

13.1.a Greenhouse gas emissions

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	Million tonnes CO <sub>2</sub> equivalents											
Greenhouse gases, total	935.8	911.2	916.9	934.0	894.5	898.0	901.4	885.7	850.5	799.7	728.7	761.6
Carbon dioxide (CO <sub>2</sub> )	832.5	808.9	813.7	831.2	792.3	795.6	800.3	785.6	754.4	707.1	639.4	674.8
Other greenhouse gases	103.2	102.3	103.2	102.8	102.2	102.4	101.1	100.1	96.1	92.6	89.4	86.8
Methane (CH <sub>4</sub> )	58.1	57.1	57.6	57.0	55.8	55.6	54.4	53.8	52.0	49.9	49.0	47.8
Nitrous oxide (N <sub>2</sub> O)	30.8	30.9	31.0	31.2	31.7	31.7	31.5	31.0	29.7	28.9	28.2	27.8
F gases	14.2	14.4	14.6	14.6	14.7	15.1	15.2	15.3	14.4	13.7	12.2	11.1
Hydrofluorocarbons (HFCs)	10.3	10.8	11.0	11.0	11.1	11.4	11.3	11.2	10.3	9.6	...	...
Perfluorocarbons (PFCs)	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.2	...	...
Sulphur hexafluoride (SF <sub>6</sub> )	3.0	3.0	3.1	3.1	3.1	3.2	3.5	3.8	3.9	3.9	...	...
Nitrogen trifluoride (NF <sub>3</sub> )	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	...	...
Mixture of HFCs, PFCs, SF <sub>6</sub> , NF <sub>3</sub>	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	...	...
	Proportion of total greenhouse gases, in %											
Carbon dioxide (CO <sub>2</sub> )	89.0	88.8	88.7	89.0	88.6	88.6	88.8	88.7	88.7	88.4	87.7	88.6
Methane (CH <sub>4</sub> )	6.2	6.3	6.3	6.1	6.2	6.2	6.0	6.1	6.1	6.2	6.7	6.3
Nitrous oxide (N <sub>2</sub> O)	3.3	3.4	3.4	3.3	3.5	3.5	3.5	3.5	3.5	3.6	3.9	3.6
F gases	1.5	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.5
Hydrofluorocarbons (HFCs)	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	...	...
Sulphur hexafluoride (SF <sub>6</sub> )	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	...	...
	1990=100											
Greenhouse gases, total	75.3	73.4	73.8	75.2	72.0	72.3	72.6	71.3	68.5	64.4	58.7	61.3
Carbon dioxide (CO <sub>2</sub> )	79.1	76.9	77.3	79.0	75.3	75.6	76.1	74.7	71.7	67.2	60.8	64.1
Other greenhouse gases	54.3	53.9	54.3	54.1	53.8	53.9	53.2	52.7	50.6	48.7	47.0	45.7
Methane (CH <sub>4</sub> )	49.0	48.1	48.6	48.1	47.1	46.9	45.9	45.4	43.9	42.1	41.3	40.3
Nitrous oxide (N <sub>2</sub> O)	53.2	53.2	53.5	53.8	54.7	54.6	54.4	53.5	51.2	49.9	48.6	47.9
F gases	106.4	107.7	109.1	109.3	109.4	112.8	113.6	114.1	107.6	102.2	90.8	83.2

Notes:

- 2021 provisional data.
- Greenhouse gases: Excluding emissions from land use, land use changes and forestry (LULUCF); excluding emissions from the energetic use of biomass. – Calculation according to the territorial concept (emissions within the territory of Germany, i. e. including foreign enterprises located in Germany and excluding emissions of German enterprises located abroad).

Explanation of symbols:

... = data will be available later.

Data source:

German Environment Agency