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SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE  
Twelfth session  
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Item 8 (b) of the provisional agenda

**METHODOLOGICAL ISSUES**

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

**Modalities for the accounting of assigned amounts**

**Preliminary assigned amounts**

**Note by the secretariat**

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## I. INTRODUCTION

1. The Kyoto Protocol stipulates that assigned amounts for the first commitment period shall be calculated in accordance with Article 3.7 and 3.8 and Annex B of the Kyoto Protocol. Additions to and subtractions from these assigned amounts may be made in accordance with Article 3.3, 3.4, 3.10, 3.11, 3.12 and 3.13 of the Kyoto Protocol.<sup>1</sup>
2. The provisional agenda and annotations for the twelfth session of the Subsidiary Body for Scientific and Technological Advice (SBSTA) contains an invitation to Parties to provide specific views on modalities for the accounting of assigned amounts under Article 7.4, in particular on the process of establishing initial assigned amounts (FCCC/SBSTA/2000/1, para. 38). The secretariat has prepared this document to provide information relevant to discussions on Articles 5, 6, 7, 8, 12 and 17 of the Kyoto Protocol.
3. In this document, the term “initial” assigned amount refers to the assigned amount calculated on the basis of Article 3.7 and 3.8 and Annex B without any additions or subtractions, in accordance with Article 3.3, 3.4, 3.10, 3.11, 3.12 and 3.13.<sup>1</sup>

## II. BACKGROUND

4. The subsidiary bodies, at their tenth sessions, endorsed the work programme on methodological issues related to Articles 5, 7 and 8 of the Kyoto Protocol (FCCC/SB/1999/2). One of the tasks in this work programme (cluster D) addresses the issue of modalities for the accounting of assigned amounts under Article 7.4 of the Kyoto Protocol. In accordance with this work programme, the secretariat was requested to prepare a paper for the thirteenth session of the SBSTA on the implications of recalculations of greenhouse gas (GHG) inventories of the base and subsequent years on assigned amounts of Annex I Parties (FCCC/SB/1999/2, p.17).
5. A preliminary paper on this issue was made available at the workshop on issues related to Articles 5, 7 and 8 that was held in Bonn, 14-16 March 2000<sup>2</sup>. The information in this paper indicates that a change in the base year greenhouse gas emission estimates resulting from a recalculation of a previously submitted GHG inventory causes a similar change in the assigned amount. For 16 Parties, the changes in emission estimates between second national communications and inventories reported two years later range from -5.3 to 12.3 per cent. The average change was 3.9 per cent.

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<sup>1</sup> The secretariat is aware that Parties have introduced terms such as “initial”, “recalculated”, and “modified” assigned amount in their submissions. Parties may wish to consider whether these terms need to be defined and standardized.

<sup>2</sup> See working paper No. 6 “Effects of recalculations of greenhouse gas inventories on assigned amounts and on emission limitation and reduction commitments of Annex I Parties”. This working paper may be obtained from the web site of the secretariat: [www.unfccc.de/sessions/workshop/000314](http://www.unfccc.de/sessions/workshop/000314). Parties may also obtain the paper upon request.

6. Some Parties, in their submissions on Articles 5, 7 and 8 (FCCC/SBSTA/2000/MISC.1), included views on methodological and technical issues related to modalities for the accounting of assigned amounts, such as the establishment of initial assigned amounts, the relationship between inventory time-series and the assigned amounts if new inventory information becomes available, and rules for calculating the assigned amounts. Some of them expressed the need for additional analysis of these issues in order to find solutions at an early stage.

7. Participants at the above-mentioned workshop noted that base year emission inventories should be reviewed prior to the first commitment period, after which they may be fixed for the duration of the commitment period (FCCC/SBSTA/2000/INF.5, para. 23 (a)). It was, however, also noted that there could be circumstances in which recalculations of base year inventories may be allowed during the commitment period.

### III. PRELIMINARY CALCULATION OF INITIAL ASSIGNED AMOUNTS

8. The table at the end of this document contains preliminary estimates of assigned amounts of Annex I Parties calculated in accordance with Article 3.7 and 3.8. The assigned amounts were calculated considering the six greenhouse gases included in Annex A to the Kyoto Protocol. **The estimates provided should be considered preliminary, since no Party has submitted a final base year inventory.** This information is provided for illustrative purposes only. For Parties that did not provide data on all greenhouse gases, the assigned amount was based only on gases that were reported. The last submitted inventory information was used for the calculations. The larger value of either the 1990 or 1995 aggregated emissions, expressed in carbon dioxide (CO<sub>2</sub>) equivalent, was used for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). Also, actual emissions of these gases were used, unless a Party only reported potential emissions<sup>3</sup>. The footnotes to the table provide additional information on reporting issues that could influence the calculation of the assigned amounts of individual Parties.

### IV. QUESTIONS NEEDING CONSIDERATION

9. The following list of preliminary questions may need to be addressed by Parties when considering the development of modalities for the accounting of assigned amounts under Article 7.4:

- (a) Is the use of the term "initial" assigned amount appropriate?
- (b) Should assigned amounts be "fixed" before the first commitment period? If so, when?
- (c) What process should be used to "fix" assigned amounts?

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<sup>3</sup> The ratio of potential to actual emissions for HFCs may vary widely among Parties. For example, it ranges from 16:1 to 1.9:1 among the three Parties which reported both emissions in their second national communications. This ratio may also exist for PFCs and SF<sub>6</sub>. The magnitude of this ratio depends on the national circumstances of the use of these gases.

(d) What should be done when a Party has recalculated subsequent years but has not recalculated its base year, as requested by the UNFCCC reporting guidelines on annual inventories (decision 3/CP.5)?<sup>4</sup>

(e) Should the base year inventory be reviewed prior to “fixing” the assigned amount? If so, when?

(f) Should adjustments under Article 5.2 be applied to the base year? If so, when? Should these adjustments be considered in the process of “fixing” the assigned amounts?

(g) If the assigned amount is “fixed”, should recalculations of the base year be allowed during the first commitment period?

(h) May Parties choose different base years (1990 or 1995) for each specific GHG (HFCs, PFCs and SF<sub>6</sub>) or only a common base year for these three gases? and

(i) How should potential emissions of HFCs, PFCs and SF<sub>6</sub> be considered when establishing initial assigned amounts<sup>5</sup>?

## V. POSSIBLE ACTION BY THE SBSTA

10. The SBSTA may wish to consider the information provided in this paper, develop a process for addressing the questions identified in the previous sections, and determine whether some aspects require a decision by the Conference of the Parties (COP)<sup>6</sup> related to the modalities for the accounting of assigned amounts under Article 7.4. The SBSTA may wish to develop guidance on how to proceed with the work on modalities for the accounting of assigned amounts, including:

(a) A possible process for fixing the initial assigned amounts, that includes:

(i) The development of a procedure to define and notify the COP, through the secretariat, of the base year to be used for HFCs, PFCs and SF<sub>6</sub> in accordance with the provisions of Article 3.8;

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<sup>4</sup> See document FCCC/CP/1999/7.

<sup>5</sup> If the assigned amount is calculated and fixed using potential emissions, it will change when Parties provide actual emissions.

<sup>6</sup> For the purpose of this paper, the secretariat assumes that the COP may take decisions that would be recommended for further adoption by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol. Parties may decide upon other approaches.

- (ii) The development of a process by which Annex I Parties with economies in transition would inform the COP, if they have not already done so, of their intention to use a historical base year or period other than 1990 for the implementation of their commitments under Article 3 in accordance with the provisions of Article 3.5; and
- (b) A process to review<sup>7</sup> the base year inventories.

It may also wish to provide guidance to the secretariat related to the future work on these issues.

11. The SBSTA may also wish to consider the timing of any decision that may need to be taken by the COP. The work related to the mechanisms of the Kyoto Protocol should also be taken into consideration.

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<sup>7</sup> The secretariat assumes that this process will be conducted together with other review activities under the Convention and the Protocol.

## Preliminary examples of assigned amounts

Party	Base year	Base year HFCs/PFCs/ SF <sub>6</sub> <sup>a, b</sup>	Gases not considered in the base year because not reported	Total GHG in base year (Gg-CO <sub>2</sub> equivalent)	Preliminary assigned amount (Gg-CO <sub>2</sub> equivalent)
Australia <sup>c</sup>	1990	1990	HFCs, SF <sub>6</sub>	480,669	2,643,682
Austria	1990	1995	-	77,154	354,908
Belgium	1990	1995	PFCs	137,034	630,356
Bulgaria	1988	data not available	HFCs, PFCs, SF <sub>6</sub>	157,090	722,613
Canada	1990	1990	-	599,450	2,817,415
Czech Republic <sup>d</sup>	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	189,837	873,248
Denmark	1990	1995	-	69,952	321,781
Estonia <sup>c</sup>	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	40,719	187,307
Finland	1990	1990	-	75,201	345,927
France	1990	1990	-	553,781	2,547,394
Germany	1990	1995	-	1,212,075	5,575,545
Greece	1990	1995	-	107,560	494,777
Hungary <sup>e</sup>	1985-1987 <sup>f</sup>	data not available	HFCs, PFCs, SF <sub>6</sub>	101,634	477,678
Iceland <sup>g</sup>	1990	1995	HFCs, PFCs	2,576	14,170
Ireland	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	53,497	246,086
Italy	1990	1995	-	519,540	2,389,884
Japan <sup>g</sup>	1990	1995	HFCs, PFCs	1,227,602	5,769,730
Latvia	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	35,669	164,076
Liechtenstein	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	260	1,196
Lithuania <sup>c, e</sup>	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	51,548	237,123
Luxembourg	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	13,448	61,862
Monaco <sup>h</sup>	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	111	509
Netherlands	1990	1995	-	219,206	1,008,349
New Zealand	1990	1990	-	73,066	365,332
Norway	1990	1990	-	52,141	263,312
Poland <sup>d, e</sup>	1988	data not available	HFCs, PFCs, SF <sub>6</sub>	564,286	2,652,144
Portugal	1990	1995	HFCs	64,016	294,473

<b>Party</b>	<b>Base year</b>	<b>Base year HFCs/PFCs/SF<sub>6</sub><sup>a, b</sup></b>	<b>Gases not considered in the base year because not reported</b>	<b>Total GHG in base year (Gg-CO<sub>2</sub> equivalent)</b>	<b>Preliminary assigned amount (Gg-CO<sub>2</sub> equivalent)</b>
Romania	1989	data not available	HFCs, PFCs, SF <sub>6</sub>	264,879	1,218,444
Russian Federation	1990	1990	SF <sub>6</sub>	3,040,062	15,200,310
Slovakia	1990	1990	-	76,304	351,000
Slovenia <sup>i</sup>	1986	data not available	HFCs, PFCs, SF <sub>6</sub>	19,212	88,377
Spain	1990	1995	-	308,459	1,418,911
Sweden <sup>g</sup>	1990	1995	HFC, PFC	70,761	325,502
Switzerland <sup>d</sup>	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	53,005	243,824
Ukraine	1990	data not available	HFCs, PFCs, SF <sub>6</sub>	919,220	4,596,100
United Kingdom <sup>c</sup>	1990	1995	-	765,728	3,522,351
United States of America	1990	1995	-	6,069,729	28,224,239

<sup>a</sup> All estimates of HFCs, PFCs and SF<sub>6</sub> refer to actual emissions except for Japan and Sweden, SF<sub>6</sub> emissions from the Netherlands and HFC emissions from New Zealand.

<sup>b</sup> The base year for HFCs, PFCs and SF<sub>6</sub> in this table is indicated solely on the basis of whether 1990 or 1995 levels of emissions were higher, with the higher value chosen as the base year. It should be noted, however, that some Parties in recent inventory submissions have indicated that they have not taken a decision as to the base year they will use.

<sup>c</sup> Emissions by sources minus removals by sinks from the land-use change and forestry sector were considered in the calculation of the assigned amounts in accordance with Article 3.7, due to the fact that for Australia and the United Kingdom land-use change and forestry constituted a net source of greenhouse gas emissions in its base year. Estonia and Lithuania reported net sources of greenhouse gas emissions from land-use change and forestry in 1997 and 1995-1997 respectively, but not in the base year.

<sup>d</sup> Although no information on emissions of HFCs, PFCs and SF<sub>6</sub> was provided for 1990 or 1995, the Party provided emission estimates for 1997 and/or 1998 in recent submissions.

<sup>e</sup> In inventory submissions or national communications subsequent to its first national communication, the Party has not provided revised estimates for the base year. It may be possible that the base year was not recalculated, but the subsequent years were.

<sup>f</sup> Average of years 1985, 1986 and 1987.

<sup>g</sup> The Party did not provide information as to the chemical species of HFCs and PFCs or information in terms of CO<sub>2</sub> equivalent, therefore these gases could not be considered in the assessment of the assigned amount.

<sup>h</sup> The Party reported emissions of HFCs, PFCs and SF<sub>6</sub> as negligible.

<sup>i</sup> 1990 data were used to calculate the assigned amount as the Party did not provide data for the base year.

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