

## Privatising the atmosphere: A solution or dangerous con?

Mike Childs

In 1833 William Forster Lloyd wrote a pamphlet (Lloyd, 1833), which described what has later become known as the ‘tragedy of the commons’ (see Hardin, 1968). It described how self-interested subsistence farmers would destroy common land by overstocking it with cattle. If you are struggling to feed your family then short-term self-interest is understandable, although there are numerous examples of how communities across the globe have worked collectively to sustain their local environments for hundreds or even thousands of years.

Climate change is often described as the new tragedy of the commons as self-interest prevents countries from living within their fair share of the planet’s atmospheric carbon carrying capacity. Carbon trading is promoted, largely by wealthy countries, as the silver bullet to solve this age old problem. Divide the atmospheric carbon space and allow countries and corporations to buy and sell it (much like some economists responded to Lloyd’s argument by stating that assigning property rights to the commons would solve the problem). Is this a great idea or dangerous con? This note examines this question and concludes that the answer is the latter.

The first question that should be asked in devising an international climate strategy, including setting up a global carbon trading scheme, is how much atmospheric carbon space is left? The next question is how should it be shared out? On the face of it, these appear to be simple questions, but, of course, in practice they are devilishly complex.

Two uncertainties make the maths difficult:

- What impacts will result from different global average temperature increases and what impacts are acceptable.
- Scientific uncertainty on how sensitive the climate is to carbon pollution.

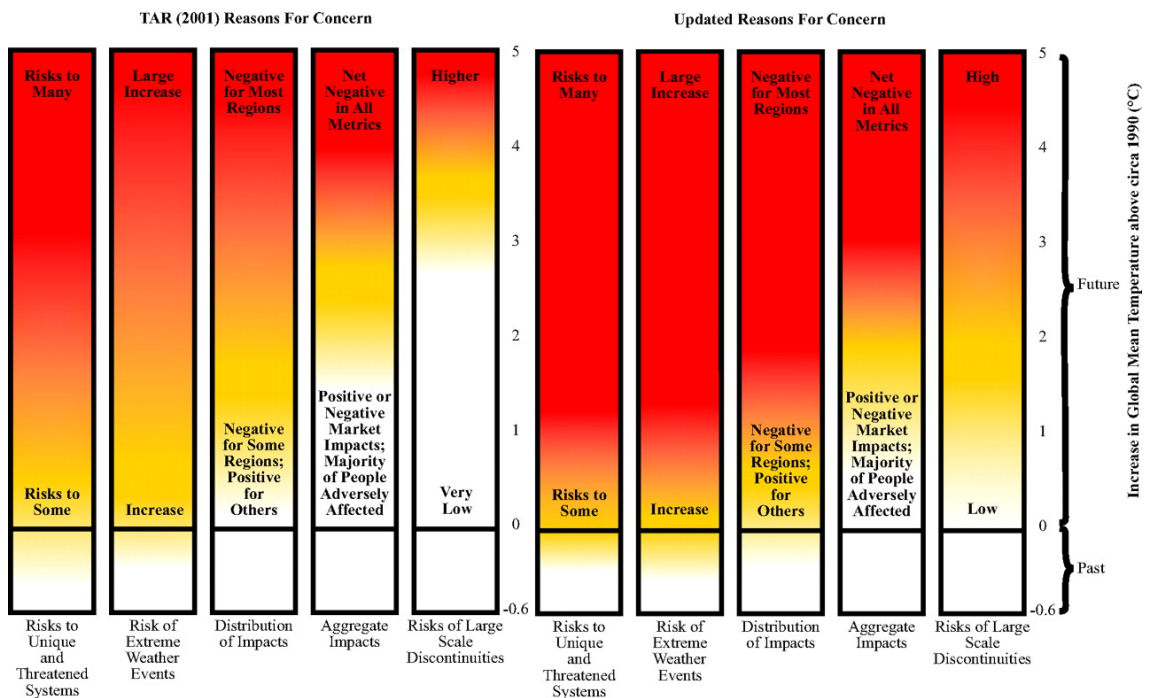
But the greatest difficulty of all is how to share the remaining atmospheric carbon carrying capacity between countries.

The recent Durban UNFCCC negotiations and the almost 20 years of negotiations before them have centred on this last difficulty, which is in essence a political and ethical choice and not a scientific one. It is true that debates on climate sensitivity and what a ‘safe’ level of global average temperature increase consists in have occupied a lot of time and space, but nothing compared to the question of how much pollution rich countries should be able to emit and how much poor countries should be able to.

## Size of global carbon budget

What is clear from most analyses of global carbon budgets is that there is not a great deal of atmospheric carbon space left. Rich countries through the G8 have said that to prevent dangerous climate change we need to keep global average temperature increases below 2 degrees compared to the pre-industrial level. By dangerous climate change they mean unacceptable impacts to people and economies as well as too high a risk of positive feedbacks. Positive feedbacks are where increased temperatures create changes on the planet that themselves create further warming, for example warming leading to the release of vast quantities of methane (a powerful greenhouse gas) due to the melting of Siberian permafrost. The choice of 2 degrees was largely informed by scientific research that led to the production of an influential ‘burning embers’ diagram (see diagram 1).

Diagram 1



‘Risks from climate change, by reason for concern – 2001 compared with updated data’  
(Smith et al., 2009: 4134)

The G8 are not explicit about the level of certainty they want in avoiding this 2 degree increase. Uncertainties about climate sensitivity have been used to identify risk levels

from different amounts of carbon pollution (Meinshausen et al., 2009). If the G8 want a low risk of avoiding 2 degrees it gives a much smaller carbon budget than a high risk. For example a 50 per cent chance of avoiding 2 degrees gives a carbon budget of around 2000 GtCO<sub>2e</sub> between 2000 and 2049, whereas an 85 per cent chance of avoiding 2 degrees gives a carbon budget of 1200 GtCO<sub>2e</sub> (500 GtCO<sub>2e</sub> has already been emitted between 2000-2010).

Through the work of setting self-imposed carbon budgets as a result of the Climate Change Act, the UK has been more explicit on this choice through setting in law a UK carbon budget that gives around a 50 per cent chance of avoiding 2 degrees if other countries make similar commitments. A 50:50 chance of avoiding dangerous climate change is, however, not great odds if you live on the front-line of climate change, for example if you are a subsistence farmer in Africa.

Many developing countries argue that a safer temperature target is to keep global average temperatures to less than 1.5 degrees above the pre-industrial level. A recent update to the burning embers diagram certainly suggests that this target is more in line with the original thinking behind the setting of the 2 degree target (diagram 1). Again these countries have not been explicit regarding the level of certainty they want to avoid this temperature target. The nature of the debate and the risks faced by their populations would suggest that they want as high a chance as possible of avoiding temperatures above 1.5 degrees. What this means on the size of the global carbon budget is that there is very little carbon budget left.

## Sharing out the global carbon budget

As stated above, the bigger debate is around how to share out this global carbon budget. Given that even the G8 target implies very limited atmospheric carbon space, the debates have been fierce.

NGOs and developing countries have argued that it would be wrong to ignore the carbon pollution released by rich countries since the industrial revolution. The US American Government argued at the 2009 Copenhagen talks that historic emissions may be interesting for authors of history books but are irrelevant to negotiations. In effect it is like they admit they have eaten half the cake but that this should have no bearing on how much of the remaining cake they should eat. NGOs and developing countries argue that historic emissions should be taken into account, with some advocating a historic base line of pre-industrial revolution, some 1970 and some 1990.

Furthermore, the US American Government argued that emissions reductions should be set using a bottom-up process of countries setting their own voluntary reduction targets (from which carbon budgets can be roughly calculated assuming steady year on year reductions towards these targets). This was the approach of the Copenhagen Accord. The USA pledge amounted to 4 per cent less emissions than 1990 levels by 2020. This bottom-up approach led to the nonsensical position where the Copenhagen Accord on the one-hand sets an aspiration of keeping the temperature increase to less than 2

degrees but the reduction pledges made were in line with a temperature increase of around 4 degrees (Pew Center, 2010).

NGOs and developing countries have argued for a top down mandatory approach based upon a fair share of the global carbon budget which is itself based on population sizes. This 'fair shares' approach, not surprisingly, requires much higher carbon reduction targets for rich countries than the US American Government or other rich countries are currently willing to contemplate.

## Carbon trading

Carbon trading is being pushed strongly by the USA, EU and others as the tool to enable an economically efficient transition to a low carbon economy without breaching any agreed temperature increase. Friends of the Earth, other NGOs and many developing countries have been very critical of this approach. There are four main reasons for this:

- **The global carbon budget to avoid dangerous climate change is too small to allow trading.** If a temperature target of 1.5 degrees is chosen with a reasonable to high chance of avoiding it, then the global carbon budget will be tiny. Carbon trading relies on countries having 'spare' carbon emissions that they can sell to others who do not have enough. Under a tiny carbon budget it is almost certain that no country will have any spare emissions to sell. Rich countries would need to make significant cuts very quickly and developing countries would have to develop predominately through low carbon technologies. The focus on carbon trading is therefore a dangerous distraction from the real job at hand.
- **Double counting.** The IPCC has suggested that rich countries (countries identified in Annex 1 of the Kyoto Protocol) should by 2020 reduce emissions by between 25-40 per cent from a 1990 baseline and developing countries should reduce emissions by 15-30 per cent from their Business-as-Usual trajectories. In the UNFCCC negotiations the UK, EU, USA and others were suggesting that they could use carbon trading to buy carbon from developing countries to meet these targets and in doing so help developing countries meet their reduction targets. This neat arrangement conveniently ignores the fact that the IPCC figures require emissions reductions in both places, not one or the other. In addition to this, rich countries are suggesting that the money transfers resulting from this trade should count towards the finances pledged to developing countries. Whereas developing countries are rightfully arguing that these finances should be additional as they have to pay for the adaption required as a result of climate impacts associated with past rich country emissions. They also argue that additional money is needed as compensation for the reduced carbon space left for developing countries due to over-consumption by rich countries.
- **Failure to meet 'additionality' requirements.** Ongoing international carbon trading is dominated by the Clean Development Mechanism (CDM). Through

this carbon credits are sold by projects in developing countries for the additional emissions reductions or emissions avoided made through the injection of foreign cash. In practice many of these avoided emissions or emissions reductions would have been made anyhow. Examples include:

- Carbon credits trading for constructing hydro-power dams that were already within development plans in China and almost completely built (or even in the most extreme cases already built), the carbon savings here are said to be due to reduced need to produce electricity from fossil fuel power stations;
  - Carbon credits for building coal-fired power stations in India using newer technologies rather than older technologies even though the newer technologies have been used in the same country without the money from selling carbon credits; and
  - Carbon credits for destroying HFCs from refrigeration factories which would otherwise be released into the atmosphere. This sounds acceptable, but because HFC is such a strong greenhouse gas and attracts so much money through selling carbon credits it has been suggested that some factories have been built specifically to create the pollution to make money from then curbing it.
- **Regulatory chill.** The obsession with carbon trading reduces the appetite for using other policy instruments, such as regulation and taxation. In the UK the previous Labour Government was not keen to regulate or increase taxes to curb the growth of international aviation. They used the excuse that carbon trading through the Emissions Trading Scheme (ETS) would result in carbon reductions being made elsewhere, ignoring the excess of carbon credits handed out to EU industries under the ETS or the ability of firms to buy credits from dodgy CDM schemes. In the EU, Commission officials argued that there should be no mandatory target on energy efficiency due to possible impacts on the carbon price. The UK Government's Committee on Climate Change has said that the ETS will not drive down emissions enough in the UK and that other policy instruments should be used.

In addition to these reasons, NGOs and others have also argued against carbon trading as the time required to set up a global system is too long and distracts from the use of faster policy responses, from opposition to the commoditisation of the atmosphere, from finance siphoned away from carbon reduction to make carbon traders rich, and from the risks of private speculators creating a carbon sub-prime market similar to the housing sub-prime market. These arguments are further developed and examples given within Friends of the Earth's report 'Dangerous obsession' (Friends of the Earth, 2009).

## State of play

Negotiations on temperature targets are far from being concluded with many developing countries refusing to accept a higher temperature target than 1.5 degrees above pre-

industrial levels and the USA, EU and other rich countries unwilling to accept anything lower than 2 degrees. Reduction targets for countries remain deadlocked with the USA refusing to accept a top down mandatory approach to target setting and the EU not prepared to increase its target to be in line with even a 50:50 chance of avoiding a 2 degree increase. Agreement on whether to include historic emissions also remain deadlocked. And finances pledged at Copenhagen have, on the whole, failed to emerge or are simply rebadged Aid money.

Carbon trading remains the number one policy objective of the USA, EU, other countries and a plethora of carbon trading vested interests, even though its weaknesses are increasingly recognised. The vast majority of developing countries will not accept a global carbon trading regime. They view the proposal as unjust because they see it allowing rich countries to pollute when they instead have to curb growth (under proposals by the American Government trading would allow the USA to increase its emissions until 2030). Whilst some developing countries want to use the CDM mechanism and newer versions, such as sectoral trading, to bring much needed money into their country, many see this as unacceptable or a poor second best to much larger financial flows from other sources. Overcoming these differences looks like a Herculean task.

## Conclusion

The 'tragedy of the commons' identified the dangers of self-interest trumping cooperative working to deliver common benefit. Carbon trading is the vehicle by which rich countries are pursuing self-interest pretending that they are willing to work together for the common good. They are using carbon trading to get out of even the paltry reduction targets they are willing to accept. They are using carbon trading to avoid additional financial transfers to developing countries. They are using carbon trading to enable them to remain the global fat cats able to consume the vast majority of remaining atmospheric space.

There are good reasons to oppose carbon trading because in effect it privatises the atmosphere. But perhaps more importantly carbon trading is a dangerous con, which promises to insert massive loopholes in any future international agreement and puts off the urgent task of countries like the UK making the transition to the low carbon economy. What is needed is global political acceptance of the urgency of the problem coupled with the use of policy measures that can be applied swiftly to reduce emissions fast – regulations, tax and spend are policy measures that better fit the bill.

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**the author**

Mike Childs is Head of Policy, Research and Science at Friends of the Earth. He has worked at Friends of the Earth for over 20 years, working on issues ranging from factory pollution to water resources to climate change. Prior to working at Friends of the Earth he studied at the Biology Department at the University of York. He also worked for 4 years with an environmental consultancy specialising in the reclamation of contaminated land. He lives in York with his partner and two young daughters.

E-mail: [mike.childs@foe.co.uk](mailto:mike.childs@foe.co.uk)