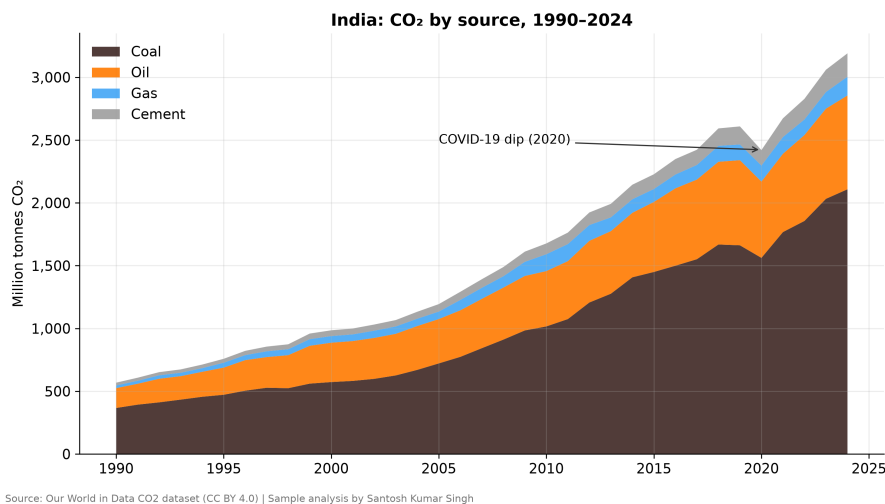
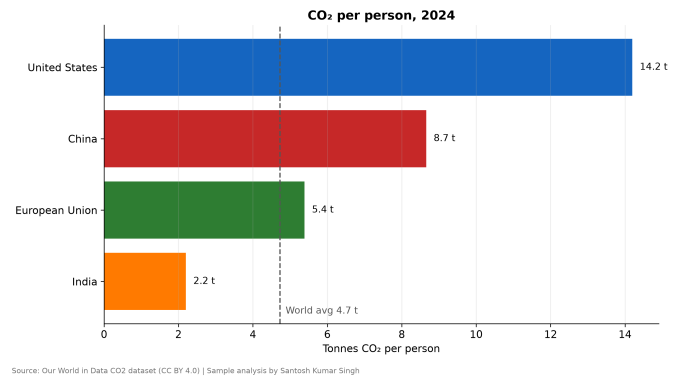
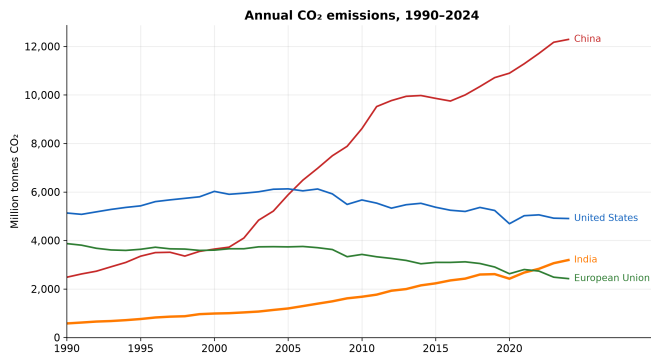


India's CO₂ Emissions in Context, 1990–2024

Sample / demo analysis for portfolio purposes. Public data: Our World in Data (CC BY 4.0).

- **Scale:** India emitted 3,194 Mt CO₂ in 2024 (8.3% of the world), up from 578 Mt in 1990 – a 5.16% compound annual growth rate, the fastest of the four economies compared.
- **Per person it is still low:** 2.2 t per person vs a world average of 4.73 t, China 8.66 t and the US 14.2 t.
- **Momentum:** over the last decade (2014–2024) India grew 4.05%/yr, China 2.11%/yr, while the US (-1.2%/yr) and EU (-2.23%/yr) declined.
- **Volatility:** India's median year-on-year growth is 5.42% (std. dev. 3.28 pts); the sharpest drop was 2020 (COVID-19), fully recovered by 2021.
- **Energy mix:** coal is 66.0% of India's 2024 fossil+cement CO₂, oil 23.4%, cement 5.8%, gas 4.7% – the trend is driven by coal power.

Economy	CO2 2024 (Mt)	Per capita (t)	World share	CAGR 1990–2024	CAGR 2014–2024
India	3,194	2.20	8.3%	5.16%	4.05%
China	12,289	8.66	31.8%	4.82%	2.11%
United States	4,904	14.20	12.7%	-0.13%	-1.20%
European Union (27)	2,426	5.39	6.3%	-1.36%	-2.23%
World	38,599	4.73	100.0%	1.57%	0.85%



Method: Python (pandas, matplotlib). Descriptive stats per country in stats/descriptive_stats_by_country.csv; key metrics in stats/key_metrics.csv. Reproduce with *python analysis.py*.