

Greenhouse gases

2013

Finland's greenhouse gas emissions in 2013

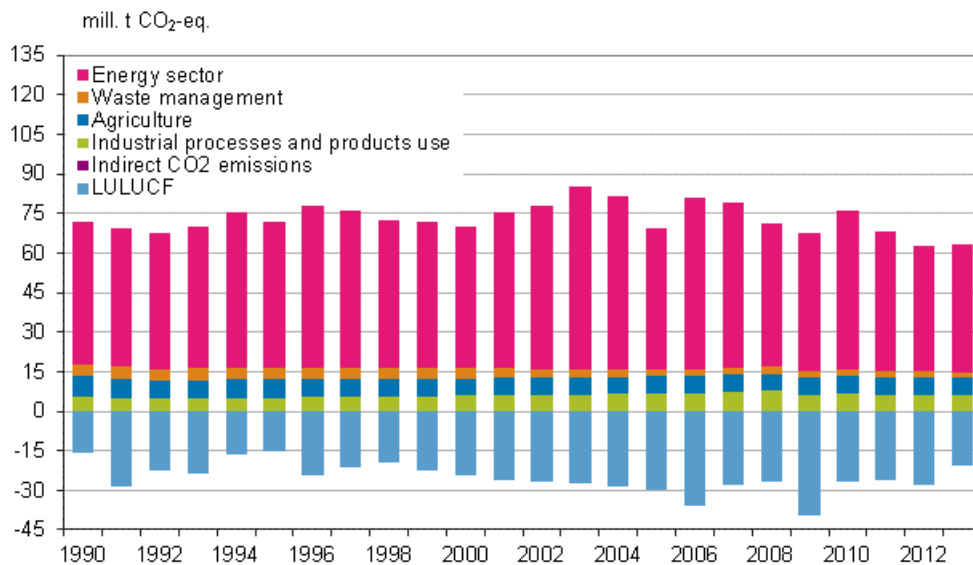
Finland's greenhouse gas emissions amounted to 63.2 million tonnes of CO₂ in the first year of the Kyoto Protocol's second commitment period in 2013. Emissions grew by approximately one per cent compared with the previous year and were 12 per cent lower than in 1990. The whole time series of greenhouse gas emissions for the years 1990 to 2013 has been updated to correspond to the changed reporting requirements. The data are based on revised emission data published by Statistics Finland.

Total emissions increased by approximately one per cent from the previous year; emissions in the energy sector rose by two per cent, emissions from industrial processes and product use and agriculture remained on level with the emissions of the previous year, and emissions in the waste sector decreased by five per cent. In the energy sector, the use of hard coal increased by over one-third, while the consumption of peat decreased by 12 per cent and that of natural gas by seven per cent.

The removals in the land use, land-use change and forestry sector decreased by around 27 per cent compared to the previous year and amounted to 20.4 million tonnes of CO₂. This sector is not included in total emissions.

During the Kyoto Protocol's second commitment period (2013 to 2020), the calculation of emissions and accounting of commitments have changed due to the revised, internationally agreed methodological and reporting guidelines for greenhouse gas emissions. Compared with the Kyoto Protocol's first commitment period (2008 to 2012), Finland's emissions level has risen by one to three per cent, depending on the year. The emissions level is influenced, for example, by the revised GWP (global warming potential) values used in commensurating greenhouse gases, the allocation of emissions and the methodological changes made.

Greenhouse gas emissions and removals in Finland by sector



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

Greenhouse gas emissions in Finland by sector. Emissions expressed in amounts corresponding to million tonnes of CO₂. Negative figures are removals of greenhouse gases.

	1990	1995	2000	2005	2008	2009	2010	2011	2012	2013
Emissions ¹ without LULUCF ² sector	71.6	72.0	70.1	69.6	71.3	67.5	75.8	68.2	62.5	63.2
Energy sector	53.7	55.4	53.8	53.6	54.3	52.3	60.0	52.9	47.5	48.4
Energy industries	19.1	24.1	22.1	21.9	24.2	25.3	30.6	24.7	20.7	22.0
Manufacturing industries and construction	13.7	12.4	12.3	11.7	11.1	8.7	10.2	9.9	8.7	8.7
Transport	12.1	11.3	12.1	12.9	12.8	12.2	12.7	12.5	12.2	12.1
Other energy ³	8.8	7.6	7.3	7.1	6.2	6.1	6.5	5.7	6.0	5.6
Industrial processes and products use	5.3	4.8	5.7	6.4	7.6	6.0	6.5	6.2	6.0	6.0
Industrial processes (excl. F-gases *)	5.2	4.8	5.1	5.5	6.2	4.5	4.7	4.6	4.5	4.4
Consumption of F-gases *	0.1	0.1	0.6	0.9	1.4	1.5	1.8	1.6	1.5	1.6
Agriculture	7.6	6.9	6.5	6.5	6.5	6.6	6.7	6.5	6.5	6.5
Waste management	4.7	4.6	3.9	2.8	2.7	2.6	2.6	2.5	2.5	2.3
Indirect CO ₂ emissions	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LULUCF ² sector	-15.8	-15.5	-24.5	-29.6	-26.9	-39.4	-26.7	-26.2	-27.9	-20.4

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

2) LULUCF refers to the land use, land use change and forestry sector.

3) 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.

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

Emissions from sources in non-emissions trading sector are calculated as the difference between the reviewed total emissions, CO₂ emissions from domestic aviation, and verified emissions of the emissions trading sector. The data on the verified emissions of the emissions trading sector are published by the Energy Authority. The EU's effort sharing decision has defined a national reduction commitment for non-emissions trading scheme sources.

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

	2005	2008	2009	2010	2011	2012	2013	Change, 2012-2013
Total emissions ¹ excl. LULUCF sector	69.6	71.3	67.5	75.8	68.2	62.5	63.2	0.7
Emissions trading sector emissions, in terms of aviation only CO ₂ -emission data from domestic aviation are included ²	33.4	36.4	34.6	41.5	35.4	29.7	31.7	2.0
Non-emissions trading sector emissions	36.1	34.8	32.9	34.3	32.8	32.7	31.5	-1.2

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 and Statistics Finland (CO₂ emission data from domestic aviation). In 2013, emissions trading was expanded with new sectors.

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Revision of the greenhouse gas emissions in Finland. Emissions corresponding to million tonnes of CO₂

Emissions	Statistical year	Previous release ¹⁾	Latest release	Change ²⁾
		12 Feb 2015	15 Apr 2015	% points
Total emissions	1990	71.6	71.6	0.0
	2005	69.6	69.6	-0.1
	2008	71.3	71.3	-0.1
	2009	67.6	67.5	-0.1
	2010	75.9	75.8	-0.1
	2011	68.3	68.2	-0.1
	2012	62.5	62.5	0.0
	2013	63.2	63.2	0.0
Non-emissions trading sector ³⁾	2005	36.2	36.1	-0.2
	2008	34.9	34.8	-0.2
	2009	33.0	32.9	-0.3
	2010	34.4	34.3	-0.3
	2011	32.9	32.8	-0.3
	2012	32.8	32.7	0.0
	2013	31.5	31.5	0.0

1) Preliminary data

2) Change between the latest and previous releases

3) Excluding CO₂ emission from domestic civil aviation

During the Kyoto Protocol's second commitment period (2013 to 2020), the calculation of emissions and commitments has changed due to the new, internationally agreed methodological and reporting guidelines for greenhouse gas emissions. Compared with the previous releases, Finland's emissions level has risen due to said calculation reasons by one to three per cent, depending on the year. The emissions level is influenced, for example, by the revised GWP (global warming potential) values used in commensurating greenhouse gases, the changes made to the allocation of emissions and to the methods. The inventory figures calculated for the first reporting for the Kyoto Protocol's second commitment period are considered as the first release for the statistics.

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Source: Greenhouse gas inventory unit. Statistics Finland