

# Final Review Report

## 2017 annual review of national greenhouse gas inventory data

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

### Luxembourg

20 April 2017

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## Conclusions from step 1 of the 2017 annual ESD review

This Final Review Report presents the findings from the first step of the 2017 annual review of the GHG emission inventory of Luxembourg, pursuant to Article 19(2) of Regulation (EU) No 525/2013.

The EU inventory team (European Environment Agency (EEA), European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM), Joint Research Centre (JRC), Eurostat) performed the checks pursuant to Article 29 of Commission Implementing Regulation (EU) 749/2014 in order to verify the transparency, accuracy, consistency, comparability and completeness of the national greenhouse gas inventory for the year 2015 submitted in 2017 by Luxembourg pursuant to Article 7(3) of Regulation (EU) No 525/2013, as part of the annual review referred to in Article 19(2) of Regulation (EU) No 525/2013.

The checks performed did not identify any significant issues, therefore Luxembourg is not subject to a second step of the 2017 annual ESD review. As no revised estimates nor technical corrections were deemed necessary, the GHG emissions data officially reported by Luxembourg by 15 March 2017 under the Monitoring Mechanism Regulation can form the basis for determination of ESD emissions (see Table 2 and Table 3).

More information on the ESD legislation and the procedures of the 2017 annual ESD review is presented in the following section of this Final Review Report.

## 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 is 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) coordinates 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 1 and consists 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 will be followed up in the second step of the annual review. The checks carried out during the first step of the 2017 annual ESD review are presented in Annex I.

**Table 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/removals 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	

## 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 Luxembourg pursuant to Article 7(3) of Regulation (EU) No 525/2013	LUX_2016_7_Inventory_15032017	10 268.935
Total greenhouse gas emissions submitted by Luxembourg		10 268.935
CO <sub>2</sub> emissions from 1A3a Domestic aviation	LUX_2016_7_Inventory_15032017	0.604
NF <sub>3</sub> emissions	LUX_2016_7_Inventory_15032017	-

(<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 submitted by Luxembourg	<i>See Table 2 above</i>	10 268.935
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>	1 660.850
CO <sub>2</sub> emissions from 1A3a Domestic aviation	<i>See Table 2 above</i>	0.604
NF <sub>3</sub> emissions	<i>See Table 2 above</i>	-
<b>Total ESD emissions</b>		<b>8 607.481</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.

## Detailed results of step 1 of the 2017 annual ESD review

The EU inventory team (ETC/ACM, JRC, Eurostat) carried out the checks to be performed during the first step of the 2017 annual ESD review as described in Annex I. The results are presented in Table 4 below.

Table 4 provides an overview of the number of issues raised during step 1. No unresolved issues have been forwarded to step 2.

**Table 4: Overview of issues raised during step 1 of the 2017 annual ESD review**

IPCC Sector	Issues raised during step 1	Issue(s) subject to step 2
Energy	6	-
Industrial processes and product use	4	-
Agriculture	8	-
LULUCF (including KP)	4	-
Waste	2	-
Cross-cutting	1	-
<b>Total number of observations</b>	<b>25</b>	<b>-</b>

## Annex I: Checks carried out during the 2017 annual ESD review in line with Art.29 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, 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.