

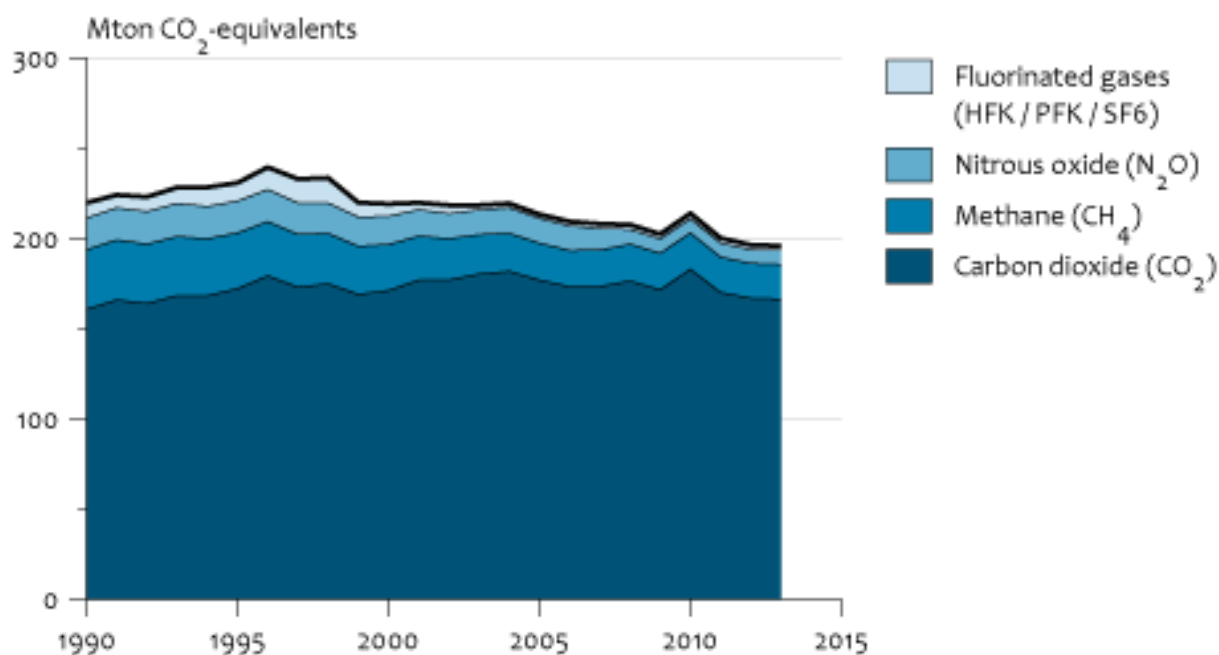
## Greenhouse gas emissions, 1990-2013

Indicator | 15 April 2015

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In 2013 greenhouse gas emissions were marginally lower than in 2012. The level of the emissions was 11.5% under the Kyoto protocol base year.

### Greenhouse gas emissions



Source: The Netherlands Pollutant Release & Transfer Register.

CBS/apr15  
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### Marginal decrease greenhouse gas emissions relative to 2012

Greenhouse gas emissions decreased marginally with 0.5% in 2013 compared to 2012. This decrease can be attributed almost entirely to the decrease in carbon dioxide (CO<sub>2</sub>) emissions. The emission of other greenhouse gases remained more or less stable compared to 2012.

In 2013, the CO<sub>2</sub> emissions decreased by 0.3% to 166.4 million tons of CO<sub>2</sub> equivalents. Emissions by industry and traffic decreased by 2.2 million tons of CO<sub>2</sub> equivalents. This was caused by lower industrial output, cleaner car park and less traffic. This was largely offset by the cold spring of 2013. More natural gas was used for heating of dwellings and offices.

Methane (CH<sub>4</sub>) emissions hardly changed in 2013. There was a decrease in the emissions from dumping sites (0.2 million tons of CO<sub>2</sub> equivalents) and an increase due to an increase of the dairy cow stock.

In chemical industry, emissions of nitrous oxide (N<sub>2</sub>O) grew marginally by 0.18 million tons of CO<sub>2</sub> equivalents (0.2%) compared to 2012.

In 2013, F-gas emissions (HFKs, PFKs and SF<sub>6</sub>) decreased by 3.5%.

## Trends since the Kyoto base year

Compared to the Kyoto base year, emission of greenhouse gases fell by 11.5%. The changes differ for each type of greenhouse gas.

Over the period 1990 to 2013 CO<sub>2</sub> emissions increased by 3.5% (5.6 million tons of CO<sub>2</sub> equivalents), predominantly due to an increase in the sectors energy and traffic. Growing energy consumption caused emissions of CO<sub>2</sub> to increase by over 10% between 1990 and 2005. The increase in emissions levelled off in 2005. Since approximately 2010, these increases turned into decreases due to imports of electricity and cleaner car park and less traffic. Also an increase in the use of renewable energy and reduced natural gas consumption for heating dwellings and offices due to the relatively mild winters resulted in a decrease of the emissions. Over the period 1990 to 2013 CO<sub>2</sub> emissions increased by 3.5% (5.6 million tons of CO<sub>2</sub> equivalents), predominantly due to an increase in the sectors energy and traffic.

Between 1990 and 2013 emissions of CH<sub>4</sub> decreased by 19.2 million tons of CO<sub>2</sub> equivalents (42%). This decrease was due to a decrease in landfill operations, resulting in lower emissions from landfill sites. Methane emissions also decreased due to a decrease in the number of livestock in agriculture and measures taken by the energy sector.

Since 1990 N<sub>2</sub>O emissions decreased by 56%. After 1995 this decline was due to a reduction in the amount of manure applied to land and a reduction in fertiliser use. A strong decline in N<sub>2</sub>O emissions after 2008 was due to the implementation of potassium nitrate production measures.

Emissions of fluorinated gases began to decrease in 1998, largely due to the measures taken in the industrial sector. However, after 2005 fluorinated gas emissions increased slightly due to the replacement of HCFCs with HFCs for use of coolants. In total emissions of F-gases decreased by 75% between 1995 and 2013.

## Climate policy objectives

According the Kyoto Protocol The Netherlands had to reduce greenhouse gases emissions by an average of 6% relative to the Kyoto basis year (the sum of the CO<sub>2</sub> equivalents of carbon dioxide, methane and nitrous oxide in 1990 and the fluorinated gases (HFKs, PFKs and SF<sub>6</sub>) in 1995) Emissions in this basic year were set at 213.2 million tons of CO<sub>2</sub> equivalents. Considering the data from 2012, the emission level over the period 2008-2012 averaged 199.4 million tons, i.e. a decrease by 6.4% compared to the basis year.

In 2012, an agreement was reached between various countries regarding an extension of the Kyoto Protocol. This agreement should lead to a reduction of greenhouse gas emissions by 18% in 2020 compared with the Kyoto base year.

## Changes in the calculation of greenhouse gas emissions caused by new IPCC guidelines

Data presented here have been calculated according the most recent IPCC Guidelines (2006). New Global warming Potentials have been used and other sources and emission factors have been used.

## References

- Agentschap NL (2013). [Emission monitoring of greenhouse gases in the Netherlands](#) [4].

Website created for the Dutch Ministry of Infrastructure and the Environment, in close cooperation with RIVM.

- CBS (2015). [StatLine: Emission of greenhouse gases, IPCC requirements](#) [5]. CBS, Den Haag/Heerlen.
- Emissieregistratie (2015). Jaarcijfers 2013. RIVM, Bilthoven; PBL, Bilthoven; CBS, Den Haag; Rijkswaterstaat-Waterdienst, Lelystad; Alterra, Wageningen; Agentschap NL, Utrecht en TNO Bouw en Ondergrond, Utrecht. <http://www.emissieregistratie.nl> [6].

## Reference for this page

CBS, PBL, RIVM, WUR (2015). [Greenhouse gas emissions, 1990-2013](#) [7] (indicator 0165, version 26 , 15 April 2015 ). [www.environmentaldata.nl](http://www.environmentaldata.nl). Statistics Netherlands (CBS), The Hague; PBL Netherlands Environmental Assessment Agency, The Hague; RIVM National Institute for Public Health and the Environment, Bilthoven; and Wageningen University and Research, Wageningen.

**Source URL:** <https://www.clo.nl/en/indicators/en016526>

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[2] [https://www.clo.nl/sites/default/files/infographics/0165\\_001g\\_clo\\_26\\_en.png](https://www.clo.nl/sites/default/files/infographics/0165_001g_clo_26_en.png)

[3] <https://www.clo.nl/sites/default/files/datasets/c-0165-001g-clo-26-en.xls>

[4] <http://www.broeikasgassen.nl/>

[5] <http://statline.cbs.nl/StatWeb/publication/?DM=SLEN&PA=70946ENG&D1=a&D2=a&D3=0,2,7,10-13&LA=EN&HDR=T,G2&STB=G1&VW=T>

[6] <http://www.emissieregistratie.nl/>

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