Carbon Monitor

Global Near-real-time Daily CO_2 Emission Report

2026



A joint release by

CNEST Carbon Neutrality and Energy System Transformation

ICCON

清华大学 碳中和研究院 Institute for Carbon Neutrality, Tsinghua University

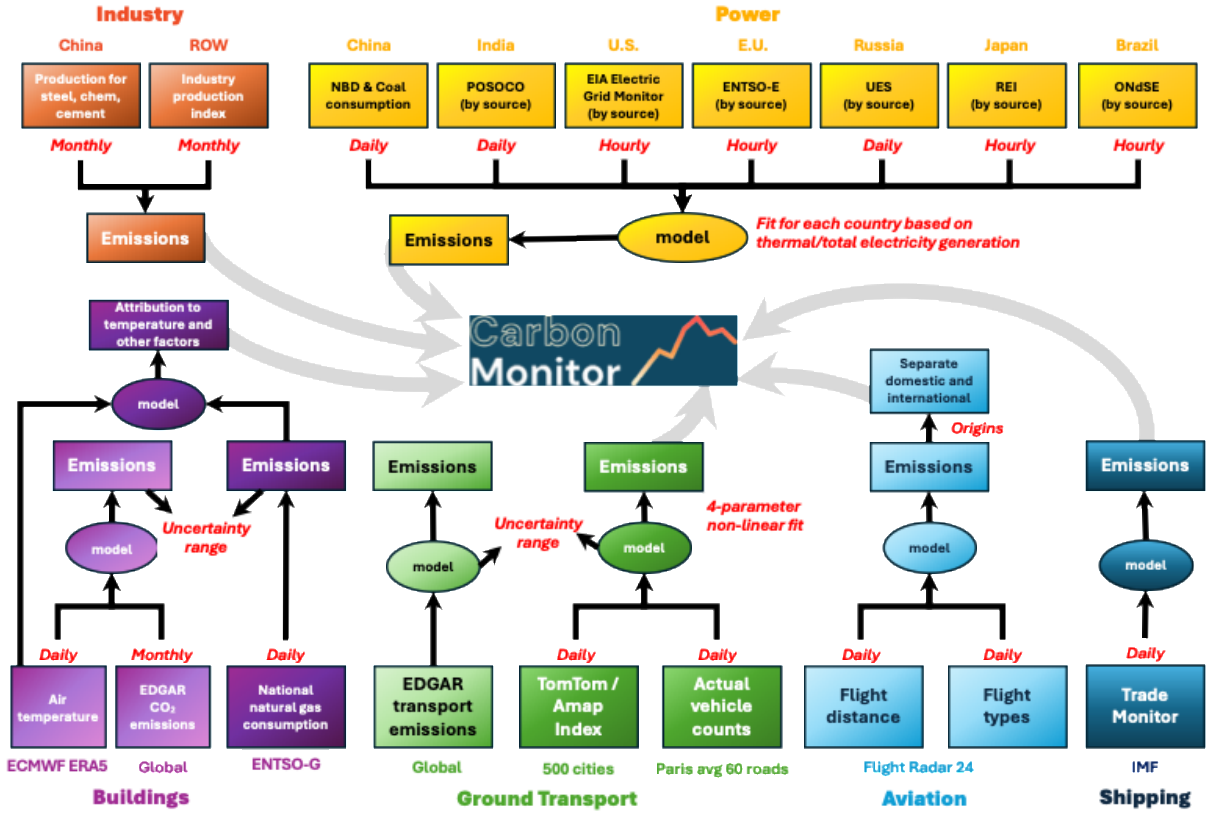
The Carbon Monitor team

Draft updated 13 October 2026 · Version 0.1

Data through 31 August 2026

Introduction

Carbon Monitor is a frequently updated daily CO_2 emission dataset, to monitor the variations of CO_2 emissions from fossil fuel combustion and industrial production processes since January 1st 2019 at the national level with near-global coverage.



Daily CO_2 emissions are estimated from a diverse range of activity data, including: hourly to daily electrical power generation data of 56 countries, monthly production data and production indices of industry processes of 62 countries/regions, daily mobility data and mobility indices of road transportation of 500 cities worldwide. Individual flight location data and monthly data were utilized for aviation and maritime transportation sector estimates. In addition, monthly fuel consumption data corrected for daily air temperature were used to estimate emissions from commercial and residential buildings.

Data Notes and Usage Guidance

Data Notes

This report uses the Carbon Monitor dataset dated 31 August 2026.

Coverage: 181,164 daily records across 62 region–sector series, 1 January 2019–31 December 2026. Estimates end on 31 August 2026; September–December 2026 is projected.

Seven sectors: Power, Industry[1], Ground Transport, Residential, Domestic Aviation, International Aviation and International Shipping. Geography: eight named countries/regions, ROW and WORLD.

Accounting: national totals exclude international aviation and shipping. All international bunkers are assigned to ROW and included in the global total, consistent with the previous report.

2026 projection: combine January–August co2 estimates with September–December yhat values. Future WORLD co2 zeros are missing-data placeholders, not zero emissions. Forecasts are used as supplied, without refitting.

Comparisons use the same release for 2025 and 2026. Country charts show 14-day centered averages; annual tables show mean daily emissions. Pre-2019 history is retained from the source report.

Data access: https://carbonmonitor.org. Source revisions can change historical estimates. Daily prediction bounds do not establish an annual confidence interval.

[1] Including energy-related and process-related emissions.

Acknowledgements

Team Leaders

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- Institute for Carbon Neutrality, Tsinghua University
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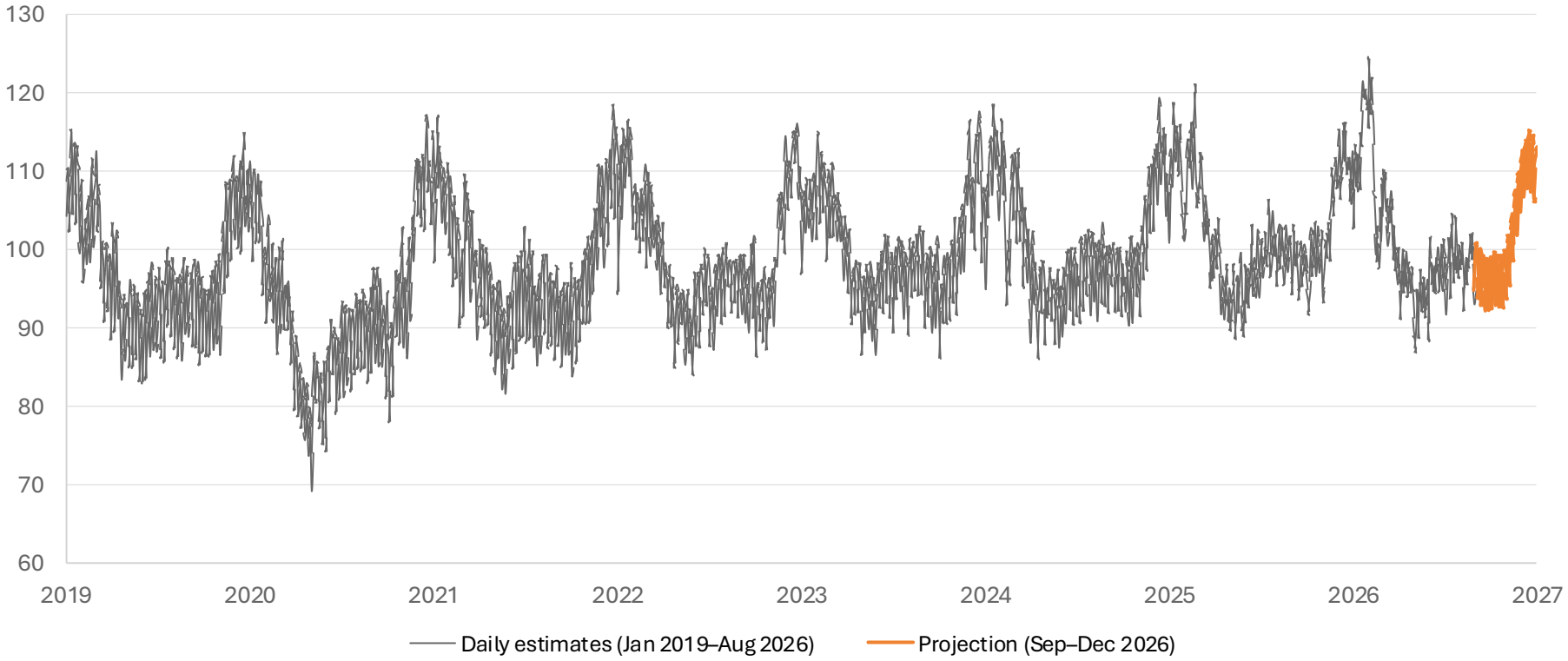
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Highlights

1.1 Global daily CO_2 emissions in near-real-time

Global CO_2 emissions are projected to decline by 0.34% in 2026.

Daily CO_2 emissions from fossil fuel combustion and industrial processes, Mt CO_2 per day



2025: 37.18 Gt CO_2

2026 projection: 37.06 Gt CO_2 (−0.34%)

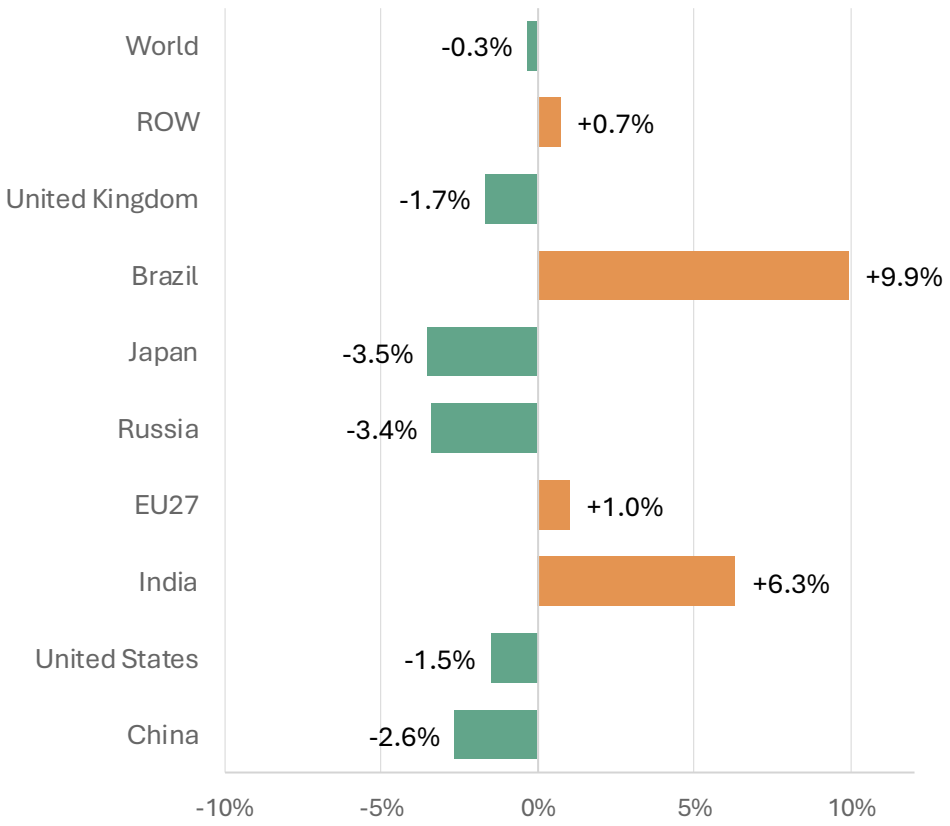
2026: January–August estimates and September–December projections. Jan–Aug emissions are 0.24% below 2025.

Source: Carbon Monitor · CM_projected_default_20260831.csv

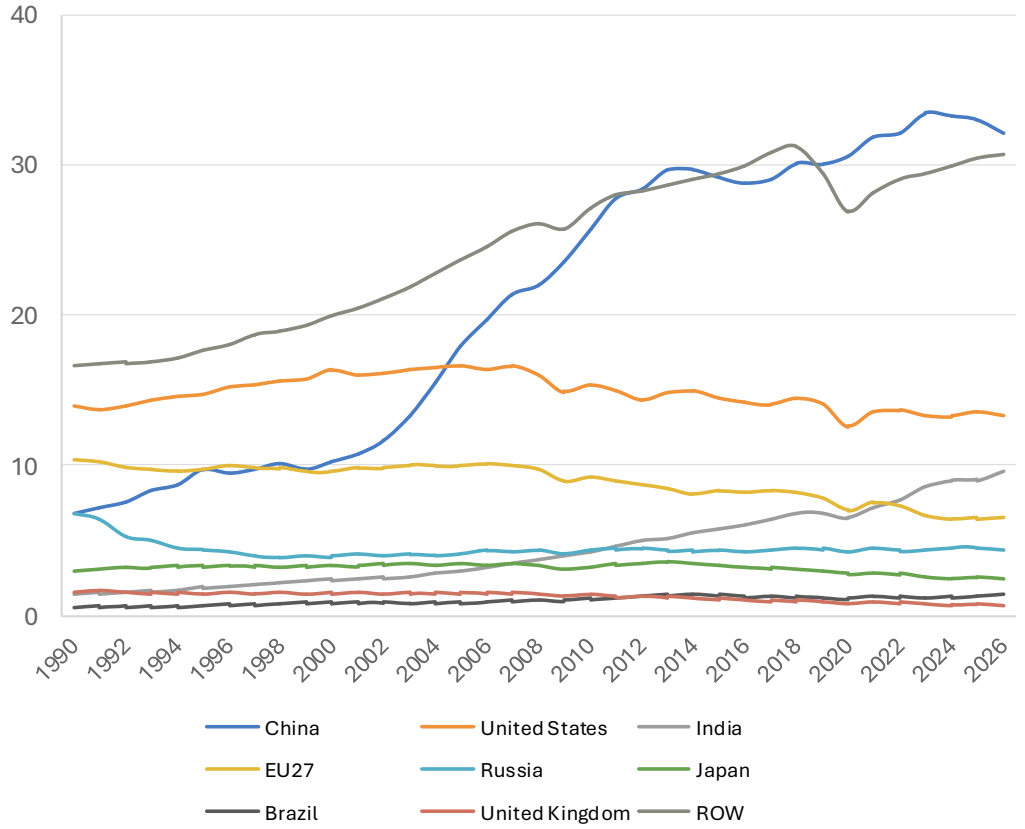
1.2 CO_2 emission trends across countries and regions

Brazil and India lead projected growth; China, the US, Russia, Japan and the UK decline.

Projected change in annual emissions: 2026 vs 2025



Annual mean daily emissions, 1990–2026, Mt CO_2/day



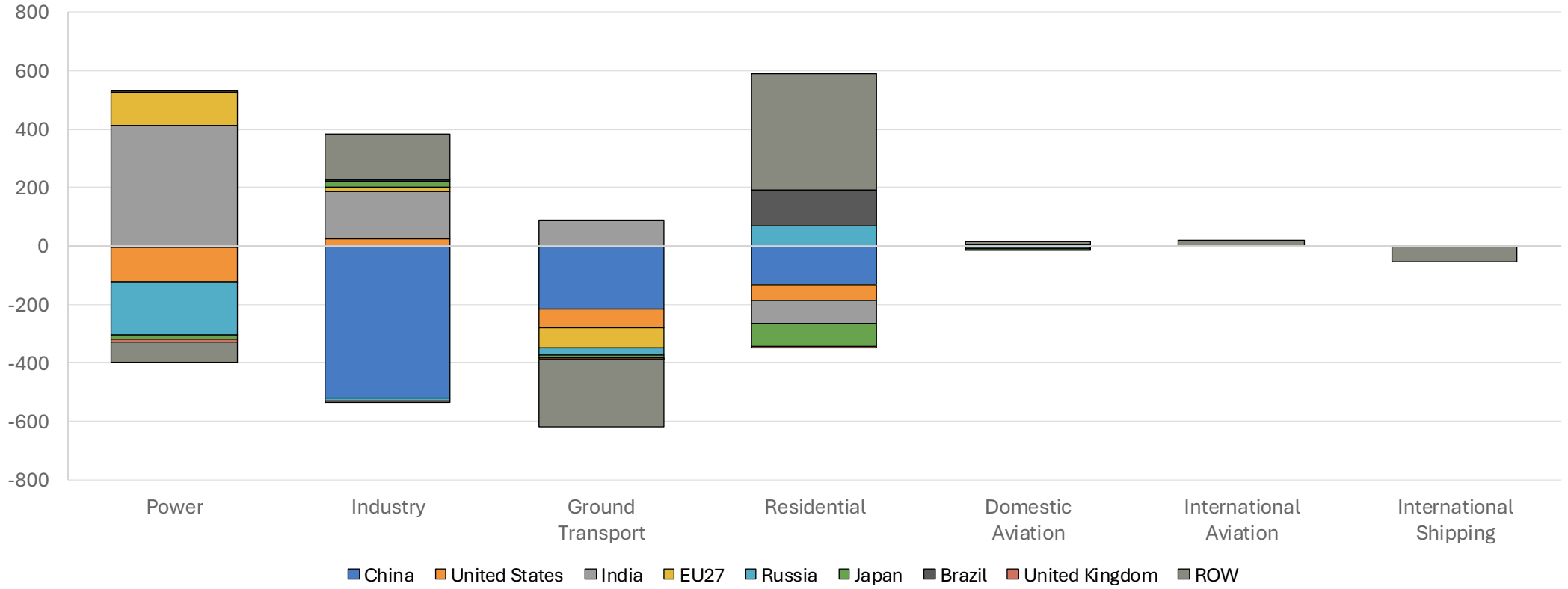
2026 combines January–August estimates with September–December projections. National totals exclude international bunkers, assigned to ROW.

Source: Carbon Monitor; pre-2019 history retained from the source report

1.3 Sectoral and national drivers of the 2026 emission change

Ground transport drives the global decline; power and residential emissions partly offset it.

Change in annual mean daily CO_2 emissions, 2026 projection minus 2025, kt CO_2 per day



Industry includes energy and process emissions. International aviation and shipping are included in the global total and assigned to ROW.

Source: Carbon Monitor · August 2026 release; September–December 2026 projected

Carbon Monitor

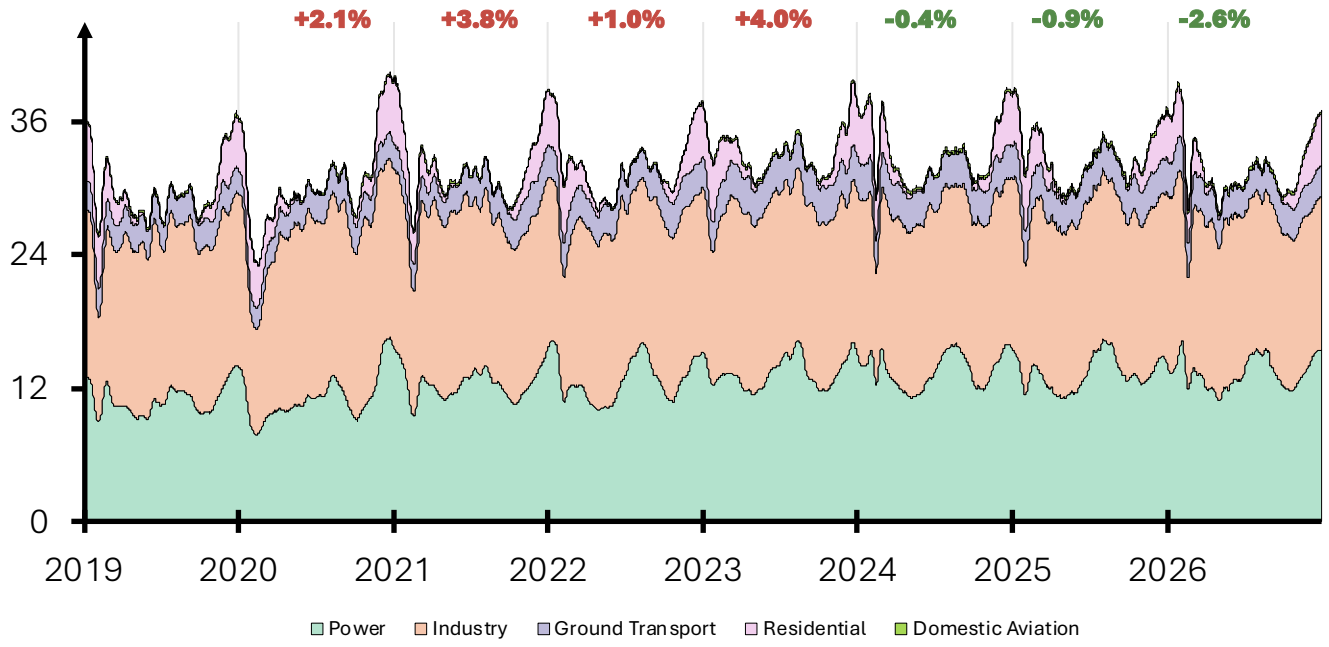


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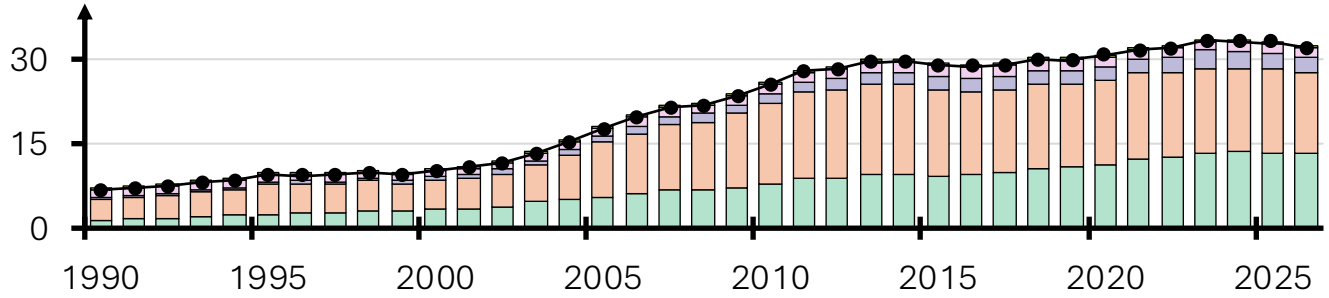
Country Profiles

2.1 China

China: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



China: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

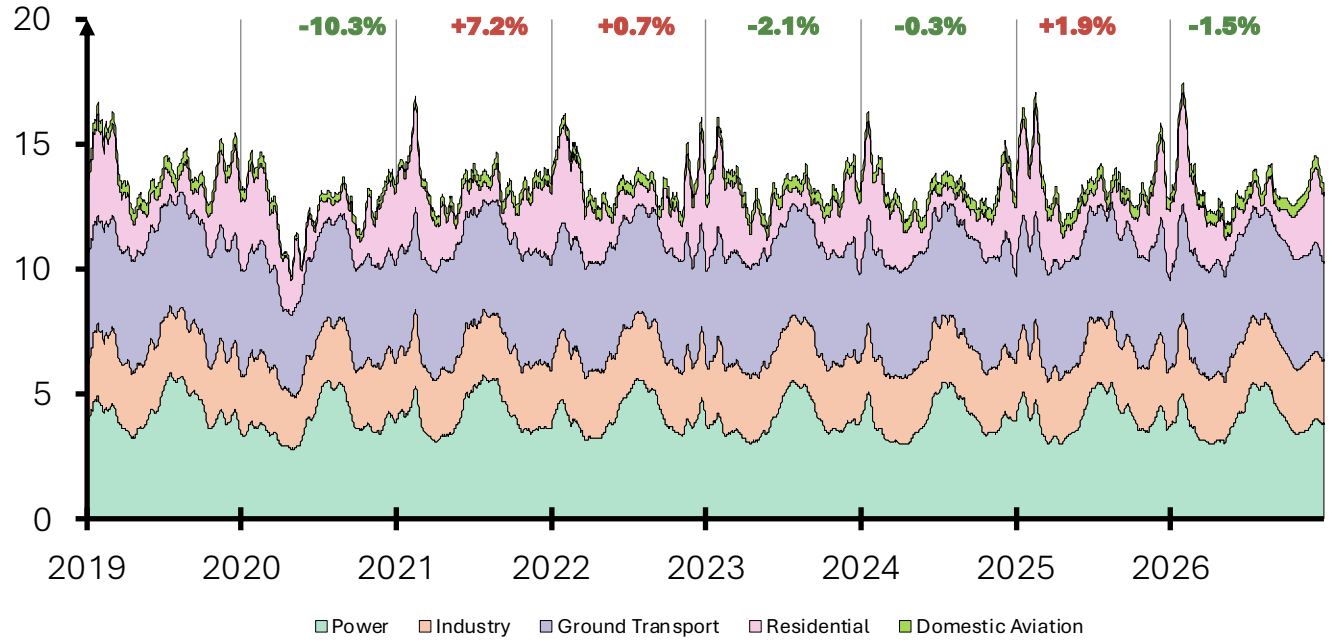
China: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	13.37	13.36	-0.05%
Industry[1]	14.75	14.23	-3.5%
Ground Transport	2.99	2.77	-7.3%
Residential	1.64	1.51	-8.0%
Domestic Aviation	0.25	0.25	+1.1%
Total	**33.01**	**32.13**	**-2.6%**

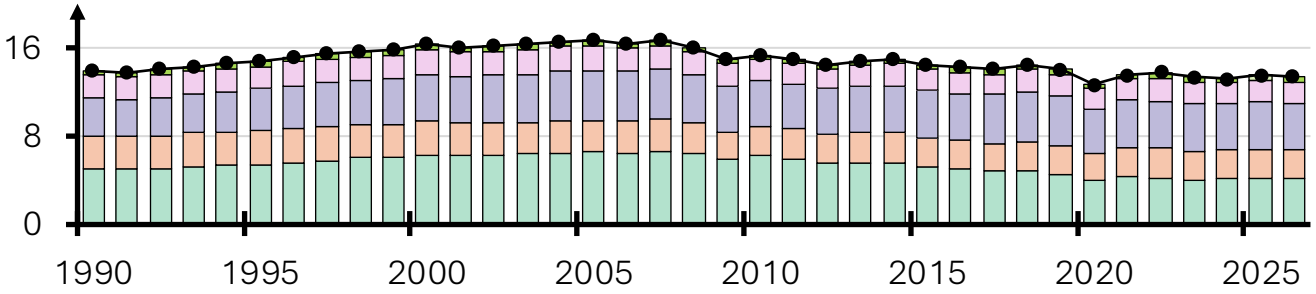
[1] Industry includes combustion and process emissions.

2.2 United States

United States: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



United States: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

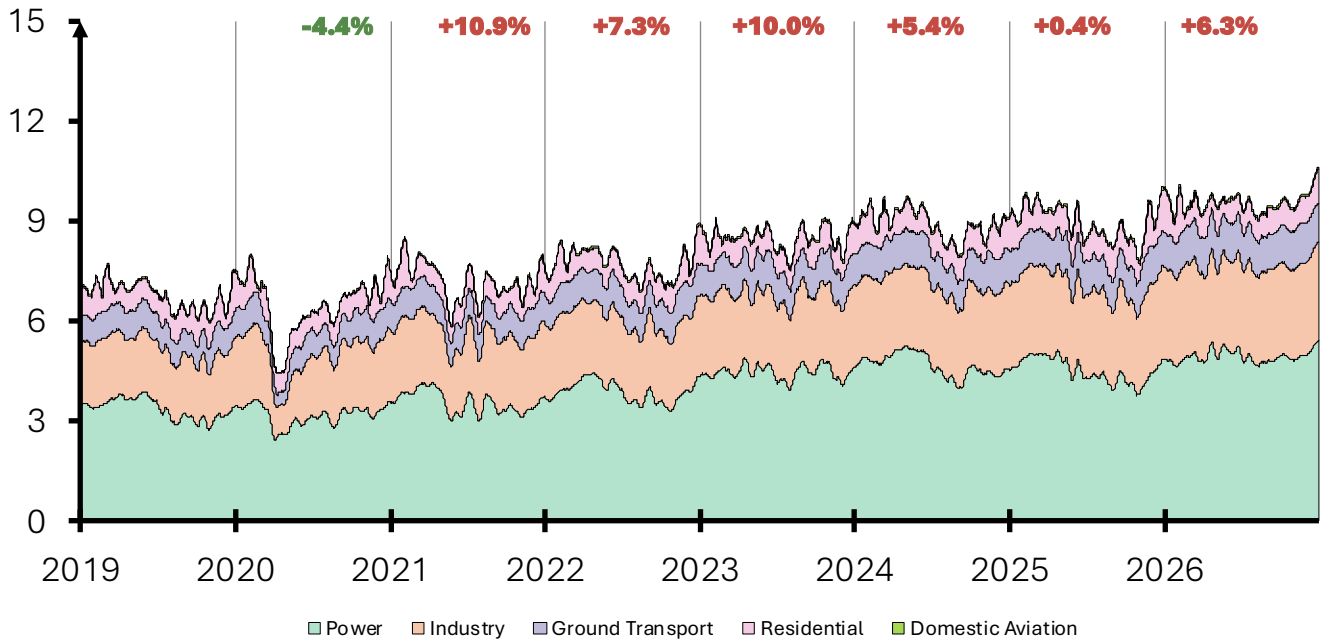
United States: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	4.16	4.04	-2.8%
Industry[1]	2.66	2.69	+1.0%
Ground Transport	4.35	4.28	-1.4%
Residential	1.94	1.89	-2.8%
Domestic Aviation	0.46	0.46	+0.4%
Total	**13.57**	**13.36**	**-1.5%**

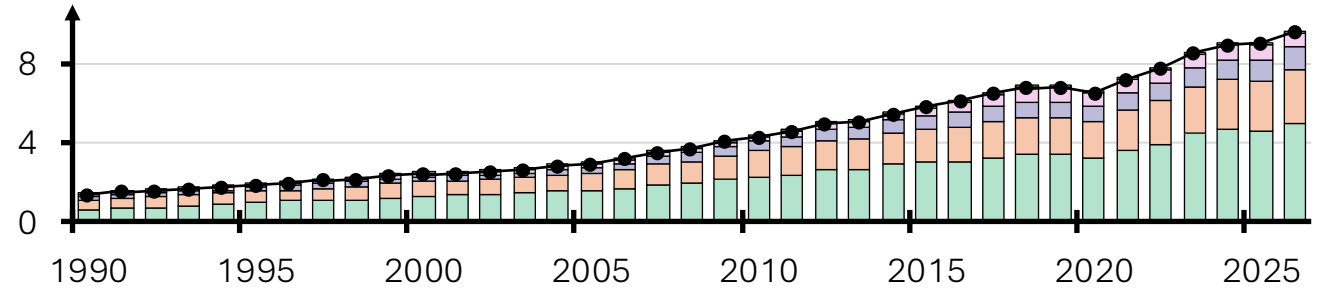
[1] Industry includes combustion and process emissions.

2.3 India

India: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



India: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

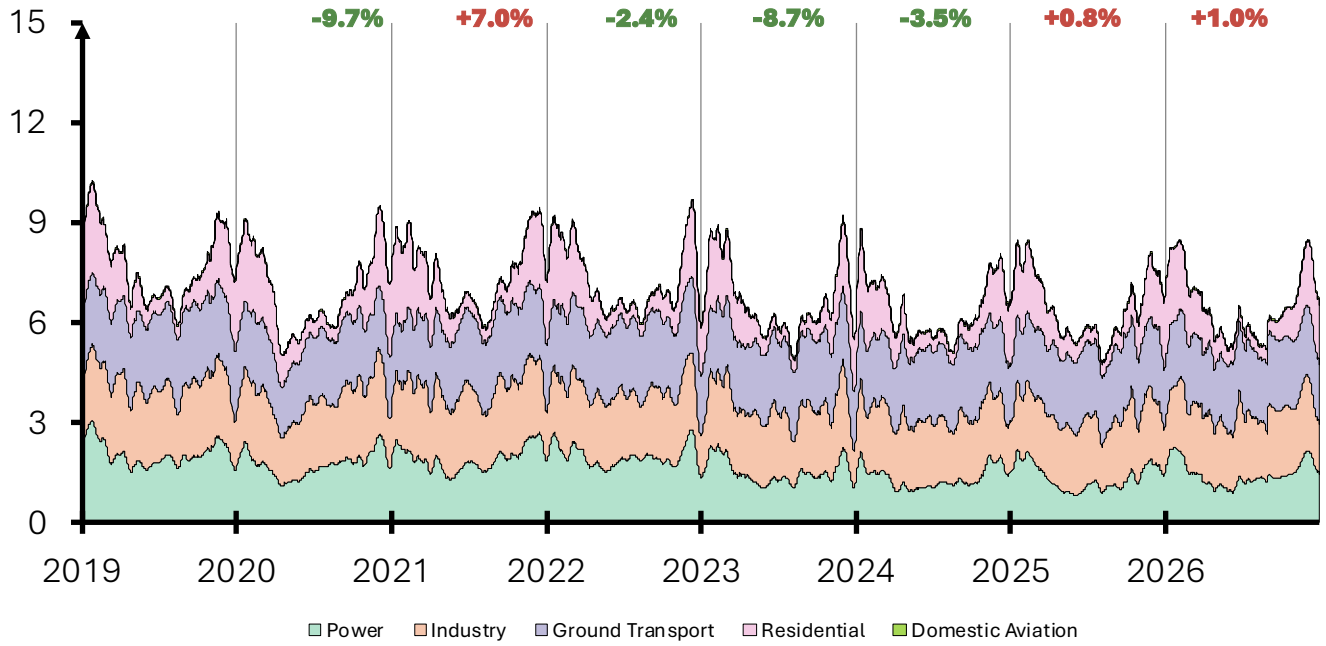
India: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	4.54	4.95	+9.0%
Industry[1]	2.58	2.73	+6.2%
Ground Transport	1.04	1.12	+8.4%
Residential	0.80	0.72	-10.2%
Domestic Aviation	0.07	0.07	-6.3%
Total	**9.03**	**9.60**	**+6.3%**

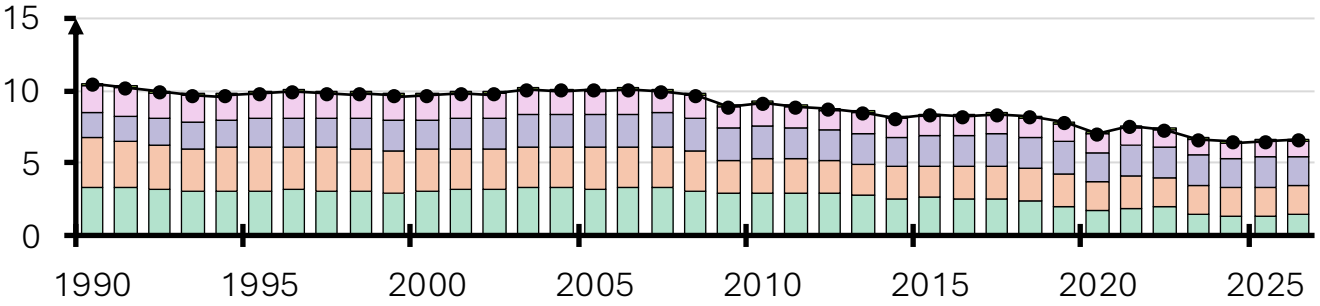
[1] Industry includes combustion and process emissions.

2.4 European Union (EU27)

EU27: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



EU27: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

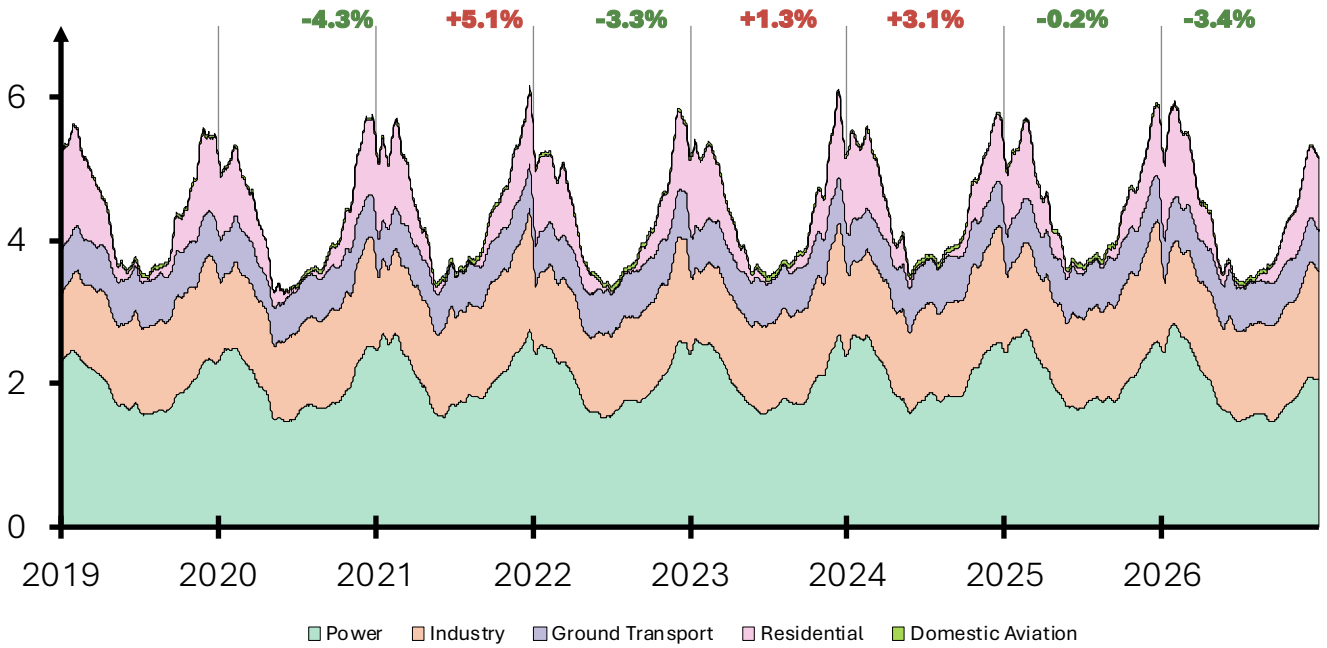
EU27: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	1.36	1.48	+8.5%
Industry[1]	1.94	1.95	+0.9%
Ground Transport	2.09	2.02	-3.2%
Residential	1.08	1.08	+0.00%
Domestic Aviation	0.04	0.04	+2.5%
Total	**6.51**	**6.58**	**+1.0%**

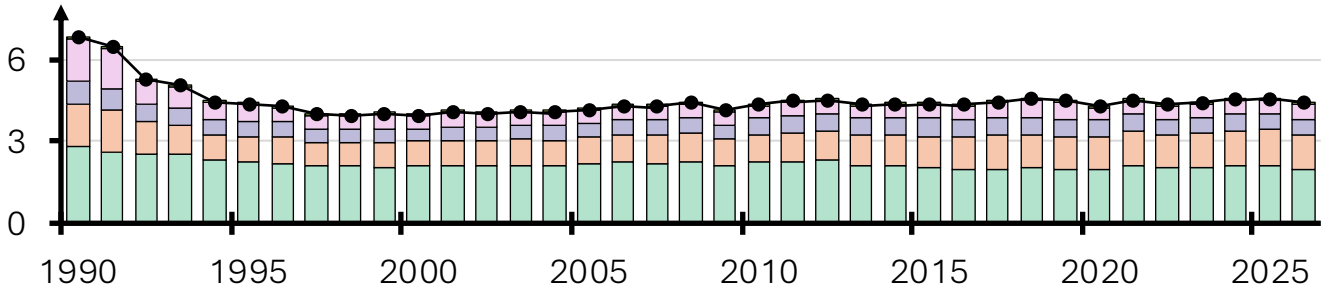
[1] Industry includes combustion and process emissions.

2.5 Russia

Russia: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



Russia: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

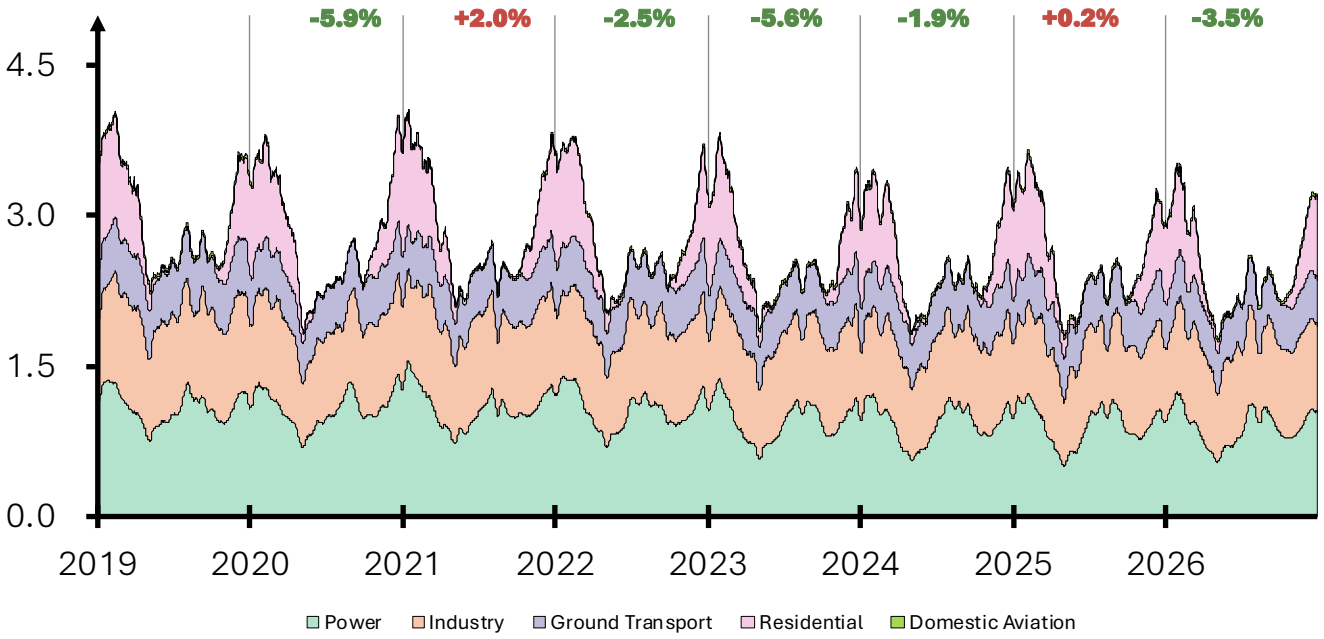
Russia: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	2.12	1.94	-8.5%
Industry[1]	1.30	1.29	-0.9%
Ground Transport	0.63	0.60	-3.9%
Residential	0.46	0.53	+14.8%
Domestic Aviation	0.05	0.04	-15.7%
Total	**4.55**	**4.40**	**-3.4%**

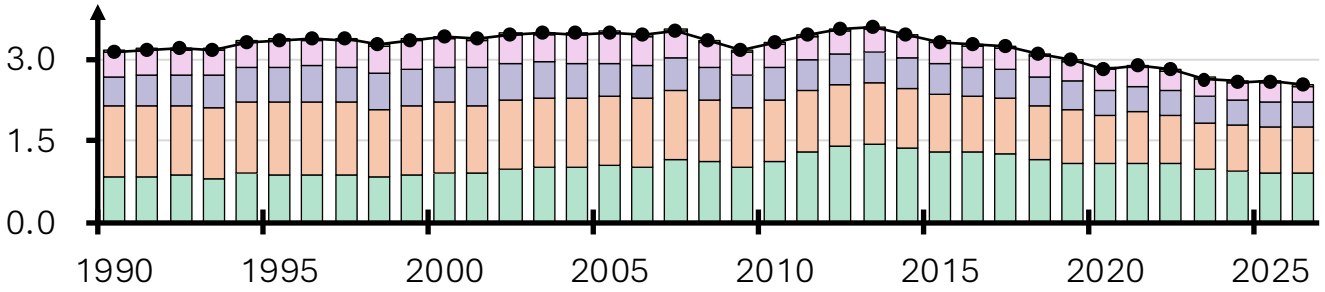
[1] Industry includes combustion and process emissions.

2.6 Japan

Japan: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



Japan: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

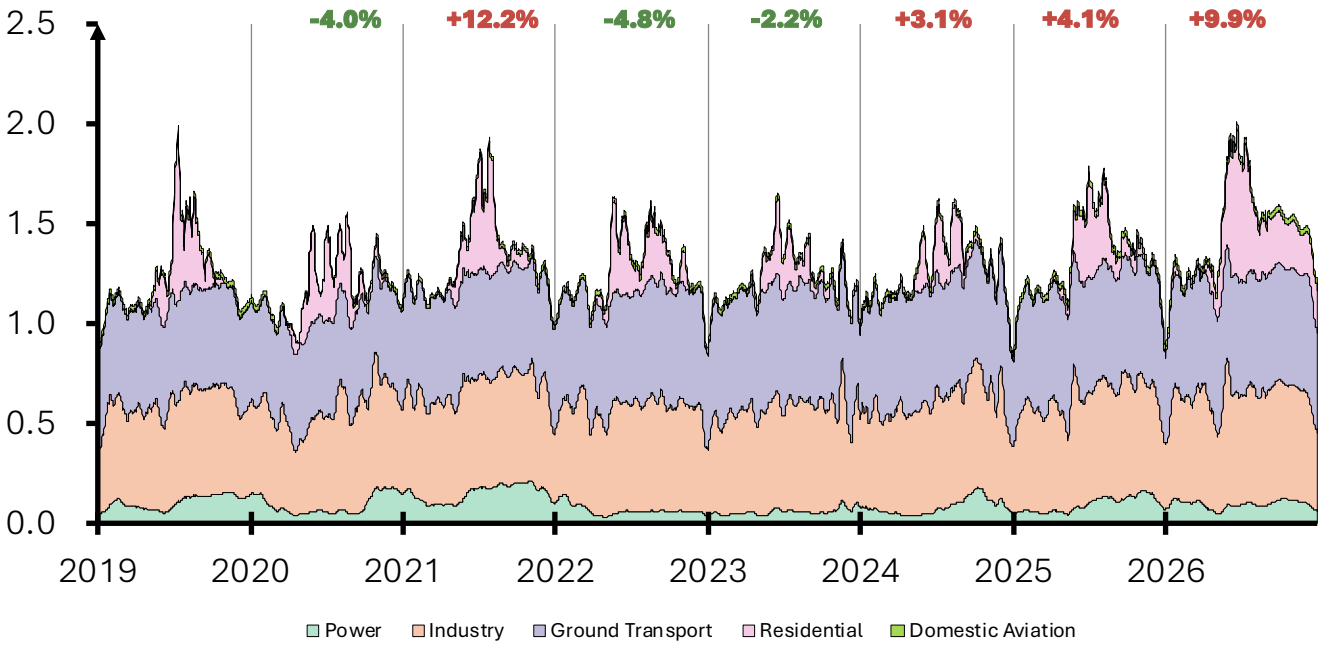
Japan: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	0.91	0.89	-2.1%
Industry[1]	0.85	0.87	+2.2%
Ground Transport	0.46	0.45	-2.2%
Residential	0.35	0.27	-22.5%
Domestic Aviation	0.03	0.03	-2.8%
Total	**2.60**	**2.51**	**-3.5%**

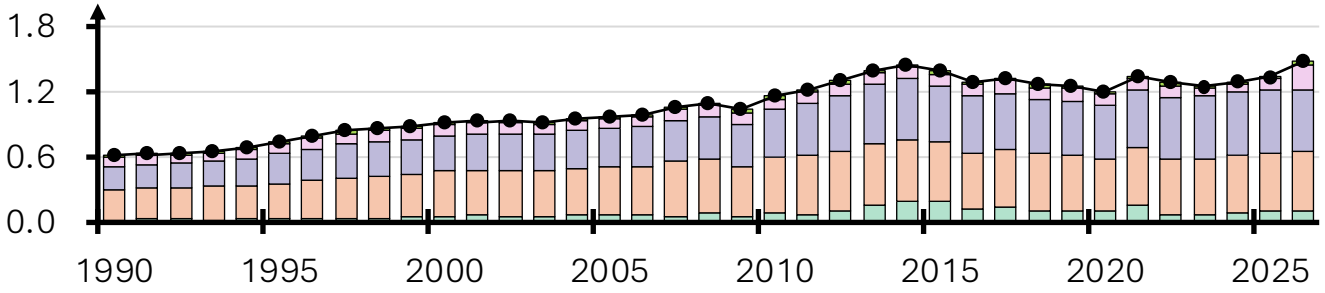
[1] Industry includes combustion and process emissions.

2.7 Brazil

Brazil: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



Brazil: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

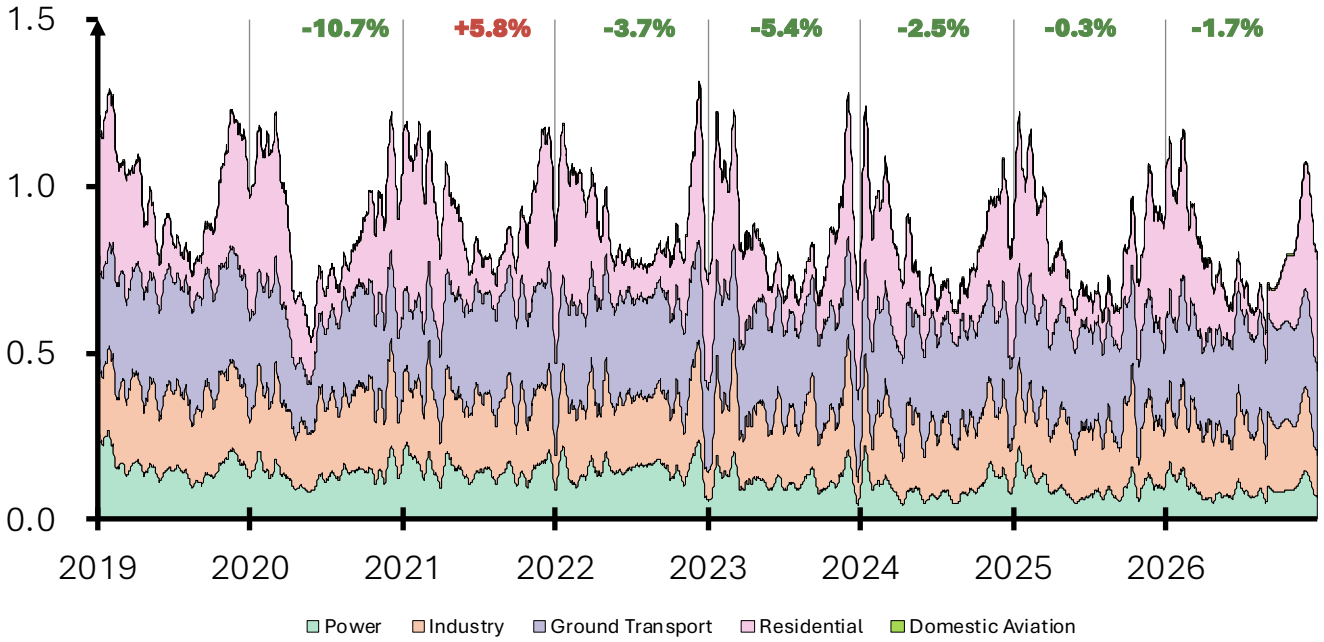
Brazil: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	0.09	0.09	+1.2%
Industry[1]	0.54	0.54	+1.2%
Ground Transport	0.57	0.57	-0.1%
Residential	0.11	0.23	+117.3%
Domestic Aviation	0.03	0.03	+3.2%
Total	**1.34**	**1.47**	**+9.9%**

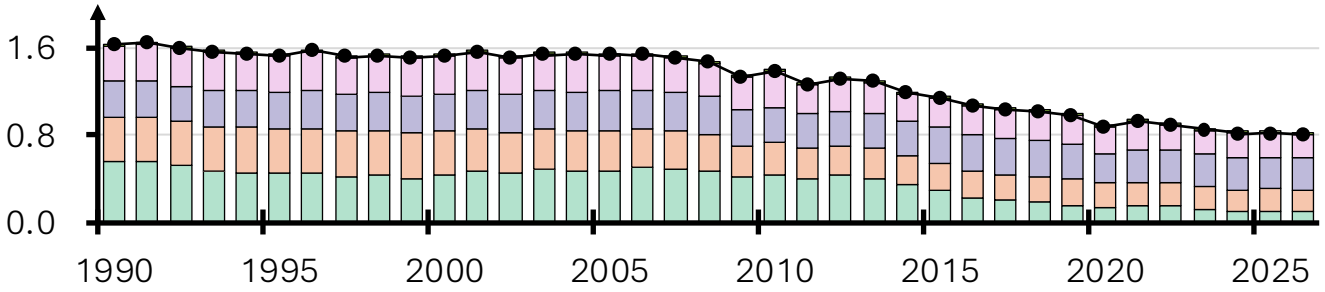
[1] Industry includes combustion and process emissions.

2.8 United Kingdom

United Kingdom: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



United Kingdom: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

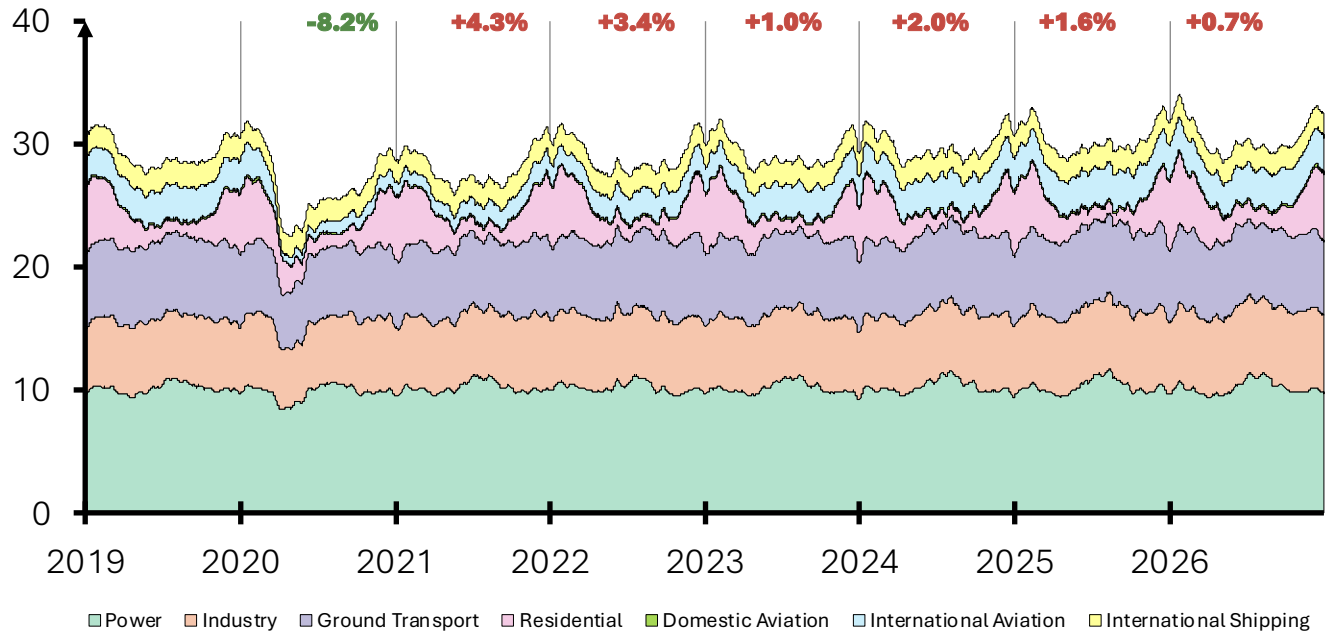
United Kingdom: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	0.10	0.09	-6.2%
Industry[1]	0.20	0.20	-0.1%
Ground Transport	0.29	0.29	-1.5%
Residential	0.22	0.22	-1.4%
Domestic Aviation	0.01	0.01	+1.7%
Total	**0.83**	**0.81**	**-1.7%**

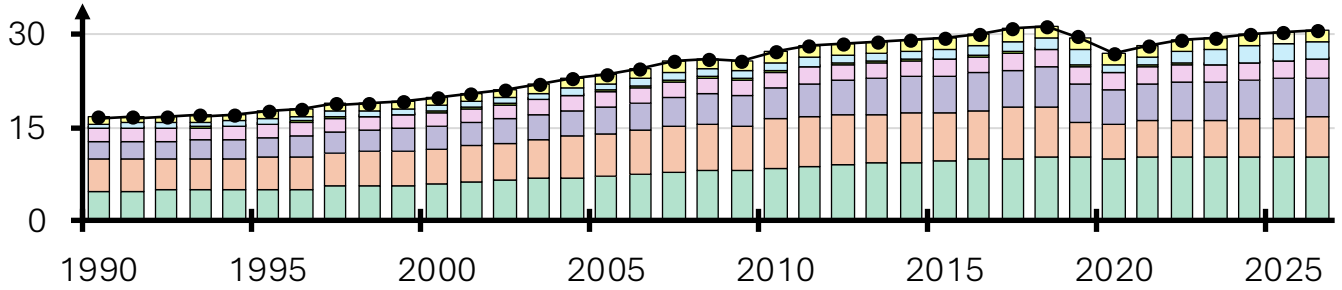
[1] Industry includes combustion and process emissions.

2.9 Rest of the World (ROW)

ROW: daily CO_2 emissions, 2019–2026, Mt CO_2/day (14-day mean)



ROW: annual mean daily CO_2 emissions, 1990–2026



Source: Carbon Monitor · Aug 2026 release. 2026P includes Sep–Dec projections.

ROW: 2026P vs 2025

Mt CO_2 per day	2025	2026P	Change
Power	10.31	10.24	-0.7%
Industry[1]	6.18	6.34	+2.5%
Ground Transport	6.44	6.21	-3.6%
Residential	2.69	3.09	+14.8%
Domestic Aviation	0.16	0.17	+3.9%
International Aviation	2.79	2.81	+0.6%
International Shipping	1.85	1.79	-3.0%
Total	**30.43**	**30.65**	**+0.7%**

[1] Industry includes combustion and process emissions.

Carbon Monitor



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Appendix

3.1 Methodology

➢ **Daily CO_2 emission estimates**

We calculate daily CO_2 emissions since January 2019, drawing on hourly datasets of electricity production and CO_2 emissions in 56 countries (including the substantial variations in carbon intensity associated with electricity production), three different indexes of daily vehicle traffic/mobility in 500 cities worldwide, monthly production data for cement, steel and other energy-intensive industrial products in 73 countries, daily aircraft transportation activity data and proxies for residential building emissions.

Details about the estimation of sectoral emissions can be accessed here.

➢ **Carbon Monitor–IPCC sector mapping**

IPCC Sector	CM Sector
1.A.1.a. Public electricity and heat production	Power
1.A.1.b. Petroleum refining	Industry
1.A.1.c. Manufacture of solid fuels and other energy industries	Industry
1.A.2. Manufacturing industries and construction	Industry
1.A.3.a. Domestic aviation	Domestic Aviation
1.A.3. Transport (excluding 1.A.3.a)	Ground Transport
1.A.4. Other sectors	Residential
1.A.5. Other	Residential
2. Total industrial processes	Industry

2026 projection and aggregation

Daily estimates through 31 August 2026 use the supplied co2 field. Values for 1 September–31 December 2026 use the supplied yhat projection; the forecasting model is not refitted for this report.

Annual emissions are the sum of daily values. Annual mean daily emissions divide each year's total by its calendar-day count. Country profiles show 14-day centered averages; smoothing is separated at the projection boundary.

National totals exclude international aviation and shipping. All international bunkers are assigned to ROW and included in the world total, following the report's existing accounting convention.

Historical values for 1990–2018 are retained from the source report; 2019–2026 use the August 2026 release. Daily prediction bounds are not combined into an annual confidence interval because the required error dependence is not supplied.

3.2 Further Reading

Near-real-time daily CO_2 datasets:

- **Carbon Monitor**: Global daily CO_2 emissions, https://carbonmonitor.org
- **Carbon Monitor - China**: Daily CO_2 emissions over 30 provinces in China, https://cn.carbonmonitor.org
- **Carbon Monitor - Europe**: National daily CO_2 emissions over 30 European countries, https://eu.carbonmonitor.org
- **Carbon Monitor - Power:** Global daily type-specific power generation data, https://power.carbonmonitor.org
- **Carbon Monitor - Cities:** Daily CO_2 emissions in cities, https://cities.carbonmonitor.org
- **GRACED**: Global daily CO_2 emission maps, https://carbonmonitor-graced.com

Related papers:

- Deng, Z., Zhu, B., Davis, S.J. *et al*. **Global carbon emissions and decarbonization in 2024**. *Nature Reviews Earth & Environment* **6**, 231–233 (2025).
- Liu, Z., Deng, Z., Davis, S.J. *et al*. **Global carbon emissions in 2023**. *Nature Reviews Earth & Environment* **5**, 253–254 (2024).
- Liu, Z., Deng, Z., Davis, S. *et al*. **Monitoring global carbon emissions in 2022**. *Nature Reviews Earth & Environment* **4**, 205–206 (2023).
- Liu, Z., Deng, Z., Zhu, B. *et al*. **Global patterns of daily CO_2 emissions reductions in the first year of COVID-19.** *Nature Geoscience* (2022).
- Davis, S.J., Liu, Z., Deng, Z. *et al*. **Emissions rebound from the COVID-19 pandemic**. *Nature Climate Change* **12**, 412–414 (2022).
- Liu, Z., Deng, Z., Davis, S.J. *et al*. **Monitoring global carbon emissions in 2021**. *Nature Reviews Earth & Environment* **3**, 217–219 (2022).
- Liu, Z., Ciais, P., Deng, Z. *et al*. **Near-real-time monitoring of global CO_2 emissions reveals the effects of the COVID-19 pandemic**. *Nature Communications* **11**, 5172 (2020).
- Liu, Z., Ciais, P., Deng, Z. *et al*. **Carbon Monitor, a near-real-time daily dataset of global CO_2 emissions from fossil fuel and cement production**. *Scientific Data* **7**, 392 (2020).

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