Greenhouse gas emissions, 1990-2016

Indicator | 6 September 2017

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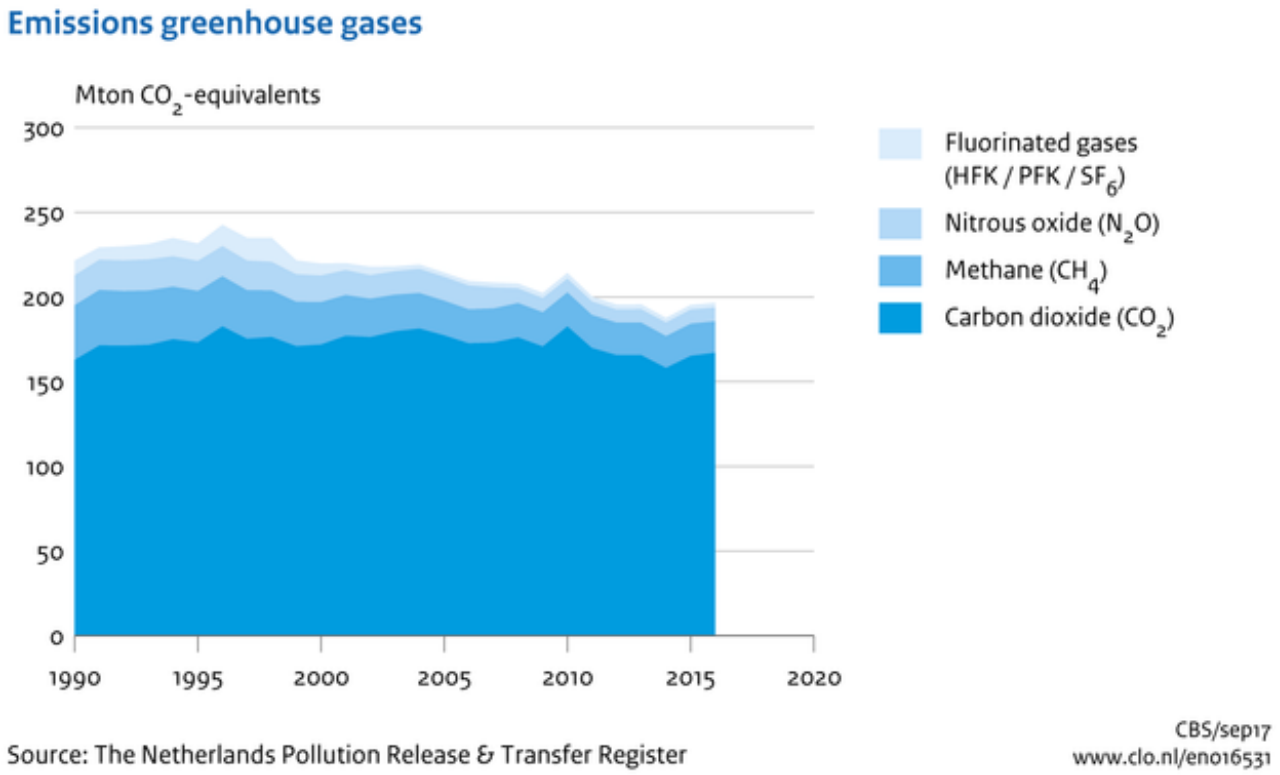
In 2016 greenhouse gas emissions (provisional data) were 0.7 per cent higher than in 2015. The level of the emissions was 12 per cent under the Kyoto protocol base year.



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Small increase greenhouse gas emissions in 2016 relative to 2015

Greenhouse gas emissions increased with 0.7 per cent in 2016 compared to 2015 (provisional data). This increase was mainly caused by an increase of the emission of carbon dioxide. It should be noted that the emissions of greenhouse gases, and especially carbon dioxide, are predominantly influenced by the temperature in winter (influencing heating of dwellings and offices). Just as 2014 and 2015 the winter of 2016 was very mild.
In 2016 the CO_2 emissions increased with 1.8 Mton to 167.2 Mton. This increase was caused by higher production in the chemical industry and the increase of the use of natural gas for heating in the built-up areas.
The emission of methane (CH_4) decreased 16 kton CO_2 equivalents due to a further decrease of the emissions from dumping sites and a small decrease from the agricultural sector.
The emission of nitrous oxide (N_2O) decreased with 2 per cent. A lower production of caprolactam

and nitric acid caused the major part of this decrease.
The emissions of fluorinated gases showed a small increase.

Trends since the Kyoto base year

Compared to the Kyoto base year, emission of greenhouse gases fell by 12%. The changes differ for each type of greenhouse gas.
Over the period 1990 to 2016 CO_2 emissions increased by 2.6%, the changes in emissions are predominantly influenced by the temperature of the winter. Also a transition to the input of more coal for the production of electricity caused an increase of the emission of CO_2.
Between 1990 and 2016 emissions of CH_4 decreased by 13.7 million tons of CO_2 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_2O emissions decreased by 54%. 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_2O 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 almost 74% between 1995 and 2016.

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_2 equivalents of carbon dioxide, methane and nitrous oxide in 1990 and the fluorinated gases (HKCs, PFCs and SF_6) in 1995) Emissions in this basic year were set at 213.2 million tons of CO_2 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. For these Kyoto targets the IPCC guidelines 2006 are used

References

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