

Yet again, given the scale of the increases in China, India and South America, is all this effort really worth it? The answer is an unequivocal yes. Emissions reductions are a bit like taxes: you may not like them, and your individual contribution may seem too measly to matter, but multiply that by several million and you can start to move mountains.

"Your contribution might not seem to matter, but multiply that by millions and you can move mountains"

Scaled up to global level, these cuts become highly significant. If 100 million people in richer nations cut their CO₂ emissions by 10 tonnes per year, on average, that would save a billion tonnes of CO₂ emissions a year, or around 5 per cent of the current global total. That won't solve the problem on its own, but it would create space for China and India to grow their economies and their carbon emissions for another year. Then we would need to add another 100 million people for the next year. And so on and so on, until new low-carbon technologies become cheap enough for developing countries like China and India to adopt them without undermining their economic development.

The global community would prefer not to allow the developing world to continue increasing their emissions indefinitely. Next month, diplomats and politicians will gather in Bali, Indonesia, to discuss what to do when the Kyoto protocol expires in 2012. Many will demand limits on the growing emissions of developing countries, including China and Indonesia, which was recently revealed to have the world's third-highest emissions - when the carbon sinks it has lost to the logging of rainforests and the draining of tropical peat swamps is taken into account.

Negotiating limits for China will not be easy. It may be about even with the US as the top emitter of CO₂, but divide its output by its total population and the figures look rather different. The typical Chinese citizen is responsible for less than one-quarter of the emissions of the typical American: 4.8 tonnes compared to 20 tonnes. Individual Indians and Africans have emissions averaging 1 tonne or less (see Diagram).

With this in mind, a growing number of politicians are suggesting a fairer approach to cutting carbon, based not on national emissions but on setting tradeable individual carbon quotas.

Ultimately, we will need to bring global emissions down low enough to match nature's ability to absorb them, which may be as low as 10 to 20 per cent of today's global emissions. But if a significant number of people change their ways and demand greener products, that will send a big signal to the market, encouraging the supply of green energy, low-carbon products, organic food and so on.

So while it may be tempting to think that only governments can act on the scale necessary to make real change by rationing carbon and setting tax regimes to provide the necessary carrots and sticks for development, there is no escaping the fact that individuals can make a difference by acting just a little bit greener. The big picture seems daunting but it can be done. And we have to start somewhere. So don't give up.

What's your quota?

Much of the carbon dioxide that is warming us today has been in the atmosphere for decades, even centuries. While developed countries only contribute about 50 per cent of emissions today, they are responsible for 80 per cent of the human-made CO₂ that is already there.

Cutting emissions needs to be done in as fair a way as possible, and since Earth has a limited capacity to absorb CO₂, one equitable solution would be to divide the remaining capacity among the world's population. Many see an idea known as "contraction and convergence" as the best way forward. This idea has been kicking around for more than a decade, but is currently most associated with a British NGO called the Global Commons Institute. If implemented, it will mean that global emissions have to contract overall, while converging on a single per-capita figure. Current emissions for a global citizen are about 4 tonnes of CO₂ per year, on average. This figure will ultimately have to drop to below 1 tonne.