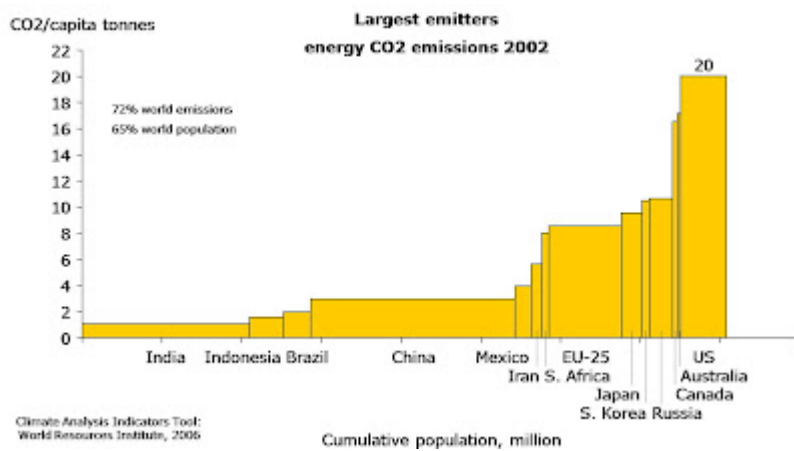


When rich countries make emissions cuts in poor countries



[Yvo de Boer](#), head of the UN Framework Convention on Climate Change ([UNFCCC](#)) argues that richer countries should be able to buy as much as *all* their emissions reductions through investments in emission reductions in developing

countries [see [BBC / interview](#)]. Given the global atmosphere is indifferent to where on the surface the reductions take place, there is an argument that countries with obligations to cut should make the emissions cuts where it's most cost effective.

As long as the rich countries do the paying, then they would not be shirking their responsibilities. Or so the argument goes. And this argument is more plausible than its critics admit - the polluter is still paying, but in theory paying where the cuts are most efficient and thus squaring equity and efficiency objectives. However, the argument is also wrong. The main problem is long-term structural change...

Underpinning data

As the chart shows, a large number of people in the world have relatively low emissions - for example, 1 tCO₂/capita for India and around 3 tCO₂/capita for China compared to about 9 in the UK and about 20 in the United States - with a world average of 4. [Data from the excellent [Climate Analysis Indicators Tool](#)]. The trouble is that if the world average crept up to where Europeans are now (EU-25 = about 8 tCO₂/capita), then we would have a doubling of emission, whereas we need to cut global emissions by at least 50% to have a hope of averting dangerous climate change and keeping temperature rise close to 2 degrees C - probably more like 70-80%. The problem is that the European carbon intensive lifestyle is not sustainable if replicated even partly around the world - yet for many countries European prosperity and living standards would be a

highly desirable outcome for economic growth. *This is where they would like to head* - but if they succeeded we'd all be under water.

So where do we need to go...?

Both developed and developing countries need to converge to a model of prosperity/subsistence dependent on emitting **much less** carbon per head than current rich countries - and for the developed countries that means major structural change, and for everyone a different model of development. If we need at least a global 50% emissions cut to stabilise the climate at 550ppm [see [Stern Review table 8.2](#) on the Challenge of Stabilisation - and this may not be enough], and we expect a 50% increase in population, and the current world average emissions are about 4tCO₂/capita, simple maths suggests we need to move to a global average of about 1.3 tCO₂/capita by the end of the century ie. about where India is now. And within that, we'd have to accommodate the economic aspirations of the 6-7 billion who will be living developing countries. Even allowing for trading, that model is will fail if it the current developed countries have 10tCO₂/capita in 2050 and beyond - let alone the American 20 tonnes/capita.

Main objectives - how do we decide the right amount reduce domestically and through trading mechanisms?

There are three main objectives to consider when thinking about offsetting or trading emissions between rich and poor countries:

1. Finding the globally most cost-effective reductions for those with obligations to reduce emissions
2. Supporting developing countries' participation in the Kyoto Protocol by transferring investment funds from rich to poor
3. Creating structural change in the domestic economies of rich countries towards a low carbon future

These objectives are in tension - as 1&2 will tend to mean more trading and meeting more of our commitments in poor countries, and 3 will mean less. economics turns on short-run and long-run efficiency. In the short run, the first two above dominate and lead to the conclusions drawn by Mr. de Boer. Take a longer view however, and it is apparent for the really deep cuts to be made later in the century, changes to major systems are required. So, change to the housing stock, transport system, product design and manufacturing, social geography,

consumer preferences, commercial energy use, energy production etc. These are slow-changing systems, but large changes can be made over decades (and of course we are wishing we had introduced tougher building regs back in the 70s and we'd be doing a lot better now). The long-run efficient approach will start to change these systems now, even if in the short run there are more efficient alternatives available, because we recognise that changing them suddenly in the future will be more costly and disruptive, and - frankly - less likely to happen. It is important to look at efficiency over the whole period over which emissions reductions are required.

Supplementarity - an important word, even if made up

The Kyoto negotiators have tried to reconcile this by defining something with the unspeakable title of the '[supplementarity principle](#)'. Its origin is in [Decision 15/CP.7](#) (part of the Marrakesh Accords of the Kyoto Protocol agreed in 2001) which set out guidelines for use of mechanisms like the [Clean Development Mechanism](#).

... the use of the mechanisms shall be supplemental to domestic action and that domestic action shall thus constitute a significant element of the effort made by each Party included in Annex I to meet its quantified emission limitation and reduction commitments

What exactly this word 'supplemental' means is far from clear... it was originally thought to mean 'at least half' of the emissions reductions must be done domestically (an EU position that was not formalised), but there is no settled definition. Mr de Boer is effectively calling for this principle to be abandoned as unnecessarily constraining.

Is it important?

Crikey! Yes indeed it is. This is all about the signals that governments send to investors, manufacturers, engineers, architects, shoppers, R&D labs etc. If the message is "we'll be doing it all in China" then they will not see a market opportunity in providing green energy, low carbon products, vehicles, buildings & services for a carbon-constrained market. It's a crucial issue for the EU Emissions Trading Scheme [see WWF report: [Emissions Impossible](#) showing that most or all of the cuts made in this system can come from developing countries through the CDM] and the Climate Change Bill for exactly these reasons: just how carbon

constrained is the UK and Europe going to become?

Note -forests...

On a related subject... the numbers above are for energy-related CO2 emissions. Some developing countries become big contributors when forests are taken into account - and Malaysia ends up with the highest emissions per capita and Brazil and Indonesia enter the top four total emitters (though of course most of the deforestation serves timber, pulp and paper demand in richer countries). perhaps rich countries could start by doing more to stop the demand for Brazilian, Indonesian and Malaysian forest products. See my charts below showing per capita emissions and total emissions, including non-CO2 gases and land use changes (ie. mostly deforestation):

