

Mapping global pollution: The world's biggest polluters

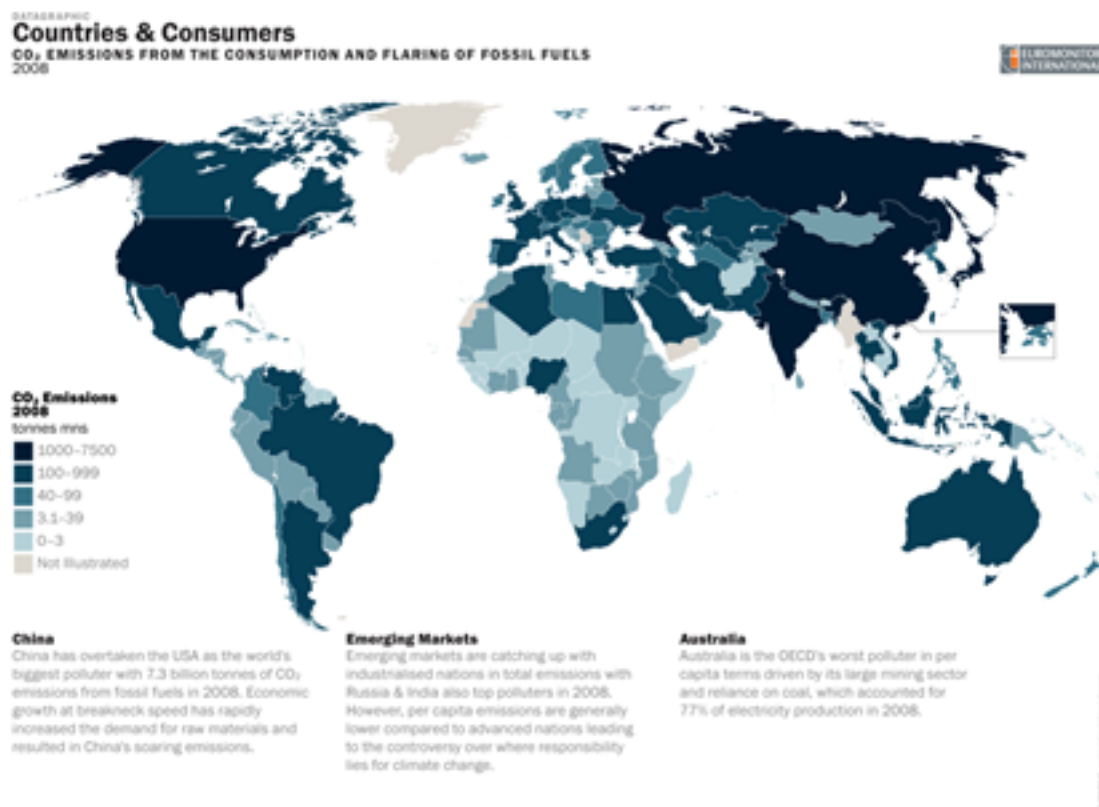
Euromonitor International

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The United Nations Climate Change Summit is taking place in December 2009 in Copenhagen with the aim of coming up with a replacement to the Kyoto Protocol for global emissions targets, which are due to expire in 2012. 192 countries are involved but a divide exists between emerging markets and advanced economies on where responsibility lies for reducing emissions. China is the world's largest polluter followed by the USA but emerging markets generally lag behind in terms of per capita emissions.

Chart 1 CO2 emissions from the consumption and flaring of fossil fuels: 2008

'000 tonnes



Source: *Euromonitor International from Energy Information Administration of the US Government, International Energy Annual*

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Emissions from energy (largely fossil fuels) are estimated to account for over 80% of global carbon dioxide emissions. Energy consumption across the world is projected to continue accelerating, especially as large emerging markets develop rapidly and are forecast to have the highest economic growth levels:

- The Energy Information Administration (EIA) estimates that in 2030, energy-related carbon dioxide emissions from non-OECD countries will exceed those from OECD countries by 77%.

China and USA together accounted for 42.3% of global CO₂ emissions from fossil fuels in 2008. As the world's biggest polluters, China and the USA are expected to take the lead in committing to tackling climate change:

- China is the world's biggest polluter with 7.3 billion tonnes of CO₂ emissions from fossil fuels in 2008. Rapid economic growth (averaging 10.0% annually over 2000-2008) and a large manufacturing sector have resulted in China overtaking the USA as the biggest polluter. In November 2009, China announced ahead of the UN summit that it would decrease its carbon intensity (carbon dioxide emissions per unit of GDP) by 40-45% by 2020 from 2005 levels;

- The USA is the second largest polluter in the world with 5.9 billion tonnes of CO2 emissions from fossil fuels in 2008. The USA announced in November 2009 that it would reduce carbon emissions by 17% by 2020 from 2005 levels.

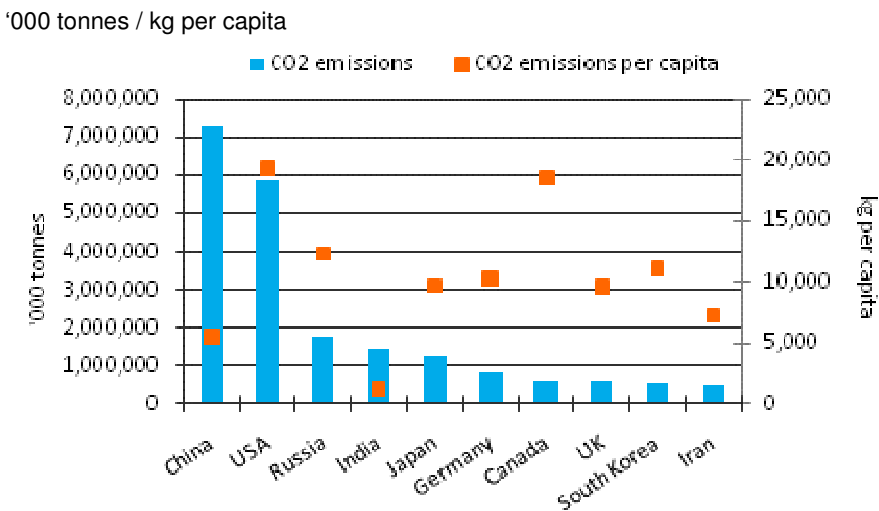
While emerging markets are catching up with developed markets in terms of total emissions (with Russia and India also amongst the top polluters), their per capita emissions are generally much lower than advanced economies leading to controversy of where responsibility lies for climate change. Many emerging markets argue that emissions targets will come at the expense of their development:

- North America's per capita CO2 emissions from fossil fuels, for example, was 19,251 kg per capita in 2008 compared to 3,379 kg per capita in Asia Pacific;
- Australia is the OECD's biggest polluter in per capita terms stemming from its large mining sector and reliance on coal at 20,619 kg per capita in 2008. In comparison, China had 5,508 kg per capita in the same year and Nigeria just 712 kg per capita.

Another sticking point in the debate on where responsibility lies is the problem that Western outsourcing to emerging markets, driven by cheaper labour and production costs, has contributed to both rising economic growth and the acceleration of carbon emissions in these countries. Large manufacturing hubs in developing economies are producing cheaper goods for the benefit of Western consumers. Western economies are therefore shifting their carbon pollution to emerging markets as they move their manufacturing and production bases.

National and International climate targets will have significant implications for businesses who have to comply with new regulations and changes in technologies, as well as consumers who may face rising energy costs as green technology is initially costly to implement.

Chart 2 Top 10 biggest CO2 emitters and their per capita emissions: 2008



Source: *Euromonitor International from Energy Information Administration of the US Government, International Energy Annual*

http://www.euromonitor.com/countries_consumers.aspx>Countries and Consumers