

01 WHO IS EMITTING?

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Current global emissions

As per World Resources Institute's Climate Analysis Indicators Tools (CAIT) version 2.0 BETA, USA has less than 5 per cent of the world's population, but accounts for 17 per cent of the global carbon dioxide emissions in 2010. India, with nearly 18 per cent of global population accounted for 5 per cent of the emissions. China stood at the top of the chart with over 27 percent emissions and around 20% of the global population.

Table 1: Share of global CO₂ emissions and population, 2010

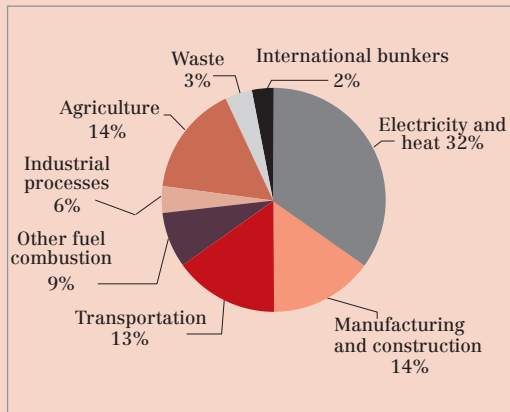
Country	Total CO ₂ emissions in 2010 (Mt CO ₂)	Share of global CO ₂ emissions in 2010 (%)	Share of world population in 2010 (%)
China	8,895.7	27.04	19.51
United States of America	5,670.3	17.24	4.51
European Union (27)	4,056.7	12.33	7.33
Germany	808.2	2.46	1.19
United Kingdom	532.7	1.62	0.91
Italy	434.9	1.32	0.88
France	397.8	1.21	0.95
Poland	312.7	0.95	0.56
Spain	337.3	1.03	0.67
The Netherlands	256.2	0.78	0.24
India	1,710.9	5.20	17.86
Russia	1,667.4	5.07	2.08
Japan	1,205.5	3.66	1.86
South Korea	604.6	1.84	0.72
Canada	552.9	1.68	0.50
Iran	592.0	1.80	1.08
Saudi Arabia	491.8	1.49	0.40
Mexico	449.4	1.37	1.65
Indonesia	439.7	1.34	3.50
Australia	427.9	1.30	0.32
Brazil	480.4	1.46	2.84
South Africa	478.4	1.45	0.73
Ukraine	285.8	0.87	0.67
Turkey	300.6	0.91	1.06
Thailand	290.0	0.88	1.01
Kazakhstan	181.6	0.55	0.24
Rest of world	4,117.9	12.52	32.12

Source: Climate Analysis Indicators Tool (CAIT) Version 2.0 BETA (Washington, DC: World Resources Institute, 2013)

Sectors: Where emissions come from

The World Resources Institute (WRI) and IEA also examined global, national and sectoral CO₂ emissions. The following graphical representations and sectoral analysis are based on this data.

Graph 1: World GHG emissions by sector in 2010 (excludes land use change)



Source: Climate Analysis Indicators Tool (CAIT) Version 2.0 BETA (Washington, DC: World Resources Institute, 2013)

Table 2: World GHG emissions by sector in 2010 (excludes land use change)

Sector	Percentage share of global GHG emissions
Energy	74
<i>Electricity & heat</i>	32
<i>Manufacturing & construction</i>	14
<i>Transportation</i>	13
<i>Other fuel combustion</i>	9
Industrial processes	6
Agriculture	14
Waste	3
International bunkers	2

Source: Climate Analysis Indicators Tool (CAIT) Version 2.0 BETA (Washington, DC: World Resources Institute, 2013)

Electricity and heat

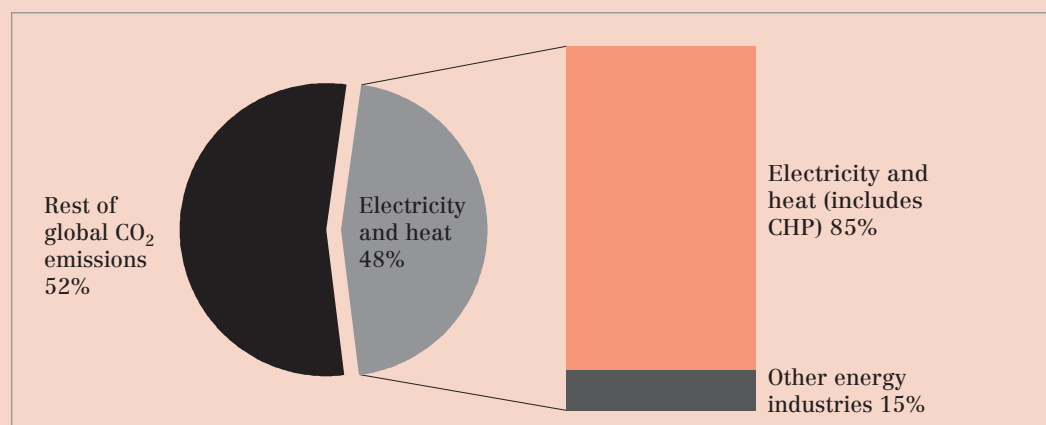
Electricity and heat account for about 41 per cent of global CO₂ emissions, making it the largest sector. In terms of global share of CO₂ emissions from electricity and heat, China US and EU-27 take up the top spots 29, 19, and 11 per cent, respectively, of the global total, with India following at the fourth position. The 10 largest emitters account for 82 per cent of the emissions from this sector. The major per capita emitters, in order, are Middle East countries, Australia and the US.

Table 3: Share of CO₂ emissions from electricity and heat

Country	Percentage of world total (2010)
China	28.7
USA	18.5
EU-27	11.0
India	7.0
Russia	6.7
Japan	3.7
South Korea	2.2
Australia	1.6
South Africa	1.9
Canada	0.9
Brazil	0.4
Rest of World	17.4

Source: International Energy Agency (IEA): CO₂ emissions from fuel combustion, highlights (2012 edition)

Graph 2: Emissions from electricity and heat, 2010

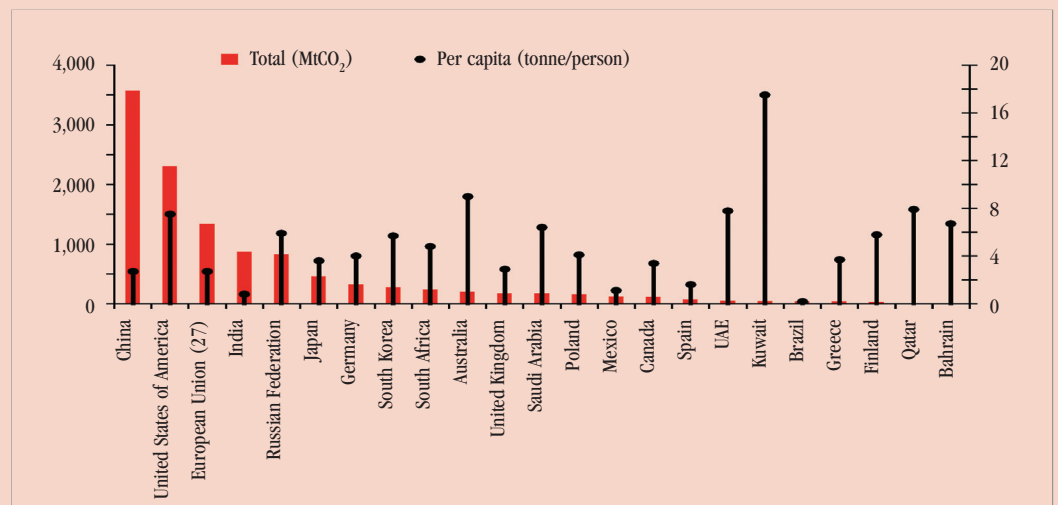


Note: CHP - Combined heat and power

Source: International Energy Agency (IEA): CO₂ emissions from fuel combustion, highlights (2012 edition)



Graph 3: Per capita CO₂ emissions from electricity and heat, 2010

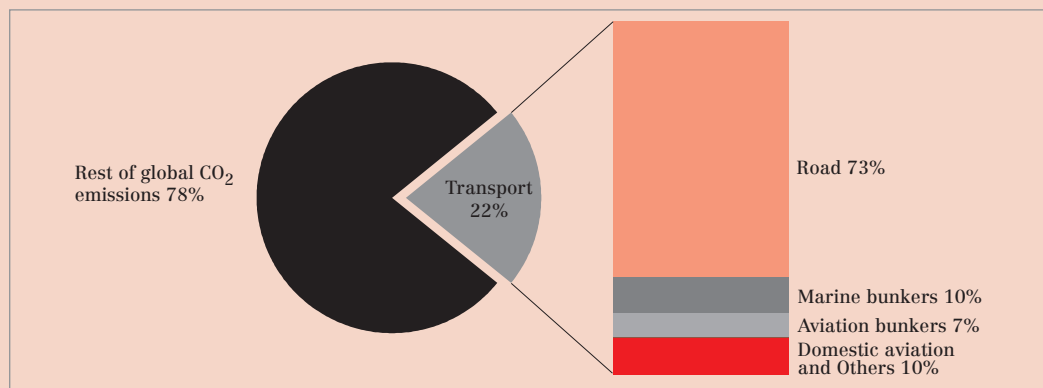


Source: International Energy Agency (IEA): CO₂ emissions from fuel combustion, highlights (2012 edition)

Transport

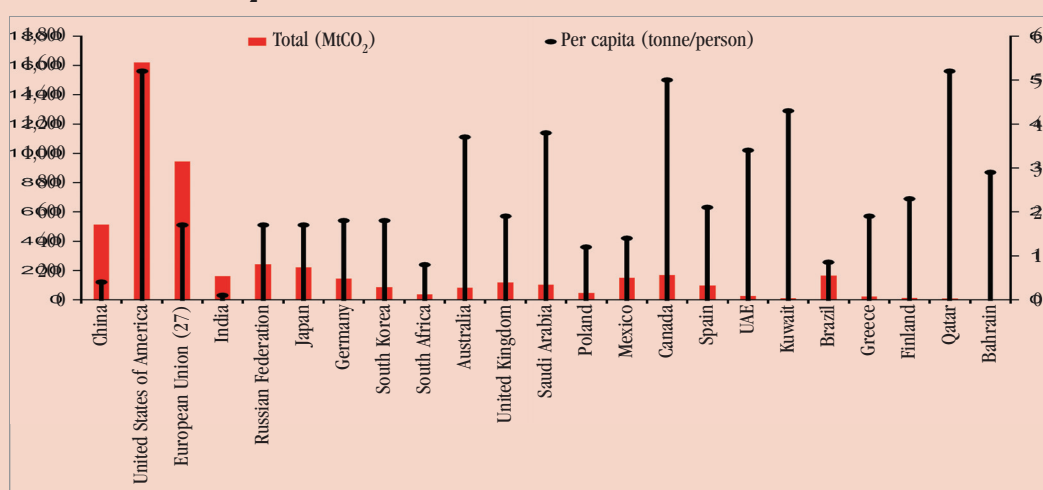
Transport accounted for about 22 per cent of global CO₂ emissions. Within this sector, road transport, at 74 per cent of CO₂ emissions accounted for the largest share. Aviation amounted to about 7 per cent. Interventions in this sector tend to be oriented around safety and fuel efficiency regulations and development of transportation infrastructure like roads, highways, seaports, and airports. However, difficulties arise in attributing emissions to countries. Ground transport is relatively easy to attribute although there some exceptions, such as in Europe, where emissions almost always occur within the same national boundaries where fuels are purchased. Nearly all emissions for international transport, however, occur in or over international territory, raising ambiguities concerning attribution.

Graph 4: CO₂ emissions from transportation, 2010



Source: International Energy Agency (IEA): CO₂ emissions from fuel combustion, highlights (2012 edition)

Graph 5: Per capita CO₂ emissions from transportation, 2010



Source: International Energy Agency (IEA): CO₂ emissions from fuel combustion, highlights (2012 edition)



Emissions: India

The reliable estimate of India's inventory comes from the government's 2010 report produced by Indian Network of Climate Change Assessment (INCCA) – a research body commissioned by Union ministry of environment and forests. The data pertains to the year 2007. The government is working on its National Communication which has to be submitted to the UN secretariat in the coming years.

