



FCCC/WEB/IRI(3)/2001/BEL

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**REPORT OF THE INDIVIDUAL REVIEW OF THE GREENHOUSE GAS INVENTORY
OF BELGIUM SUBMITTED IN THE YEAR 2001¹**

(Centralized review)

I. OVERVIEW

A. Introduction

1. The Conference of the Parties (COP), at its fifth session, by its decision 6/CP.5, adopted guidelines for the technical review of greenhouse gas (GHG) inventories from Parties included in Annex I to the Convention (Annex I Parties),² hereinafter referred to as the review guidelines, for a trial period covering GHG inventory submissions for the years 2000 and 2001. The COP requested the secretariat to conduct individual reviews of GHG inventories for a limited number of Annex I Parties. The secretariat was requested to use different approaches to individual reviews by coordinating desk reviews, centralized reviews and in-country reviews.

2. In response to the mandate by the COP, the secretariat coordinated a centralized review of seven national GHG inventories submitted in 2001 (Austria, Belgium, Estonia, the European Community, Germany, Greece and Spain), which took place from 8 to 12 October 2001. The review was carried out by a team of nominated experts from the roster of experts working at the headquarters of the UNFCCC in Bonn. The members of the team were: Mr. Charles Russell (New Zealand), Mr. José Ramon Villarín (Philippines), Mr. Hristo Vassilev (Bulgaria), Ms. Irina Yesserkepova (Kazakhstan), Ms. Nadzeya Zaleuskaya (Belarus), Mr. André Van Amstel (the Netherlands), Ms. Punsalma Batima (Mongolia), Mr. Rizaldi Boer (Indonesia), Mr. Josef Mindas (Slovakia), Mr. Charles Jubb (Australia) and Mr. Emilio Sempris (Panama). The review was coordinated by Ms. Rocio Lichte (UNFCCC secretariat). Mr. Charles Russell and Mr. José Ramon Villarín were lead authors of this report.

3. The principle objective of the review of the GHG inventories was to ensure that the COP had adequate information on the inventories. The review should also further assess the progress of the Parties toward fulfilling the requirement outlined in the UNFCCC reporting guidelines.³ In this context, the review team checked the Parties' responses to questions raised in the previous stages of the review process, and the consistency of inventory submissions with the UNFCCC reporting guidelines and the Revised 1996 IPCC Guidelines for National Greenhouse Gas

¹ In the symbol for this document, 2001 refers to the year in which the inventory was submitted, and not to the year of publication. The number (3) indicates that for Belgium this is a centralized review report.

² Document FCCC/CP/1999/7, in particular the UNFCCC review guidelines (pages 109 to 114), and decision 6/CP.5 (pages 121 to 122).

³ The guidelines for the preparation of national communication by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories (FCCC/CP/1999/7) are referred to as the UNFCCC reporting guidelines in this report.

Inventories (hereinafter referred to as the IPCC Guidelines), and identified possible areas for improvement in the inventories of the seven Annex I Parties. Each IPCC sector was reviewed by two experts.

4. The review team also assessed whether the reporting fulfilled the requirements included in the IPCC Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (hereinafter referred to as the IPCC good practice guidance).⁴

5. The UNFCCC secretariat provided the review team with all necessary technical guidance, information and data, such as the national inventory submissions and the results of previous stages of the review process. Sources of data and information used for the review of the inventory of Belgium are outlined in paragraphs 7 to 11 below.

6. In accordance with the UNFCCC review guidelines, a draft version of this report was communicated to the Government of Belgium, which provided comments that were considered and incorporated, as appropriate, in this final version of the report.

B. Inventory submission and other sources of information

7. In its 2001 inventory submission, Belgium did not submit a national inventory report (NIR), and provided only partial national inventory data in the common reporting format (CRF) for the years 1998 and 1999. These CRFs included sectoral reports only, as well as tables Summary 1.A, Summary 1.B and Summary 2 of the CRF. Hydrofluorocarbon (HFC), perfluorocarbon (PFC) and sulphur hexafluoride (SF₆) emissions estimates were not included in the CRF but were reported in a separate set of data files. Reporting of SF₆ corrected a substantial overestimate of emissions included in the Party's original report.

8. The CRF was not submitted until June 2001, but was submitted in both electronic and hard copy format.

9. The status report 2001, the draft synthesis and assessment (S&A) report 2001 prepared by the secretariat, the Parties' responses to the draft S&A report and the UNFCCC secretariat's preliminary key source assessment,⁵ were provided by the secretariat as additional sources of information. In addition, the expert review team (ERT) had access to a data search tool for retrieving inventory data from the secretariat's GHG inventory database.

10. Other sources of information used during the review included: Belgium's inventory submission of the year 2000 (CRF for 1997 and 1998), results of the review of the 2000 inventory submission (S&A report 2000), the preliminary guidance for experts participating in the individual review of GHG inventories, and the UNFCCC reporting and review guidelines (FCCC/CP/1999/7).

11. During the review the Party was not contacted to request additional information.

⁴ According to the conclusions of the SBSTA at its twelfth session, the IPCC good practice guidance should be applied by Annex I Parties to the extent possible for inventories due in 2001 and 2002, and should be used for inventories due in 2003 and beyond.

⁵ The UNFCCC secretariat had identified, for each individual Party, those source categories that are *key sources* in terms of their absolute level of emissions, applying the tier 1 level assessment as described in the IPCC good practice guidance. Key sources according to the tier 1 trend assessment were also identified for those Parties that provided a full CRF for the year 1990. The key sources identified by the secretariat's preliminary key source assessment might differ from the key sources identified by the Party itself.

12. Belgium responded to the points raised regarding its inventory submission, and included in its response general information on the way the inventories are gathered in Belgium. These are compiled at regional level (Flanders, Wallonia and Brussels); however, the compilation of the national inventory on the basis of regional data is co-coordinated by the working group Emissions from the Co-ordination Committee for the International Environmental Policy (CCIEP). As a result of ongoing efforts in inventory preparation, many of the shortcomings noted in this section have already been overcome in the year 2002, such as the timely submission of the 2002 inventory submission including time series for 1990-2000 and the provision of a NIR, which had not been submitted in 2001 owing to the lack of available resources. Belgium also emphasized its preparedness to provide information during the review if so requested.⁶

13. Other general issues noted in this report, such as the lack of sectoral background data tables in the 2001 inventory submission, were also addressed by Belgium in its response to the draft of this report. Belgium explained the main problem underlying this absence of data as being the use by the regions of different emission factors and/or activity data for several sectors, mainly due to the different socio-economic and industrial characteristics of each region. Furthermore, the availability of background data can differ from one region to another. This situation makes calculation of "Belgian" activity data/emission factors difficult, and Belgium considered, therefore, that reporting of aggregate activity data or emission factors at the national level would be of low interest given the diverse physical reality encompassed by these data.

14. Regarding the lack of information on time-series in its 2001 submission, Belgium explained that a complete time-series of emission estimates from 1990 to 1999 was not reported in 2001 because recalculations were not completed for any of these years at the time of submission. For the period 1990-1997, the official emission data were still (in 2001) those reported in the previous submissions, although the methodologies used in 1998 and 1999 were not fully consistent with those used for the earlier years. Belgium stated that recalculations had been finalized in the meantime, and that a complete emissions time-series was reported in the 2002 inventory submission, together with a key source analysis (both level and trend assessment).

15. The issues noted in this report with respect to HFCs, PFCs and SF₆ reporting were explained by Belgium as follows: updated data for HFC, PFC and SF₆ emissions for the years 1998 and 1999 were submitted in 2001, but owing to time constraints could not be recorded in the CRF tables and, therefore, were provided in a separate file. The wrong SF₆ data were due to a mistake in operating the CRF tables. These problems were notified at an early stage of the review process. Belgium also indicated that it intended to report F-gas emission estimates in the CRF tables from 2002 onwards. See also paragraph 14 above regarding the reporting of emission trends.

⁶ The revised guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention, which were agreed by the SBSTA at its sixteenth session, address this experience from the trial period and provide guidance for communication between the expert review team (ERT) and the Party under review.

C. Emission profiles, trends and key sources

16. Information on emission estimates in the 2001 inventory submission was limited, and did not cover information for years other than 1998 and 1999. Additionally, the CRF estimates are distorted by the fact that incorrect SF₆ emission estimates were included.⁷ As a result, an assessment of emission profiles and trends was not possible. The overall inadequacy of reporting combined with the overestimate of SF₆ emissions precludes any key and non-key source analysis.

17. Before such an assessment can be undertaken and comparisons made with other Annex I Parties, the Party would have to submit a complete time-series of emission estimates for all sectors. This could be achieved by submitting a full revised CRF with all tables completed, including trend tables. Care needs to be taken to ensure that the correct estimates of SF₆ emissions are reported in the CRF. The ERT takes note of the response from Belgium on the lack of data on emission trends and on the misreporting of SF₆ data in the CRF (see paragraphs 14 and 15, respectively).

D. General assessment of the inventory

18. The 2001 inventory submission covered inventory estimates for the years 1998 and 1999 using the CRF. Information on emission trends (table 10 of the CRF) was not provided.⁸ See also paragraph 14 above for information provided by Belgium in its response to the draft of this report.

19. The inventory covered the direct GHGs carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), and the indirect GHGs CO, NO_x, NMVOC and SO₂. Disaggregated estimates for HFCs, PFCs and SF₆ were provided for both actual and potential emissions, but were not included in the CRF. All major IPCC source/sink categories were covered in the inventory; at the level of sub-sources, however, information was often lacking. Notation keys were not used in the CRF, and the completeness table of the CRF (table 9) was not completed, leaving many unexplained data gaps.

20. Belgium provided neither a NIR, nor a full set of CRF tables. The CRF only included sectoral reports (tables 1, 2(I), 3, 4, 5, 6) and tables Summary 1.A, 1.B and 2 of the CRF. No sectoral background data tables were provided, which means that emission estimates only were provided. No activity data were provided. The inventory was found to be incomplete and to lack transparency in all sectors.

21. In addition, no information on methods and emission factors used was provided for any sector (Summary 3 was omitted). References and information on sources and quality of activity data and emission factors were also lacking.

22. The inventory did not include any information on assessment of uncertainties, nor did it include any information on recalculations (tables 8(a) and (b) were not provided). However, in its response to the draft S&A report 2001, Belgium stated that inventory data for 1998 contained

⁷ When submitting its national inventory and in its response to the draft status report 2001, Belgium explained that emission data in the CRF on HFCs, PFCs and SF₆ are invalid, but are provided in a separate data file. However, due to the nature of the CRF software application, these invalid estimates were included in the calculation of sectoral subtotals and national totals.

⁸ In its response to the draft S&A report 2001, Belgium explained that time-series for 1990 to 1997 are still those reported in the 1999 inventory submission. This information was, however, not used in this review. Given that recalculation of these years is currently in progress, it can be assumed that time-series for these years would not be consistent with the estimates reported for 1998 and 1999.

in the 2000 submission were provisional estimates, which were updated for the 2001 inventory submission. Belgium advised that recalculation of the years 1990 to 1997 is currently in progress.

23. For the reasons outlined above, a thorough review of the individual sectors was not possible. The lack of full documentation including a NIR means that no information is available on methodologies, activity data or emission factors.

24. A distinction between key sources and non-key sources was not made for this review, because the data provided in the CRF did not allow for a key source determination according to the tier 1 level assessment of the IPCC good practice guidance using the recommended category disaggregation level. A determination of its key sources was not provided by Belgium. Contextual information on each of the sectors is also not included in the review because of the distortion in total emissions arising from the incorrect estimate of SF₆ emissions included in the CRF. A corrected CRF was not submitted by the Party.

Conformity with the UNFCCC reporting guidelines and the IPCC Guidelines

25. The inventory was found not to conform with the UNFCCC reporting guidelines. It was not possible to assess for any sector whether the estimates were derived in line with the IPCC Guidelines, or whether any elements of the IPCC good practice guidance had been applied.

E. Areas for further improvement

1. Planned or ongoing work by the Party

26. In the 2001 inventory submission, no information was provided as to whether the Party is engaged in ongoing work to improve the quality of its inventory. Belgium, however, stated in its response to the draft S&A report 2001 that recalculation of inventory data for 1990 to 1997 is currently in progress.

2. Issues identified by the ERT

27. It is considered that Belgium needs to provide a NIR and a complete set of CRF tables for 1990-1999. The CRF tables should include all the required information including the appropriate use of notation keys, along with completion of all sectoral background tables and tables containing supporting information (all summary, trend and overview tables, recalculation tables, completeness tables).

28. The ERT takes note of the information provided by Belgium in its response, in which the Party indicates that many of the recommendations made in this report have already been addressed in the 2002 inventory submission resulting in improvements in completeness and transparency as compared to previous inventory submissions. These improvements include the submission of a NIR, the provision of estimates for the 1990-2000 period and the preparation of a key source analysis. The CRF reporting has been improved, in that table Summary 3 (methods and emission factors used), Table 7 (overview), table 8 (recalculations) and table 10 (emission trends) have been provided, and notation keys been used to explain gaps in data. F-gas emission estimates were included in the CRF from 1995 onwards. However, Belgium refers also to its explanation outlining the reasons for the lack of sectoral background data tables (see paragraph 13 above).

II. ENERGY

A. Sector overview

29. The sector's share in national total GHG emissions in terms of CO₂ equivalent is 88%. The main source of emissions is CO₂. The largest source of CO₂ emissions is 1.A.4 Other sectors followed by 1.A.2 Manufacturing industries and construction, 1.A.1 Energy industries and 1.A.3 Transport. The contribution of these subsectors to CO₂ emissions is 28.5%, 27.4%, 23.8% and 20.3% respectively.

30. A detailed review of the energy sector was not possible due to the lack of information in Belgium's inventory submission, as outlined in the overview section of this report.

1. Completeness

31. Belgium did not provide disaggregated estimates for the transport subsector; for road transportation, civil aviation and other transportation no estimates were reported. For bunkers, no CH₄ or N₂O emissions were reported. Belgium informed the ERT that it did not provide disaggregated estimates for the transport subsectors due to a lack of emission estimates for railway traffic for one of the regions; improvements in this area are, however, being undertaken. Bunker CH₄ and N₂O emissions are not estimated in Belgium because they are assumed to be negligible.

2. Transparency

32. The emissions data reported for 1998 to 1999 are the aggregate sectoral report inventory data. There was no transparency due to a lack of data in the sectoral background data tables. See also paragraph 13 above for information provided by Belgium in its response to the draft of this report.

3. Recalculations

33. Information on recalculations was not provided in the CRF. However, estimates from the energy sector for the year 1998 have been recalculated. When comparing tables Summary 1.A of the 2000 and 2001 submissions, a 7.2% increase in CO₂ emissions in 2001 is noted. The reason for this is additional industrial activities included under "other" of subsector 1.A.2 Manufacturing industries and construction. Belgium confirmed that additional industrial activities were included under "other" of subsector 1.A.2 Manufacturing industries and construction, and indicated that in its 2002 inventory submission, the consistency of the allocation of the different sources to IPCC categories is ensured over the complete time series.

4. Conformity with the UNFCCC reporting guidelines

34. The inventory for energy does not conform to the recommendations for inventories set out in the UNFCCC reporting guidelines.

B. Reference and sectoral approach

1. Comparison between reference and sectoral approach

35. No reference approach estimates were provided.

2. Treatment of feedstocks and non-energy use of fuels

36. Information on feedstocks was not reported. Belgium indicated in its response that feedstocks are reported in the 2002 submission.

3. International bunker fuels

37. Both aviation and marine bunker emission estimates were reported, but without providing information on the type of fuel used. CO₂ emissions from marine bunkers are more than three times higher than CO₂ emissions from aviation. Separate figures for marine and aviation bunkers were provided in table 1 Sectoral report for energy; in table Summary 1.A sheet 3, however, marine and aviation were not reported separately. Belgium indicated in its response that information regarding the type of fuels used is given in its NIR 2002.

C. Areas for further improvement

38. The ERT suggests that the Party provide:

(a) More detailed information in the CRF ensuring that all cells for the energy sector tables contain data or notation key entries including all relevant parts of the summary tables and completeness tables.

(b) A NIR which explains the methodologies used, and clearly identifies data sources and emission factor sources.

See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

III. INDUSTRIAL PROCESSES AND SOLVENT USE

A. Sector overview

39. Assessment of the importance of this sector in the context of the total emissions inventory has not been undertaken due to the overestimate of SF₆ emissions.

40. A detailed review of the industrial processes and the solvent use sectors was not possible due to the lack of information in Belgium's inventory submission, as outlined in the overview section of this report. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

1. Completeness

41. HFC, PFC, and SF₆ emissions estimates in the CRFs were invalid, but were reported in separate data files. The CRF tables were therefore found to be incomplete.

42. In the 1999 inventory, inconsistent data for total CH₄ emissions from industrial processes were reported in Summary 1.As1 (6.42 Gg) and table 2(I)s1 (2.12 Gg).

43. Similarly, total reported CO₂ emissions from industrial processes differs between tables Summary 1.As1 (14,531.23 Gg) and table 2(I)s1 (13,332.07 Gg).

2. Recalculations

44. The substantial increase in CO₂ emissions in the 2001 submission (from 121,974 Gg in the 2000 submission to 130,762 Gg in the 2001 submission) was explained by the Party to be due to the category “other” of the industrial sector; an industrial sector which had not previously been considered was included in this category. The reporting of additional industrial activities under “other” was confirmed by Belgium, as explained in the response to paragraph 33 above.

45. In the draft S&A report 2001 an error in reporting of SF₆ from consumption of halocarbons was noted (an increase from 206.29 Gg CO₂-e in the 2000 submission to 2,485,600 Gg CO₂-e in the 2001 submission). See also paragraph 15 above for information provided by Belgium in its response to the draft of this report.

46. The Party has agreed that there is a reporting error and the estimate contained in the CRF should be disregarded. Separate data tables were submitted but a corrected CRF has not been provided. The inclusion of the new industry in the “other” category, together with the error in SF₆ emissions, are the reasons for undertaking a recalculation of the complete time series back to 1990. The recalculations are to be published in the next CRF submission by Belgium.

B. Comments on individual source categories

47. CO₂ emissions from metal production were reported as declining substantially (from 2,813 Gg in 1998 to 1,616 Gg in 1999), along with emissions of CH₄ (from 134.89 Gg in 1998 to 45.48 Gg in 1999). N₂O emissions remained stable from 1998 to 1999 (2.40 Gg). Belgium indicated in its response that these were erroneous figures, and provided the following corrected figures, which are also reported in the 2002 submission: for CO₂, 1,500.85 Gg in 1998 and 1,498.34 Gg in 1999, and for CH₄, 2.16 Gg in 1998 and 2.12 Gg in 1999.

48. Consumption of SF₆, HFCs and PFCs were reported in a separate data file. This file includes the correct SF₆ emissions. The format of the tables does not correspond to the CRF. The classification of data in the separate tables is not consistent with the classifications provided in tables 2(II)s1 and 2(II)s2. No comments are provided on the estimation method used to obtain the estimates. Potential and actual emissions estimates since 1995 are reported, and the ratio of potential to actual emissions appears reasonable with the exception of HFC-152a (0.18). See also paragraph 15 above for information provided by Belgium in its response to the draft of this report.

IV. AGRICULTURE

A. Sector overview

Table 1. Summary overview: Provision of information in the agriculture sector

Sectoral report tables – agriculture	Available (1998-1999)
Notation keys	No
Sectoral background tables – agriculture	No
National inventory report	No
Methods – agriculture	No explanation
Emission factors – agriculture	No explanation
Explanation of non-IPCC method	No
Uncertainty	No
Emission trends	No (1998-1999)
Procedure for quality assurance/quality control (QA/QC)	No
Complete set of CRF tables – agriculture	No
Plans for future improvements	No information

49. A detailed review of the agriculture sector is not possible due to the lack of information in Belgium's inventory submission, as outlined in the overview section of this report. Analysis of and comment on the significance of the agriculture sector in the context of the Party's total emissions inventory is not possible either, due to the substantial overestimate of SF₆ emissions. This also precludes any comprehensive source analysis and identification of key and non-key sources. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

1. Completeness and transparency

50. No information was provided for the following source categories: 4C rice cultivation, 4E prescribed burning of savannas and 4F field burning of agricultural residues. For CH₄ and N₂O from 4B manure management and 4D agricultural soils, no disaggregated estimates according to subcategories were provided. Belgium informed the ERT that emissions from source categories 4.C Rice cultivation and 4.E Prescribed burning of savannas do not occur in Belgium.

51. Only the sectoral report table for agriculture (table 4 of the CRF) is provided for 1998 and 1999. The reporting in this sector is incomplete and lacks transparency. Belgium indicated that the methodologies used are explained in its NIR 2002.

2. Conformity with the UNFCCC reporting guidelines and the IPCC Guidelines

52. The submission does not conform to the reporting guidelines because the CRF is incomplete and no NIR was provided, thereby precluding any assessment of the methodologies used.

B. Comments on individual source categories

53. Although a key source analysis could not be performed, the following source categories have been identified as the most relevant sources within the agriculture sector: CH₄ emissions from enteric fermentation, CH₄ from manure management, and N₂O from agricultural soils.

4.A Enteric fermentation – CH₄

54. Trends: It is difficult to assess the trend since information for only 1998 and 1999 is provided. However, according to FAO (Food and Agriculture Organization of the United Nations) data, the population of dairy cattle increased by 3.2% between 1997 and 1998 and decreased by 1.2% between 1998 and 1999. The sheep population increased by 10.6% in 1997-1998 and decreased by 4.4% in 1998-1999; the pig population increased by 9.5% in 1997-1998 and by about 1% in 1998-1999.

55. The S&A report noted that the emission factor for CH₄ from enteric fermentation for dairy and non-dairy cattle was low compared to the IPCC default for Western Europe. The Party has not commented on this observation, and the lack of a NIR means that clarification cannot be sought from this source. For sheep and pigs emission factors were equal to the IPCC defaults. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

V. LAND-USE CHANGE AND FORESTRY**A. Sector overview**

Table 2. Summary overview: Provision of information for the land-use change and forestry (LUCF) sector

Sectoral report table	Available
Notation keys	No information
Sectoral background data tables	No information
National inventory report	Not available
Methods	No information
Emission factors	No information
Explanation of non-IPCC method	-
Uncertainty	No information
Emission trends	1998, 1999 only
Procedure for QA/QC	No information
Complete set of CRF tables (LUCF)	No (table 5 only)
CO ₂ reported	Yes
Non-CO ₂ gases reported	Yes
Plans for future improvements	No information

56. In the sectoral report for LUCF (table 5), Belgium reported emissions and removals estimates from two categories: 5.A Changes in forest and other woody biomass stocks, and 5.E Other. The net CO₂ emissions/removals is -1,845 Gg for 1998 and 1999. Detailed information about LUCF activities was not provided.

57. A detailed review of the LUCF sector was not possible due to the lack of information in Belgium's inventory submission, as outlined in the overview section of this report. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

1. Completeness and transparency

58. CRF table 5 gives overall data on the LUCF sector for 1998 and 1999 for categories 5.A and 5.E.

59. The reporting of this sector is not transparent. Relevant activity data (for example, in tables 5.A-D of the CRF or alternative formats) are omitted and a NIR is not available to supplement and clarify information. The data in table 5 do not appear to be internally consistent.

2. Methodology, emission factors, activity data

60. There is no information about the methodology, emission factors or activity data. It is assumed that the IPCC 1996 methodology was used. More detail is required. In its response to the draft of this report, Belgium provided as reference the following article: Perrin D. et al., Calculation of the impacts of forestation, afforestation and reforestation on the C-sequestration potential in Belgian forests ecosystems, *Biotechnol. Agron. Soc. Environ*, No. 4, (2000), pp. 259-262, in which the methodology is explained. Belgium informed the ERT that this methodology follows the IPCC methodology.

3. Recalculation

61. There is no information as to whether recalculations have been undertaken. Any changes could not be identified in comparison with the previous year's submission because emissions data for 1998 and 1999 only were reported in the 2001 submission. A lack of available activity data (growth rate, carbon uptake factor, forested area, and so on), means that control calculations could not be applied. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

4. Conformity with the UNFCCC reporting guidelines and the IPCC Guidelines

62. The CRF tables for this sector are not complete and the data are inconsistent. No information about the methods was reported. The inventory does not conform to the guidelines. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

B. Source and sink categories

1. 5.A Changes in forest and other woody biomass stock

63. Gross emissions and removals are reported for 1998 and 1999 in the temperate forests category. CO₂ removals are reported for temperate forests in the removal column but CO₂ emissions for harvested wood are reported as a separate value. This value should be reported as an emission value for the temperate forests category. Belgium informed the ERT that work is currently ongoing in order to report this value for the temperate forests category in its 2003 submission.

2. 5.E Other

64. There is no detailed information about the sources and sinks included in this category. A large removal value was reported for 1999 (-3,359.5 Gg CO₂), but placed in the emissions column as a negative value. This value was not taken into account in the final calculations. CH₄

and N₂O emissions are included for this category but without the sources being specified. These values do not correspond with the data for total land-use change and forestry. In its response to the draft of this report, Belgium explained that the value –3,359 Gg CO₂ was erroneously entered in the CRF table.

3. Total land-use change and forestry

65. Total emission values correspond well with data from category 5.A, but not for category 5. E (this value was not taken into account in the total emissions calculation). Values presented for CH₄ and N₂O are not harmonized with the individual values within the sectors. These values are higher than the values in category 5.E.

C. Areas for further improvement

Issues identified by the ERT

66. The review process identified the following areas for improvement: preparation of a NIR with detailed information about methodology and activity data, and the completion of all sectoral CRF tables or alternative data formats with equivalent information, if non-IPCC methods were used. In the near future it should be necessary to create a “new inventory” for the LUCF sector with the complete set of background data tables. It is assumed that the Party has the required data (forest and land use inventory databases) for GHG inventory calculations.

67. It is strongly recommended that a NIR be prepared with detailed supporting information about the LUCF sector in Belgium. Any additional information on methods or techniques used to estimate or develop emission factors (such as expert judgement, field measurement or remote sensing) should also be reported in order to improve the quality of, and facilitate a better understanding of, the estimates. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

VI. WASTE

A. Sector overview

68. The 1999 inventory for Belgium includes an estimate of actual emissions of SF₆ of 104 Gg, which dominates Belgium’s GHG emissions. This distortion in emissions reported precludes any contextual analysis of the significance of the waste sector in the Party’s inventory. The estimate of SF₆, has been recognized by the Party as incorrect, and separate data have been submitted. The Party has not submitted revised CRF tables incorporating the changes. As a result no source analysis has been undertaken in this review. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

1. Completeness and transparency

69. The inventory is incomplete. Sectoral background data tables for the waste sector have not been completed, nor have any other tables relevant to a detailed review of the inventory, namely, summary tables which should include supporting information and completeness tables. Table 6 is partially complete but cells that should be noted are left blank. The failure to include full entries in background tables prevents a proper review of completeness in reporting of gases and sources. Relevant notation entries should be included.

70. The inventory is not transparent due to the absence of data in supporting tables and the lack of a detailed NIR. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

2. Consistency with the UNFCCC reporting guidelines and the IPCC Guidelines

71. The inventory is not consistent with the guidelines in that it lacks basic information required to be reported in the CRF. The CRF tables are incomplete and there is no summary information on methodologies, activity data or emission factors. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.

B. Results from previous reviews

72. The S&A report 2000 noted that CH₄ emissions from industrial waste water were not provided and N₂O emissions from human sewage were not reported. The 1999 inventory reports N₂O emissions from human sewage, but CH₄ emissions from industrial waste water are not reported. Belgium explained in its response that CH₄ and N₂O emissions from industrial waste water are not estimated. The N₂O emissions from human sewage had been reported in the 1999 inventory by mistake. This has been corrected in the 2002 submission.

73. A small quantity of undocumented CH₄ emissions are reported under 6.D Other. This was commented upon in the S&A report 2000 and has not been addressed. Belgium explained in its response that these CH₄ emissions reported under 6.D Other came from sludge spreading and composting.

74. The draft S&A report 2001 commented on the lack of data provided. The Party did not respond to the comment or rectify the problem.

C. Areas for further improvement

75. The ERT considered that the Party should provide more complete information. Specifically, the Party should:

(a) Complete all CRF tables and ensure that every cell contains a relevant entry.

(b) Provide a NIR which summarises the methodologies used, specifies the source of activity data, and specifies the source of emission factors and parameters relevant to implied emission factors for solid waste disposal sites. See also paragraph 28 above for information provided by Belgium in its response to the draft of this report.
