

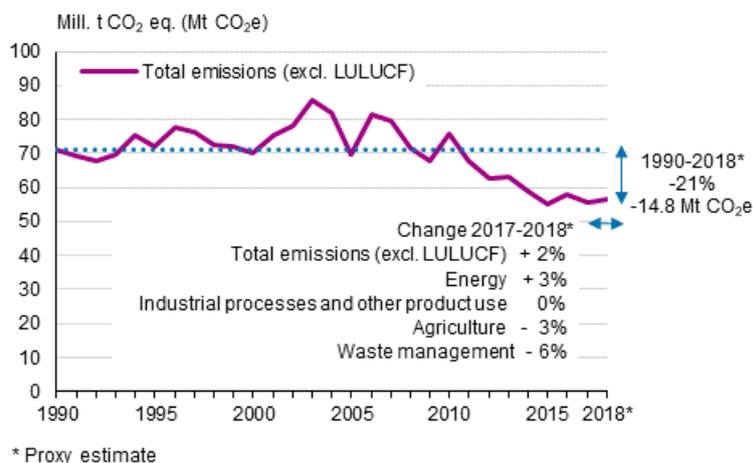
# Greenhouse gases

2018, instant preliminary data

## Greenhouse gas emissions increased, emission allocation exceeded

According to Statistics Finland’s instant preliminary data, the total emissions of greenhouse gases in 2018 corresponded with 56.5 million tonnes of carbon dioxide (CO<sub>2</sub> eq.). Emissions grew by two per cent from the previous year. The growth in emissions was most influenced by increased consumption of natural gas and peat. Emissions not included in the EU Emissions Trading System remained at last year’s level but exceeded the annual emission allocations set by the EU by 0.4 million tonnes of CO<sub>2</sub> equivalent. In the instant preliminary data, the emissions and removals of the latest year are produced at a less detailed level than data for previous years.

### Finland's greenhouse gas emissions without the LULUCF sector in 1990 to 2018 and changes in emissions compared to 1990 and 2017



Statistics Finland releases instant preliminary data on greenhouse gas emissions of the previous year by sector and broken down between emissions included in the EU Emissions Trading System (ETS) and not included in the EU ETS.. More information on greenhouse gas emissions, their development and factors affecting the development, as well as the fulfilment of international obligations can be found in Statistics Finland's report on [Finland's greenhouse gas emissions in 1990 to 2018](#) (only in Finnish) and in the [review](#) (only in Finnish) of this release.

According to the instant preliminary data, total emissions (excl. LULUCF) increased by two per cent in 2018 (1.1 million tonnes of CO<sub>2</sub> eq.) compared to the previous year. In the energy sector, emissions grew by three per cent (1.4 tonnes of CO<sub>2</sub> eq.) and the emissions from industrial processes and product use remained almost unchanged. In the energy sector, the growth in emissions was most affected by increased consumption of peat and natural gas. Emissions from agriculture fell by three per cent (0.2 million tonnes of CO<sub>2</sub> eq.) and emissions in the waste sector by six per cent (0.1 million tonnes of CO<sub>2</sub> eq.) from 2017 to 2018. According to instant preliminary data, the net sink of the LULUCF sector was -14.2 million tonnes of CO<sub>2</sub> eq. in 2018, or 30 per cent lower than in the year before. The emissions and removals of this sector are usually not included in total emissions.

Emissions not included in the EU ETS are calculated as the difference between the total emissions and verified emissions of the sectors in the EU ETS, excluding CO<sub>2</sub> emissions from domestic civil aviation as they are estimated in the inventory. The data on the [verified emissions of the sectors in the EU ETS](#) are published by the Energy Authority. Annual emission allocations for the years 2013 to 2020 have been defined in the EU's Effort Sharing Decision for emissions not included in the ETS. The emissions in question were below the target path in 2013 to 2015 and in 2017. The 2016 emissions and the 2018 emissions based on instant preliminary data exceeded the target path, but these could be compensated for with the emission allocations not used in previous years.

## Greenhouse gas emissions and removals by sector broken down between emissions included in the EU Emissions Trading System (ETS) and not included in the EU ETS in 2013 to 2018

		2013	2014	2015	2016	2017	2018 <sup>1)</sup>	Change, 2017- 2018
		million t CO2 eq.						%
<b>Emissions without LULUCF sector<sup>2)</sup></b>		<b>63.0</b>	<b>58.8</b>	<b>55.2</b>	<b>58.1</b>	<b>55.4</b>	<b>56.5</b>	<b>2</b>
<b>CO2-emissions from civil aviation</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>-2</b>
<b>Emissions trading sector emissions<sup>3)</sup></b>		<b>31.5</b>	<b>28.8</b>	<b>25.5</b>	<b>27.2</b>	<b>25.1</b>	<b>26.2</b>	<b>4</b>
	Energy sector	27.6	25.1	21.6	23.0	21.1	22.0	4
	Industrial processes	4.0	3.7	3.9	4.2	4.0	4.2	5
	Difference between the emissions trading registry and the inventory <sup>4)</sup>	-0.1	0.0	-0.1	0.1	0.0		
<b>Non- emissions trading sector emissions<sup>5)</sup></b>		<b>31.3</b>	<b>29.8</b>	<b>29.5</b>	<b>30.7</b>	<b>30.1</b>	<b>30.0</b>	<b>0</b>
	Energy sector	20.4	19.1	18.8	20.2	19.7	20.2	2
	Transport <sup>5)</sup>	11.8	10.7	10.7	11.9	11.3	11.5	2
	Off-road vehicles and other machinery	2.6	2.5	2.4	2.3	2.4	2.5	2
	Other energy sector emissions <sup>6)</sup>	6.0	5.9	5.7	6.0	6.0	6.2	4
	Industrial processes and products use	1.9	1.9	2.0	1.9	1.9	1.7	-11
	Industrial processes (excl. F-gases) <sup>7)</sup>	0.5	0.5	0.5	0.5	0.6	0.4	-34
	Consumption of F-gases <sup>7)</sup>	1.5	1.5	1.4	1.4	1.3	1.3	-2
	Agriculture	6.5	6.6	6.5	6.6	6.5	6.3	-3
	Waste management	2.3	2.2	2.1	2.0	1.9	1.8	-6
	Indirect CO2 emissions	0.1	0.1	0.1	0.1	0.1	0.1	0
	Difference between the emissions trading registry and the inventory <sup>4)</sup>	0.1	0.0	0.1	-0.1	0.0		
<b>LULUCF sector<sup>2)</sup></b>		<b>-19.0</b>	<b>-21.8</b>	<b>-20.1</b>	<b>-18.5</b>	<b>-20.4</b>	<b>-14.2</b>	<b>-30</b>

1) Proxy estimate

2) LULUCF refers to the land use, land-use change and forestry sector. The sector does not come under the scope of the Emissions Trading System or the reduction targets under the Effort Sharing Decision

3) Source: Energy Authority

4) The divergence caused by the methodological and definitional differences in total emissions in the emissions trading sector between the data of the Energy Authority and the Greenhouse Gas Inventory

5) Excluding CO2 emission from domestic civil aviation according to the inventory.

6) Includes emissions from e.g. residential and commercial heating, waste incineration and fuel use in manufacturing industry

7) F-gases refer to fluorinated greenhouse gases (HFC, PFC compounds, SF6 and NF3)

In the instant preliminary data, the emissions and removals for 2018 are calculated at a less detailed level than [data](#) for previous years. The 2018 emissions will become revised as all data used in the calculation are completed. Preliminary data of the statistics on greenhouse gas emissions will be released in December 2019 and official data in March 2020. More detailed information on the calculation methods of instant preliminary data can be found in Appendix 3 of the report on [Finland's greenhouse gas emissions in 1990 to 2018](#) (only in Finnish).

## Regional data on emissions

Statistics Finland's regional emissions calculations have been made for 2013, 2015 and 2017 from the so-called region-based perspective, i.e. emissions have been allocated to their places of origin. The data

have been calculated with methods consistent with the greenhouse gas inventory by allocating emissions to regions on the basis of data on activity by municipality. The data have been separately calculated for the sectors of energy, transport, industrial processes and product use, agriculture and the waste sector. The calculations exclude the land use, land use change and forestry sector (LULUCF). Statistics Finland publishes only numeric data by municipality on the emissions not included in the EU Emissions Trading System for confidentiality reasons. Total emissions and emissions from the Emissions Trading System are published on the level of regions. The emissions data can be found in the [database tables](#).

More detailed information on the calculation methods of regional data on emissions can be found in the [methodological description](#) and in Appendix 4 of the report on Finland's greenhouse gas emissions in 1990 to 2018 (only in Finnish).

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## Revision of Finland's greenhouse gas emissions. Emissions expressed in million tonnes CO2 equivalent

	Statistical reference year	Previous release	Latest release	Change <sup>1)</sup>
		28 March 2019	23 May 2019	
		Mill. t CO2-eq.		%
Total emissions  (without LULUCF sector)	1990	71.3	71.3	0.0
	2005	69.9	69.9	0.0
	2010	75.7	75.7	0.0
	2015	55.2	55.2	0.0
	2016	58.1	58.1	0.0
	2017	55.4	55.4	0.0
	2018	..	56.5 <sup>2)</sup>	..
LULUCF sector	1990	-14.8	-14.8	0.0
	2005	-24.4	-24.4	0.0
	2010	-22.1	-22.1	0.0
	2015	-20.1	-20.1	0.0
	2016	-18.5	-18.5	0.0
	2017	-20.4	-20.4	0.0
	2018	..	-14.2 <sup>2)</sup>	..
Emissions not in Trading System <sup>3)</sup>	2013	31.3	31.3	0.0
	2014	29.8	29.8	0.0
	2015	29.5	29.5	0.0
	2016	30.7	30.7	0.0
	2017	30.1	30.1	0.0
	2018	..	30.0 <sup>2)</sup>	..

1) Change between the latest and previous releases

2) Proxy estimate

3) Excluding CO2 emissions from domestic civil aviation

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Source: Greenhouse gas inventory unit. Statistics Finland