

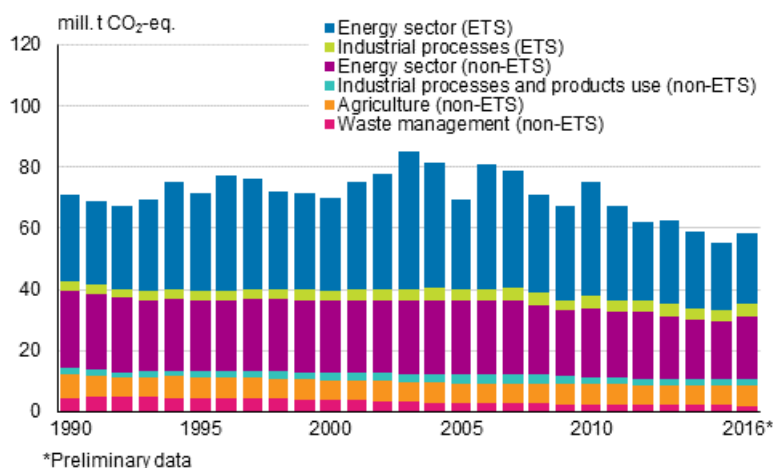
Greenhouse gases

2016, preliminary data

Finland's greenhouse gases made an upturn

In 2016, Finland's greenhouse gas emissions amounted to 58.9 million tonnes of carbon dioxide (CO₂ eq.), being 12.4 million tonnes less than in the comparison year 1990. Emissions according to the instant preliminary data became revised by 0.1 tonnes. Total emissions rose by six per cent from the previous year, the biggest reasons for the growth in the emissions being the increase in coal consumption and the decline in the proportion of biofuels used in transport. Emissions from the non-emissions trading sector went up by six per cent compared to 2015 and exceeded the annual emission allocation set by the EU by 1.1 million tonnes of CO₂ eq. The data are based on the preliminary report to be submitted by Statistics Finland to the European Commission by 15 January 2018 concerning emissions in 2016.

Greenhouse gas emissions of the emissions trading sector (ETS) and the non-emissions trading sector (non-ETS) by sector in 1990 to 2016 (million tonnes of CO₂ eq.)

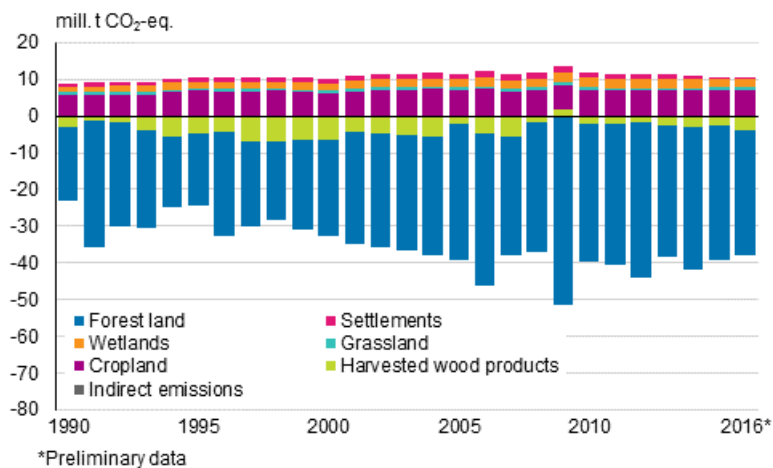


Total emissions in 2016 rose by six per cent from the previous year; emissions in the energy sector went up by eight per cent (3.3 million tonnes of CO₂ eq.), emissions from industrial processes and product use increased by four per cent (0.3 million tonnes of CO₂ eq.), emissions from agriculture grew by one per cent (0.04 million tonnes of CO₂ eq.), and emissions in the waste sector went down by seven per cent (0.1 million tonnes of CO₂ eq.). Emissions from transport (1.5 million tonnes of CO₂ eq.) and from production

of electricity and heat (1.4 million tonnes of CO₂ eq.) rose most in the energy sector. [Link to the energy release.](#)

The removals of land use, land-use change and forestry sector (LULUCF) decreased by around six per cent compared to the previous year and amounted to around 27 million tonnes of CO₂. This sector is not included in total emissions.

Greenhouse gas emissions and removals in the land use, land use change and forestry sector (LULUCF sector) in 1990 to 2016



(Emissions are positive and removals negative figures)

Greenhouse gas emissions in Finland by sector

	1990	1995	2000	2005	2010	2013	2014	2015	2016 ⁴⁾
Emissions and removals, million tonnes CO ₂ eq.									
Emissions without LULUCF sector ¹⁾	71.3	71.9	70.1	69.8	75.5	63.1	58.9	55.4	58.9
Energy sector	53.6	55.3	53.8	53.7	60.2	48.3	44.5	40.9	44.2
Energy industries	19.0	24.0	22.1	22.1	30.9	22.2	21.0	17.8	19.1
Manufacturing industries and construction	13.7	12.4	12.2	11.6	10.2	8.6	7.2	6.9	7.3
Transport	12.1	11.3	12.1	12.9	12.7	12.2	11.1	11.1	12.6
Other energy ²⁾	8.8	7.6	7.3	7.0	6.3	5.4	5.2	5.0	5.2
Industrial processes and products use	5.4	5.0	6.0	6.7	6.1	5.9	5.7	5.9	6.1
Industrial processes (excl. F-gases) ³⁾	5.3	4.9	5.2	5.6	4.7	4.4	4.2	4.4	4.7
Consumption of F-gases ³⁾	0.1	0.2	0.7	1.1	1.4	1.5	1.5	1.5	1.4
Agriculture	7.5	6.8	6.5	6.5	6.6	6.5	6.5	6.5	6.5
Waste management	4.7	4.6	3.9	2.8	2.6	2.3	2.2	2.1	2.0
Indirect CO ₂ emissions	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LULUCF sector ⁵⁾	-14.0	-13.7	-22.4	-27.7	-27.5	-27.3	-30.9	-28.8	-27.1

1) LULUCF refers to the land use, land use change and forestry sector. The sector does not come under the scope of the emissions trading scheme or the reduction targets under the effort sharing decision.

2) Other energy includes sub-categories heating of buildings, fuel use in agriculture, forestry and fisheries, other fuel use and fugitive emissions from fuels.

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

4) Preliminary data

5) Negative figures are removals of greenhouse gases

Emissions outside the non-emissions trading scheme emissions are calculated as the difference between the total emissions and verified emissions of the emissions trading sector, excluding CO₂ emissions from domestic civil aviation according to the inventory. The data on the verified emissions of the emissions trading sector 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 from the non-emissions trading sector. Emissions from the non-emissions trading sector are below the annual emission allocations in 2013 to 2015. Emissions according to the preliminary data for 2016 exceeded the target path. More information in Finnish is available in the [Review of the release](#).

Greenhouse gas emissions broken down between emissions trading sources and non-emissions trading sectors in 2005, 2008 to 2010, and 2013 to 2016 (million t CO₂ eq.)

	2005	2008	2009	2010	2013	2014	2015	2016 ³⁾	Change, 2015-2016
Emissions without LULUCF sector	69.8	71.3	67.7	75.5	63.1	58.9	55.4	58.9	-3.5
CO ₂ emissions from civil aviation	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.0
Emissions trading sector emissions ¹⁾	33.1	36.2	34.4	41.3	31.5	28.8	25.5	27.2	-1.8
Non-emissions trading sector emissions ²⁾	36.4	34.9	33.1	34.0	31.4	29.9	29.7	31.4	-1.7

1) Source: Energy Authority. In 2013, emissions trading was expanded with new sectors

2) Excluding CO₂ emissions from domestic civil aviation according to the inventory

3) Preliminary data

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Revisions in these statistics

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

	Statistical reference year	Previous release 24 May 2017	Latest release 8 Dec 2017	Change % ¹⁾
Total emissions (without LULUCF sector)	1990	71.3	71.3	0.0
	2005	69.6	69.8	0.3
	2010	75.7	75.5	-0.2
	2011	67.7	67.8	0.1
	2012	62.4	62.3	-0.1
	2013	63.2	63.1	-0.2
	2014	59.1	58.9	-0.4
	2015	55.6	55.4	-0.3
	2016	58.8 ²⁾	58.9 ³⁾	0.2
LULUCF sector	1990	-12.7	-14.0	9.6
	2005	-27.1	-27.7	2.3
	2010	-27.3	-27.5	0.8
	2011	-28.7	-29.0	0.9
	2012	-32.3	-32.7	1.4
	2013	-26.3	-27.3	3.6
	2014	-28.3	-30.9	8.2
	2015	-26.0	-28.8	9.6
	2016	-23.9 ²⁾	-27.1 ³⁾	11.8
Non-emissions trading sector ⁴⁾	2013	31.5	31.4	-0.5
	2014	30.2	29.9	-0.8
	2015	29.9	29.7	-0.5
	2016	31.3 ²⁾	31.4 ³⁾	0.4

1) Change between the latest and previous releases

2) Proxy estimate

3) Preliminary data

4) Excluding CO2 emissions from domestic civil aviation

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Source: Greenhouse gas inventory unit. Statistics Finland