporting of consistent, transparent, comparable, accurate and complete information by Annex I Parties;
- (c) To ensure that the COP/MOP and any body that may be designated by the COP/MOP for compliance purposes have the adequate information on the implementation of the Kyoto Protocol by Annex I Parties to carry out their assigned functions and to take decisions on any matter required for implementation of the Kyoto Protocol.

#### **A. Supplementary information relevant to Article 3.3 and 3.4**

Annex I Parties shall include in the greenhouse gas inventory annual information on the estimation of emissions and removals from land-use, land-use change and forestry relevant to Articles 3.3 and 3.4 of the Kyoto Protocol, in accordance with any guidelines, rules and modalities that may be adopted by the COP/MOP. These estimates shall be clearly distinguished from other sectors of the inventory.

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<sup>1</sup> as contained in FCCC/CP/1999/7 Part I (Decision 3/CP.5)

<sup>2</sup> "Annex I Parties" in these guidelines refers to Parties included in Annex I to the Convention

<sup>3</sup> For the sake of brevity, all articles referred to in these guidelines are those of the Kyoto Protocol, unless otherwise specified.



### **B. Transfers and acquisitions of ERUs, CERs and AAUs**

Each Annex I Party shall report the following information in an agreed standard format :

- a) Total holdings of PAAs by the Party, including, if relevant, amount of PAAs allocated to legal entities resident in the Party, with breakdown by entity, at the beginning and at the end of the calendar year;
- b) Total holdings of ERUs and CERs by the Party at the beginning and at the end of the calendar year. The inventory submission for the first year of the commitment period shall provide information on CERs obtained in accordance with Article 12.10, from 2000 up to and including the year prior to the first commitment period;
- c) Total quantity of transfers and acquisitions of PAAs and ERUs during the calendar year and identification of each acquiring and transferring Party;
- d) Total quantity of CERs acquired during the calendar year, including reference to detailed information related to relevant projects; and
- e) Total quantity of PAAs, ERUs and CERs retired [or cancelled] during the calendar year.

### **C. Information under Article 3.1 and 3.13**

After the end of the true-up period<sup>4</sup>, each Annex I Party shall issue supplementary report. That report shall include:

- (a) Total quantity of PAAs, ERUs, CERs held in its retirement account;
- (b) Total holdings of PAAs, ERUs, CERs that the Party intends to add to its initial assigned amount for the subsequent commitment period.
- (c) Aggregate greenhouse gas emissions for all years of the first commitment period, and all adjustments applied during the first commitment period if any, and;
- (d) *information – to be further defined – proving compliance (such as on supplementarity).*

### **D. National systems in accordance with Article 5.1**

Each Annex I Party shall include in its national inventory report information on any changes that have occurred in its national system, compared to information reported in previous submissions, including information submitted under Article 7.2.

### **E. Adjustments in accordance with Article 5.2**

If adjustment(s) has(have) occurred during the previous year, the Annex I Party concerned shall report which inventory data were adjusted and reference the adjustment report(s) issued by the adjustment team.

### **F. National registries**

Each Annex I Party shall include in its national inventory report information on any changes that have occurred in its national registry, compared to information reported in previous submissions, including information submitted under Article 7.2.

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<sup>4</sup> in 2015.

**G. Information on activities under Article 6, 12 and 17**

Each Annex I Party shall provide the uniform resource locator (URL) in the Internet from which information on projects having generated ERUs or CERs during the relevant year is available.

Likewise, it shall provide the uniform resource locator (URL) in the Internet from which up-to-date information may be found on entities which are authorized by the Party to participate in the mechanisms pursuant to Articles 6,12 or 17.

**Elements of a CoP/moP decision**  
**Reporting under Article 7.2**

...

Decides that Parties included in Annex I to the Convention and having ratified the Kyoto Protocol shall submit information prepared in accordance with guidelines for reporting of supplementary information under Article 7.2 of the Kyoto Protocol contained in Annex I of this decision.

Under Article 12 of the Convention, each Party shall submit a national communication, prepared in accordance with UNFCCC reporting guidelines on national communications<sup>5</sup> and other relevant decisions of the COP and the COP/MOP.

Unless otherwise specified in the attached guidelines, supplementary information under Article 7.2 of the Kyoto Protocol shall be incorporated in the national communication (in a single report).

**Annex I to the Decision**

**II. GUIDELINES for reporting Of Supplementary Information UNDER ARTICLE 7.2 OF THE KYOTO PROTOCOL**

The objectives of these guidelines are:

- (a) To enable Annex I Parties<sup>6</sup> to meet their commitments for reporting information in accordance with Article 7.2<sup>7</sup> of the Kyoto Protocol;
- (b) To promote the reporting of consistent, transparent, comparable, accurate and complete information by Annex I Parties;
- (c) To ensure that the COP/MOP and any body that may be designated by the COP/MOP for compliance purposes have the information necessary to carry out their assigned functions and to take decisions on any matter required for implementation of the Kyoto Protocol.

**A. Supplementary information relevant to Article 2**

In providing information under section V of the UNFCCC reporting guidelines on national communications<sup>8</sup>, each Annex I Party shall specifically address policies and measures implemented and/or further elaborated in order to reduce or limit emissions of GHG not controlled by the Montreal Protocol.

In addition, it shall identify steps taken to co-operate with other Parties to enhance the individual and combined effectiveness of their above mentioned policies and measures pursuant to Article 4, paragraph 2(e)(i) of the Convention.

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<sup>5</sup> as contained in FCCC/CP/1999/7 Part II (Decision 4/CP.5)

<sup>6</sup> "Annex I Parties" in these guidelines refers to Parties included in Annex I to the Convention.

<sup>7</sup> For the sake of brevity, all articles referred to in these guidelines are those of the Kyoto Protocol, unless otherwise specified.

<sup>8</sup> FCCC/CP/1999/7 Part II

With respect to the transport sector, each Annex I Party shall identify which steps it has taken through ICAO and IMO in order to pursue limitation or reduction of emissions of GHG not controlled by the Montreal Protocol from aviation and marine bunker fuels.

### **B. Supplementary information relevant to Article 3**

#### 1. BASE YEAR (ARTICLE 3.5 AND 3.8)

Each Annex I Party shall provide information on the base year it uses for HFCs, PFCs and SF<sub>6</sub>, for the purpose of the calculation of its commitments under Article 3.7.

Each Annex I Party undergoing the process of transition to a market economy shall recall in its national communications which base year or period was agreed by the CoP/moP for the implementation of its commitments under Article 3.

#### 2. DEMONSTRABLE PROGRESS IN 2005 (ARTICLE 3.2):

Each Annex I Party shall provide, in all relevant sections of its 4<sup>th</sup> national communication, information to demonstrate that progress has been made in achieving its commitments under the Kyoto Protocol. (*Specific guidelines to be drafted later on*)

### **C. Supplementary information on national systems**

Each Annex I Party shall provide a description of how it is undertaking the general and specific functions defined in paragraphs 10, 12, 14 and 16 of the guidelines for national systems under Article 5.1, including:

- (a) a description of the institutional, legal and procedural arrangements as required under paragraphs 10 and 12 of guidelines for national systems; the single national entity with overall responsibility for the national inventory and the roles and responsibilities of various agencies and entities involved in the inventory development process in relation to data collection, processing and archiving;
- (b) an explanation of functions that were not performed or were only partially performed and information on actions planned or taken to perform them in the future;
- (c) a description of the QA/QC plan, its implementation and the quality objectives established in accordance with paragraphs 12 and 13 of the guidelines for national systems;
- (d) the key source categories and information on the identification process of key sources in accordance to paragraph 14 (a) of the guidelines for national systems; and
- (e) information on internal evaluation and review processes and their results in according to paragraph 15 of the guidelines for national systems;

### **D. Supplementary information on national registries**

Each Party included in Annex I shall provide a description of its national registry. The description shall include the following information:

.....  
*Depending on the outcome of discussions in the mechanisms WG*

.....  
**E. Supplementary information relevant to Articles 6, 12 and 17**

Each Annex I Party that participates in Kyoto mechanisms shall report :

- (a) a description of any institutional arrangements and decision-making procedures that it has in place to coordinate activities related to participation in the mechanism(s), including the participation of legal entities;
- (b) general information on projects under Article 6 (summarising detailed information on each project as publicly available in the Internet);
- (c) information on how its project activities under Article 12 have assisted Parties not included in Annex I to the Convention in achieving sustainable development and in contributing to the ultimate objective of the Convention; (reference should be made to reports issued by the non-Annex I Parties hosting projects);
- (d) information on names and contact details of legal entities, within the jurisdiction of the Party, that are (or have been) authorized to participate in mechanisms under any of Articles 6, 12 and 17; and
- (e) estimates of the expected contribution that each mechanism will allow towards compliance with the Party's quantified emission limitation and reduction commitment under Article 3.

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