

Average CO2 emissions per km from new passenger cars (sdg_13_31)

ESMS Indicator Profile (ESMS-IP)

Compiling agency: Eurostat, the
statistical office of the European Union

Eurostat metadata

Reference metadata

- [1. Contact](#)
- [2. Metadata update](#)
- [3. Relevance](#)
- [4. Statistical Indicator](#)
- [5. Frequency and Timeliness of dissemination](#)
- [6. Coverage and comparability](#)
- [7. Accessibility and clarity](#)
- [8. Comment](#)
- [Related Metadata](#)
- [Annexes](#)
- [Footnotes](#)

Eurostat Quality Profile

4.5. Source data	EEA / DG CLIMA
5.1. Frequency of dissemination	Every year
5.2. Timeliness	T+1 year
6.1. Reference area	All EU MS
6.2. Comparability - geographical	All EU MS
6.3. Coverage - Time	> 10 years
6.4. Comparability - over time	> 4 data points

Description of Eurostat quality grading system under the following [link](#).

For any question on data and metadata, please contact: [Eurostat user support](#)

[Download](#)

1. Contact

[Top](#)

1.1. Contact organisation	Eurostat, the statistical office of the European Union
1.2. Contact organisation unit	E2: Environmental statistics and accounts; sustainable development
1.5. Contact mail address	e-mail contact: ESTAT-SDG-MONITORING@ec.europa.eu

2. Metadata update

[Top](#)

2.1. Metadata last certified	14/03/2023
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2.2. Metadata last posted	11/06/2024
2.3. Metadata last update	09/04/2024

3. Relevance

[Top](#)

The indicator is part of the EU Sustainable Development Goals (SDG) indicator set. It is used to monitor progress towards SDG 12 on ensuring sustainable consumption and production patterns and on SDG 13 on taking urgent action to combat climate change and its impacts. These SDGs are embedded in the European Commission's Priorities under the 'European Green Deal'.

SDG 12 calls for a comprehensive set of actions from businesses, policy-makers, researchers and consumers to adapt to sustainable practices. It envisions sustainable production and consumption based on advanced technological capacity, resource efficiency and reduced global waste.

SDG 13 seeks to implement the commitment to the United Nations Framework Convention on Climate Change for achieving a climate neutral world by mid-century to limit global warming to well below 2°C and aiming at 1.5°C (compared to pre-industrial times). It also aims to strengthen countries' resilience and adaptive capacity to climate-related natural hazards and the resulting disasters.

EU legislation ([Regulation \(EU\) 2021/1119](#)) sets the objective of climate neutrality in the EU by 2050. Mandatory CO2 emission targets for cars and vans are set by [EU legislation \(REGULATION \(EU\) 2019/631\)](#) and CO2 emission standards for heavy-duty vehicles by [Regulation \(EU\) 2019/1242](#) (applying from 2025).

The Commission's 'Fit for 55' proposal for revised CO2 emission standards for new passenger cars and vans aims to contribute to the 2030 climate objectives and to the 2050 climate neutrality.

4. Statistical Indicator

[Top](#)

4.1. Data description

The indicator is defined as the average carbon dioxide (CO2) 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 CO2 emissions of new cars. In the monitoring for cars and vans, emissions data are reported using the 'New European Driving Cycle' (NEDC) protocol until 2019, using both protocols NEDC and the 'Worldwide harmonized Light vehicles Test Procedure' (WLTP) in 2020 and only WLTP protocol from 2021.

In this table, from 2020, reported WLTP data are shown; for the period 2017-2019 a conversion factor, calculated using 2020 data in NEDC and WLTP, is used to show data in WLTP; before 2017, NEDC data are shown.

4.2. Unit of measure

g CO2 per km

4.3. Reference Period

Calendar year

4.4. Accuracy - overall

For assessment of accuracy please refer to the original source (see link to external data source and metadata in section "Annexes").

4.5. Source data

EEA / DG CLIMA

Data source: Reporting under Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO2 emission performance standards for new passenger cars and for new light commercial vehicles

Data provider: European Environment Agency (EEA) / European Commission, Directorate-General for Climate Action (DG-CLIMA)

5. Frequency and Timeliness of dissemination [Top](#)

5.1. Frequency of dissemination

Every year

The indicator is updated annually.

5.2. Timeliness

T+1 year

New data points are disseminated within one year after the reference year.

6. Coverage and comparability [Top](#)

6.1. Reference area

All EU MS

Data are presented for all EU Member States plus Iceland and Norway.

6.2. Comparability - geographical

All EU MS

Data are comparable between all EU Member States and with the other presented countries.

6.3. Coverage - Time

> 10 years

Presented time series (including EU aggregates) starts in 2000.

6.4. Comparability - over time

> 4 data points

Length of comparable time series without methodological break is two data points. Between 2020 and 2021 the test procedure for CO2 emissions was changed from NEDC to WLTP. This has led to a break in time series between 2020 and 2021. Data between 2007 and 2020 are comparable.

In the monitoring for cars and vans, emissions data are reported using NEDC protocol until 2019, using both protocols NEDC and WLTP in 2020 and only WLTP protocol from 2021. In this table, from 2020, reported WLTP data are shown; for the period 2017-2019 a conversion factor, calculated using 2020 data in NEDC and WLTP, is used to show data in WLTP; before 2017, NEDC data are shown.

Therefore, the data is comparable between 2000-2016 (NEDC) and from 2017 onwards (WLTP).

7. Accessibility and clarity [Top](#)

7.1. Dissemination format - Publications

Analysis of indicator is presented in Eurostat's annual monitoring report on Sustainable development in the EU (progress towards SDGs in the EU context).

7.2. Dissemination format - online database

see table [sdg_13_31](#)

7.3. Dissemination format - other

Eurostat dedicated section on SDGs: <http://ec.europa.eu/eurostat/web/sdi/overview>

8. Comment	Top
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Related metadata	Top

Annexes	Top
Source data and metadata European Environment Agency Datahub, average CO2 emissions per km from new passenger cars	

Footnotes	Top

