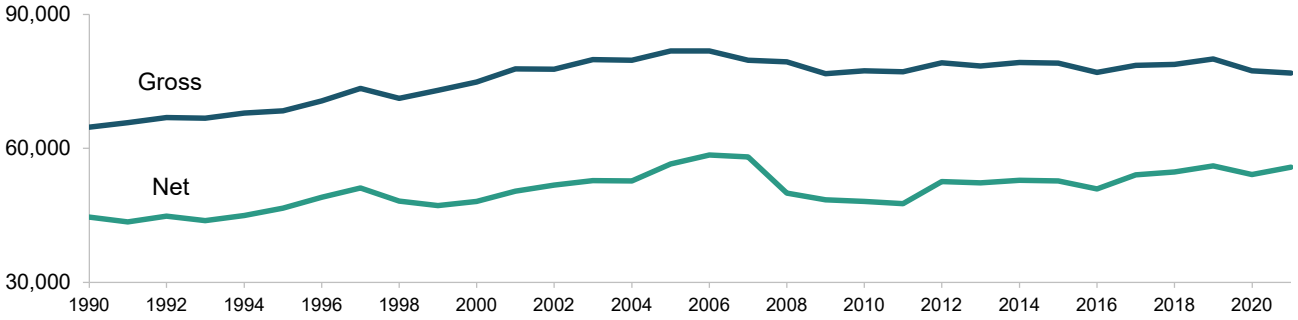
New Zealand's Greenhouse Gas Inventory 1990–2021
Data fact sheet

Ministry for the Environment
Manatū Mō Te Taiao

Emissions by sector

Sector	1990 kt CO_2-e	2021 kt CO_2-e		Change (1990–2021) kt CO_2-e	Change (1990–2021) %	Per cent of gross 1990	Per cent of gross 2021		Change (2020–2021) kt CO_2-e	Change (2020–2021) %
Energy	23,880.3	**31,210.1**	↑	7,329.8	30.7	36.9	**40.6**	↑	93.2	0.3
IPPU	3,579.9	**4,609.6**	↑	1,029.7	28.8	5.5	**6.0**	↑	26.7	0.6
Agriculture	33,312.0	**37,786.1**	↑	4,474.1	13.4	51.5	**49.2**	↓	– 574.1	– 1.5
Waste	3,944.6	**3,214.9**	↓	– 729.7	– 18.5	6.1	**4.2**	↓	– 51.6	– 1.6
Tokelau	3.2	**3.8**	↑	0.6	19.4	0.005	**0.005**	↓	– 0.40	– 9.5
Gross	**64,720.1**	**76,824.6**	↑	**12,104.5**	**18.7**	**100.0**	**100.0**	↓	**– 506.1**	**– 0.7**
LULUCF	– 20,171.2	**– 21,078.2**	↓	– 906.9	– 4.5	– 31.2	**– 27.4**	↑	2,163.9	9.3
Net	**44,548.8**	**55,746.4**	↑	**11,197.6**	**25.1**	N/A	N/A	↑	**1,657.8**	**3.1**

Gross and net emissions 1990–2021 (kt CO_2-e)



Other statistics

	1990	2021
Enteric fermentation as a proportion of gross emissions	41.7%	36.3%
Road transportation as a proportion of gross emissions	10.6%	16.5%

Did you know...
Since peaking in 2006, gross emissions have been stable with yearly fluctuations

Largest contributors to change in gross emissions 1990–2021 (Δ>1,000 kt CO_2-e)

Category	Gas	1990 kt CO_2-e	2021 kt CO_2-e		Change (1990–2021) kt CO_2-e	Change (1990–2021) %
Enteric fermentation from dairy cattle	CH_4	6,012.9	13,382.5	↑	7,369.6	122.6
Road transportation	CO_2	6,659.3	12,555.2	↑	5,895.8	88.5
Agricultural soils	N_2O	5,216.8	7,315.2	↑	2,098.3	40.2
Manufacturing industries and construction	CO_2	4,676.5	6,205.1	↑	1,528.5	32.7
Product uses as substitutes for ozone-depleting substances	HFCs	Not occurring	1,483.0	↑	1,483.0	N/A
Manufacture of solid fuels and other energy industries	CO_2	1,715.3	252.5	↓	– 1,462.7	– 85.3
Enteric fermentation from sheep	CH_4	14,407.4	8,011.9	↓	– 6,395.4	– 44.4

Gross emissions by gas

Gas	1990 kt CO_2-e	2021 kt CO_2-e		Change (1990–2021) kt CO_2-e	Change (1990–2021) %	Per cent of gross 1990	Per cent of gross 2021		Change (2020–2021) kt CO_2-e	Change (2020–2021) %
CO_2	25,502.5	**34,318.0**	↑	8,815.5	34.6	39.4	**44.7**	↑	80.7	0.2
CH_4	32,580.7	**33,019.3**	↑	438.6	1.3	50.3	**43.0**	↓	– 385.0	– 1.2
N_2O	5,706.9	**7,937.6**	↑	2,230.7	39.1	8.8	**10.3**	↓	– 202.0	– 2.5
F-gases	929.9	**1,549.6**	↑	619.7	66.6	1.4	**2.0**	↑	0.2	0.0

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