

# Final Review Report

## 2017 annual review of national greenhouse gas inventory data

pursuant to Article 19(2) of Regulation (EU) No 525/2013

### Belgium

30 June 2017

European Environment Agency



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## Conclusions from the 2017 annual ESD review

This Final Review Report presents the findings from the 2017 annual review of the GHG emission inventory of Belgium, pursuant to Article 19(2) of Regulation (EU) No 525/2013, with a view to monitoring Belgium's achievement of its greenhouse gas emission reduction or limitation target pursuant to Article 3 of Decision No 406/2009/EC (the 'Effort Sharing Decision', ESD) in 2015.

The reviewers carried out checks to verify the transparency, accuracy, consistency, comparability and completeness of the national greenhouse gas inventory for the year 2015 submitted in 2017 by Belgium pursuant to Article 7(3) of Regulation (EU) No 525/2013.

The review consisted in two steps:

1. The EU inventory team (European Environment Agency (EEA), European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM), Joint Research Centre (JRC) and Eurostat) performed the initial checks under Step 1.
2. A Technical Expert Review Team (TERT) performed Step 2 of the 2017 annual ESD review.

More information on the Effort Sharing Decision and the procedures for the 2017 annual ESD review is presented in the annexes to this review report.

### Step 1 conclusions

The EU inventory team identified, through the checks performed in Step 1, three significant issues. Therefore Belgium was subject to a second step of the 2017 annual ESD review. Only significant issues were subject to the second step review checks.

### Step 2 conclusions

1. The reviewers raised 60 issues with Belgium during the first and the second step of the review 2017 (see Table 1). The TERT provided recommendations for three of these issues. Other issues raised during the annual review were clarified and are considered resolved.
2. The TERT identified cases where inventory data were prepared in a manner which is inconsistent with UNFCCC guidance documentation or Union rules. The TERT did not identify any underestimates or overestimates exceeding the threshold of significance pursuant to Article 31 of Commission Implementing Regulation (EU) No 749/2014.
3. On that basis, the TERT did not deem necessary any technical corrections in the meaning of Article 19(3)(c) of Regulation (EU) No 525/2013 in consultation with Belgium.
4. The TERT identified non-binding recommendations in order to improve the national inventory data of Belgium (see Table 4).
5. The TERT considers that it received a response from Belgium that was sufficient in order to undertake the annual review appropriately.

**Table 1: Issues raised with Belgium during the first and the second step**

	Issues raised	Recommendations	Revised estimates <sup>1</sup>	Technical corrections <sup>2</sup>
<b>Total</b>	<b>60</b>	<b>3</b>	<b>-</b>	<b>-</b>
Energy	28	3	-	-
IPPU	6	-	-	-
Agriculture	21	-	-	-
Waste	4	-	-	-
Cross-cutting	1	-	-	-

<sup>1</sup> Revised estimates: changes in inventory estimates triggered by the review and provided by the Member State.

<sup>2</sup> Technical corrections: changes in inventory estimates triggered by the review and provided by the TERT.

## National totals

**Table 2: National totals**

Data / Source category	Reference	Emission estimates (kt CO <sub>2</sub> equivalent) <sup>1</sup>
		2015
Total greenhouse gas emissions, including indirect CO <sub>2</sub> , without land use, land-use change and forestry as reported by Belgium pursuant to Article 7(3) of Regulation (EU) No 525/2013.	BEL_2017_15032017	117 443.259
<b>Total greenhouse gas emissions</b>		<b>117 443.259</b>
CO <sub>2</sub> emissions from 1.A.3.a Domestic aviation	BEL_2017_15032017	8.974
NF <sub>3</sub> emissions	BEL_2017_15032017	0.850

<sup>1</sup> The tables presented in this report show numbers rounded to three decimal places, although most numbers are available with greater precision. For all calculations (in particular of total GHG emissions and total ESD emissions), all available decimal places were used. Therefore, the totals shown may slightly differ from calculation results where only three decimals would be taken into account.

## Greenhouse gas emissions covered by Decision 406/2009/EC

**Table 3: Greenhouse gas emissions covered by Decision 406/2009/EC**

Data	Reference	Emissions (kt CO <sub>2</sub> equivalent) <sup>1</sup>
		2015
Total greenhouse gas emissions	<i>See Table 2 above</i>	117 443.259
Total verified emissions from stationary installations under Directive 2003/87/EC	Extracted by the European Commission from EUTL on 8 March 2017 (as agreed at the Working Group I of the Climate Change Committee on 18 May 2015) <sup>2</sup>	44 713.915
CO <sub>2</sub> emissions from 1.A.3.a Domestic aviation	<i>See Table 2 above</i>	8.974
NF <sub>3</sub> emissions	<i>See Table 2 above</i>	0.850
<b>Total ESD emissions</b>		<b>72 719.520</b>

<sup>1</sup> The tables presented in this report show numbers rounded to three decimal places, although most numbers are available with greater precision. For all calculations (in particular of total GHG emissions and total ESD emissions), all available decimal places were used. Therefore, the totals shown may slightly differ from calculation results where only three decimals would be taken into account.

<sup>2</sup> The emissions of ETS stationary installations were independently verified and recorded in the EU Transaction Log (EUTL). These emissions do not derive from the national greenhouse gas emission inventory data and therefore the TERT was not tasked to review them.

## Statement from Belgium on the conclusions presented by the TERT

Belgium agrees with the aggregated GHG emission inventory estimates presented in Table 2.

## Recommendations from the TERT, considering revised estimates and technical corrections deemed necessary by the TERT

**Table 4: Recommendations from the TERT**

EMRT - ID	Key category	Category, gas, year	Conclusion step 2 note	Revised estimate	Technical correction
BE-1A3-2017-0001	Yes	1.A.3 Transport, CO <sub>2</sub> , 1990-2015	For 1.A.3 Transport, CO <sub>2</sub> , liquid fuels for 1990-2015, the TERT noted that based on a TERT recommendation in the ESD Review 2016 (BE-1A3-2016-0002), Belgium should apply country-specific CO <sub>2</sub> EFs for key categories. In response to a question raised during the review, Belgium explained that both the Belgian Petrol Federation and the Fund for the Analysis of Petroleum Products (Fapetro) had stated that they could not provide country specific values. Belgium also explained that it has contacted EMISIA to get more information about H:C and O:C ratios in their COPERT-programme, and that it will contact Fapetro again to ask them whether they can validate the COPERT values. The TERT recommends that Belgium continue its efforts to derive country-specific CO <sub>2</sub> EFs for future submissions.	No	No
BE-1A3d-2017-0002	Yes	1.A.3.d Domestic navigation, CO <sub>2</sub> , 2014-2015	For category 1.A.3.d Domestic navigation and the gas CO <sub>2</sub> for gas/diesel oil, year 2015, the TERT noted that the IEF (71.3 t CO <sub>2</sub> /TJ) is outside the IPCC range (72.6 t/TJ to 74.8 t/TJ). In response to questions raised during the review, Belgium explained that emissions are calculated with a constant EF, which is not fully reflected in the reported data because of a difference in timing between the publication of the Flemish energy balance and the calculation of the emissions. Belgium provided data and calculations showing that the lack of updated data only has an impact on the reported activity data and does not influence the emissions estimates. The TERT notes that this issue does not relate to an over- or underestimate and reiterates the recommendation raised in BE-1A3d-2016-0003 that Belgium address this transparency issue by reporting activity data that is aligned with emissions calculations.	No	No
BE-1AB-2017-0002	No	1.AB Reference approach, CO <sub>2</sub> , 2015	The TERT noted that with regard to the recommendation of the ESD review 2016 (BE-1AB-2016-0001), Belgium did not report 'CO <sub>2</sub> emissions from the NEU reported in the inventory' in column I of CRF table 1.A(d). In response to questions raised during the review, Belgium provided the missing information and stated that it will be included in the next submission. Belgium also explained why the sum of NEU CO <sub>2</sub> emissions from LPG and naphtha in CRF table 1.A(d) column I reported against the category 2.B.8.b in column J do not appear to match the CO <sub>2</sub> emissions in the CRF Table2(l).A-Hs1 for category 2.B.8.b. The TERT agreed with the explanation provided by Belgium. The TERT recommends that Belgium include descriptions of these NEU processes and the associated emissions and where they are reported, in the next NIR and completely fill in the CRF table 1.A(d).	No	No



## Annex I: Legal background and procedures of the 2017 annual ESD review

The Effort Sharing Decision No 406/2009/EC (ESD) sets national emission limits for greenhouse gas (GHG) emissions in the sectors outside the EU's Emission Trading System (ETS) for the period 2013-2020. The ESD and the Monitoring Mechanism Regulation (EU) 525/2013 (MMR) lay down annual reporting obligations, compliance checks and a Union review process to ensure that the compliance with annual GHG emission limits is assessed in a credible, consistent, transparent and timely manner. The requirements for the Union review of the national inventory data submitted by Member States are set out in Article 19 of the MMR.

The details concerning the review process, such as the timing and steps of conducting the annual and comprehensive reviews are set out in Chapter III and Annex XVI of the Commission Implementing regulations (EU) No 749/2014.

The objectives of the 2017 annual ESD review of Member States' GHG emission inventories are:

- a) to support the European Commission by ensuring it has accurate, reliable and verified information on annual GHG emissions for determining compliance with ESD targets for the year 2015 in a credible, consistent, transparent and timely manner, according to Article 19 (2) of the MMR;
- b) to assist Member States in improving the quality of their GHG inventories.

The 2017 annual ESD review of national greenhouse gas (GHG) inventory data was carried out for the compliance year 2015 pursuant to Article 19 of the MMR. The EEA review secretariat (consisting of Melanie Sporer, John van Aardenne and Emma Salisbury) coordinated the 2017 annual ESD review as foreseen in Article 28 of the Commission Implementing Regulation (EU) No 749/2014.

The scope of the 2017 annual ESD review is presented in Table A.1.1. The checks carried out during the 2017 annual ESD review are presented in Annex II.

The review consisted of 2 steps. Step 1 was combined with the 'EU QA/QC procedures' (i.e. initial checks) and was carried out by the EU inventory team (ETC/ACM, JRC, Eurostat). All findings from the initial checks that were relevant for the ESD and that were not resolved within the initial check phase were followed up in the second step of the annual review.

Step 2 of the 2017 annual ESD review was performed by a Technical Expert Review Team (TERT) under service contract 34.0201/2016/743206/SER/CLIMA.C2 of the Directorate General for Climate Action of the European Commission. The TERT consisted of the following experts:

- Lead Reviewers: Anke Herold, Suvi Monni, Klaus Radunsky
- Energy: Julien Vincent, Ralph Harthan, Graham Anderson
- IPPU F-gases: Barbara Gschrey, Domenico Gaudioso
- IPPU excluding F-gases: Daniela Romano, Eva Krtkova
- Agriculture: Steen Gyldenkaerne, Rocio Condor, Chris Dore, Katalin Lovas
- Waste: Hans Oonk, Kaat Jespers, Juraj Farkas
- Quality controller: Justin Goodwin
- Co-ordinator: Bernd Gugele

The lead reviewers and sector review experts did not review emission inventories of Member States where these individuals have themselves contributed to the compilation of that inventory, or presently are or have been any part of the decision-making process related to the compilation of that inventory. Reviewers who are nationals of the Member State whose inventory is concerned, did not take part in the review of that inventory.

Step 2 of the review was performed on the basis of GHG emission data and the national inventory report (NIR) officially reported by Member States by 15 March 2017 under the MMR. Where relevant, the TERT calculated technical corrections for over- or underestimates identified in a mandatory category in the Member States' GHG inventories that exceed the threshold of significance. Technical corrections were calculated for the year 2015.

**Table A.1.1: Scope of the 2017 annual ESD review**

Element	Scope	Further information
Member States	EU geographical coverage of the Member States	
Years	2015	
Gases	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs, SF <sub>6</sub>	NF <sub>3</sub> is not covered by the ESD
Sectors	All emission source sectors excluding LULUCF	National totals exclude emissions from LULUCF and emissions reported under memo items
Indirect CO <sub>2</sub> emissions	Included in national total	
Inventory Submission	Submissions received by 15 March, 2017	

## Annex II: Checks carried out during the 2017 annual ESD review in line with Art.29 and 32 of the Commission Implementing Regulation (EU) No 749/2014

**As part of the EU's effort to assist Member States in improving the quality of the GHG inventories, the checks to verify the transparency, accuracy, consistency, comparability and completeness of the greenhouse gas inventory included:**

### **First step review checks:**

1. Assessment whether all emission source categories and gases required under Regulation (EU) No 525/2013 are reported;
2. Assessment whether emissions data time series are consistent;
3. Assessment whether implied emission factors across Member States are comparable taking the IPCC default emission factors for different national circumstances into account;
4. Assessment of the use of 'Not Estimated' notation keys where IPCC tier 1 methodologies exist and where the use of the notation key is not justified in accordance with paragraph 37 of the UNFCCC reporting guidelines on annual greenhouse gas inventories as included in Annex I to Decision 24/CP.19;
5. Analysis of recalculations performed for the inventory submission, in particular if the recalculations are based on methodological changes;
6. Comparison of the verified emissions reported under the Union's Emissions Trading System with the greenhouse gas emissions reported pursuant to Article 7 of Regulation (EU) No 525/2013 with a view of identifying areas where the emission data and trends as submitted by the Member State under review deviate considerably from those of other Member States;
7. Comparison of the results of Eurostat's reference approach with the Member States' reference approach;
8. Comparison of the results of Eurostat's sectoral approach with the Member States' sectoral approach;
9. Assessment whether recommendations from earlier Union or UNFCCC reviews, not implemented by the Member State could lead to a technical correction;
10. Assessment whether there are potential overestimations or underestimations relating to a key category in a Member State's inventory.

### **Second step review checks:**

1. Detailed examination of the inventory estimates including methodologies used by the Member State in the preparation of inventories;
2. Detailed analysis of the Member State's implementation of recommendations related to improving inventory estimates as listed in its most recent UNFCCC annual review report made available to that Member State before the submission under review or in the final review report pursuant to Article 35(2) of this Regulation; where recommendations have not been implemented a detailed analysis of the justification provided by the Member State for not implementing them;
3. Detailed assessment of the time series consistency of the greenhouse gas emissions estimates;
4. Detailed assessment whether the recalculations made by a Member State in the given inventory submission as compared to the previous one are transparently reported and made in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories;
5. Follow-up on the results of the checks referred to in Article 29 of the Commission Implementing Regulation (EU) No 749/2014 and on any additional information submitted by the Member State under review in response to questions from the technical experts review team and other relevant checks.