



SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE

Tenth session

Bonn, 31 May - 11 June 1999

Agenda item 4 (a)

**NATIONAL COMMUNICATIONS FROM PARTIES INCLUDED IN
ANNEX I TO THE CONVENTION**

**GUIDELINES FOR THE PREPARATION OF
NATIONAL COMMUNICATIONS**

Draft conclusions by the Chairman

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA) decided to forward to the Subsidiary Body for Implementation (SBI) a draft decision on guidelines for the preparation of national communications by Parties included in Annex I to the Convention, part I: UNFCCC reporting guidelines on annual inventories, to be recommended for adoption by the Conference of the Parties at its fifth session (see annex to these conclusions). The text of these guidelines, which includes the common reporting format, is contained in an annex to the draft decision.
2. The SBSTA advised the SBI to set up a two-year trial period starting in early 2000 to assess the UNFCCC reporting guidelines on annual inventories, particularly the common reporting format, with a view to revising them at COP 7, taking into consideration, *inter alia*, experience gained by the Parties and the secretariat, and the input from IPCC.
3. The SBSTA encouraged Parties included in Annex I to the Convention to support the efforts of other Annex I Parties undergoing the process of transition to a market economy aimed at improving the quality of their national greenhouse gas inventories, including the reporting of inventory data using the common reporting format and the archiving of the inventory data.

4. The SBSTA took note of the information provided by the IPCC-OECD-IEA Programme on National Greenhouse Gas Inventories¹ related to its work on uncertainties and *good practices*. It requested the IPCC to provide its report in time for the twelfth session of the SBSTA and decided to consider the IPCC report on these activities at that session.
5. The SBSTA requested Parties to submit any further technical corrections to the common reporting format electronically to the secretariat, by 15 July 1999, so that the text of the guidelines could be completed in time for the fifth session of the COP.
6. The SBSTA requested the secretariat, subject to the availability of resources and taking into account the advice of the IPCC and other relevant organizations, to develop the software tools needed to facilitate reporting by Parties using the common reporting format.
7. The SBSTA requested all Parties not using the sectoral background data tables 5A-D on land-use change and forestry of the common reporting format to specify alternative formats, and to submit them to the secretariat by 1 July 2001.
8. The SBSTA decided to continue discussions at its eleventh session on revisions to the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, part II: UNFCCC reporting guidelines on projections, policies and measures, financial resources and transfer of technology, and other matters. It further decided, upon completion of work, to forward its conclusions for consideration by the SBI with the aim of submitting revisions to part II of the guidelines for adoption at the fifth session of the Conference of the Parties. The SBSTA requested the secretariat to prepare a document, in English only, reflecting the status of discussions on the draft text of part II of the guidelines at the close of the tenth session.

¹ By decision of the XIV Plenary of the IPCC, the functions of the IPCC-OECD-IEA Programme on Inventories will be assumed by the IPCC Task Force on Inventories with a technical support unit to be located in Japan in 1999.

Annex

Draft decision --/CP.5

**Communications from Parties included in Annex I to the Convention:
guidelines and schedule**

The Conference of the Parties,

Recalling the relevant provisions of the United Nations Framework Convention on Climate Change, in particular, Article 4, Article 10, paragraph 2, and Article 12,

Recalling its decisions 3/CP.1 on preparation and submission of national communications from Parties included in Annex I to the Convention, 4/CP.1 on methodological issues, 9/CP.2 on communications from Parties included in Annex I to the Convention: guidelines, schedule and process for consideration, and 11/CP.4 on national communications from Parties included in Annex I to the Convention,

Recognizing that anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol should be reported in a transparent, consistent, comparable, complete and accurate way,

Noting that the revised guidelines for the preparation of national communications by Parties included in Annex I to the Convention annexed to decision 9/CP.2 need to be updated to improve the transparency, consistency, comparability, completeness and accuracy of the reported national greenhouse gas inventories and other information,

Noting the ongoing process of improvement in guidance to Parties on the reporting of GHG inventories, in particular the work of the IPCC related to uncertainties and *good practices*,

1. *Decides* to adopt the guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories, contained in the annex to this decision;
2. *Decides* that Parties included in Annex I to the Convention should use the UNFCCC guidelines on annual inventories for reporting inventories due by 15 April each year, beginning in the year 2000;
3. *Invites* Parties to submit separately, by 1 July 2001, information to the secretariat on experiences with using the guidelines, in particular the common reporting format, in the years 2000-2001.

4. *Requests* the secretariat to prepare a report on the use of the guidelines, in particular the common reporting format, taking into account, *inter alia*, experiences gained by Parties in using the guidelines, and by the secretariat in processing the common reporting format, and input from the IPCC, for consideration by the SBSTA at its fifteenth session in considering possible revisions to the guidelines;

5. *Decides* that revisions to these guidelines, particularly the common reporting format, shall be considered by the SBSTA at its fifteenth session with a view to submitting a decision for adoption at COP 7.

Annex to the draft decision

**GUIDELINES FOR THE PREPARATION OF NATIONAL COMMUNICATIONS
BY PARTIES INCLUDED IN ANNEX I TO THE CONVENTION**

PART I:

UNFCCC REPORTING GUIDELINES ON ANNUAL INVENTORIES

A. Objectives

1. The objectives of the UNFCCC reporting guidelines on annual inventories are:
 - (a) To assist Annex I Parties in meeting their commitments under Articles 4 and 12 of the Convention and in preparing to meet possible future commitments under Articles 3, 5 and 7 of the Kyoto Protocol;
 - (b) To facilitate the process of considering annual national inventories and national inventories included in national communications, including the preparation of technical analysis and synthesis documentation; and
 - (c) To facilitate the process of verification and technical assessment and expert review of the inventory information.

B. Principles and definitions

2. National greenhouse gas inventories, referred to below only as inventories, should be transparent, consistent, comparable, complete and accurate.
3. Inventories should be prepared using comparable methodologies agreed upon by the Conference of the Parties (COP), as indicated in paragraph 7 below, and any *good practices*² agreed upon by the COP at a future session.

² The Intergovernmental Panel on Climate Change (IPCC) is currently developing guidance on *good practices* as part of its work related to uncertainties in inventories. This guidance may be available for consideration by the Subsidiary Body for Scientific and Technological Advice (SBSTA) in 2000. Guidance on *good practices* may include, *inter alia*, advice on the choice of methodology, emission factors, activity data, and uncertainties, and on a series of quality assessment and quality control procedures which may be applied during the preparation of inventories.

4. In the context of these UNFCCC reporting guidelines on annual inventories:

Transparency means that the assumptions and methodologies used for an inventory should be clearly explained to facilitate replication and assessment of the inventory by users of the reported information. The transparency of inventories is fundamental to the success of the process for the communication and consideration of information;

Consistency means that an inventory should be internally consistent in all its elements with inventories of other years. An inventory is consistent if the same methodologies are used for the base and all subsequent years and if consistent data sets are used to estimate emissions or removals from sources or sinks. Under certain circumstances referred to in paragraphs 10 and 11, an inventory using different methodologies for different years can be considered to be consistent if it has been recalculated in a transparent manner, taking into account any *good practices*;

Comparability means that estimates of emissions and removals reported by Parties in inventories should be comparable among Parties. For this purpose, Parties should use the methodologies and formats agreed by the COP for estimating and reporting inventories. The allocation of different source/sink categories should follow the split of the Revised 1996 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, at the level of its summary and sectoral tables.

Completeness means that an inventory covers all sources and sinks, as well as all gases, included in the Revised 1996 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, as well as other existing relevant source/sink categories which are specific to individual Parties, and therefore may not be included in the IPCC Guidelines. Completeness also means full geographic coverage of sources and sinks of a Party.³

Accuracy is a relative measure of the exactness of an emission or removal estimate. Estimates should be accurate in the sense that they are systematically neither over or under true emissions or removals, as far as can be judged, and that uncertainties are reduced as far as practicable. Appropriate methodologies conforming to guidance on *good practices* should be used to promote *accuracy* in inventories.

C. Scope

5. These UNFCCC reporting guidelines on annual inventories cover the estimation and reporting of greenhouse gas emissions and removals of both annual inventories and inventories included in national communications, as specified by decision 11/CP.4 and other relevant decisions of the COP.

³ According to the instruments of ratification, acceptance, approval or accession of the Convention by a given Party.

D. Base year

6. The year 1990 should be the base year for the estimation and reporting of inventories. According to the provisions of Article 4.6 of the Convention and decisions 9/CP.2 and 11/CP.4, the following Annex I Parties that are undergoing the process of transition to a market economy, are allowed to use a base year or a period of years other than 1990, as follows:

Bulgaria:	to use 1988
Hungary:	to use the average of the years 1985 to 1987
Poland:	to use 1988
Romania:	to use 1989
Slovenia:	to use 1986

E. Methods

Methodology

7. Parties shall use the Revised 1996 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories, referred to below as the IPCC Guidelines, to estimate and report on anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol. In accordance with the IPCC Guidelines, Parties may use different methods (tiers) included in those guidelines, giving priority to those methods which are believed to produce the most accurate estimates, depending on the data available. In accordance with the IPCC Guidelines, Parties can also use national methodologies which they consider better able to reflect their national situation provided that these methodologies are compatible with the IPCC Guidelines and are well documented.

8. The IPCC Guidelines offer a default methodology which includes default emission factors and in some cases default activity data. As these default data, factors and assumptions may not always be appropriate for specific national contexts, it is preferable that Parties use their own national emission factors and activity data, where available, provided that they are developed in a manner consistent with any *good practices*, and considered to be more accurate, and the reporting of the emission and removal estimates and their underlying data is transparent.

Good practices

9. When preparing inventories, Parties should apply any *good practices* agreed upon by the COP, in order to improve transparency, consistency, comparability, completeness and accuracy.

Recalculations

10. The purpose of all recalculations should be the improvement of accuracy and/or completeness. Recalculations have to ensure consistency of the time-series. The inventories of

an entire time-series, including the base year and all subsequent years for which inventories have been reported, should be estimated using the same methodologies, and the underlying activity data and emission factors should be obtained and used in a consistent manner. Where the methodology or manner in which underlying activity data and emission factors are gathered has changed, Parties should recalculate inventories for the base and subsequent years.

11. However, in some cases activity data may be missing for some historical years, including the base year. In this case, emissions or removals for these years may need to be recalculated with alternative methodologies. In these instances, Parties should demonstrate that the time-series is consistent. The alternative methodologies should be documented in a transparent manner, taking into account any *good practices*.

Uncertainties

12. Parties should estimate the uncertainties of their inventories using the best methodologies available to them, taking account of any *good practices*.

F. Reporting

1. General guidance

Estimates of emissions and removals

13. Article 12.1(a) of the Convention requires that each Party shall communicate to the COP, through the secretariat, *inter alia*, a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol. At a minimum, inventories shall contain information on the following six greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), and sulphur hexafluoride (SF₆). Parties should report emissions and removals of any other greenhouse gases whose 100-year global warming potential (GWP) values have been identified by the IPCC and adopted by the COP. Parties should also provide information on the following indirect greenhouse gases: carbon monoxide (CO), nitrogen oxides (NO_x) and non-methane volatile organic compounds (NMVOCs). Parties are encouraged to provide information on sulphur oxides (SO_x).

14. Greenhouse gas emissions and removals should be presented on a gas-by-gas basis in units of mass with emissions by sources listed separately from removals by sinks, except in cases where it may be technically impossible to separate information on sources and sinks in the areas of land-use, land-use change and forestry. For HFCs and PFCs, emissions should be reported for each relevant chemical in the category on a disaggregated basis except in cases where paragraph 19 applies.

15. In addition, consistent with decision 2/CP.3, Parties should report aggregate emissions and removals of greenhouse gases, expressed in CO₂ equivalent terms at summary inventory level,⁴ using GWP values provided by the IPCC in its Second Assessment Report, referred to below as 1995 IPCC GWP values, based on the effects of greenhouse gases over a 100-year time horizon. A list of these values is given in table 1 at the end of this document. Table 1 will be amended to include any additional greenhouse gases and their 100-year GWP values, once the GWP values have been adopted by the COP.

16. Consistent with decision 2/CP.3, Parties should report actual emissions of HFCs, PFCs and SF₆, where data are available, providing disaggregated data by chemical (for example, HFC-134a) and source category in units of mass and in CO₂ equivalents. Parties should make every effort to develop the necessary sources of data for reporting actual emissions. For the source categories where the concept of potential emissions applies, and Parties do not yet have the necessary data to calculate actual emissions, Parties should report disaggregated potential emissions. Parties reporting actual emissions should also report potential emissions for the sources where the concept of potential emissions applies, for reasons of transparency and comparability.

17. Parties are strongly encouraged to also report emissions and removals of greenhouse gases for which 100-year GWP values are available, but not yet adopted by the COP. These emissions and removals should be reported separately from national totals. The GWP value and reference should be indicated.

18. In accordance with the IPCC Guidelines, international aviation and marine bunker fuel emissions, based upon fuel sold to ships or aircraft engaged in international transport, should not be included in national totals, but reported separately. Parties should also report emissions from international aviation and marine bunker fuels as two separate entries in their inventories.

19. Emissions and removals should be reported on the most disaggregated level of each source/sink category, taking into account that a minimum level of aggregation may be required to protect confidential business and military information.

Recalculations

20. Recalculations of previously submitted estimates of emissions and removals as a result of changes in methodologies, changes in the manner in which emission factors and activity data are obtained and used or the inclusion of new sources or sinks, which have existed since the base year but were not previously reported, should be reported for the base year and all subsequent years, up to the year in which the recalculations are made. Recalculations should result in an improvement in the accuracy and completeness of the inventory and ensure the consistency of

⁴ CO₂ equivalent emissions should be provided at a level of disaggregation similar to summary table 7A of the IPCC Guidelines.

the time-series. In this regard, Parties should report justifications for these changes. The information on the procedures used for performing the recalculations, changes in the calculation methods, emission factors and activity data used, and inclusion of sources or sinks, should be documented in a transparent manner, indicating the relevant changes in each source or sink category where these changes have taken place.

Completeness

21. Where methodological or data gaps in inventories exist, information on these gaps should be presented in a transparent manner. Parties should clearly indicate the sources and sinks not considered in their inventories but included in the IPCC Guidelines, and explain the reason for the exclusion. In addition, Parties should use the standard indicators presented below to fill the blanks in all the tables of an inventory. This approach facilitates assessment of the completeness of an inventory. The standard indicators are as follows:

(a) “NO” (not occurring) for emissions by sources and removals by sinks of greenhouse gases that do not occur for a particular gas or source/sink category within a country;

(b) “NE” (not estimated) for existing emissions by sources and removals by sinks of greenhouse gases which have not been estimated. Where “NE” is used in an inventory for emissions or removals of CO₂, N₂O, CH₄, HFCs, PFCs, or SF₆, the Party should indicate, using the completeness table of the common reporting format, why emissions could not be estimated;

(c) “NA” (not applicable) for activities in a given source/sink category that do not result in emissions or removals of a specific gas. If categories in the common reporting format for which “NA” is applicable are shaded, they do not need to be filled in;

(d) “IE” (included elsewhere) for emissions by sources and removals by sinks of greenhouse gases estimated but included elsewhere in the inventory instead of the expected source/sink category. Where “IE” is used in an inventory, the Party should indicate, using the completeness table of the common reporting format, where in the inventory the emissions or removals from the displaced source/sink category have been included and the Party should give the reasons for this inclusion deviating from the expected category;

(e) “C” (confidential) for emissions by sources and removals by sinks of greenhouse gases which could lead to the disclosure of confidential information, given the provisions of paragraph 19 above; and

(f) “0” for emissions by sources and removals by sinks of greenhouse gases which are estimated to be less than one half the unit being used to record the inventory table, and which therefore appear as zero after rounding. The amount should still be included in the national

totals and any relevant subtotals.^{5,6} In the sectoral background tables of the common reporting format Parties should provide data as detailed as methods allow.

22. If Parties estimate emissions and removals from country-specific sources or sinks, or of gases, which are not part of the IPCC Guidelines, they should explicitly describe what source/sink categories or gases these are, as well as what methodologies, emission factors and activity data have been used for their estimation.

Verification⁷

23. In accordance with the IPCC Guidelines, and for verification purposes, Parties should compare their national estimates of carbon dioxide emissions from *fuel combustion* with those estimates obtained using the IPCC reference approach, and report on them in annual inventories. Parties are also encouraged to report on any peer review of their inventory conducted nationally.

Uncertainties⁸

24. When reporting greenhouse gas emission and removal inventory data, the level of uncertainty associated with these data and their underlying assumptions should be indicated. The methodologies used for estimating uncertainties should be reported in a transparent manner. Parties are encouraged to report quantitative information on uncertainties where this is available.

Adjustments

25. Inventories are to be reported without adjustments related, for example, to climate variations or trade patterns of electricity. If Parties, in addition, carry out such adjustments to inventory data, they should be reported separately and in a transparent manner, with clear indications of the method followed.

26. Adjustments are regarded as important information in relation to the monitoring of

⁵ The level of detail appropriate to very small source/sink categories is under consideration by the IPCC in its work on *good practices* and Parties should use any guidance which is subsequently agreed by the COP.

⁶ With this procedure it is possible that sums of all sectoral tables will differ slightly from sums of summary tables because of rounding effects.

⁷ The SBSTA may wish to consider this issue when more data are available or on completion of the development of guidance on *good practices* by the IPCC and, as appropriate, expand this section in any subsequent revisions to these guidelines.

⁸ More rigorous requirements for reporting uncertainties may be adopted by the COP once the ongoing work of the IPCC on this matter is completed.

emission and removal trends and the performance of national policies and measures. Individual Parties may choose whether adjustments are applied, in addition to reporting unadjusted inventory data, and if so, indicate which methods are chosen. Parties are further encouraged to share with others their experience with the application of adjustments.

2. Common reporting format

27. Parties shall submit annually to the Conference of the Parties, through the secretariat, the information required under the common reporting format as contained in the annex to these guidelines. This information shall be submitted on an annual basis for the last but one year prior to the year of submission, in accordance with paragraph 5. It should be formally submitted in both electronic form and hard copy. The common reporting format is part of the national inventory report referred to in section 3 below.

28. The common reporting format is a standardized format for reporting estimates of greenhouse gas emissions and removals and other relevant information. It will be provided to Parties by the secretariat and will also be available on the UNFCCC Web site. The common reporting format allows for the improved handling of electronic submissions and facilitates the processing of inventory information and the preparation of useful technical analysis and synthesis documentation.

29. The common reporting format consists of:

- (a) Summary and sectoral tables;
- (b) Sectoral background data tables for reporting of aggregate emission factors and activity data;
- (c) The IPCC worksheet 1-1 containing estimates of CO₂ emissions from fuel combustion using the IPCC reference approach and a table for comparing estimates under this reference approach with national estimates, as well as providing explanations of any significant differences;
- (d) Tables for reporting, *inter alia*, aggregate CO₂ equivalent emissions and removals, recalculations, completeness of the inventory, uncertainty, feedstocks and non-energy use of fuels, international bunkers and multilateral operations, emission trends, and a check-list of the main inventory information requested by these UNFCCC reporting guidelines on annual inventories.

30. The common reporting format follows the source/sink category split of the IPCC sectoral tables. It provides a minimum set of information on methods, aggregate emission factors, and activity data, as well as relevant assumptions that underlie the estimates given in the sectoral tables.

31. The information provided by the common reporting format is aimed at enhancing the comparability and transparency of inventories by facilitating, *inter alia*, activity data and aggregate emission factor cross-comparisons among Parties, and easy identification of possible mistakes, misunderstandings and omissions in the inventories.

3. National inventory report

32. Parties shall submit to the Conference of the Parties, through the secretariat, a national inventory report containing detailed and complete information on their inventories for all years from the base year to the year of the current annual inventory submission, in order to ensure the transparency of the inventory.

33. The national inventory report shall be submitted annually in its entirety to the Conference of the Parties, through the secretariat, in accordance with relevant decisions of the COP, either as a printed document or electronically and should be updated annually to reflect changes. It should include:

(a) The annual inventory information, submitted in accordance with paragraph 27, for all years from the base year⁹ to the year of the current annual inventory submission;

(b) Calculation sheets¹⁰ or equivalent database information on detailed inventory calculations in each sector, for all years from the base year to the year of the current annual inventory submission, containing, *inter alia*, disaggregated national emission factors and activity data underlying the estimates;

(c) A description of the specific methodologies and assumptions used in each sector, including an indication of the level of complexity (IPCC tiers) applied and a description of any national methodology used by the Party, as well as information on anticipated future improvements in methodologies;

(d) References or sources of information related to methodologies, emission factors and activity data, as well as the rationale for their selection;

(e) Information on assumptions and conventions underlying the emission and removal estimates, as well as the rationale for their selection;

(f) Specific information on feedstocks and bunkers:

⁹ According to the provisions of Article 4.6 of the Convention and decisions 9/CP.2 and 11/CP.4, some Parties with economies in transition are allowed to use base years other than 1990, as mentioned in paragraph 7 above.

¹⁰ Calculation sheets or equivalent database information according to the IPCC Guidelines, CORINAIR or national methods.

- (i) With regard to possible double counting or non-counting of emissions, Parties should indicate whether feedstocks have been accounted for in the inventory, and if so, how they have been accounted for;
 - (ii) Regarding the reporting of emissions from bunker fuels, Parties should explain how they distinguish between domestic marine and aviation emissions, which are to be included in national totals, and international bunker emissions;
- (g) Information on any recalculations related to previously submitted inventory data, as requested in paragraph 20 above;
- (h) Information on uncertainties, as requested in paragraph 24 above;
- (i) Information on quality assurance/quality control (QA/QC) procedures implemented.
- (j) A separate section clearly identifying changes with respect to the previous years, including the changes in methodologies, sources of information and assumptions, as well as changes in response to the review process;

34. Parties shall publish their national inventory report. Parties may fulfil that obligation by keeping the national inventory report in its entirety on their national Web sites.

G. Record keeping

35. Parties should gather and archive all relevant inventory information for each year, including all disaggregated emission factors, activity data and documentation about how these factors and data have been generated and aggregated for the reporting of the inventory. This information should allow the reconstruction of the inventory, *inter alia*, by the expert review teams. Inventory information should be archived from the base year, including the corresponding data on recalculations applied. The paper trail should enable estimates of emissions and removals to be traced back to the original disaggregated emission factors and activity data. This information should also facilitate the timely process of clarifying inventory data when the secretariat prepares annual compilations of inventories or assesses methodological issues. Parties are encouraged to collect and gather the information in a single national inventory facility or to, at least, keep the number of facilities to a minimum.

H. Systematic updating of the guidelines

36. Relevant future decisions, once taken by the COP, regarding the reporting of inventories under the Convention should be applied *mutatis mutandis* to these UNFCCC reporting guidelines on inventories, which will be updated accordingly.

I. Language

37. The national inventory report shall be submitted in one of the official languages of the United Nations. Annex I Parties are also encouraged to submit, where relevant, a translation of the national inventory report into English.

Table 1: 1995 IPCC global warming potential (GWP) values¹¹ based on the effects of greenhouse gases over a 100-year time horizon

Greenhouse gas	Chemical formula	1995 IPCC GWP
Carbon dioxide	CO ₂	1
Methane	CH ₄	21
Nitrous oxide	N ₂ O	310
Hydrofluorocarbons (HFCs)		
HFC-23	CHF ₃	11700
HFC-32	CH ₂ F ₂	650
HFC-41	CH ₃ F	150
HFC-43-10mee	C ₅ H ₂ F ₁₀	1300
HFC-125	C ₂ HF ₅	2800
HFC-134	C ₂ H ₂ F ₄ (CHF ₂ CHF ₂)	1000
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)	1300
HFC-152a	C ₂ H ₄ F ₂ (CH ₃ CHF ₂)	140
HFC-143	C ₂ H ₃ F ₃ (CHF ₂ CH ₂ F)	300
HFC-143a	C ₂ H ₃ F ₃ (CF ₃ CH ₃)	3800
HFC-227ea	C ₃ HF ₇	2900
HFC-236fa	C ₃ H ₂ F ₆	6300
HFC-245ca	C ₃ H ₃ F ₅	560
Perfluorocarbons		
Perfluoromethane	CF ₄	6500
Perfluoroethane	C ₂ F ₆	9200
Perfluoropropane	C ₃ F ₈	7000
Perfluorobutane	C ₄ F ₁₀	7000
Perfluorocyclobutane	c-C ₄ F ₈	8700
Perfluoropentane	C ₅ F ₁₂	7500
Perfluorohexane	C ₆ F ₁₄	7400
Sulphur hexafluoride	SF ₆	23900

¹¹ As provided by the IPCC in its Second Assessment Report.

COMMON REPORTING FORMAT
(Section 2 of the UNFCCC reporting guidelines on annual inventories)

[The tables of the common reporting format are attached in English only.]

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