EEA geospatial data catalogue

Average CO2 emissions per km from new passenger cars_superseded (2000-2023provisional)

The Regulation (EU) No 2019/631 requires Countries to record information for each new passenger car registered in its territory. The indicator is defined as the average carbon dioxide (CO_2) emissions per km by new passenger cars in a given year. The reported emissions are based on type-approval and can deviate from the actual CO_2 emissions of new cars. Since 2021, the emissions are measured with a new test procedure (Worldwide harmonized Light vehicles Test Procedure WLTP), compared to the New European Driving Cycle (NEDC) procedure used until 2020. The WLTP aims to reflect better real driving conditions and WLTP values are systematically higher than NEDC values. This change leads to a break in time series between 2020 and 2021.

Simple

Identification info

Date (Creation)	2024-08-19
Date (Publication)	2025-01-13
Date (Revision)	2025-01-13
Edition	01.00
Citation identifier	eea_s_eu-sdg-13-31-provisional_p_2000-2023_v01_r00
Status	Superseded
Point of contact	
Topic category	• Environment • Transportation

Point of contact:

Organisation	Individual	Electronic mail address	Website	Role
European Environment Agency		sdi@eea.europa.eu	http://www.eea.europa.eu	Point of contact

Extent

Temporal extent

Time period	2000-01-01 2023-12-31

Maintenance and update frequency	Annually
GEMET	• road transport • statistical data • emission • passenger transport • carbon dioxide
Continents, countries, sea regions of the world.	• Iceland • EU27 (from 2020) • Norway
Reporting obligations	• CO2 emissions from new passenger cars
EEA Management Plan	• 2024 2.1.5
EEA topics	• Sustainability • Road transport • Climate mitigation

- Transport and mobility

Resource constraints

Use constraints	Other restrictions
Other constraints	
Language	English

Distribution Information

Distribution format	• Microsoft Excel (.xls, .xlsx) • ascii (.csv, .txt, .sql)
OnLine resource	https://sdi.eea.europa.eu/webdav/datastore/public/eea_s_eu-sdg-13-31-provisional_p_2000-2023_v01_r00
OnLine resource	Direct download
OnLine resource	EEA Indicator:CO2 performance of new passenger cars in Europe
OnLine resource	Monitoring of CO2 emissions from passenger cars Regulation (EU) 2019/631
OnLine resource	List of CO2 Monitoring Decisions
OnLine resource	CO2 passenger cars (Elastic Data Viewer)
OnLine resource	Eurostat SDG_13_31: Average CO2 emissions per km from new passenger cars

Resource lineage

Statement	EU average specific CO2 emissions are calculated as the average emissions (as recorded in the certificates of conformity, based on type approval values) of all new passenger cars first registered in the EU in a particular year. For calculating manufacturers/pools' average emissions, eco-innovation savings and super-credits (for 2020-2022) are also taken into account. For each manufacturer/pool, an annual specific emissions target is calculated on the basis of the fleet-wide target and the average 'mass in running order' of the registered vehicles, using the formula in ANNEX 1, part A of Regulation (EU) 2019/631. Note: 2022 data are provisional(p). For the purpose of EU SDG statistics, the NEDC emissions values for the years 2017, 2018 and 2019 have been converted into equivalent WLTP ones, using the 2020 dataset, which contains both values (NEDC and WLTP) for all individual vehicles. In 2020 only WLTP values are reported.
Hierarchy level	Dataset
Source	• Monitoring of CO2 emissions from passenger cars, 2023 - Provisional data

Metadata

Metadata identifier	946dbd33-3802-4307-8b0c-4d9500f7839d
Language	English
Character encoding	UTF8
Contact	

Organisation	Individual	Electronic mail address	Website	Role
				Point

	European Environment Agency	sdi@eea.europa.eu	of contact

Type of resource

Resource type	Non geographic dataset
Name	Tabular dataset

Metadata linkage	https://sdi.eea.europa.eu/geonetwork/srv/api/records/946dbd33-3802-4307-8b0c-4d9500f7839d
Date info (Creation)	2024-08-19T11:29:37.69573Z
Date info (Revision)	2025-10-09T11:04:11.562477Z

Metadata standard

Title	ISO 19115/19139
Edition	1.0

Overviews

Dataset for indicator	Average CO2 emissions per km from new passenger cars (13_31)
Conditions	Data for the period 2000-2009 are not collected by EEA (Source DG CLIMA)
Unit	g CO2 per km
Coverage	EU27_2020
Legend	AGG= Aggregate
	MS= Member State
	EFTA= EFTA country
	CC= Candidate Country

TIME

Type	GEO (Labels)	GEO (Codes)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AGG	European Union (aggregate changing according to the context)	EU_V	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
AGG	European Union - 27 cou	EU27_2020	:	:	:	:	:	:	:	**157.5**	**152.8**	**145.0**	**139.6**	**135.3**	**132.0**	**126.4**	**123.1**	**119.1**	**117.6**	**143.0**	**145.6**	**148.0**	**130.8**	**115.7**	**109.8**	**107.8**
MS	Belgium	BE	166.5	163.7	161.1	158.1	156.5	155.2	153.9	152.8	147.8	142.1	133.4	127.2	128.0	124.0	121.3	117.9	115.9	140.5	144.7	147.3	130.6	117.0	104.5	85.3
MS	Bulgaria	BG	:	:	:	:	:	:	:	171.6	171.5	172.1	158.9	151.4	149.2	141.7	135.9	130.3	125.8	153.0	153.6	157.8	147.1	139.5	134.3	130.8
MS	Czechia	CZ	:	:	:	:	154.0	155.3	154.2	154.2	154.4	155.5	148.9	144.5	140.8	134.6	131.6	126.3	121.2	150.4	152.7	156.0	144.9	138.8	137.7	136.3
MS	Denmark	DK	175.7	172.9	170.0	169.0	165.9	163.7	162.5	159.8	146.4	139.1	126.2	125.0	117.0	112.7	110.2	106.2	106.0	129.8	132.8	135.6	116.4	92.3	86.3	73.3
MS	Germany	DE	182.2	179.5	177.4	175.9	174.9	173.4	172.5	169.5	164.8	154.0	151.1	145.6	141.6	136.1	132.5	128.3	126.9	154.2	157.0	159.0	136.0	113.5	105.9	113.0
MS	Estonia	EE	:	:	:	:	179.0	183.7	182.7	181.6	177.4	170.3	162.0	156.9	150.3	147.0	140.9	137.2	133.9	161.0	160.5	157.7	147.6	142.6	141.6	134.5
MS	Ireland	IE	161.3	166.6	164.3	166.7	167.6	166.8	166.3	161.6	156.8	144.4	133.2	128.3	125.1	120.7	117.1	114.1	112.0	135.3	137.3	137.9	130.0	112.6	100.7	97.6
MS	Greece	EL	180.3	166.5	167.8	168.9	168.8	167.4	166.5	165.3	160.8	157.4	143.7	132.7	121.1	111.9	108.2	106.4	106.3	131.9	135.0	140.1	130.5	119.8	118.0	112.7
MS	Spain	ES	159.2	156.8	156.4	157.0	155.3	155.3	155.6	153.2	148.2	142.2	137.9	133.8	128.7	122.4	118.6	115.3	114.4	139.4	143.1	147.0	135.5	126.0	121.5	117.5
MS	France	FR	163.6	159.8	156.8	155.0	153.1	152.3	149.9	149.4	140.1	133.5	130.5	127.7	124.4	117.4	114.2	111.0	109.8	133.8	136.0	137.9	121.1	108.6	103.1	96.8
MS	Croatia	HR	:	:	:	:	:	:	:	:	:	:	:	:	:	127.1	115.8	112.8	111.5	137.1	139.7	144.7	135.2	127.9	127.3	127.2
MS	Italy	IT	155.1	158.3	156.6	152.9	150.0	149.5	149.2	146.5	144.7	136.3	132.7	129.6	126.2	121.1	118.1	115.2	113.3	137.3	140.5	144.7	132.5	120.3	119.2	120.1
MS	Cyprus	CY	:	:	:	:	173.4	173.0	170.1	170.3	165.6	160.7	155.8	149.9	144.3	139.2	129.8	125.7	123.5	148.1	149.6	153.6	151.9	145.9	136.8	100.4
MS	Latvia	LV	:	:	:	:	192.4	187.2	183.1	183.5	180.6	176.9	162.0	154.4	152.0	147.1	140.4	137.1	128.9	156.1	156.1	155.0	146.8	142.6	134.6	132.1
MS	Lithuania	LT	:	:	:	:	187.5	186.3	163.4	176.5	170.1	166.0	150.9	144.4	144.2	139.8	135.8	130.0	126.2	154.4	155.9	160.0	146.2	135.7	135.9	129.9
MS	Luxembourg	LU	176.7	177.0	173.8	173.5	169.7	168.6	168.2	165.8	159.5	152.5	146.0	142.2	137.0	133.4	129.9	127.5	126.1	153.9	159.3	161.2	143.9	123.8	115.7	106.8
MS	Hungary	HU	:	:	:	:	158.5	156.3	154.6	155.0	153.4	153.4	147.4	141.6	140.8	134.4	133.0	129.6	125.9	152.2	155.0	157.2	141.4	133.1	131.2	127.6
MS	Malta	MT	:	:	:	:	148.8	150.5	145.9	147.8	146.9	135.7	131.2	124.7	121.5	118.7	115.3	113.3	111.8	134.5	130.5	132.2	128.1	107.5	91.4	91.5
MS	Netherlands	NL	174.2	174.0	172.4	173.5	171.0	169.9	166.7	164.8	156.7	146.9	135.8	126.1	118.6	109.1	107.3	101.2	105.9	131.3	127.9	119.3	104.4	95.1	86.8	74.2
MS	Austria	AT	168.0	165.6	164.4	163.8	161.9	162.1	163.7	162.9	158.1	150.2	144.0	138.7	135.7	131.6	128.5	123.7	120.4	146.3	149.1	152.1	135.7	116.1	112.0	104.1
MS	Poland	PL	:	:	:	:	154.1	155.2	155.9	153.7	153.1	151.6	146.2	144.5	141.3	138.1	132.9	129.3	125.8	154.7	157.3	158.0	146.0	137.6	135.7	134.8
MS	Portugal	PT	169.2	:	154.0	149.9	147.1	144.9	145.0	144.2	138.2	133.8	127.2	122.8	117.6	112.2	108.8	105.7	104.7	126.9	128.6	132.6	118.0	107.1	103.1	89.8
MS	Romania	RO	:	:	:	:	:	:	:	154.8	156.0	157.0	148.5	140.7	139.0	132.1	128.2	125.0	122.0	146.2	147.3	150.7	138.5	125.6	119.7	115.8
MS	Slovenia	SI	:	:	:	:	152.7	157.2	155.3	156.3	155.9	152.0	144.4	139.7	133.4	125.6	121.3	119.2	119.0	145.0	146.5	150.0	138.6	133.7	129.1	123.9
MS	Slovakia	SK	:	:	:	:	:	157.4	152.0	152.7	150.4	146.6	149.0	144.9	141.0	135.1	131.7	127.6	124.8	152.8	154.7	158.0	144.6	138.0	136.8	137.6
MS	Finland	FI	181.1	178.1	177.2	178.3	179.8	179.5	179.2	177.3	162.9	157.0	149.0	144.0	139.1	131.8	127.4	123.0	120.0	143.3	141.4	139.7	120.0	98.3	85.3	60.9
MS	Sweden	SE	200.0	200.2	198.2	198.5	197.2	193.8	188.6	181.4	173.9	164.5	151.3	141.8	135.9	133.2	131.0	126.3	123.1	148.2	148.1	145.1	111.7	88.3	66.6	61.0
EFTA	Iceland	IS	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	141.6	138.5	96.3	80.3	76.1	61.9
EFTA	Liechtenstein	LI	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
EFTA	Norway	NO	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	27.6	17.8	14.5
EFTA	Switzerland	CH	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	Bosnia and Herzegovina	BA	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	Montenegro	ME	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	North Macedonia	MK	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	Albania	AL	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	Serbia	RS	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC	Türkiye	TR	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
CC (potential)	Kosovo (under United Na	XK	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

Provided by