

Scottish Greenhouse Gas Statistics 2017

Supplementary analysis of emissions using the sectoral categories used in the Climate Change Plan 2018.

The Scottish Government's Climate Change Plan was published in February 2018 presenting a strategy to reduce emissions over the period to 2032. The modelling activity supporting this plan used a modified version of the sectoral categories used in the Scottish Greenhouse Gas Emissions publication. These modified categories were reflected in the published plan.

This paper describes these modified categories; shows the degree of correspondence between them and the standard categories; and finally presents source emissions for the entire time-series using these modified categories.

Table 1: Description of Climate Change Plan categories

Climate Change Plan:	Greenhouse Gas Inventory categories included:
Electricity	Power Stations
Residential	Residential
Services	Public Sector Buildings and Services from Business and Industrial Processes
Industry	Industry and Refineries emissions from Energy Supply
Transport	Transport, including all domestic and international Aviation and Shipping
Agriculture	Agriculture and Liming
Waste	Waste Management
LULUCF	Land Use and Forestry and Development

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Table 2 below shows the degree of correspondence between the GHG source and CCP categories using 2017 emissions.

For example, Agriculture and related land use in 2017 emitted 9.7 MtCO_{2e} of greenhouse gases. Recategorising these emissions into the climate change plan categories results in 7.6 MtCO_{2e} being assigned to the Agriculture category, and the remainder (2.1 MtCO_{2e}) being assigned to the Land use category.

Table 2: 2017 Correspondence matrix (MtCO_{2e})

		Climate change plan categories								
		Agriculture	Electricity Generation	Industry	Land use	Residential	Services	Transport	Waste	Grand Total
GHG categories used in main publication.	Agriculture and Related Land Use	7.6			2.1					9.7
	Business and Industrial Process			6.5			2.1			8.7
	Development				2.0					2.0
	Energy Supply		1.2	4.9						6.0
	Forestry				-9.5					-9.5
	International Aviation and Shipping							1.9		1.9
	Public Sector Buildings						1.1			1.1
	Residential					6.0				6.0
	Transport (excluding international aviation and shipping)							13.0		13.0
	Waste Management								1.7	1.7
	Grand Total	7.6	1.2	11.4	-5.4	6.0	3.2	14.9	1.7	40.5

Note: cells may not sum to totals due to rounding.

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Table 3 below shows Greenhouse gas emissions for Scotland using the Climate Change Plan categories for the period 1990 to 2017.

Table 3: Source emissions for Scotland using CCP categories. (MtCO₂e)

CCP Sectors	Baseline period	1990	1995	1998	1999	2000	2001
Agriculture	8.9	8.9	8.9	8.9	8.9	8.6	8.3
Electricity Generation	14.8	14.8	16.7	17.8	16.7	19.7	18.9
Industry	21.0	21.0	19.6	17.4	16.1	15.9	16.3
Land use	-0.3	-0.3	-1.4	-2.3	-2.7	-3.0	-3.4
Residential	8.1	8.0	7.8	8.1	8.0	7.8	8.3
Services	3.0	3.0	3.3	3.4	3.6	3.5	3.6
Transport	14.8	14.8	15.8	16.4	16.4	15.7	15.5
Waste	6.0	6.0	6.2	6.1	5.8	5.7	5.4
Grand Total	76.3	76.2	77.0	75.8	72.8	74.0	73.0

CCP Sectors	2002	2003	2004	2005	2006	2007	2008
Agriculture	8.3	8.4	8.3	8.2	8.0	8.2	7.7
Electricity Generation	17.2	17.6	15.8	14.1	18.8	15.6	14.3
Industry	15.2	15.0	15.0	15.2	14.0	13.6	13.7
Land use	-3.8	-3.9	-4.3	-4.5	-4.8	-5.0	-5.2
Residential	7.6	7.6	7.8	7.7	7.5	7.3	7.5
Services	3.2	3.4	3.5	3.5	3.3	3.3	3.7
Transport	15.9	15.6	15.7	15.9	15.9	16.2	15.6
Waste	5.2	5.1	4.4	4.0	3.6	3.2	3.1
Grand Total	68.9	68.8	66.3	64.2	66.4	62.4	60.4

CCP Sectors	2009	2010	2011	2012	2013	2014	2015
Agriculture	7.7	7.8	7.7	7.7	7.6	7.7	7.6
Electricity Generation	13.4	15.8	12.1	12.8	11.5	9.8	7.7
Industry	12.2	12.1	12.0	11.4	11.4	10.6	10.9
Land use	-5.3	-5.3	-5.5	-5.2	-5.1	-5.3	-5.3
Residential	7.2	8.0	6.5	7.0	7.1	5.9	6.1
Services	3.3	3.5	3.1	3.4	3.5	3.1	3.3
Transport	14.9	14.4	14.0	13.7	13.6	13.8	14.1
Waste	2.8	2.5	2.4	2.1	1.5	1.5	1.7
Grand Total	56.3	58.8	52.2	52.8	50.9	47.2	46.2

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Table 3 (Continued): Source emissions for Scotland using CCP categories. (MtCO₂e)

CCP Sectors	2016	2017	Change 2016- 2017	Change 2016- 2017 (%)	Change 1990- 2017	Change 1990 - 2017 (%)
Agriculture	7.6	7.6	0.0	-0.4%	-1.3	-14.9%
Electricity Generation	2.5	1.2	-1.3	-53.6%	-13.6	-92.1%
Industry	11.3	11.4	0.1	0.8%	-9.6	-45.8%
Land use	-5.4	-5.4	0.0	0.8%	-5.1	1465.3%
Residential	6.3	6.0	-0.3	-4.3%	-2.0	-24.4%
Services	3.3	3.2	-0.1	-4.1%	0.2	7.1%
Transport	14.6	14.9	0.3	2.2%	0.1	0.4%
Waste	1.6	1.7	0.0	2.6%	-4.3	-72.0%
Grand Total	41.9	40.5	-1.4	-3.3%	-35.6	-46.8%