

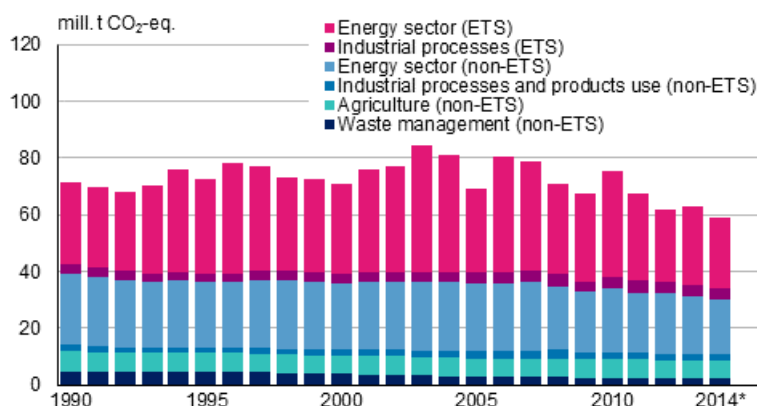
# Greenhouse gases

2014, Preliminary data

## Finland's greenhouse gas emissions were below 60 million tonnes of carbon dioxide

In 2014, Finland's greenhouse gas emissions amounted to 59.1 million tonnes of carbon dioxide (CO<sub>2</sub> eq.), which was 12 million tonnes less than in the comparison year 1990. The trend of emissions has been declining for the past ten years. Compared with the previous year, total emissions decreased by seven per cent and emissions from the non-emissions trading sector by four per cent. Emissions from the non-emissions trading sector were below the annual emission allocations set by the EU by 1.1 million tonnes. The data are based on the preliminary report to be submitted by Statistics Finland to the European Commission on 15 January 2016 concerning emissions in 2014.

### Greenhouse gas emissions of the emissions trading sector (ETS) and the non-emissions trading sector (non-ETS) by sector in 1990 to 2014 (million tonnes of CO<sub>2</sub> eq.). The data concerning 2014 are preliminary



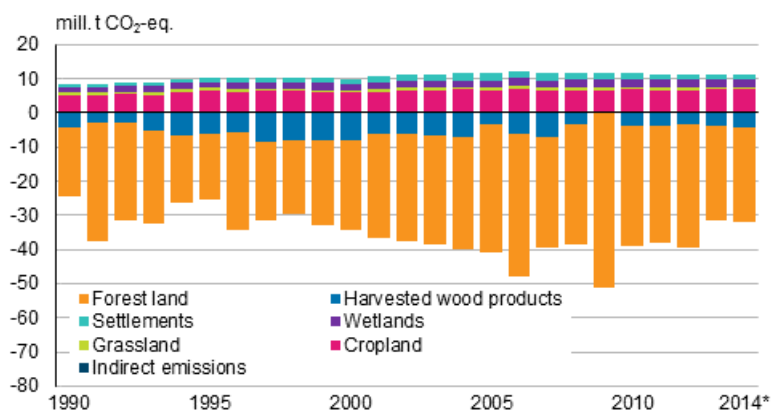
Due to changes in the GWP values and reporting guidelines, the figures are not comparable with the figures released prior to 2015.

Total emissions decreased by seven per cent; emissions in the energy sector fell by eight per cent (4 million tonnes CO<sub>2</sub> eq.), and in the waste sector by six per cent (0.1 million tonnes CO<sub>2</sub> eq.); emissions from industrial processes and product use, as well as from agriculture remained on level with the previous year.

In the energy sector, the use of hard coal, oil products and natural gas decreased, and the use of peat and biofuels increased. [Link to energy release.](#)

The removals by land use, land-use change and forestry sector (LULUCF) increased by around two per cent compared to the previous year and amounted to 21 million tonnes of CO<sub>2</sub>. 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 2014 (million tonnes of CO<sub>2</sub> eq.) (emissions are positive and removals negative figures). Data concerning 2014 are preliminary**



Emissions from sources in the non-emissions trading sector are calculated as the difference between the total emission and verified emissions of the emissions trading sector, excluding CO<sub>2</sub> 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. According to the now released preliminary data, emissions from the non-emissions trading sector are below the annual emission allocations in 2013 and 2014. More information in Finnish is available in the Review of the release.

**Greenhouse gas emissions in Finland by sector. Emissions, million tonnes of CO<sub>2</sub> eq. Negative figures are removals of greenhouse gases. The data concerning 2014 are preliminary**

	1990	1995	2000	2005	2008	2009	2010	2013	2014*
Emissions without LULUCF sector <sup>1)</sup>	71.3	71.8	70.0	69.5	71.3	67.7	75.9	63.2	59.1
Energy sector	53.6	55.4	53.8	53.7	54.5	52.5	60.1	48.4	44.4
Energy industries	19.0	24.0	22.1	22.0	24.3	25.4	30.7	22.0	19.4
Manufacturing industries and construction	13.7	12.4	12.2	11.6	11.1	8.8	10.2	8.5	8.5
Transport	12.1	11.3	12.1	12.9	12.8	12.2	12.7	12.2	11.1
Other energy <sup>2)</sup>	8.8	7.6	7.4	7.1	6.2	6.1	6.5	5.7	5.4
Industrial processes and products use	5.4	4.9	5.8	6.5	7.6	6.0	6.6	6.0	5.9
Industrial processes (excl. F-gases) <sup>3)</sup>	5.3	4.8	5.2	5.6	6.3	4.6	4.7	4.4	4.2
Consumption of F-gases <sup>3)</sup>	0.1	0.1	0.6	0.9	1.4	1.5	1.8	1.6	1.8
Agriculture	7.5	6.8	6.4	6.4	6.4	6.4	6.5	6.5	6.5
Waste management	4.7	4.6	3.9	2.8	2.7	2.6	2.6	2.3	2.2
Indirect CO <sub>2</sub> emissions	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
LULUCF sector	-16.0	-15.3	-24.3	-29.4	-26.8	-39.5	-27.2	-20.3	-20.8

1) Due to changes in the GWP values and reporting guidelines, the figures are not comparable with the figures released prior to 2015.

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

3) F-gases refer to fluorinated greenhouse gases (HFC, PFC compounds, SF<sub>6</sub> and NF<sub>3</sub>)

**Greenhouse gas emissions broken down between emissions trading sectors and non-emissions trading sources in 2005, 2008 to 2010, and 2013 to 2014 (million t CO<sub>2</sub> eq.) The data concerning 2014 are preliminary**

	2005	2008	2009	2010	2013	2014*	Change, 2013-2014
Emissions without LULUCF sector <sup>1)</sup>	69.5	71.3	67.7	75.9	63.2	59.1	-4.1
CO <sub>2</sub> emissions from civil aviation	0.3	0.3	0.2	0.2	0.2	0.2	0.0
Emissions trading sector emissions <sup>2)</sup>	33.1	36.2	34.4	41.3	31.5	28.8	-2.7
Non-emissions trading sector emissions <sup>3)</sup>	36.1	34.9	33.1	34.4	31.5	30.1	-1.4

1) Due to changes in the GWP values and reporting guidelines, the figures are not comparable with the figures released prior to 2015.

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

3) Excluding CO<sub>2</sub> emission from domestic civil aviation according to the inventory

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## Revisions in these statistics

The calculation of emissions has changed in 2015 due to the revised, internationally agreed methodological and reporting guidelines for greenhouse gas emissions. Compared with previously published data, Finland's emission level has risen by one to two per cent depending on the year due to the mentioned computational reasons. The changes in the emissions level is influenced, for example, by the revised GWP (global warming potential) values used in commensurating greenhouse gases and the allocation of emissions and the methodological changes made.

### 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>
		22 May 2015	14 Dec 2015	% points
Total emissions	1990	71.6	71.3	-0.3
	2005	69.6	69.5	0.0
	2008	71.3	71.3	0.1
	2009	67.5	67.7	0.3
	2010	75.8	75.9	0.1
	2011	68.2	68.0	-0.2
	2012	62.5	62.4	-0.2
	2013	63.2	63.2	0.0
	2014	60.1 <sup>3)</sup>	59.1	-1.7
Non-emissions trading sector <sup>2)</sup>	2005	36.1	36.1	-0.1
	2008	34.8	34.9	0.2
	2009	32.9	33.1	0.5
	2010	34.3	34.4	0.3
	2011	32.8	32.7	-0.4
	2012	32.7	32.6	-0.3
	2013	31.5	31.5	0.0
	2014	31.1 <sup>3)</sup>	30.1	-3.2

1) Change between latest and previous release

2) Excluding CO2 emissions from domestic civil aviation

3) Approximated data

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Source: Greenhouse gas inventory unit, Statistics Finland