COMPLIANCE COMMITTEE **CC/ERT/ARR/2017/37**
3 July 2017

Report of the individual review of the annual submission of Belgium submitted in 2016

Note by the secretariat

The report of the individual review of the annual submission of Belgium submitted in 2016 was published on 20 June 2017. For purposes of rule 10, paragraph 2, of the rules of procedure of the Compliance Committee (annex to decision 4/CMP.2, as amended by decisions 4/CMP.4 and 8/CMP.9), the report is considered received by the secretariat on the same date. This report, FCCC/ARR/2016/BEL, contained in the annex to this note, is being forwarded to the Compliance Committee in accordance with section VI, paragraph 3, of the annex to decision 27/CMP.1.

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Report on the individual review of the annual submission of Belgium submitted in 2016*

Note by the expert review team

Summary

Each Party included in Annex I to the Convention must submit an annual greenhouse gas (GHG) inventory covering emissions and removals of GHG emissions for all years from the base year (or period) to two years before the inventory due date (decision 24/CP.19). Parties included in Annex I to the Convention that are Parties to the Kyoto Protocol are also required to report supplementary information required under Article 7, paragraph 1, of the Kyoto Protocol, with the inventory submission due under the Convention. This report presents the results of the individual inventory review of the 2016 annual submission of Belgium, conducted by an expert review team in accordance with the "Guidelines for review under Article 8 of the Kyoto Protocol". The review took place from 12 to 17 September 2016 in Bonn, Germany.

* In the symbol for this document, 2016 refers to the year in which the inventory was submitted, not to the year of publication.

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Contents

I. Introduction[1]

1. This report covers the review of the 2016 annual submission of Belgium organized by the UNFCCC secretariat, in accordance with the "Guidelines for review under Article 8 of the Kyoto Protocol" (decision 22/CMP.1, as revised by decision 4/CMP.11) (hereinafter referred to as the Article 8 review guidelines). As indicated in the Article 8 review guidelines, this review process also encompasses the review under the Convention, as described in the "Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention" (hereinafter referred to as the UNFCCC review guidelines) and particularly part III, "UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention". The review took place from 12 to 17 September 2016 in Bonn, Germany, and was coordinated by Mr. Matthew Dudley (UNFCCC secretariat). Table 1 provides information on the composition of the expert review team (ERT) that conducted the review of Belgium.

Table 1
Composition of the expert review team that conducted the review of Belgium

Area of expertise	*Name*	*Party*
Generalist	Mr. Justin Goodwin	United Kingdom of Great Britain and Northern Ireland
	Ms. Melanie Hobson	United Kingdom
Energy	Ms. Rianne Dröge	Netherlands
	Mr. Naofumi Kosaka	Japan
	Ms. Tian Wang	China
	Mr. Benon Bibbu Yassin	Malawi
IPPU	Mr. Joseph Amankwa Baffoe	Ghana
	Mr. Vladimir Danielik	Slovakia
	Ms. Qing Tong	China
Agriculture	Mr. Jacques B. Kouazounde	Benin
	Mr. Chang Liang	Canada
LULUCF	Mr. Kevin Black	Ireland
	Mr. Markus Didion	Switzerland
	Mr. Agustin José Inthamoussu	Uruguay
	Mr. Dinh Hung Nguyen	Viet Nam

[1] At the time of publication of this report, Belgium had not yet submitted its instrument of ratification of the Doha Amendment, and the amendment had not yet entered into force. The implementation of the provisions of the Doha Amendment is therefore considered in this report in the context of decision 1/CMP.8, paragraph 6, pending the entry into force of the amendment.

Area of expertise	*Name*	*Party*
Waste	Mr. Philip Acquah	Ghana
	Ms. Irina Yesserkepova	Kazakhstan
Lead reviewers	Mr. Philip Acquah	
	Mr. Justin Goodwin	

Abbreviations: IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry.

2. This report contains findings based on the assessment by the ERT of the 2016 annual submission against the Article 8 review guidelines. The ERT has made recommendations to resolve those findings related to issues,[2] including issues related to problems.[3] Other findings, and, if applicable, the encouragements of the ERT to resolve them, are also included.

3. A draft version of this report was communicated to the Government of Belgium, which provided no comments.

4. Annex I shows annual greenhouse gas emissions for Belgium, including totals excluding and including the land-use, land use change and forestry sector, indirect carbon dioxide emissions and emissions by gas and by sector. Annex I also contains background data related to emissions and removals from activities under Article 3, paragraph 3, forest management under Article 3, paragraph 4, and additional activities under Article 3, paragraph 4, of the Kyoto Protocol, if elected, by gas, sector and activity for Belgium.

5. Information to be included in the compilation and accounting database can be found in annex II.

6. The ERT notes that Belgium's 2015 annual submission was delayed, consistent with decision 6/CMP.9, paragraph 4. As a result, the review of the 2016 annual submission is being held in conjunction with the review of the 2015 annual submission, in accordance with decision 10/CMP.11, paragraph 1. To the extent that identical information is presented in both annual submissions, the ERT has reviewed this information only once and, as appropriate, has replicated the findings below in both the 2015 and the 2016 annual review reports.

II. Summary and general assessment of the 2016 annual submission

7. Table 2 provides the assessment by the ERT of the annual submission with respect to the tasks undertaken during the review. Further information on the issues identified, as well as additional findings, may be found in tables 3 and 5.

[2] Issues are defined in decision 13/CP.20, annex, paragraph 81.

[3] Problems are defined in decision 22/CMP.1, annex, paragraphs 68 and 69, as revised by decision 4/CMP.11.

Table 2
Summary of review results and general assessment of the inventory of Belgium

Assessment			*Issue or problem ID#(s) in table 3 and/or 5*[a]
Dates of submission	Original submission: 15 June 2016 (NIR), 15 June 2016, Version 3 (CRF tables), 15 April 2016 (SEF tables) Revised submission: 26 May 2016 (SEF tables) The values from the latest submission are used in this report		
Review format	Centralized		
Application of the requirements of the UNFCCC Annex I inventory reporting guidelines and Wetlands Supplement (if applicable)	Have any issues been identified in the following areas?		
	1. Identification of key categories	No	
	2. Selection and use of methodologies and assumptions	Yes	L.1, L.8, L.10 and L.11
	3. Development and selection of emission factors	Yes	E.6
	4. Collection and selection of activity data	Yes	E.13, L.13, L.14 and KL.8
	5. Reporting of recalculations	No	
	6. Reporting of a consistent time series	Yes	L.12 and L.14
	7. Reporting of uncertainties, including methodologies	No	
	8. QA/QC	QA/QC procedures were assessed in the context of the national system (see below)	
	9. Missing categories/completeness[b]	Yes	E.15, A.17, L.14, KL.12 and KL.14
	10. Application of corrections to the inventory	No	
Significance threshold	For categories reported as insignificant, has the Party provided sufficient information showing that the likely level of emissions meets the criteria in paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines?	No	
Description of trends	Did the ERT conclude that the description in the NIR of the trends for the different gases and sectors is reasonable?	Yes	
Supplementary information under the Kyoto Protocol	Have any issues been identified in the following areas?		
	1. National system:		
	(a) The overall organization of the national system, including the effectiveness and reliability of the institutional, procedural and legal arrangements	No	
	(b) Performance of the national system functions	No	

Assessment			*Issue or problem ID#(s) in table 3 and/or 5*[a]
	2. National registry:		
	(a) Overall functioning of the national registry	No	
	(b) Performance of the functions of the national registry and the technical standards for data exchange	No	
	3. ERUs, CERs, AAUs and RMUs and information on discrepancies reported in accordance with decision 15/CMP.1, annex, chapter I.E, taking into consideration any findings or recommendations contained in the SIAR	No	
	4. Matters related to Article 3, paragraph 14, of the Kyoto Protocol, specifically problems related to the transparency, completeness or timeliness of the reporting on the Party's activities related to the priority actions listed in decision 15/CMP.1, annex, paragraph 24, including any changes since the previous annual submission	No	
	5. LULUCF activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol:		
	(a) Reporting in accordance with the requirements of decision 2/CMP.8, annex II, paragraphs 1–5	Yes	KL.5, KL.8, KL.9, KL.10 and KL.14
	(b) The Party has demonstrated methodological consistency between the reference level and reporting on forest management in accordance with decision 2/CMP.7, annex, paragraph 14	Yes	KL.7
	(c) The Party has reported information in accordance with decision 6/CMP.9	Yes	
	(d) Country-specific information has been reported to support provisions for natural disturbances, in accordance with decision 2/CMP.7, annex, paragraphs 33 and 34	No	
	(e) Other issues	No	
CPR	Was the CPR reported in accordance with the annex to decision 18/CP.7, the annex to decision 11/CMP.1 and decision 1/CMP.8, paragraph 18?	Yes	
Adjustments	Has the ERT applied an adjustment under Article 5, paragraph 2, of the Kyoto Protocol?	No	
	The ERT accepts that the revised estimates submitted by Belgium in its 2014 annual submission can replace a previously applied adjustment in the compilation and accounting database	NA	
Response from the Party during	Has the Party provided the ERT with responses to the questions raised, including the data and information	Yes	

Assessment			*Issue or problem ID#(s) in table 3 and/or 5*[a]
the review	necessary for the assessment of conformity with the UNFCCC Annex I inventory reporting guidelines and any further guidance adopted by the Conference of the Parties?		
Recommendation for an exceptional in-country review	On the basis of the issues identified, does the ERT recommend that the next review be conducted as an in-country review?	No	
Questions of implementation	Did the ERT list a question of implementation?	No	

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction unit, CPR = commitment period reserve, CRF = common reporting format, ERT = expert review team, ERU = emission reduction unit, LULUCF = land use, land-use change and forestry, NA = not applicable, NIR = national inventory report, QA/QC = quality assurance/quality control, RMU = removal unit, SEF = standard electronic format, SIAR = standard independent assessment report, UNFCCC Annex I inventory reporting guidelines = "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories", Wetlands Supplement = *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*.

[a] The ERT identified additional issues in the energy, industrial processes and product use, agriculture, LULUCF and waste sectors and for LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol that are not specifically listed in table 2 but are included in table 3 and/or 5.

[b] Missing categories for which methods are provided in the Intergovernmental Panel on Climate Change (IPCC) *2006 IPCC Guidelines for National Greenhouse Gas Inventories* may affect completeness and are listed in annex III.

III. Status of implementation of issues and/or problems raised in the previous review report

8. Table 3 compiles all the recommendations made in the previous review report. Owing to the unique circumstances of the 2015 annual submission described in paragraph 6 above, the latest available review report was for the review of the 2014 annual submission, published on 14 April 2015. For each issue and/or problem, the ERT specified whether it believes the issue and/or problem has been resolved by the conclusion of the review of the 2016 annual submission and provided the rationale for its determination, taking into consideration the publication date of the previous review report and national circumstances.

Table 3
Status of implementation of issues and/or problems raised in the previous review report of Belgium

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
General			
G.1	QA/QC and verification (13, 2013) (12, 2014) Transparency*	Ensure that any improvements to the QA/QC procedures are reflected in the QA/QC plan	Not resolved. The QA/QC plan has not officially been updated since 2010 and hence any improvements to the QA/QC procedures have not yet been reflected in it (see also W.1 below)

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
G.2	Methods (16, 2014) Adherence to UNFCCC Annex I inventory reporting guidelines	Examine whether the inventory for a specific region, for categories where a tier 1 default method is used, could be improved by using the IEF for the same category in another region (or regions) as a country-specific EF for that category	Resolved. Progress has been made by Belgium in using the most appropriate EFs for each region. The ERT commends the Party for using the best data available
Energy			
E.1	1. General (energy sector) – solid, liquid and gaseous fuels (22, 2014) (22, 2013) Transparency	Include the full national energy balance for the latest reported year, outlining the final energy consumption by category	Resolved. Annex 8 to the NIR contains the federal energy balance (as reported to Eurostat) and the three regional balances (see also E.12 in table 5)
E.2	1. General (energy sector) – solid, liquid and gaseous fuels (23 and 26, 2014) (24, 2013) Consistency*	Improve the consistency between the regional and federal energy balances	Addressing. Paragraph 3.2.1 of the NIR describes the progress made, including proposals for data collection for transport and heating petroleum products at a regional level. In response to a question raised by the ERT, Belgium explained that 2015 data on road transportation will probably be available by the end of 2016. Other energy statistics were not discussed
E.3	1. General (energy sector) – solid, liquid and gaseous fuels (23, 2014) Transparency*	Clearly document in the NIR any remaining differences between the regional and federal energy balances and provide explanations for these differences	Not resolved. In response to a question raised by the ERT, Belgium explained that it made a detailed comparison of the federal and regional energy balances in 2014. An ad hoc working group has been established to more deeply analyse the differences by sector and by energy source; this work is ongoing. Differences between the regional and federal energy balances are not included in the NIR
E.4	Fuel combustion – reference approach – solid, liquid and gaseous fuels – CO_2 (25, 2014) Transparency*	Provide an explanation for each year of the time series for which the difference between the reference approach and the sectoral approach exceeds 2 per cent	Addressing. Belgium included in paragraph 3.2.1 of the NIR an explanation of the differences resulting from the allocation of off-gases. This accounts for some of the

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
			differences, but does not fully explain the full extent of the differences between the reference and sectoral approaches
E.5	Comparison with international data – solid, liquid and gaseous fuels – CO_2 (26, 2014) (27, 2013) Consistency*	Improve the consistency between the energy balances and the energy statistics reported internationally to Eurostat and the International Energy Agency	Addressing. Paragraph 3.2.1 of the NIR describes the progress made, including proposals for data collection for transport and heating petroleum products at a regional level. In response to a question raised by the ERT, Belgium explained that 2015 data on road transportation will probably be available by the end of 2016. Other energy statistics were not discussed
E.6	1.A.2.a Iron and steel – solid fuels – CO_2 (29, 2014) (32, 2013) Transparency*	Review and, if necessary, revise the low IEFs for solid fuels in iron and steel, and, in order to improve transparency, revise the description in the NIR of the category-specific QA/QC activities performed by explaining the links between the plant-specific AD from the EU ETS, the regional energy balances and the AD reported in the CRF tables	Addressing. In response to a question raised by the ERT, Belgium explained that the low IEFs for solid fuels were due to the mix of coke oven gas and blast furnace gas. However, the NIR does not yet contain a description of the links between the plant-specific AD from the EU ETS, the regional energy balances and the AD reported in the CRF tables
E.7	1.A.3.a Domestic aviation – liquid fuels – CO_2, CH_4 and N_2O (30, 2014) (35, 2013) Accuracy	Make efforts to utilize additional data sources and collaborate with Belgocontrol and/or Eurocontrol to improve the emission estimates	No longer relevant. According to paragraph 34 of decision 24/CP.19, the splitting of domestic and international bunkers is a "should" requirement
E.8	1.B.1.b Solid fuel transformation – solid fuels – CO_2 (31, 2014) (37, 2013) Transparency	Include in the NIR the reason for the use of the notation key "NA" and provide a brief explanation in the documentation box of CRF table 1.B.1	No longer relevant as the 2006 IPCC Guidelines recognize that there are no methods for estimating CO_2 fugitive emissions from coke and charcoal production
E.9	1.B.1.b Solid fuel transformation – solid fuels – CO_2 (31, 2014) (37, 2013)	Include in the NIR an explanation of how fugitive emissions are controlled	No longer relevant as the 2006 IPCC Guidelines recognize that there are no methods for estimating CO_2

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
	Transparency		fugitive emissions from coke and charcoal production
IPPU			
I.1	2. General (IPPU) (34, 2014) Comparability	Correct the notation keys reported for AD (e.g. for semiconductor manufacturing and for all F-gases)	Resolved. The notation keys reported for AD are correct in Belgium's 2016 inventory submission
I.2	2. General (IPPU) (35, 2014) (47, 2013) Transparency	Continue to improve the transparency of reporting in the NIR (e.g. on iron and steel industry, semiconductor manufacturing and QA/QC procedures)	Resolved. Belgium has improved the transparency of its reporting on iron and steel industry, semiconductor manufacturing and QA/QC
I.3	2. General (IPPU) (36, 2014) (42, 2013) Transparency	Provide more detailed data on the methodologies and data sources for the AD and EFs for other chemical industry and consumption of halocarbons and F-gases in the semiconductor industry and other categories considered by the Party to be confidential	Resolved. Belgium has improved the transparency of its reporting on chemical industry and consumption of halocarbons and F-gases in the semiconductor industry
I.4	2.A.3 Glass production – CO_2 (46, 2014) Transparency	Provide a clarification of the trend in the CO_2 IEF between 2005 and 2012, which can be mainly attributed to the Walloon region and the changes in the shares of glass types produced	Resolved. The NIR includes tables for the time series for the production of each type of glass by region, with the corresponding emissions
I.5	2.A.4 Other process uses of carbonates – CO_2 (37, 2014) Completeness	Estimate the missing emissions from limestone and dolomite use for the years prior to 2006 and/or include in the NIR an explanation for the large inter-annual fluctuations in the CO_2 IEF	No longer relevant. The allocation of these emissions has changed with the application of the 2006 IPCC Guidelines
I.6	2.A.4 Other process uses of carbonates – CO_2 (45, 2014) Transparency	Include an explanation for the significant variation in emissions due to the raw material mix used (carbon content in the raw material and the desired ceramic end product)	Resolved. There is significant variation in emissions from ceramic production reported for the Walloon region in the NIR (table 4-8) as a result of the carbon content in the raw material and the desired ceramic end product. During the review, Belgium provided additional information on carbon contents at the plant level in the Walloon region covering two years. The calculation of CO_2 emissions from ceramic production follows the guidelines for the monitoring and reporting of greenhouse gas emissions

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
			pursuant to European Union directive 2003/87/EC
I.7	2.B.7 Soda ash production – CO_2 (44, 2014) Transparency	Transparently report in the NIR the emissions from coke oxidation allocated to the energy sector	No longer relevant. The allocation of these emissions has changed with the application of the 2006 IPCC Guidelines. They are now reported in category 2.B.10
I.8	2.B.9 Fluorochemical production – PFCs (39, 2014) Transparency*	Explain that the fugitive emissions are from a single chemical plant and occur when the waste gas incinerator used for abatement is out of order, which happens frequently, and also as a result of changes in the product mix of the plant	Not resolved. Belgium has not provided sufficient information in its 2016 annual submission explaining that the fugitive emissions are from a single chemical plant and occur when the waste gas incinerator used for abatement is out of order
I.9	2.C.1 Iron and steel production – CO_2 (38, 2014) Transparency	State in the NIR that all the incoming solid fuels in blast furnace use are included in the fuel consumption of iron and steel in the energy sector, as they are used for boilers in the iron and steel plants for energy purposes	No longer relevant. The allocation of these emissions has changed with the application of the 2006 IPCC Guidelines and they should be included in the IPPU sector
I.10	2.F. Product uses as substitutes for ozone depleting substances – HFCs (40, 2014) Comparability	Correct the notation keys reported for HFC-32 in 2012	Resolved. The notation keys reported for HFC-32 are correct in the NIR
I.11	2.F. Product uses as substitutes for ozone depleting substances – HFCs, PFCs and SF_6 (41, 2014) (42, 2013) Transparency	Include information on the methodologies, AD and EFs used to estimate emissions from the consumption of halocarbons and SF_6 and on the QA/QC procedures, while preserving confidentiality, as appropriate	Resolved. Belgium included in the NIR information on the methodologies, AD and EFs used to estimate emissions from the consumption of halocarbons and SF_6 and on the QA/QC procedures, while preserving confidentiality
I.12	2.F. Product uses as substitutes for ozone depleting substances – SF_6 (43, 2014) Transparency	Describe all the methodological changes made during the 2014 review cycle to estimate the amount of fluid filled into new manufactured products for the years 1990–2008	Resolved. Belgium described in the NIR the methodology used to estimate the amount of fluid filled into new manfuactured products for the entire times series
I.13	2.F.1 Refrigeration and air conditioning – HFCs, PFCs and SF_6	Include information on the models used to estimate fugitive and disposal emissions from mobile	Resolved. Belgium included in the NIR information on the models used to estimate

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
	(42, 2014) Transparency	refrigerant consumption	fugitive and disposal emissions from mobile refrigerant consumption
Agriculture			
A.1	3. General (agriculture) (49, 2014) (55, 2013) Transparency	Provide transparent explanations for all recalculations made in the annual submission	Resolved. More detailed explanations for the recalculations are provided in the NIR
A.2	3. General (agriculture) (50, 2014) (56, 2013) Accuracy	Provide an analysis of the key categories at the national level and apply the key category guidelines to the use of higher-tier methods for the key categories for all regions in Belgium	Resolved. Higher-tier methods for the key categories are now nationally based rather than regionally based
A.3	3.A.1 Cattle – CH_4 (51, 2014) (57, 2013) Accuracy	Use a weighted average for the country-specific EFs for dairy and non-dairy cattle calculated for the Walloon and Flemish regions and apply it to the Brussels-Capital region. Alternatively, if deemed more accurate, consider the use of EFs from either the Flemish region or the Walloon region for the Brussels-Capital region. In all cases, document the choice of EFs in the NIR	Resolved. Methodological consistency (same method and same EFs) for the three regions of Belgium has been implemented for cattle. The methodology is documented in the NIR
A.4	3.A Enteric fermentation – CH_4 (52, 2014) Adherence to UNFCCC Annex I inventory reporting guidelines	Implement appropriate QA procedures in the future	Resolved. However, the ERT noted that Belgium could consider including a more detailed justification of the choice of data sources in its next NIR
A.5	3.B Manure management – CH_4 and N_2O (53, 2014) Comparability	Harmonize the methodological approach across the regions. Alternatively, if deemed more accurate, consider the use of EFs from either the Flemish region or the Walloon region for the Brussels-Capital region. Document the choice of EFs for the Brussels-Capital region in the NIR	Resolved. The Walloon region method and EFs have been applied across all regions
A.6	3.B Manure management – CH_4 (54, 2014) (60, 2013) Transparency	Include more detailed explanations in the NIR of the country-specific EFs and parameters used for maximum methane producing capacity and volatile solids excreted	Resolved. The NIR includes detailed information on country-specific parameters
A.7	3.B Manure management – CH_4 and N_2O (55, 2014) Transparency	Correct the information and include in the NIR a description of the allocation of animals to the animal waste management systems for swine and poultry in the different regions	Resolved. More detailed information on animal waste management systems for each livestock category is provided in the NIR

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
A.8	3.B Manure management – N_2O (56, 2014) (63, 2013) Accuracy	Estimate N_2O emissions from manure management for the Brussels-Capital region, using appropriate and consistent methods. Alternatively, if deemed more accurate, consider the use of EFs from either the Flemish region or the Walloon region for the Brussels-Capital region. In all cases, document the choice of EFs in the NIR	Resolved. N_2O emissions from manure management for the Brussels-Capital region are estimated using the same approach and EFs as for the Walloon region. This is sufficiently documented in the NIR
A.9	3.D Direct and indirect N_2O emissions from agricultural soils – N_2O (57, 2014) Transparency	Include a detailed justification for the use of the region-specific fractions for synthetic nitrogen fertilizer applied to soils ($Frac_{GASF}$) and livestock nitrogen excreted and deposited onto soils	Resolved. For the Flemish region, a region-specific $Frac_{GASF}$ value was derived using a model, whereas for the Brussels-Capital and Walloon regions the IPCC default for $Frac_{GASF}$ is used
A.10	3.D Direct and indirect N_2O emissions from agricultural soils – N_2O (58, 2014) Transparency	Increase the transparency of the calculation of $Frac_{LEACH}$ and the reporting thereon, and include additional information on the calculation method	Resolved. For all regions, a $Frac_{LEACH}$ value of 0.3 is used, as described in the NIR. This value is consistent with the default value in the 2006 IPCC Guidelines
LULUCF			
L.1 *	4.A.1 Forest land remaining forest land (61, 2014) Accuracy*	Implement a higher-tier method for the Flemish and Brussels-Capital regions for estimating carbon stock change in living biomass, as soon as possible	Addressing. Belgium has indicated that higher-tier methods will be applied for the Flemish and Brussels-Capital regions when the second National Forest Inventory is complete. The NIR reports that 50 per cent of the plots have been completed to date
L.2	4.A.2 Land converted to forest land – CO_2 (63, 2014) Transparency	Provide a reference to the parameter values applied in the IPCC default equations in order to estimate the carbon stock changes in living biomass	Resolved. Parameters for estimating carbon stock changes in biomass are provided in the NIR
L.3	4.A.2 Land converted to forest land – CO_2 (64, 2014) Transparency	Include clear references to the parameter values applied to estimate the carbon stock changes in the soil pool	Resolved. Parameters for estimating soil carbon stock changes are provided in the NIR
L.4	4.B.1 Cropland remaining cropland – CO_2 (65, 2014)	Document the assumptions regarding the land use upon which the expansion of orchards has occurred	Resolved. Assumptions and definitions regarding expansion of orchards are

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
	Transparency		provided in the NIR
L.5	4.B.2 Land converted to cropland – CO_2 (66, 2014) Transparency*	Separately describe the processes causing the increasing area of cropland	Not resolved. Belgium provided information on the increase in orchard areas over the time series (figure 6.4 of the NIR), but no information was provided on how this increase contributes to the total change in cropland remaining cropland
L.6	4.B.2 Land converted to cropland – CO_2 (67, 2014) Transparency	Include sufficient material to explain the decreasing trend in emissions and IEFs for living biomass and soils	Resolved. Belgium provided information in section 6.3.2.2 of the NIR
L.7	4.E. Settlements – CO_2 (68, 2014) Transparency	Include sufficient material to explain the decreasing trend in emissions and IEFs for living biomass	Resolved. Belgium provided sufficient information in section 6.1.2 of the NIR to explain the trends
Waste			
W.1	5. General (waste) (72, 2014) (79, 2013) Transparency	Update the QA/QC plan and provide more information in the NIR, including information on the improved tier 1 QC checks developed by country experts	Resolved. Belgium reported in the NIR that tier 1 QC checks have been developed in accordance with the 2006 IPPC Guidelines
W.2	5.A Solid waste disposal on land – CH_4 (74, 2014) Transparency	Correct the time-lag values in the relevant CRF table	Resolved. The default value of six months from the 2006 IPCC Guidelines has been applied for time lag
W.3	5.A Solid waste disposal on land – CH_4 (74, 2014) (81, 2013) Transparency	Include in the NIR correct and relevant information on and detailed explanations of the parameter values used in the calculations using the 2006 IPCC model	Resolved. Section 7.2.2.2 of the NIR provides information on the parameters
KP-LULUCF			
KL.1	Article 3.3 activities – CO_2 (81, 2014) (89, 2013) Transparency	Provide all information regarding methods relevant to the estimation of emissions for KP-LULUCF transparently in chapter 10.3.1 of the NIR, even if doing so introduces repetition of the information provided in chapter 7	Resolved. The present ERT considers that repeating information provided in chapter 6 of the NIR in chapter 10 will not necessarily improve transparency. It is also the opinion of the ERT that there has been a gradual

ID#	*Issue and/or problem classification*[a, b]	*Recommendation made in previous review report*[c]	*ERT assessment and rationale*
			improvement in both chapter 6 and chapter 10 of the NIR since this issue was first raised in 2013. Hence, the methodologies used are considered to be transparently reported and to satisfy the requirements set out in decision 2/CMP.8, annex II, paragraph 2(a). However, the ERT identified a new issue relating to the appropriate use of the guidelines
KL.2	Afforestation and reforestation – CO_2 (83, 2014) Transparency*	Review the land classification system with the aim of developing a system that can be used to classify the use of all land in Belgium, and do not use the "other land" classification in the case of statistical discrepancy	Resolved. The areas previously classified as "other land" have all been reclassified since the 2015 annual submission
KL.3	Afforestation and reforestation – CO_2 (83, 2014) Transparency	Consider whether the conversion of other land to forest land is a directly human-induced conversion of land use	Resolved. Belgium has clearly shown that all afforestation and reforestation activities are human induced (sections 10.4 and 10.5 of the NIR)
KL.4	Deforestation – CO_2 (84, 2014) Transparency	Include a clear explanation for the recalculations of emission estimates	Resolved. Belgium has provided recalculations (section 10.3.4 of the NIR) and indicated that the differences are due to liming application

Abbreviations: AD = activity data, CRF = common reporting format, EF = emission factor, ERT = expert review team, EU ETS = European Union Emissions Trading System, F-gas = fluorinated gas, IEF = implied emission factor, IPCC = Intergovernmental Panel on Climate Change, IPPU = industrial processes and product use, KP-LULUCF = LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, LULUCF = land use, land-use change and forestry, NA = not applicable, NIR = national inventory report, QA/QC = quality assurance/quality control, UNFCCC Annex I inventory reporting guidelines = "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories", 2006 IPCC Guidelines = *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

[a] References in parentheses are to the paragraph(s) and the year(s) of the previous review report(s) where the issue was raised. Issues are further classified as defined in decision 13/CP.20, annex, paragraph 81. In the review of the supplementary information reported in accordance with Article 7, paragraph 1, of the Kyoto Protocol, the ERT has applied the classification in decision 22/CMP.1, annex, paragraph 69, in conjunction with decision 4/CMP.11.

[b] An asterisk is included next to each issue type for all issues that are also problems, as defined in decision 22/CMP.1, annex, paragraphs 68 and 69, including those that lead to an adjustment or a question of implementation.

[c] The review of the 2016 annual submission is being held in conjunction with the review of the 2015 annual submission and, as such, the 2015 annual review report was not available at the time of this review. Therefore, the recommendations reflected in table 3 are from the 2014 annual review report. For the same reason, 2015 is excluded from the list of years in which the issue has been identified.

IV. Issues identified in three successive reviews and not addressed by the Party

9. In accordance with paragraph 83 of the UNFCCC review guidelines, the ERT noted that the issues included in table 4 have been identified in three successive reviews, including the review of the 2016 annual submission of Belgium, and have not been addressed by the Party.

Table 4
Issues identified in three successive reviews and not addressed by Belgium

ID#	*Previous recommendation for the issue identified*	*Number of successive reviews issue not addressed*[a]
General		
G.1	Ensure that any improvements to the QA/QC procedures are reflected in the QA/QC plan	3 (2013–2015/2016)
Energy		
E.2	Improve the consistency between the regional and federal energy balances	3 (2013–2015/2016)
E.5	Improve the consistency between the energy balances and the energy statistics reported internationally to Eurostat and the International Energy Agency	3 (2013–2015/2016)
E.6	Review and, if necessary, revise the low implied emission factors for solid fuels in iron and steel, and, in order to improve transparency, revise the description in the national inventory report of the category-specific QA/QC activities performed by explaining the links between the plant-specific AD from the European Union Emissions Trading System, the regional energy balances and the AD reported in the common reporting format tables	3 (2013–2015/2016)
IPPU		
	No such issues for the IPPU sector were identified	
Agriculture		
	No such issues for the agriculture sector were identified	
LULUCF		
	No such issues for the LULUCF sector were identified	
Waste		
	No such issues for the waste sector were identified	
KP-LULUCF		
	No such issues for KP-LULUCF were identified	

Abbreviations: AD = activity data, IPPU = industrial processes and product use, KP-LULUCF = LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, LULUCF = land use, land-use change and forestry, QA/QC = quality assurance/quality control.

[a] The review of the 2016 annual submission is being held in conjunction with the review of the 2015 annual submission. As the reviews of the 2015 and 2016 annual submissions are not successive reviews, but are rather being held in conjunction, for the purpose of counting successive years in table 4, 2015/2016 is considered as one year. The expert review team noted that this table 4 is the same as that in the 2015 annual review report for Belgium, modified to reflect the combined 2015/2016 review.

V. Additional findings made during the 2016 technical review

10. Table 5 contains findings made by the ERT during the technical review of the 2016 annual submission of Belgium that are additional to those identified in table 3.

Table 5
Additional findings made during the 2016 technical review of the annual submission of Belgium

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
General			
G.3	Inventory planning	The ERT raised a question during the review on whether the outputs from the key category analysis are used to prioritize improvements to the inventory. Belgium confirmed that this was the case	Not an issue
		The ERT encourages Belgium to continue to use the outputs from the key category analysis to prioritize improvements to the inventory, and to state in the NIR that this is happening	
G.4	National system	The ERT raised a question during the review on how continuous improvement of the inventory is ensured, given that the national system has not been updated since 2010. Belgium responded that improvement is ensured through the working group on emissions of the Comité de coordination de la politique internationale de l'environnement	Not an issue
		The ERT encourages Belgium to update its national system and to incorporate within that system a process for continual improvement	
G.5	National system	Since 2010, Belgium has received repeated recommendations to improve the transparency of its inventory, particularly for KP-LULUCF, where transparency issues remain unresolved. The present ERT identified further methodological inconsistencies, the use of outdated inventory preparation guidelines, calculation errors and transparency issues (see also L.8, L.9, L.11–L.13 and KL.5–KL.12 below). The ERT noted that there is limited information in the NIR on how previous ERT recommendations have been resolved, and the planned improvements outlined in section 9.2 of the NIR do not adequately address the improvements required by the recommendations in previous review reports. During the latest review, the Party acknowledged that planned improvements need to be updated. The ERT is concerned that no system has been implemented to facilitate improvements to the inventory in a timely manner	Yes. Transparency*
		The ERT encourages Belgium to develop a detailed inventory plan outlining future planned improvements to the inventory. The ERT recommends that Belgium report planned improvements in its next annual submission in accordance with paragraph 50 of the annex to decision 24/CP.9	
Energy			
E.10	Comparison with international data – – liquid fuels	The ERT noted systematic discrepancies in the data for other oil resulting from the fact that imports and exports reported in CRF table 1.A(b) are consistently lower than those reported to the International Energy Agency. Belgium explained that other petroleum products were included in	Yes. Comparability*

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue[a] and/or a problem?[b] If yes, classify by type
		other liquid fossil and not in other oil. In the 2006 IPCC Guidelines (volume 2, chapter 1, table 1.1), other petroleum products are included in other oil	
		The ERT recommends that Belgium reallocate other petroleum products from other liquid fossil to other oil in the reference approach (CRF table 1.A(b)) for the complete time series	
E.11	Comparison with international data – solid fuels	The ERT noted that production of small amounts of other bituminous coal was reported to the International Energy Agency, but not to the UNFCCC, and raised a question about this. Belgium responded that it does not consider this as production, but rather a recovery of coal, and that it will be included in CRF table 1.A(b) in the next annual submission	Yes. Comparability*
		The ERT recommends that Belgium include production of other bituminous coal in the reference approach (CRF table 1.A(b))	
E.12	1.A. Fuel combustion – sectoral approach – all fuels – CO_2, CH_4 and N_2O	The NIR contains three regional energy balances and one national energy balance. These balances are presented in different formats and with various levels of detail, which makes it difficult for the ERT to assess the completeness of the inventory. The ERT made a comparison of the sum of the three regional energy balances and the AD in the CRF tables (for categories 1.A.1, 1.A.2 and 1.A.4). In response to a question raised by the ERT on the differences in the balances, Belgium explained that for liquid fuels the differences are due to the allocation of off-road transportation, and to a small correction to the AD for off-road transportation that was made in the CRF tables but not yet made in the regional energy statistics. For solid fuels, the differences result from the allocation of solid fuels to the IPPU sector	Yes. Comparability*
		The ERT recommends that Belgium include the regional and national energy statistics in the NIR in a similar format and explain in more detail how AD are allocated to the CRF categories	
E.13	1.A.3.b Road transportation – liquid fuels – CO_2, CH_4 and N_2O	The ERT noted that the reported amount of gasoline used for road transportation differs in the national energy statistics and the CRF tables. During the review, Belgium explained that gasoline consumption for road transportation in the national energy statistics includes gasoline consumption for off-road transportation. In the CRF tables, some of the gasoline consumption is allocated to off-road transportation in CRF category 1.A.2.g. The ERT agrees with this allocation	Yes. Comparability*
		The ERT recommends that Belgium include in the NIR a description of how gasoline consumption for road transportation in the national energy statistics is corrected to account for off-road transportation	
E.14	1.A.3.b Road transportation –	The CO_2 emissions from road transportation are calculated using the default EFs in the COPERT model. According to the decision tree in the 2006 IPCC Guidelines, country-specific carbon contents should be used to calculate the CO_2 emissions from road transportation when this is a key	Yes. Accuracy*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
	liquid fuels – CO_2	category; however, Belgium indicates in the NIR that country-specific carbon content data are not available The ERT recommends that Belgium collect country-specific carbon contents of gasoline and gas/diesel oil used in road transportation and use these data to calculate the CO_2 emissions from road transportation	
E.15	1.B.1.a Coal mining and handling – solid fuels – CH_4	According to the NIR, there were mining activities in Belgium until 1992, but emissions from abandoned mines are reported as "NO" (not occurring) in the CRF tables. In response to a question raised by the ERT, Belgium explained that there are seven abandoned gassy mines in the country and that there was gas recovery from two of these mines in the early 1990s. Belgium then provided the ERT with a tier 1 estimation of the CH_4 emissions from the abandoned mines, amounting to 40 kt CO_2 eq in 1990 and 43 kt CO_2 eq in 2014. The ERT concluded that these emissions could be considered insignificant, and that, taking into account emissions from abandoned coal mines, the total emissions excluded remains below 0.1 per cent of the national GHG emissions The ERT recommends that Belgium calculate the CH_4 emissions from abandoned coal mines for the complete time series and include these emissions in the CRF tables. Alternatively, the ERT recommends that the Party include information in the NIR to demonstrate that these emissions are insignificant, in accordance with paragraph 37(b) of the annex to decision 24/CP.19. The ERT also recommends that the Party include a description of this source in the NIR, including an explanation of the total number of abandoned coal mines and the number of coal mines that are still gassy	Yes. Completeness*
IPPU			
I. 14	2.C.1 Iron and steel production – CO_2	The ERT noted that the reallocation of emissions from solid fuels, coke oven gas and blast furnace gas from the energy sector (category 1.A.2.a and 1.A.1.a) to the IPPU sector (category 2.C.1) has occurred. Further, the ERT noted that the allocation of emissions from some solid fuels used as a reductant and from limestone and dolomite used by the iron and steel industry has been changed to category 2.C.1.d with the application of the 2006 IPCC Guidelines. It is not clearly stated in the NIR whether a recalculation of category 2.C.1 a and 2.C.1.d emissions was undertaken for at least the base year. During the reveiw, Belgium provided information showing that the emissions are the same before and after the reallocation of the subcategories and therefore there is no need for recalculation The ERT recommends that Belgium include information in the NIR to describe the allocation of emissions from the iron and steel industry between the energy and the IPPU sectors. Further, the ERT recommends that the Party transparently describe in the NIR any recalculations that are made	Yes. Transparency*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
I.15	2.D.3 Other (non-energy products from fuels and solvent use) – CO_2, CH_4 and N_2O	Belgium reported the notation key "NA" (not applicable) for CO_2, CH_4 and N_2O emissions for category 2.D.3.A (solvent use) for the entire time series. In response to a question raised by the ERT, Belgium indicated that it will report the notation key "NO" in the next annual submission	Yes. Comparability*
		The ERT recommends that Belgium ensure the correct notation key "NO" is used to report emissions from solvent use	
I.16	2.D.3 Other (non-energy products from fuels and solvent use) – CO_2	Belgium did not estimate indirect CO_2 emissions from non-methane volatile organic compounds in solvent use, although these emissions are included in the 2006 IPCC Guidelines (volume 3, chapter 5.5.4)	Not an issue
		The ERT encourages Belgium to estimate the indirect CO_2 emissions from non-methane volatile organic compounds in solvent use	
Agriculture			
A.11	3. General (agriculture)	To address the strong recommendations made in previous review reports regarding the consistency of the inventory, Belgium has implemented a process enabling the use of appropriate and consistent methodologies for estimating emissions from the agriculture sector for the three regions in the country	Not an issue
		The ERT commends Belgium for the efforts made to improve the consistency and transparency of its inventory	
A.12	3.B Manure management – N_2O	Belgium reported sectoral background data for the population of each livestock category, the rate of manure nitrogen excretion, manure nitrogen excreted by each animal waste management system, and direct and indirect N_2O emissions from manure management (CRF table 3.B(b)). The ERT noted that the amount of manure nitrogen calculated using animal population multiplied by nitrogen excretion rate does not match the amount obtained by summing the nitrogen excreted by all the animal waste management systems for the same animal category. During the review, Belgium acknowledged such discrepancies for mules, asses and poultry, but explained that they do not have an impact on the estimated N_2O emissions	Yes. Transparency*
		The ERT recommends that Belgium report the correct manure nitrogen excretion rate for mules, asses and poultry in CRF table 3.B(b) and the NIR	
A.13	3.B Manure management – N_2O	Belgium reported that an IPCC tier 2 method was used for estimating direct N_2O emissions from manure management (NIR, p.154, table 5-14). The ERT noted that the N_2O EFs used for solid, dry lot, pit storage below animal confinements and poultry manure with and without litter are default EFs from the 2006 IPCC Guidelines. During the review, Belgium acknowledged a discrepancy in	Yes. Transparency*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
		describing the method used for estimating direct N_2O emissions from manure management in the NIR	
		The ERT recommends that Belgium provide accurate information in the NIR on the method used for estimating direct N_2O emissions from manure management	
A.14	3.D.a.3 Crop residues – N_2O	Belgium reported that the method used for estimating the amount of nitrogen in crop residues returned to soils is based on equation 11.6 of the 2006 IPCC Guidelines, with $Frac_{RENEWAL}$ (the fraction of total area under crop that is renewed annually) equal to 1. The ERT noted uncertainty as to whether a $Frac_{RENEWAL}$ of 1 is applied for all crop types, including clover and alfalfa. During the review, Belgium clarified that a value of 1 is indeed used for all crop types, including clover and alfalfa. The Party also stated that region-specific values of $Frac_{RENEWAL}$ for clover and alfalfa are available from expert consultations	Not an issue
		The ERT encourages Belgium to use country-specific values for $Frac_{Renewal}$ for clover and alfalfa in order to improve the emission estimates of N_2O from crop residue decomposition in future inventory submissions	
A.15	3.D.b.2 Nitrogen leaching and run-off – N_2O	The IPCC default EF5 (0.0075 kg N_2O-nitrogen (N)/kg N) and $Frac_{LEACH}$ (0.30) were used for estimating indirect N_2O emissions from agricultural soils due to leaching and run-off of nitrogen (NIR, p.174). The ERT noted that the IEF reported for this category in CRF table 3.D varied from 0.00339 kg N_2O-N/kg N in 1990 to 0.00315 kg N_2O-N/kg N in 2014. During the review, Belgium acknowledged that incorrect AD for the Walloon region resulted in the lower IEFs during the period	Yes. Comparability*
		The ERT recommends that Belgium report the correct amount of leaching and run-off of nitrogen to ensure that the IEFs reflect the actual EF used for the estimates of N_2O emissions from agricultural soils	
A.16	3.H Urea application – CO_2	Belgium reported CO_2 emissions from urea application as "NE" (not estimated) in the NIR. The amount of urea used in Belgium throughout the time series is reported in table 5.29 (NIR, p.173) and Belgium described that, because only one data source was available (the International Fertilizer Association), CO_2 emissions in 2014 were estimated to be less than the threshold of significance (57 kt CO_2 eq) for Belgium	Not an issue
		The ERT, considering the growing trend in the application of urea and nitrogen fertilizer solutions (also known as urea ammonium nitrate), encourages Belgium to report CO_2 emissions from urea application	

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
A.17	3.I Other carbon-containing fertilizers – CO_2	In the NIR, Belgium reported CO_2 emissions from other carbon-containing fertilizers as "NO". In table 5-29 (NIR, p.173), Belgium reported the use of nitrogen fertilizer solutions as varying from 0 per cent in 1990 to 21 per cent in 2014. During the review, Belgium confirmed that the nitrogen fertilizer solutions used in the country are mainly urea ammonium nitrate. Although the ERT accepted the Party's reporting, the ERT believes that this issue should be considered further in future reviews to confirm that there has not been an underestimation of emissions The ERT, considering the growing trend in the application of nitrogen fertilizer solutions, recommends that Belgium report CO_2 emissions from other carbon-containing fertilizers	Yes. Completeness*
LULUCF			
L.8	4. General (LULUCF) – all gases	In the NIR, Belgium indicated that the IPCC good practice guidance for LULUCF was used for estimating emissions and removals for all gases and LULUCF categories. The ERT noted that the 2006 IPCC Guidelines should be used, as stipulated in decision 24/CP.19. During the review, the Party indicated that the text in the NIR is outdated and that the 2006 IPCC Guidelines are indeed being used. The ERT could not confirm that the new guidelines are being used correctly The ERT recommends that Belgium correctly apply and reference the section of the 2006 IPCC Guidelines used to derive removal and emission estimates for all gases in the LULUCF sector, and indicate clearly the tier methods used for specific estimates. For example, see L.11 below relating to the DOM and soil carbon pools for land converted to forest land	Yes. Accuracy*
L.9	4. General (LULUCF) – CO_2	Belgium uses country-specific EFs for estimating carbon stock changes in mineral soils but does not provide any information on the methodological assumptions made regarding the transition period for the SOC pool to reach steady state. During the review, the Party indicated that no transition period is applied and that, based on country-specific research, SOC accumulates in all years The ERT encourages Belgium to provide transparent information on the methodological assumptions made in estimating carbon stock changes for SOC	Not an issue
L.10	4.A.1 Forest land remaining forest land – CO_2	Belgium uses country-specific EFs for estimating carbon stock changes in deadwood and litter (DOM pool) but does not apply a transition period, which is required by the 2006 IPCC Guidelines (equation 2.19). During the review, the ERT and the Party agreed that, because a transition period was not applied, DOM emissions had been overestimated The ERT recommends that Belgium provide revised estimates for DOM emissions and removals for the entire time series	Yes. Accuracy*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
L.11	4.A.2 Land converted to forest land – CO_2	Belgium assumes a carbon stock change of zero in the DOM pool for land converted to forest land, using the tier 1 approach from the IPCC good practice guidance for LULUCF, and reports "NE" in CRF table 4.A. However, the 2006 IPCC Guidelines should be used for estimating emissions for this category (equation 2.18 or 2.19). Further, because Belgium reported "NE" for carbon stock changes in the DOM pool, it is required to justify emissions or removals as not being significant, as defined in decision 24/CP.19, annex I, paragraph 37(b). During the review, the ERT and the Party agreed that DOM removals had therefore been underestimated The ERT recommends that Belgium estimate carbon stock changes in the DOM pool using the tier 1 approach outlined in the 2006 IPCC Guidelines and, if appropriate, include a justification as to why emissions or removals from carbon stock changes in the DOM pool are not significant, as defined in decision 24/CMP.19, annex, paragraph 37	Yes. Accuracy*
L.12	4.B.1 Cropland remaining cropland – CO_2	The ERT noted a large increase in mineral SOC removals from cropland remaining cropland as a result of the inconsistent application of EFs over the time series (–0.05 t carbon (C)/ha/year for the period 1990–2005 and 0.3 t C/ha/year for the period 2006–2013) (NIR, figures 6.1 and 6.2, and CRF table 4.B). During the review, the ERT and Belgium agreed that this approach does not result in an accurate and consistent assessment of SOC emissions or removals. The Party confirmed that it will apply a single revised EF (–0.066 t C/ha/year) for the entire time series, which is based on a review of available research data The ERT, while welcoming the initiative to apply a single revised EF for the entire time series, recommends that Belgium provide, along with the estimates of SOC emissions or removals from cropland remaining cropland, a transparent description of the approaches used in the next annual submission	Yes. Consistency*
L.13	4.G Harvested wood products – CO_2	The ERT noted that the annual HWP inflow values presented in CRF table 4.G.s2 are approximately five times higher than the annual timber harvest reported in the NIR (NIR, table 6.6), which could potentially lead to an overestimation or underestimation of HWP emissions or removals. During the review, Belgium explained that the HWP inflow values were errors and provided the correct data together with all relevant AD and parameters. The Party also acknowledged that the ERT would not be able to reconcile the HWP calculations using the information provided because of inventory calculation errors, and indicated that revised estimates would be provided in the next annual submission The ERT recommends that Belgium correctly apply the 2006 IPCC Guidelines and transparently provide the AD and parameters used to estimate HWP emissions or removals in the next inventory submission	Yes. Accuracy*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
L.14	4.G Harvested wood products – CO_2	The ERT noted that HWP inflows were estimated only for 2000 onwards, and highlights that the estimation of HWP inflows, removals and emissions from 1900. The exclusion of historic inflows from the HWP estimation would lead to a significant overestimation of HWP removals. During the review, Belgium indicated that United Nations Economic Commission for Europe data on HWP inflows are available only for 2000 onwards, but the Party did provide some information on the total harvest since 1990 The ERT recommends that Belgium estimate HWP from historic inflows since 1900 using the average value of the timber harvest for the first five years for which AD are available or by extrapolation of the data for HWP inflows for 2000–2014 as outlined in the 2006 IPCC Guidelines (chapter 12)	Yes. Completeness*
Waste			
W.4	5.A.1.a Anaerobic – CH_4	According to the NIR, tier 1 QC checks were performed for the key categories for the three regions of Belgium (NIR, p.214, chapter 7.2.4), but further information on these checks was not provided in the NIR The ERT encourages Belgium to provide a summary of the tier 1 QC checks developed by national experts and implemented for the annual submission in accordance with the 2006 IPCC Guidelines on QA/QC	Not an issue
KP-LULUCF			
KL.5	Article 3.3 activities – all gases	In chapter 10 of the NIR, Belgium stated that the preparation of the KP-LULUCF inventory and additional information is done in accordance with the annex to decision 15/CMP.1; but the supplementary information requirements for the issues related to the 2006 IPCC Guidelines are now set out in decision 2/CMP.8. During the review, the Party indicated that the relevant text in the NIR had not been updated and that the preparation of the KP-LULUCF inventory was carried out in accordance with decision 2/CMP.8. The ERT acknowledges this, but is concerned as to whether all elements in decision 2/CMP.8, annex II, paragraph 2, were adhered to, in particular the application of the new reporting guidelines. For example, the application of the tier 1 method for estimation of carbon stock change in litter, deadwood and soils in afforested land has not been done in accordance with the 2006 IPCC Guidelines (see also KL.12 and KL.13 below) The ERT recommends that Belgium update the relevant sections in the NIR to reference the applicable methods from the 2006 IPCC Guidelines applied and the relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol used to estimate emissions and removals	Yes. Transparency*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
KL.6	General (KP-LULUCF) – all gases	There is no information in the NIR on how HWP inflows from domestically produced timber harvests are derived, as required by decision 2/CMP.8, annex II, paragraph 2(g)(i) and (vii). During the review, Belgium provided the HWP product data from FAOSTAT and the derived ratios of domestically produced industrial roundwood, as outlined in equations 2.8.2 and 2.8.3 of the Kyoto Protocol Supplement The ERT recommends that Belgium provide information on how HWP inflows from domestically produced harvests are derived, with tables showing production, import and export of different sawnwood and wood-based products, in the NIR	Yes. Transparency*
KL.7	General (KP-LULUCF) – CO_2	The ERT noted that the FMRL for Belgium does not take into account natural disturbances. Since the adoption of the FMRL, there have also been substantial changes in the methods used to calculate biomass, soil, DOM and HWP stock changes because of new methodological developments and the application of the 2006 IPCC Guidelines and the Kyoto Protocol Supplement. The Party indicated that a technical correction will be applied in the future (likely in 2017). However, it is good practice to specify methodological elements or historical activity used in the reporting of forest management emissions and removals, which are different to those used for constructing the FMRL as outlined in decision 2/CMP.7, annex, paragraphs 14 and 15 (Kyoto Protocol Supplement, chapter 2.7.5.2) The ERT, while underlining that a technical correction is only applicable at the end of the second commitment period of the Kyoto Protocol, recommends that Belgium provide, in its annual submission, a summary of any methodological inconsistencies that may trigger a technical correction to the FMRL	Yes. Consistency*
KL.8	General (KP-LULUCF) – CO_2	Belgium did not provide information in the NIR on how it ensures that land that was accounted for under activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in the first commitment period continues to be accounted for in subsequent commitment periods, in accordance with decision 2/CMP.8, annex II, paragraph 2(d). This information was provided during the review The ERT recommends that Belgium include, in its annual submission, information on how land that was accounted for under activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol in the first commitment period continues to be accounted for in the second commitment period	Yes. Transparency*
KL.9	General (KP-LULUCF) – CO_2	Belgium did not provide information in the NIR on how emissions from HWP that have been accounted for during the first commitment period on the basis of instantaneous oxidation have been excluded from the accounting for the second commitment period in accordance with decision 2/CMP.8, annex II, paragraph 2(g)(iv). During the review, the Party explained that there were no harvests from elected afforestation lands in the first commitment period and that forest management under Article 3, paragraph 4, of the Kyoto Protocol was not elected. Therefore, there	Yes. Transparency*

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue[a] and/or a problem?[b] If yes, classify by type
		are no HWP that need to be excluded from accounting in the second commitment period The ERT recommends that Belgium include, in its annual submission, information confirming that there were no HWP accounted for in the first commitment period on the basis of instantaneous oxidation	
KL.10	General (KP-LULUCF) – CO_2	Harvests from deforestation are accounted on the basis of instantaneous oxidation, but Belgium did not provide transparent information in the NIR on how emissions are derived in accordance with decision 2/CMP.8, annex II, paragraph 2(g)(v). During the review, the Party provided information on how harvests from deforestation were estimated using equation 2.8.1 of the Kyoto Protocol Supplement, and confirmed that emission estimates are accounted on the basis of instantaneous oxidation The ERT recommends that Belgium include, in the NIR, transparent information on how emissions from harvests from deforestation are estimated	Yes. Transparency*
KL.11	Forest management – CO_2, CH_4 and N_2O	Belgium provided a background and margin for emissions associated with wildfires for land under forest management, as specified in the Kyoto Protocol Supplement. In CRF table 4(KP-1)B1.3, the margin is reported as 3.94 kt CO_2 eq. However, this is the standard deviation as shown in table 10-9 of the NIR. According to decision 2/CMP.7, the margin should be equal to twice the standard deviation (i.e. 7.8 kt CO_2 eq, as indicated in table 10-9). During the review, the Party indicated that the margin was entered in the table incorrectly The ERT recommends that Belgium enter the correct margin for emissions associated with wildfires for land under forest management in CRF table 4(KP-1)B1.3 in the annual submission	Yes. Accuracy*
KL.12	Afforestation and reforestation – CO_2, CH_4 and N_2O	In the NIR, Belgium stated that the litter and deadwood pools are assumed to be zero ("NO") on the basis of tier 1 assumptions from the IPCC good practice guidance for LULUCF. However, the 2006 IPCC Guidelines and the Kyoto Protocol Supplement should now be used for the preparation of KP-LULUCF inventories, in accordance with decision 6/CMP.9. Moreover, decision 2/CMP.8, annex II, paragraph 2(e), stipulates that if a pool is not accounted, the Party must provide verifiable information to demonstrate that the pool is not a source. During the review, Belgium was asked to provide more information to demonstrate that the litter and deadwood pools are not sources. The ERT considers that numerical measurements are required to clearly demonstrate that the litter and deadwood pools in elected afforestation areas are not sources. Belgium did not provide demonstrable information but did make a logical argument that it is very unlikely that these pools are sources The ERT recommends that Belgium undertake a numerical evaluation (e.g. using a tier 1 approach from the 2006 IPCC Guidelines) of litter and deadwood stock changes in forest types elected under	Yes. Completeness*

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue[a] and/or a problem?[b] If yes, classify by type*
		afforestation, or provide examples showing that these pools are not sources	
KL.13	Forest management – CO_2	Belgium did not estimate litter and deadwood carbon stock changes in accordance with the 2006 IPCC Guidelines and the Kyoto Protocol Supplement. The ERT considers that the current method used by the Party results in an underestimation of emissions from these pools	Yes. Accuracy*
		The ERT recommends that Belgium revise its estimates for litter and deadwood carbon stock changes using the 2006 IPCC Guidelines and the Kyoto Protocol Supplement, and include the correct estimates in the next annual submission	
KL.14	Harvested wood products – CO_2	Belgium did not include HWP inflows for the recommended time series in the calculation of carbon stock changes for HWP in accordance with the 2006 IPCC Guidelines and the Kyoto Protocol Supplement and pursuant to decision 2/CMP.8, annex II, paragraph 2(g)(iii). The Party also incorrectly calculated carbon stock changes for HWP pools. The ERT considers that the current method used by the Party results in an underestimation of emissions from these pools	Yes. Completeness*
		The ERT recommends that Belgium revise its estimates for HWP pools using the 2006 IPCC Guidelines and the Kyoto Protocol Supplement, and include the correct estimates in the annual submission	

Abbreviations: AD = activity data, CRF = common reporting format, DOM = dead organic matter, EF = emission factor, ERT = expert review team, FMRL = forest management reference level, HWP = harvested wood products, IEF = implied emission factor, IPCC = Intergovernmental Panel on Climate Change, IPCC good practice guidance for LULUCF = IPCC *Good Practice Guidance for Land Use, Land-Use Change and Forestry*, IPPU = industrial processes and product use, KP-LULUCF = LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, Kyoto Protocol Supplement = *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*, LULUCF = land use, land-use change and forestry, NIR = national inventory report, QA/QA = quality assurance/quality control, SOC = soil organic carbon, 2006 IPCC Guidelines = *2006 IPCC Guidelines for National Greenhouse Gas Inventories*.

[a] Recommendations are related to issues as defined in decision 13/CP.20, annex, paragraph 81, or problems as identified in decision 22/CMP.1, annex, paragraph 69, identified by the ERT during the review. Encouragements are made to the Party to address all findings not related to such issues.

[b] An asterisk is included next to each issue type for all issues that are also problems, as defined in decision 22/CMP.1, annex, paragraphs 68 and 69, including those that lead to an adjustment or a question of implementation.

VI. Application of adjustments

11. The ERT has not identified the need to apply any adjustments to the 2016 annual submission of Belgium.

VII. Accounting quantities for activities under Article 3, paragraph 3, and, if any, activities under Article 3, paragraph 4, of the Kyoto Protocol

12. Belgium has elected commitment period accounting and therefore the issuance and cancellation of units for activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol are not applicable for the 2016 review.

VIII. Questions of implementation

13. No questions of implementation were identified by the ERT during the review.

Annex I

Overview of greenhouse gas emissions and removals for Belgium for submission year 2016 and data and information on activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

1. Tables 6–9 provide an overview of total greenhouse gas emissions and removals, as submitted by Belgium.

Table 6
Total greenhouse gas emissions for Belgium, base year[a]–2014[b]
(kt CO_2 eq)

	Total GHG emissions excluding indirect CO_2 emissions		*Total GHG emissions including indirect CO_2 emissions[c]*		*Land-use change (Article 3.7 bis as contained in the Doha Amendment)[d]*	*KP-LULUCF activities (Article 3.3 of the Kyoto Protocol)[e]*	*KP-LULUCF activities (Article 3.4 of the Kyoto Protocol)*	
	Total including LULUCF	*Total excluding LULUCF*	*Total including LULUCF*	*Total excluding LULUCF*			*CM, GM, RV, WDR*	*FM*
FMRL								–2 499.00
Base year	145 469.12	147 811.09	145 469.12	147 811.09	NA		NA	
1990	143 679.27	146 021.24	143 679.27	146 021.24				
1995	151 901.54	154 020.29	151 901.54	154 020.29				
2000	147 474.12	149 213.02	147 474.12	149 213.02				
2010	129 282.66	133 258.41	129 282.66	133 258.41				
2011	118 990.73	122 833.40	118 990.73	122 833.40				
2012	114 696.06	118 761.34	114 696.06	118 761.34				
2013	115 364.31	119 375.30	115 364.31	119 375.30		–110.75	NA	–3 041.06
2014	109 847.00	113 866.62	109 847.00	113 866.62		–160.41	NA	–3 041.59

Abbreviations: CM = cropland management, FM = forest management, FMRL = forest management reference level, GHG = greenhouse gas, GM = grazing land management, KP-LULUCF = LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, LULUCF = land use, land-use change and forestry, NA = not applicable, RV = revegetation, WDR = wetland drainage and rewetting.

[a] Base year refers to the base year under the Kyoto Protocol, which is 1990 for CO_2, CH_4 and N_2O and 1995 for HFCs, PFCs, SF_6 and NF_3. Belgium has not elected any activities under Article 3, paragraph 4, of the Kyoto Protocol. For activities under Article 3, paragraph 3, of the Kyoto Protocol and forest management under Article 3, paragraph 4, only the inventory years of the commitment period must be reported.

[b] Emissions/removals reported in the sector other (sector 6) are not included in the total GHG emissions.

[c] The Party has not reported indirect CO_2 emissions in common reporting format table 6.

[d] The value reported in this column refers to 1990.

[e] Activities under Article 3, paragraph 3, of the Kyoto Protocol, namely afforestation and reforestation, and deforestation.

Table 7
Greenhouse gas emissions by gas for Belgium, excluding land use, land-use change and forestry, 1990–2014[a]
(kt CO_2 eq)

	CO_2[b]	*CH_4*	*N_2O*	*HFCs*	*PFCs*	*Unspecified mix of HFCs and PFCs*	*SF_6*	*NF_3*
1990	119 982.50	12 040.18	10 232.40	NA, NO	2 191.05	NA, NO	1 575.10	NA, NO
1995	125 519.44	11 947.64	10 997.20	501.99	2 914.29	NA, NO	2 139.73	NA, NO
2000	126 315.21	10 827.00	10 352.83	1 127.80	446.11	NA, NO	144.06	NA, NO
2010	114 155.39	8 624.50	7 759.83	2 508.71	106.61	NA, NO	102.03	1.32
2011	104 945.71	8 369.07	6 564.49	2 614.05	225.50	NA, NO	112.09	2.48
2012	100 931.60	8 235.74	6 470.89	2 733.36	278.21	NA, NO	110.43	1.12
2013	101 744.74	8 098.25	6 280.72	2 703.01	431.59	NA, NO	115.75	1.24
2014	96 325.41	8 047.55	6 278.98	2 811.80	306.96	NA, NO	95.22	0.69
Per cent change 1990–2014	**–19.7**	**–33.2**	**–38.6**	**NA**	**–86.0**	**NA**	**–94.0**	**NA**

Abbreviations: NA = not applicable, NO = not occurring.
[a] Emissions/removals reported in the sector other (sector 6) are not included in the total greenhouse gas emissions.
[b] Belgium did not report indirect CO_2 emissions in common reporting format table 6.

Table 8
Greenhouse gas emissions by sector for Belgium, 1990–2014[a, b]
(kt CO_2 eq)

	Energy	*IPPU*	*Agriculture*	*LULUCF*	*Waste*	*Other*
1990	103 193.74	26 219.59	12 163.57	–2 341.97	4 444.33	NO
1995	107 047.69	30 164.94	12 192.84	–2 118.75	4 614.83	NO
2000	105 453.93	28 416.36	11 272.25	–1 738.89	4 070.48	NO
2010	98 994.94	21 422.32	10 171.28	–3 975.75	2 669.86	NO
2011	89 716.19	20 581.61	10 081.50	–3 842.67	2 454.10	NO
2012	87 534.32	19 008.56	9 846.11	–4 065.27	2 372.34	NO
2013	87 722.53	19 817.67	9 836.52	–4 010.99	1 998.58	NO
2014	82 290.58	19 810.83	9 941.76	–4 019.62	1 823.45	NO
Per cent change 1990–2014	**–20.3**	**–24.4**	**–18.3**	**71.6**	**–59.0**	**NA**

Abbreviations: IPPU = industrial processes and product use, LULUCF = land use, land-use change and forestry, NA = not applicable, NO = not occurring.

[a] Emissions/removals reported in the sector other (sector 6) are not included in the total greenhouse gas emissions.

[b] Belgium did not report indirect CO_2 emissions in common reporting format table 6.

Table 9

Greenhouse gas emissions/removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol by activity, base year[a]–2014, for Belgium[b]

(kt CO_2 eq)

	Article 3.7 bis as contained in the Doha Amendment[c]	*Article 3.3 of the Kyoto Protocol*		*Forest management and elected Article 3.4 activities of the Kyoto Protocol*				
	Land-use change	*Afforestation and reforestation*	*Deforestation*	*Forest management*	*Cropland management*	*Grazing land management*	*Revegetation*	*Wetland drainage and rewetting*
FMRL				–2 499.00				
Technical correction				NE				
Base year	NA				NA	NA	NA	NA
2013		–436.42	325.67	–3 041.06	NA	NA	NA	NA
2014		–488.75	328.34	–3 041.59	NA	NA	NA	NA
Per cent change 1990–2014					**NA**	**NA**	**NA**	**NA**

Abbreviations: FMRL = forest management reference level, NA = not applicable, NE = not estimated.

[a] Base year refers to the base year under the Kyoto Protocol, which is 1990 for CO_2, CH_4 and N_2O and 1995 for HFCs, PFCs, SF_6 and NF_3. Belgium has not elected any activities under Article 3, paragraph 4, of the Kyoto Protocol. For activities under Article 3, paragraph 3, of the Kyoto Protocol, and forest management under Article 3, paragraph 4, only the inventory years of the commitment period must be reported.

[b] The values in this table include emissions from land subject to natural disturbances, if applicable.

[c] The value reported in this column refers to 1990.

2. Table 10 provides an overview of relevant key data for Belgium's reporting under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.

Table 10
Key relevant data for Belgium under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

Key parameters	*Values*
Periodicity of accounting	(a) Afforestation/reforestation: commitment period accounting
	(b) Deforestation: commitment period accounting
	(c) Forest management: commitment period accounting
	(d) Cropland management: not elected
	(e) Grazing land management: not elected
	(f) Revegetation: not elected
	(g) Wetland drainage and rewetting: not elected
Election of activities under Article 3, paragraph 4	None
Election of application of provisions for natural disturbances	Yes, for forest management
3.5% of total base-year emissions, excluding LULUCF	5 173.388 kt CO_2 eq (41 387.106 kt CO_2 eq for the duration of the commitment period)
Cancellation of AAUs, ERUs, CERs and/or issuance of RMUs in the national registry for:	
1. Afforestation and reforestation in 2014	NA
2. Deforestation in 2014	NA
3. Forest management in 2014	NA
4. Cropland management in 2014	NA
5. Grazing land management in 2014	NA
6. Revegetation in 2014	NA
7. Wetland drainage and rewetting in 2014	NA

Abbreviations: AAU = assigned amount unit, CER = certified emission reduction unit, ERU = emission reduction unit, LULUCF = land use, land-use change and forestry, NA = not applicable, RMU = removal unit.

Annex II

Information to be included in the compilation and accounting database

Tables 11 and 12 include the information to be included in the compilation and accounting database for Belgium. Data shown are from the original annual submission of the Party, including the latest revised estimates submitted, adjustments (if applicable) and the final data to be included in the compilation and accounting database.

Table 11
Information to be included in the compilation and accounting database for 2014, including the commitment period reserve, for Belgium
(t CO_2 eq)

	Original submission	*Revised estimates*	*Adjustment*[a]	*Final*[b]
Commitment period reserve	525 805 662			525 805 662
Annex A emissions for 2014				
CO_2	96 325 413			96 325 413
CH_4	8 047 552			8 047 552
N_2O	6 278 983			6 278 983
HFCs	2 811 797			2 811 797
PFCs	306 964			306 964
Unspecified mix of HFCs and PFCs	NA, NO			NA, NO
SF_6	95 218			95 218
NF_3	690			690
Total Annex A sources	**113 866 619**			**113 866 619**
Activities under Article 3, paragraph 3, of the Kyoto Protocol for 2014				
3.3 Afforestation and reforestation	–488 746			–488 746
3.3 Deforestation	328 341			328 341
Forest management and elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2014				
3.4 Forest management for 2014	–3 041 587			–3 041 587

Abbreviations: Annex A sources = sources included in Annex A to the Kyoto Protocol, NA = not applicable, NO = not occurring.

[a] "Adjustment" is relevant only for Parties for which the expert review team has calculated one or more adjustment(s).

[b] "Final" includes revised estimates, if any, and/or adjustments, if any.

Table 12
Information to be included in the compilation and accounting database for 2013 for Belgium
(t CO_2 eq)

	Original submission	*Revised estimates*	*Adjustment*[a]	*Final*[b]
Annex A emissions for 2013				
CO_2	101 744 737			101 744 737
CH_4	8 098 249			8 098 249
N_2O	6 280 716			6 280 716
HFCs	2 703 012			2 703 012
PFCs	431 591			431 591
Unspecified mix of HFCs and PFCs	NA, NO			NA, NO
SF_6	115 754			115 754
NF_3	1 242			1 242
Total Annex A sources	**119 375 302**			**119 375 302**
Activities under Article 3, paragraph 3, of the Kyoto Protocol for 2013				
3.3 Afforestation and reforestation	–436 423			–436 423
3.3 Deforestation	325 668			325 668
Forest management and elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2013				
3.4 Forest management for 2013	–3 041 060			–3 041 060

Abbreviations: Annex A sources = sources included in Annex A to the Kyoto Protocol, NA = not applicable, NO = not occurring.

[a] "Adjustment" is relevant only for Parties for which the expert review team has calculated one or more adjustment(s).

[b] "Final" includes revised estimates, if any, and/or adjustments, if any.

Annex III

Additional information to support findings in table 2

Missing categories that may affect completeness

The categories for which methods are included in the Intergovernmental Panel on Climate Change (IPCC) *2006 IPCC Guidelines for National Greenhouse Gas Inventories* but were reported as "NE" (not estimated) or for which the expert review team otherwise determined that there may be an issue with the completeness of the reporting in the Party's inventory are the following:

(a) Methane emissions from abandoned coal mines (see ID# E.15 in table 5);

(b) Carbon dioxide (CO_2) emissions from other carbon-containing fertilizers (see ID# A.17 in table 5);

(c) CO_2 emissions or removals from harvested wood products for the period 1990 –2000 (see ID# L.14 in table 5);

(d) All emissions from litter and deadwood in land areas identified under afforestation and reforestation (see ID# KL.12 in table 5);

(e) CO_2 emissions from harvested wood products (see ID# KL.14 in table 5).

Annex IV

Documents and information used during the review

A. Reference documents

Aggregate information on greenhouse gas emissions by sources and removals by sinks for Parties included in Annex I to the Convention. Note by the secretariat. Available at <http://unfccc.int/resource/webdocs/agi/2015.pdf>.

Annual status report for Belgium for 2016. Available at <http://unfccc.int/resource/docs/2016/asr/bel.pdf>.

FCCC/ARR/2015/BEL. Report on the individual review of the annual submission of Belgium submitted in 2015. Available at <http://unfccc.int/resource/docs/2016/arr/bel.pdf>.

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FCCC/ARR/2013/BEL. Report of the individual review of the annual submission of Belgium submitted in 2013. Available at <http://unfccc.int/resource/docs/2014/arr/bel.pdf>

FCCC/ARR/2012/BEL. Report on the individual review of the annual submission of Belgium submitted in 2012. Available at <http://unfccc.int/resource/docs/2013/arr/bel.pdf>.

"Guidelines for national systems for the estimation of anthropogenic greenhouse gas emissions by sources and removals by sinks under Article 5, paragraph 1, of the Kyoto Protocol". Decision 19/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=14>.

"Guidelines for review under Article 8 of the Kyoto Protocol". Decision 22/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a03.pdf#page=51>.

"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories". Annex to decision 24/CP.19. Available at <http://unfccc.int/resource/docs/2013/cop19/eng/10a03.pdf#page=4>.

"Guidelines for the preparation of the information required under Article 7 of the Kyoto Protocol". Decision 15/CMP.1. Available at <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=54>.

"Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention". Annex to decision 13/CP.20. Available at <http://unfccc.int/resource/docs/2014/cop20/eng/10a03.pdf#page=6>.

"Implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol, Part I: Implications related to accounting and reporting and other related issues". Decision 3/CMP.11. Available at <http://unfccc.int/resource/docs/2015/cmp11/eng/08a01.pdf#page=5>.

"Implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol, Part II: Implications related to review

and adjustments and other related issues". Decision 4/CMP.11. Available at <http://unfccc.int/resource/docs/2015/cmp11/eng/08a01.pdf#page=30>.

Intergovernmental Panel on Climate Change. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories.* Available at <http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html>.

Intergovernmental Panel on Climate Change. 2014. *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*. Available at <http://www.ipcc-nggip.iges.or.jp/public/kpsg>.

Intergovernmental Panel on Climate Change. 2014. *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*. Available at <http://www.ipcc-nggip.iges.or.jp/public/wetlands/index.html>.

Standard independent assessment report, part 1, for Belgium for 2014. Available at <https://unfccc.int/files/kyoto_protocol/application/pdf/iar_2014_bel_1_v2.0.pdf>.

Standard independent assessment report, part 2, for Belgium for 2014. Available at <https://unfccc.int/files/kyoto_protocol/application/pdf/iar_2014_bel_2_v2.0.pdf>.

B. Additional information provided by the Party

Responses to questions during the review were received from Mr. Andre Guns (Walloon Agency for Air and Climate), including additional material on the methodology and assumptions used.

Annex V

Acronyms and abbreviations

AAU	assigned amount unit
AD	activity data
CER	certified emission reduction
CH_4	methane
CM	cropland management
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CPR	commitment period reserve
CRF	common reporting format
DOM	dead organic matter
EF	emission factor
ERT	expert review team
ERU	emission reduction unit
EU ETS	European Union Emissions Trading System
F-gas	fluorinated gas
FM	forest management
FMRL	forest management reference level
GHG	greenhouse gas
GM	grazing land management
HFC	hydrofluorocarbon
HWP	harvested wood products
IEF	implied emission factor
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
KP-LULUCF	LULUCF emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol
LULUCF	land use, land-use change and forestry
N	nitrogen
NA	not applicable
NE	not estimated
NF_3	nitrogen trifluoride
NIR	national inventory report
NO	not occurring
N_2O	nitrous oxide
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
RMU	removal unit
RV	revegetation
SEF	standard electronic format
SF_6	sulphur hexafluoride
SIAR	standard independent assessment report
SOC	soil organic carbon
UNFCCC	United Nations Framework Convention on Climate Change
WDR	wetland drainage and rewetting