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WHO IS EMITTING WHAT?

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Current global emissions

As per the latest data, China, comprised of 19.2 per cent of the world's population, was the world's leading emitter of greenhouse gas (GHG) with an almost 24.5 per cent share in 2012. The United States, about 4.5 per cent of world's population, was the second largest emitter of GHG with almost 13.9 per cent of the global share. India, with around 17.6 per cent of the global population, accounted for 6.7 per cent of the emissions.

Tables 1 & 2 list the emission GHGs in different countries.

Table 1: GHG emissions in Africa in 2012

Country	Emissions in MT CO ₂ eq (excluding land-use change and forestry)
South Africa	462.60
Egypt	288.19
Nigeria	296.68
Kenya	59.48
Ghana	27.34
Congo (Dem. Republic)	36.31
Madagascar	27.09
Africa (total)	2,679.37
Africa (per capita)	2.52

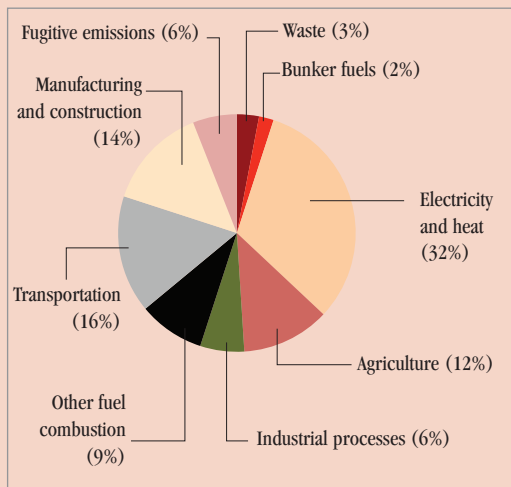
Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

Table 2: Share of global GHG emissions and population, 2012

Country	Total GHG excluding land-use change and forestry in 2012 (MT CO ₂ eq)	Share of world population in 2012 (%)	Share of global GHG emissions in 2012 (%)	Per capita emission in 2012 (tonne CO ₂ eq)
China	10,975.5	19.2	24.5	8.1
United States	6,235.1	4.5	13.9	19.9
European Union-28 states	4,399.1	7.1	9.8	8.8
India	3,013.8	17.6	6.7	2.4
Russian Federation	2,322.2	2.0	5.2	16.2
Africa	2,679.4	15.1	6.0	2.5
Japan	1,344.6	1.8	3.0	10.5
Germany	887.2	1.1	2.0	11.0
South Korea	693.3	0.7	1.5	13.9
Iran	715.0	1.1	1.6	9.4
Canada	714.1	0.5	1.6	20.5
Saudi Arabia	527.0	0.4	1.2	18.6
Brazil	1,012.6	2.8	2.3	5.1
Mexico	723.9	1.7	1.6	6.0
United Kingdom	553.4	0.9	1.2	8.7
Indonesia	760.8	3.5	1.7	3.1
Italy	465.2	0.8	1.0	7.8
Australia	648.2	0.3	1.4	28.5
South Africa	462.6	0.7	1.0	8.8
France	457.3	0.9	1.0	7.0
Turkey	419.7	1.1	0.9	5.7
Poland	367.3	0.5	0.8	9.5
Ukraine	390.3	0.6	0.9	8.6
Spain	339.4	0.7	0.8	7.3
Thailand	375.7	0.9	0.8	5.6
Kazakhstan	290.9	0.2	0.6	17.3
Netherlands	205.4	0.2	0.5	12.3
Rest of the world	67,33.2	18.1	15.0	5.3

Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

Figure 1: World GHG emissions by sector in 2012 (excluding land-use change)



Source: Climate Analysis Indicators Tool (CAIT) Version 2.0 BETA (Washington, DC: WRI, 2014)

Sectors: Where emissions come from

We have also examined global, national and sector-wise GHG emissions.

Electricity and heat

Electricity and heat accounted for 32 per cent of global GHG emissions, making it the largest sector. Transportation accounted for 16 per cent and manufacturing and construction for 14 per cent of GHG emissions. With regard to global share of emissions from

Table 3: Share of GHG emissions from electricity and heat, 2012

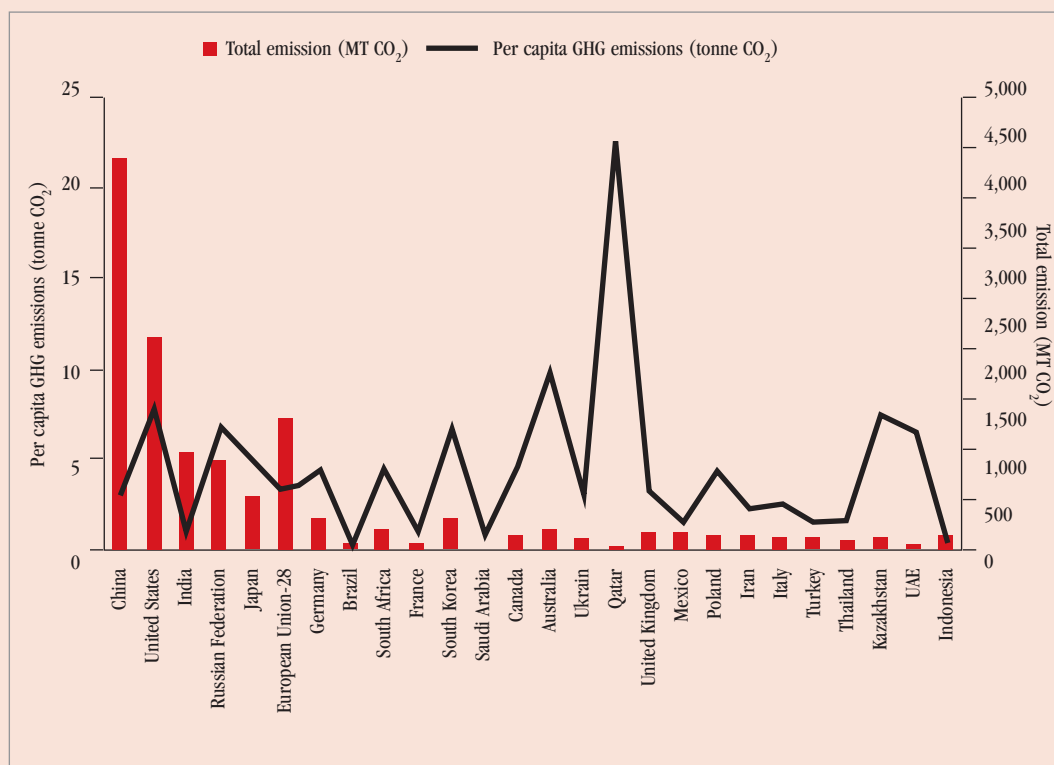
Country	Percentage of world total (2012)
China	29.55
USA	15.89
European Union-28	9.93
Russian Federation	6.67
India	7.45
Japan	4.08
South Korea	2.30
Australia	1.53
Canada	1.04
South Africa	1.58
Brazil	0.54

Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

electricity and heat, China, the US and EU-28 took the top spots, with around 30, 16 and 10 per cent respectively of the global total. India followed in the fifth position. The top six countries, including the EU-28, account for over 70 per cent of emissions from electricity and heat.

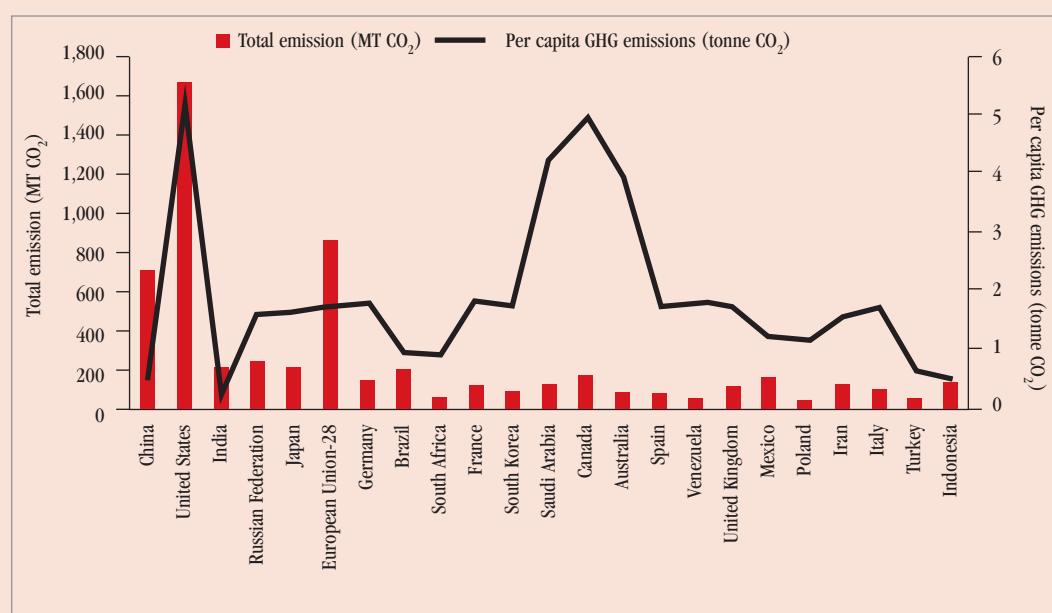
Graph 2 indicates that while China and India figure in the top five total emitters, the picture is completely different when per capita emissions are taken into account. The black line shows that India's and China's

Figure 2: Total per capita GHG emissions from electricity and heat, 2012



Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

Figure 3: Total and per capita emissions from transport, 2012



Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

per capita emissions from heat and electricity are very low compared to that of developed countries like US, Japan, Australia and Canada. Qatar stands out in the list.

Transport

The transport sector is responsible for 16 per cent of global GHG emissions and is expected to grow to one-third by 2050. *Graph 3* indicates that total and per capita emissions from the transport sector are highest in the US.

Emissions: India

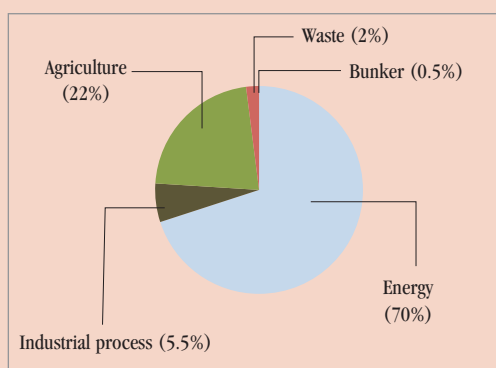
The energy sector accounted for the most GHG emissions among all sectors. *Graph 4* shows that the

energy sector contributed 70 per cent of total GHG emissions while the agriculture sector accounted for 22 per cent. *Graph 5* shows the break-up of the energy emissions by its various sub-sectors.

Total GHG emissions (excluding land-use change and forestry) from India in 2012 were 3013.77 million tonnes of CO₂ eq of which:

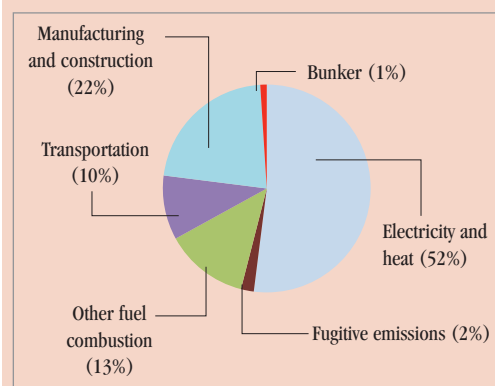
- CO₂ emissions were 2075.18 million tonnes
- CH₄ emissions were 626.98 million tonnes
- N₂O emissions were 267.86 million tonnes
- Per capita CO₂ emissions for 2012 were 1.68 tCO₂
- Electricity and heat, at 52 per cent, accounted for highest GHG emissions by sector

Figure 4: Sector-wise world GHG emissions, 2012



Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute

Figure 5: GHG emissions in India by energy sub-sector, 2012



Source: CAIT Climate Data Explorer. 2015. Washington, DC: World Resources Institute