



Working paper No. 4 (2000)

## WORKSHOP ON ISSUES RELATED TO ARTICLES 5, 7 AND 8 OF THE KYOTO PROTOCOL

Bonn, 14-16 March 2000

### METHODOLOGICAL ISSUES RELATED TO GUIDELINES UNDER ARTICLE 8 AND ADJUSTMENTS UNDER ARTICLE 5.2 OF THE KYOTO PROTOCOL: SUMMARY OF ISSUES AND RELATED OPTIONS

#### Working paper

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## I. INTRODUCTION

### A . Mandate

1. Article 8 of the Kyoto Protocol states that the Conference of the Parties (COP) serving as the meeting of the Parties to the Protocol shall adopt at its first session, and review periodically thereafter, guidelines for the review of implementation of the Protocol by expert review teams taking into account the relevant decisions of the Conference of the Parties. Article 5.2 of the Kyoto Protocol states that methodologies for estimating anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol shall be those accepted by the Intergovernmental Panel on Climate Change (IPCC) and agreed upon by the Conference of the Parties at its third session. Where such methodologies are not used, appropriate adjustments shall be applied according to methodologies agreed upon by the Conference of the Parties serving as the meeting of the Parties to the Protocol at its first session.
2. At its fourth session, the COP adopted decision 8/CP.4 on the preparations for the first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol. It decided that the preparatory work would include guidelines for the review of implementation by expert teams under Article 8. It also decided that the preparatory work should include methodologies for the application of adjustments under Article 5.2, with a view to completion by COP 6 (FCCC/CP/1998/16/Add.1).
3. At their tenth sessions, the subsidiary bodies endorsed the work programme on methodological issues related to Articles 5, 7 and 8 of the Kyoto Protocol (FCCC/SB/1999/2). The development of guidelines under Article 8 and of methodologies for the application of adjustments under Article 5.2 are an integral part of the work plan.
4. At its eleventh session, the Subsidiary Body for Scientific and Technological Advice (SBSTA) requested the secretariat to include in the agenda for the workshop on national systems and issues related to adjustments, the consideration of the methodological and technical aspects of the guidelines related to Article 8 of the Kyoto Protocol (FCCC/SBSTA/1999/14, para. 51 (a)).
5. The SBSTA, at its eleventh session, recalled Article 5.2 of the Kyoto Protocol and took note of submissions by Parties on the issue of adjustments. It considered that adjustments referred to in this article 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 any good practice agreed upon by the COP. It noted that these adjustments would result in substitution of a revised technical estimate for the purpose of accounting of the Parties' emissions and assigned amounts. It also considered that adjustments related to Article 5.2 could be an element of the review process under Article 8 of the Kyoto Protocol. It noted that the methodologies and procedures of adjustments, including the question of who should apply these adjustments, should be further examined in the preparatory work related to Articles 5 and 8 of the Kyoto Protocol.
6. The SBSTA invited Parties to submit their initial views on Article 8, particularly the relationship between the review process and compliance procedure and further requested Parties to submit their views on approaches for considering adjustments referred to in Article 5.2 of the Kyoto Protocol and any methodologies for their application by 1 February 2000.

## **B. Scope**

7. This paper draws upon the views of Parties contained in submissions on Articles 8 and 5.2 of the Kyoto Protocol and also draws on views contained in submissions on Article 7 (FCCC/SBSTA/2000/MISC.1).

8. The paper summarizes the views of Parties on the key issues and elements that may be contained in guidelines on Article 8, including the identification of inventory problems and process-related aspects of adjustments under Article 5.2. The paper also summarizes Parties' views on methodologies for adjustments. The information is organized under various headings followed by questions which Parties may wish to discuss at the workshop and questions that could be addressed in a different context, including during discussions on compliance or mechanisms. It may be noted that the SBSTA, at its eleventh session, requested that any compliance-related aspects of the Article 8 review process be taken up by the joint working group on compliance, as appropriate.

## **C. Background**

9. Guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention were adopted by decision 6/CP.5. The decision requests these guidelines to be used during the 2000 to 2001 trial period of technical inventory reviews, which includes individual country reviews on a voluntary basis, and determines that individual reviews of inventories for all Annex I Parties will be initiated in 2003 (FCCC/CP/1999/Add.1). Currently there are no guidelines for the review of national communications under the Convention. However, Parties may wish to read document FCCC/SBI/2000/3 on the experience of reviews of national communications, which describes issues related to the review process and outlines possible options for the third round of in-depth reviews, including the development of guidelines.

10. In their submissions, Parties in general envisage that guidelines for supplementary information under Article 7.1 and 7.2 of the Kyoto Protocol will build upon the UNFCCC reporting guidelines on annual inventories and the UNFCCC reporting guidelines on national communications. Given this, it can also be envisaged that there will be a single review process separated into inventory review and national communication review, although these could be done at different times and using different approaches.

11. The secretariat envisages that guidelines related to review will need to evolve in the future based upon the experience gained under the Convention. Therefore, the Article 8 guidelines will have some elements that are relatively complete, some that will need to be specified after COP 6 and some that will evolve based on experience.

**D. Possible action by participants attending the workshop**

12. Participants may wish to consider the information in this document and to address the questions posed. Participants are expected to focus on elements that could be contained in guidelines for review under Article 8, including the process-related aspects of adjustments under Article 5.2, and separately to consider what methodologies may be appropriate for adjustments.

**II. WHAT IS TO BE REVIEWED AND WHEN?**

13. According to Article 8 of the Kyoto Protocol, the information submitted under Article 7 by each Party included in Annex I shall be reviewed by expert review teams. So, clearly there is a link between reporting and review. Several articles of the Kyoto Protocol relate to the reporting of information and it is for Parties to decide what of this is encompassed under the guidelines for reporting supplementary information under Article 7 and hence what is subject to review either as part of the annual compilation and accounting of emissions inventories and assigned amounts or as part of the review of national communications. Article 8 also states that the review process shall provide a thorough and comprehensive technical assessment of all aspects of the implementation by a Party of the Protocol, so the scope of review can be broader than just what is reported under Article 7.

14. In their submissions, Parties have similar views on what is to be reviewed before, during and after the first commitment period. The elements to be reviewed are listed in the first column of table 1, whilst the following columns are used to indicate when these elements should be reviewed. There are differences on whether certain elements should be reviewed annually or periodically during the commitment period and these differences are also illustrated in table 1. In relation to the inventory, the table does not show a possible separation of an annual review into stages such as initial checks, synthesis and assessment and individual review which form part of the trial inventory review under the Convention. Parties' views differ as to whether the individual review for each Party should be annual and/or if every part of the individual inventory review needs to be annual. For example, it is argued that some parts of the inventory are based on infrequent survey data and hence should not be reviewed in-depth annually.

**Table 1. Elements to be reviewed before, during and after the first commitment period**

	Before the first commitment period	During the first commitment period		After the first commitment period
		Annually	Periodically	
• Base year inventory and hence the assigned amount	X	X <sup>1</sup>	X	
• Implementation of Articles 5 and 7 or aspects relevant to compliance	X		X	
• National registries <sup>2</sup>	X		X	
• Annual inventory		X		
• Information on AAUs, CERs and ERUs <sup>3</sup>		X	X	
• Adjustments		X		
• Land-use, land-use change and forestry in accordance with Article 3.3 and 3.4		X	X	
• National systems under Article 5.1		X	X <sup>4</sup>	
• National communications			X	
• Assigned amounts vs. cumulative emissions 2008-2012				X

15. Participants may wish to consider the following questions at the workshop:

#### Main questions

- (a) *Does the above table cover the elements to be reviewed?*
- (b) *Which elements should be reviewed annually and which periodically?*
- (c) *Should there be a pre-commitment period review, for what purpose and when?*

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<sup>1</sup> If recalculations are allowed.

<sup>2</sup> National registries could be encompassed in the review of Article 5.

<sup>3</sup> Assigned amount units, certified emission reduction units and emission reduction units.

<sup>4</sup> National systems could be reviewed during the annual inventory review only if required by the review team.

(d) *Should the review be limited to 'supplementary information'? (Will there still be a separate review under the UNFCCC?)*

#### Secondary questions

(e) *Should the review of transfers and acquisitions of AAUs, CERs and ERUs focus on an aggregation of eligible transfers and acquisitions?*

(f) *Should the secretariat be expected to maintain a database to track assigned amounts, transfers and acquisitions and inventories of emissions from sources and removals by sinks, based on annual submissions from Parties?<sup>5</sup>*

#### Compliance-related questions

16. Parties, in general, state that the main rationale for reviewing implementation of Articles 5 and 7 or aspects thereof prior to the first commitment period is related to Parties' participation in the Kyoto Protocol mechanisms. So there is a strong link to compliance at this stage.

(a) *What information should be reviewed for the purpose of compliance with Articles 5 and 7?*

(b) *If there is a pre-commitment review, should a review of Articles 5 and 7 be limited to particular aspects for compliance purposes?*

### **III. GUIDANCE**

17. The guidelines for review under Article 8 of the Kyoto Protocol need to take into account other guidelines and/or rules and modalities relating to work on other articles. In particular, consideration should be given to:

- (a) Guidelines for supplementary information under Article 7.1
- (b) Guidelines for supplementary information under Article 7.2
- (c) Guidelines for national systems under Article 5.1
- (d) Principles, modalities, rules and guidelines under Articles 6, 12 and 17
- (e) Modalities, rules and guidelines for Article 3.4 and possible reporting guidelines related to Article 3.3 and 3.4.
- (f) Procedures and mechanisms for non-compliance
- (g) Guidelines on registries (unless part of Article 5.1)
- (h) Revised 1996 IPCC Guidelines and good practice guidance

18. Parties, in their submissions, note what should be included in the various guidelines under development. In particular, they indicate that review teams will need guidance on a number of issues

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<sup>5</sup> The secretariat currently has under development a new database to store annual GHG inventory data submitted by Parties according to the common reporting format agreed upon by decision 3/CP.5. It also maintains an activities implemented jointly database for information submitted in accordance with the uniform reporting format.

and such guidance can be included in guidelines. Typically, Parties have not stated whether this guidance should be part of guidelines for review under Article 8, guidelines for national systems under Article 5.1 or whether a new set of guidelines should be developed related to Article 5.2. The following table, in the first column, lists all of the areas on which guidance has been requested for inclusion in the various guidelines. The other columns provide an indication of which guidelines the guidance could be part of.

**Table 2 Guidance to be included in the guidelines**

	Guidelines under Article 8	Guidelines under Article 5.1	Article 5.2
• Review of national communications	X		
• Review of national systems	X		
• Identification of adjustable and non-adjustable inventory problems	X		X
• Identification of severe inventory problems	X		X
• Identification of minor inventory problems	X		X
• The scope of questions of implementation	X		
• Methodologies for adjustments		X	X
• Process aspects of review	X		
• Process aspects of adjustments	X		X

19. Parties have noted that the experience gained during the two-year trial period of the technical inventory review will be directly relevant to the provision of much of this guidance.

20. Participants may wish to consider the following questions at the workshop:

Main questions

- (a) *Does table 2 reflect the elements to be contained within the various guidelines?*
- (b) *In which guidelines should the various elements of guidance be contained?*

### Secondary questions

(c) *If there is to be a review of Articles 5 and 7 or aspects thereof prior to the first commitment period should the guidelines under Article 8 contain any separate guidance for this? (In other words, will the nature of this review differ from that during the commitment period?)*

## **IV. IDENTIFICATION OF POTENTIAL INVENTORY PROBLEMS**

21. A large number of potential problems could be identified during the review of inventories. This section considers what sort of guidance may be required to identify and categorize problems. Such guidance may be relevant for the expert review teams and the compliance bodies.

22. Parties agree in their submissions that potential problems should be separated according to agreed rules or criteria and may result in different consequences. They differ somewhat in the suggested categorization of problems, although the suggestions are complementary.

23. Three possible sets of categories are presented as examples below. These may be expanded upon.

### **Level of importance of emission source** (Which problems *need* correction or adjustment?)<sup>6</sup>

*De minimis problems*  
that are of negligible influence on the level and trend of the emissions are not pursued by compliance procedures.

*Important problems*  
that need to be fixed or adjusted or which can lead to questions of implementation. If adjusted, the Party is in compliance.

*Severe problems*  
that need to be fixed or adjusted or which can lead to questions of implementation. If adjusted, the case is still considered by the compliance body.

### **Quantification** (Which problems *can* be adjusted?)

*Quantifiable problems*  
that can be expressed in terms of emissions, are relevant for the assessment of compliance with Article 3 and could be fixed by the calculation of a revised technical estimate (adjustable) (e.g. missing estimate)

*Non-quantifiable problems*  
that cannot be expressed in terms of emissions, relate to the process of inventory compilation and cannot be fixed by the calculation of a technical revised estimate (non-adjustable) (e.g. problems with quality control)

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<sup>6</sup> These three categories are intended to encompass the categories mentioned by Parties in their submissions such as minor, major, serious, less serious, egregious. New names have been chosen to add clarity since categories mentioned by Parties overlapped.



### Level of dispute

#### *Undisputed problems*

that need explanation or correction, Party agrees  
(e.g. only potential emissions of HFCs PFCs  
and SF<sub>6</sub> reported)

#### *Disputed estimates*

for which under- or over-estimation is  
suspected, Party disagrees  
(e.g. significant recalculation)

24. With this categorization, several combinations would be possible. As an example, a gap in the inventory can be 'severe', 'quantifiable' and 'undisputed'. 'Disputed estimates' are always 'quantifiable' by their nature but could be 'de minimis', 'important' or 'severe'. For non-quantifiable problems the categorization into 'de minimis', 'important' or 'severe' could not be on a quantitative basis. Tables 3 and 4 provide examples of problems and their possible categorization.

25. In considering table 3, it should be noted that limited time is available in the current in-depth review process for the consideration of inventory problems and so only the most obvious problems are typically detected. During the trial period of technical inventory review under the Convention, expert review teams will be able to examine the problems in much greater detail.

**Table 3. Illustrative list of problems encountered with inventories during the in-depth reviews**

- |  |
|--|
| <ul style="list-style-type: none"> <li>• Actual emissions of HFCs, PFCs and SF<sub>6</sub> not reported</li> <li>• Disaggregated emissions of HFCs, PFCs and SF<sub>6</sub> by gas not reported</li> <li>• Inconsistent activity data or methods for base year data and subsequent years</li> <li>• Split of CO<sub>2</sub> emissions from fuel combustion activities into IPCC categories not provided</li> <li>• Considerable difference between the national and the reference approach for fuel combustion activities, unexplained</li> <li>• Significantly different emission factors than others, unexplained</li> <li>• Change in allocation of a source (e.g. from <i>land-use change and forestry</i> category to <i>energy</i>)</li> <li>• Recalculations that change emissions significantly</li> <li>• Inclusion of emissions from biomass in the totals for some years</li> </ul> |
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**Table 4. Illustrative list of possible problems and possible categorization**

	<b>Undisputed problems</b>	<b>Disputed estimates</b>
<b>Quantifiable</b>	<ul style="list-style-type: none"> <li>• Missing estimate due to data gap</li> <li>• Only potential emissions of HFCs, PFCs and SF<sub>6</sub> provided</li> <li>• Emissions allocated to wrong category</li> <li>• No sectoral or reference approach provided for CO<sub>2</sub> from energy</li> <li>• Emissions not reported on a gas-by-gas basis or high level of aggregation</li> <li>• Inconsistent time-series</li> <li>• Lack of information on uncertainty</li> </ul>	<ul style="list-style-type: none"> <li>• Inconsistent or irregular emission factor, emissions and/ or activity data</li> <li>• Significant changes in emissions due to recalculation or over time</li> <li>• High divergence from international data</li> <li>• Significant difference in reference and sectoral approaches (CO<sub>2</sub>)</li> <li>• Use of questionable measurement/ estimation methodology</li> <li>• Data inconsistent with previous submission, unexplained</li> <li>• Conflicting information on data from different sources within a Party</li> <li>• High uncertainty<sup>7</sup></li> </ul>
<b>Non-quantifiable</b>	<ul style="list-style-type: none"> <li>• Documentation not transparent</li> <li>• Insufficient archiving</li> <li>• National system not in accordance with Article 5.1 guidelines</li> <li>• Problems with quality assurance/control</li> <li>• Failure to submit on time</li> <li>• Data not reported in the correct format</li> <li>• Inconsistency between information in the common reporting format and the national inventory report</li> </ul>	

26. Problems in the categories may have different consequences. Table 4 provides an illustrative example of possible consequences.

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<sup>7</sup> One Party in its submission proposed that adjustments should be made when the uncertainty of the estimates is judged to be unacceptably high to assess compliance with the target, even if the inventory is prepared according to the agreed guidelines.

**Table 5. Possible consequences of different categories of problems**

Case	De minimis	Important	Severe	Quantifiable	Non quantifiable	Consequence
1	x			x	or x	Not pursued
2		x		x		Adjusted [and forwarded to the compliance body]
3			x	x		[Not] adjusted and forwarded to the compliance body
4		x			x	Party is requested to correct by next submission [and forwarded to the compliance body]
5			x		x	Party is requested to correct by next submission and forwarded to the compliance body

27. Table 5 does not presume that all quantifiable problems will be subject to adjustment even though technically this is possible. Parties may decide that some severe problems should not be subject to adjustment.

28. Participants may wish to consider the following questions:

(a) *Are the categories of problems listed above appropriate? What is a useful categorization of problems perhaps linked to different consequences?*

(b) *What would be the different consequences of an identified problem that falls within a category? For example, which problems should be adjusted? Should all quantifiable problems be adjusted?*

(c) *What methods exist to determine to which category an identified problem belongs?*

(d) *What guidance should be provided for review teams to identify problems?*

## V. THE PROCESS OF INVENTORY REVIEW

29. The process of inventory review begins with the identification of problems which may then be resolved by the Party, be subject to adjustment where feasible and/or be forwarded to compliance procedures if necessary. Parties' views differ on how many stages are involved in the process of inventory review and, in particular, where the compliance body or bodies are involved. They also differ as to how many iterations and how much time should be permitted for a Party to resolve a problem with the review team, agree an adjustment and settle a dispute at the compliance stage. An overview of the possible inventory review process and its duration is presented in diagrammatic form at the end of this paper.

### **A. Identification of problems**

30. Parties' submissions contain many points in common relating to the process of identifying problems with the inventory. Many, but not all, Parties suggested the following:

- (a) The technical GHG inventory review is in several stages, for example initial checks, synthesis and assessment, individual review;
- (b) During the review questions will be raised;
- (c) Expert review team members should have technical expertise;
- (d) Expert review teams [and the secretariat] follow guidance to identify adjustable and non-adjustable problems, minor problems and severe problems;
- (e) If a problem is identified, the Party is given a fixed time scale to fix it;
- (f) If a Party corrects the problem in accordance with IPCC Guidelines, this does not constitute an adjustment;
- (g) Where a problem is identified or at any stage of the review process, Parties may be provided with access to technical advice from the review team or other Parties and/or may request technical or financial assistance as facilitation from the compliance procedure.

31. Participants may wish to consider the following questions during the workshop:

#### **Main questions**

- (a) *Will the individual review for each Party take place annually?*
- (b) *How long should a Party be given to fix a problem?*

#### **Secondary questions**

- (c) *Should a Party be permitted to request assistance via the compliance procedure before the individual review stage? If so, does the review process stop?*
- (d) *Should outside experts be used as part of the review process to provide inputs to the review teams?*

### **B. Adjustment of problems**

32. Parties' submissions generally note that if a problem has not been corrected it may be subject to adjustment, using agreed methodologies. The following summarises the key elements in the submissions. The main divergence in approach relates to whether the Party itself or an outside body

calculates an adjustment.

- (a) The review team recommends if an adjustment is appropriate.
- (b) If the Party disagrees with the review team's recommendation, the issue is referred to the compliance procedure.
- (c) Whilst severe inventory problems may be subject to adjustment, these also need to be simultaneously referred to the compliance procedure.
- (d) Adjustments may be estimated by an adjustment team, an outside body such as the technical support unit, by the review team or by the Party itself.
- (e) If the adjustment is applied by another body, if a Party accepts the adjustment then it is in compliance with Articles 5.2 and 7.1, whilst if it cannot agree it is referred to the compliance procedure. (Aside from severe problems.)
- (f) If the Party agrees to impose an adjustment on itself, the inventory is re-submitted to the review team for acceptance or referral to the compliance procedure.
- (g) If a Party accepts an adjustment but later is able to retroactively self-correct the problem during the commitment period, the adjustment could be removed.

### **C. Non-adjustable problems**

33. It is recognized in submissions that many problems may not be subject to adjustment and hence procedures may be simplified in such cases.

- (a) If a problem has not been fixed within a given timescale and cannot be subject to adjustment, it is referred to the compliance procedure.
- (b) Only if several consecutive expert review reports indicate that procedural or institutional problems have not been addressed should the problem be referred to the compliance procedure.

34. Participants may wish to consider the following questions.

#### **Main questions**

- (a) *Should the adjustment be calculated by the review team, an adjustment team, another outside body or the Party itself?*

Secondary questions

- (b) *How much time (and/or iterations) is allowed for the Party, review team, compliance bodies and other bodies, if involved, to correct problems, calculate and agree adjustments and resolve disputes?*
- (c) *Should the adjustment procedure begin after entry into force, but prior to the first commitment period?*
- (d) *What needs to be reported and by whom in relation to adjustments?*

**VI. THE PROCESS OF NATIONAL COMMUNICATION REVIEW**

35. Parties' submissions contain little about the review of national communications, hence it is difficult to identify where there is consensus. However, the views contained in the submissions are generally complementary. The following summarizes some of the main points.

- (a) National communications should be reviewed separately from GHG inventories by different review teams.
- (b) Review should occur once per commitment period.
- (c) Review teams should be well prepared before a country visit.
- (d) Guidance for review of national communications should describe purposes, tasks, approaches and procedures to assess the implementation of commitments under the Protocol, aside from Article 3 and include an assessment of supplementary information.
- (e) Guidance for the review of mechanisms could be developed under the relevant articles.
- (f) Review could be narrowly limited to aspects unique to the Kyoto Protocol, but not including individual review of Article 12 projects, or cover all aspects of implementation of commitments other than inventories.
- (g) Information submitted under Article 6 may be reviewed in accordance with Article 8.
- (h) If a review team has concerns with information, these should first be discussed with the Party. If resolution is not possible they should be directed to the compliance procedure.
- (i) Collective provisions of the Protocol should be reviewed, but questions of implementation should not be forwarded from the review teams to the compliance procedure.

36. Participants may wish to consider the following questions:

Main questions

- (a) *What approach should be used to review national communications?*
- (b) *How frequently should review occur (linked to reporting)?*
- (c) *How much time should be given to resolve problems?*

## **VII. METHODS TO APPLY ADJUSTMENTS**

37. This section is intended to facilitate discussion on elements of guidance for methodologies to calculate adjustments.

38. Parties state in their submissions that methodologies should be ‘transparent’, ‘non-arbitrary’, ‘as accurate as possible’, ‘flexible’, ‘simple’ and ‘straightforward’. In addition, they should be ‘conservative’ but not ‘punitive’.

39. Methodologies for adjustments could consist of two stages namely methods to calculate revised technical estimates of emissions and methods to make estimates conservative. The second stage could be incorporated into the first, but they have been separated below in order to structure the discussion.

### **Methods to calculate revised technical estimates of emissions**

40. For the methods to obtain revised technical estimates, there may be a conflict between transparency, replicability, simplicity and accuracy. Additional information is provided in working paper No. 3 (2000).

41. Methods to calculate revised technical estimates can be either problem-independent or problem-specific:

(a) *Problem-independent* methods could be used regardless of the problem. The revised technical estimates replace the estimate in question. This would result in a smaller set of methods and could be less accurate.

(b) *Problem-specific* methods would have to be defined specifically for each possible problem. Larger sets of methods for all problems, sectors, gases and possibly countries would have to be developed which could be more accurate.

42. Independent or problem-specific methods are not necessarily competing options, as either could be used to solve the same problem.

43. Methods to calculate revised technical estimates of emissions taken from submissions by Parties (FCCC/SBSTA/1999/MISC.9, and Add.1 and FCCC/SBSTA/2000/MISC.1) include:

Method	Description	Characteristics
(1) IPCC tier I methods	Use IPCC tier I methods with available data and emission factors.	Estimates depend on the quality of the activity data used and whether the default emission factors reflect the national circumstances of that country. For most sectors defaults are given as ranges, or additional assumptions have to be made.
(2) Annex B averages	Estimation of emissions based on averages over Annex B countries. The average emission rate of several Parties would be applied to an emission driver of one Party.	National circumstances are not taken into account. Higher accuracy can be obtained by grouping countries with similar circumstances into clusters and applying an average over the countries included in that cluster. Such grouping would have to be defined.
(3) Extrapolation using driver	Extrapolation of emissions according to a defined methodology based on the linkage of emissions with a driving indicator or growth factor.	Only applicable if emissions of at least one year are available. Possibly difficult to develop into guidelines valid for all countries, emissions and time periods.
(4) Extrapolation without using driver	Extrapolation of emissions, for example linear or polynomial	Only applicable if emissions of several years are available. Results depend on the method used and also the number existing emission estimates considered.
(5) Interpolation	Linear interpolation and extrapolation.	Only applicable if emissions of at least two adjacent years are available.
(6) Linkages	Estimation of emissions of one gas or source category based on the linkage to emissions of another gas or source category.	Can only be applied in a limited number of cases.

44. Participants may consider the following questions:

(a) *How should guidance on methods to calculate revised technical estimates be designed? For example:*

Option	Description	Implication
(1) Define agreed methods	Define a set of replicable transparent methods that can be performed without assumptions for all cases (e.g. problems, sources, gases, countries)	Transparent and replicable, but complex task, possibly not accurate and may be impossible.
(2) Solution case by case	Set generic guidance on methods that are to be applied and how the assumptions have to be selected, if needed.	Possibly not transparent, replicable. Judgement and assumptions needed. Potentially higher accuracy, if controlled.

(b) *Are the methods to obtain revised technical estimates given above complete? May some methods be discarded at this point?*

(c) *When should methods be developed?*



(d) *How should the appropriate method be selected?*

(e) *How, if possible, should a selection process for the appropriate method be defined, which is applicable for all cases?*

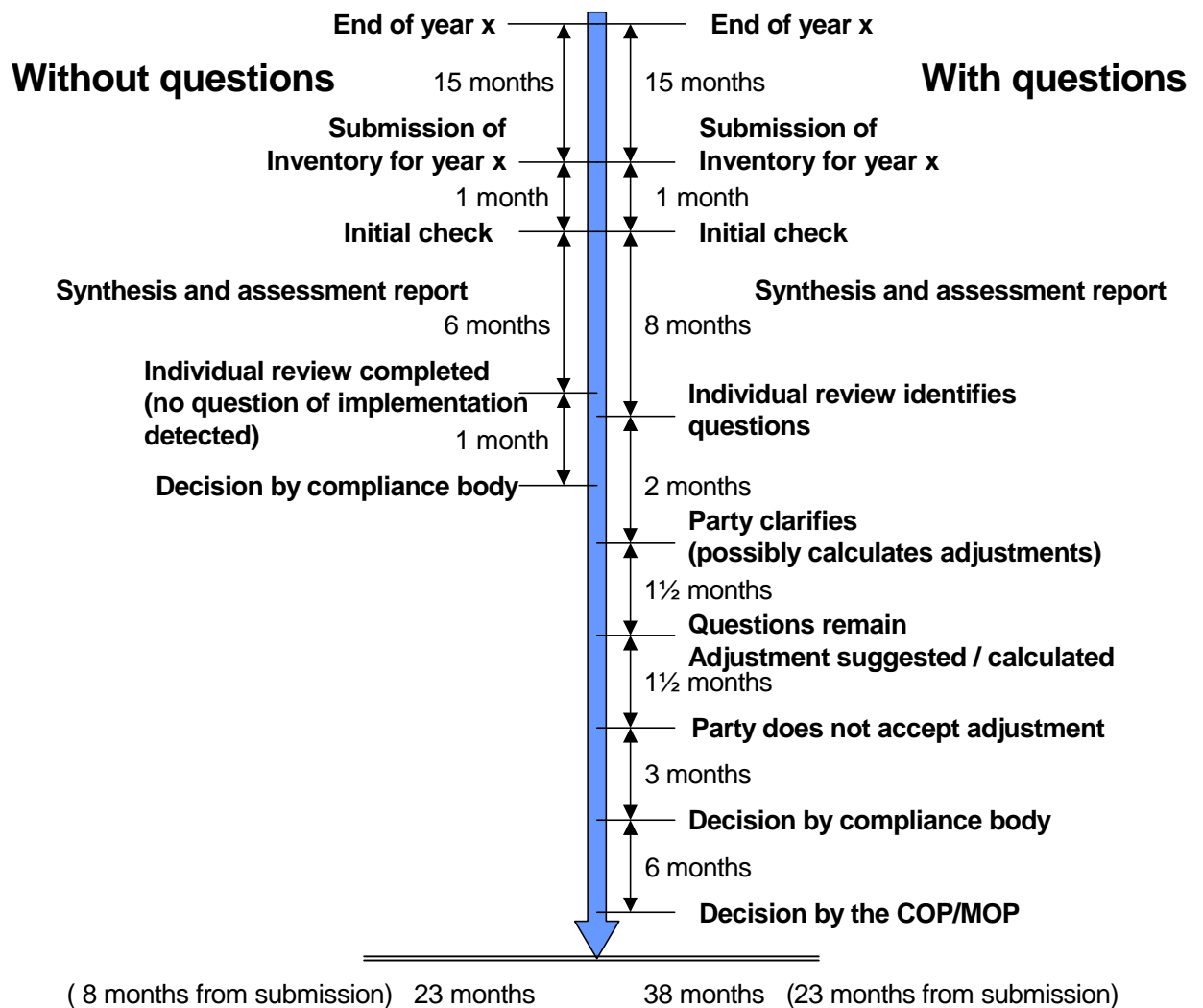
#### **Methods to make estimates conservative**

45. Participants may consider the following question:

(a) *How can revised technical estimates be made conservative? How can it be ensured that they are not punitive? For example:*

<b>Option</b>	<b>Description</b>	<b>Implication</b>
(1) Inflating and deflating of revised technical estimate	For a source category in question a revised technical estimate is calculated and increased (target year) or decreased (base year) by a set percentage	Inflating and deflating factors have to be defined.
(2) Using top / bottom range of estimate	In the case assumptions have to be made when calculating the revised technical estimate, the assumptions that lead to higher emissions (target year) and lower emissions (base year) are preferred.	Possibly not transparent.

**Process and duration of possible review under the Kyoto Protocol with and without questions of implementation**



### Annex

1. This annex contains questions that participants may, primarily, wish to address in another context.

#### Mechanisms-related questions

(a) *Aside from aggregation of transfers and acquisitions of AAUs, CERs and ERUs, how should the review process under Article 8 encompass the review of mechanisms? Should only some aspects be reviewed?*

#### Compliance-related questions

2. Participants may wish to consider question (a), but the remainder may not be relevant for consideration at the workshop.

(a) *At what stage and by whom is which compliance procedure triggered? For example:  
At any stage, if the Party requests assistance?  
After the initial check, if questions are identified?  
After the synthesis and assessment report, if questions are identified?  
After the individual review, if no questions are identified?  
After agreement of the review team (or another body) and Party on an adjustment?*

(b) *How is a dispute handled? Is additional guidance needed for the compliance bodies to make decisions about inventories and adjustments, taking into account possible disputes about the interpretation of the guidelines?*

(c) *If a Party is allowed a long period to correct procedural or institutional problems then does it remain in compliance during this period? (i.e. If a Party can complete an inventory according the guidelines, but has problems related to the national system.)*

(d) *Should review teams collect information and report on the basis that Parties are initially in compliance or not in compliance?*

(e) *When the secretariat or a review team raises a question, is it a question of implementation under Article 8 or only a question of implementation when the Party has failed to adequately answer it or is it that only the compliance body decides if a question becomes a question of implementation?*

(f) *In the case of severe inventory problems referred to the compliance procedure, should an adjustment be simultaneously calculated and presented to the compliance body or should the recommendation of the compliance body be awaited?*

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