



Carbon 'offset' - no magic solution to 'neutralise' fossil fuel emissions

1. Introduction

Can the climate damage caused by fossil fuel emissions be 'neutralised' or 'offset'? Over the past few years, the idea of carbon 'offset' or 'carbon neutral' projects has found a large following. Show-biz celebrities, aid agencies and even financial institutions like the World Bank hail tree-planting and similar projects as a win-win-win approach to global warming. Following suit, the European Commission declared its intention to provide a 'climate neutral' Green Week 2005.

2. Can 'offset' projects really help slow climate change?

The idea is simple enough: we pay someone else somewhere else to cover their land with trees, and they'll soak up the carbon dioxide released through the emissions from our bargain trip to that cottage in Southern France; that splashy CD release; that big corporate conference – or Green Week 2005. We can go on using fossil fuels without affecting the climate as long as we plant enough trees. And who could object to planting trees?

Well, FERN does – at least in this case. If the deal sounds too good to be true, it probably is.

So what's wrong, then, with using trees to soak up greenhouse gases? In brief, what's wrong is this: What 'offset' forestry does is confuse fossil carbon with biological carbon. It claims that emissions from burning oil, gas or coal can be considered equal, in climatic terms, to the biological carbon stored in a tree. For example, companies like UK-based Future Forests, a marketing firm that provides 'carbon neutral' services, says that it can calculate exactly how many trees someone somewhere will need to plant and tend for 99 years in order to soak up the emissions generated by air travel to, say, Brussels.

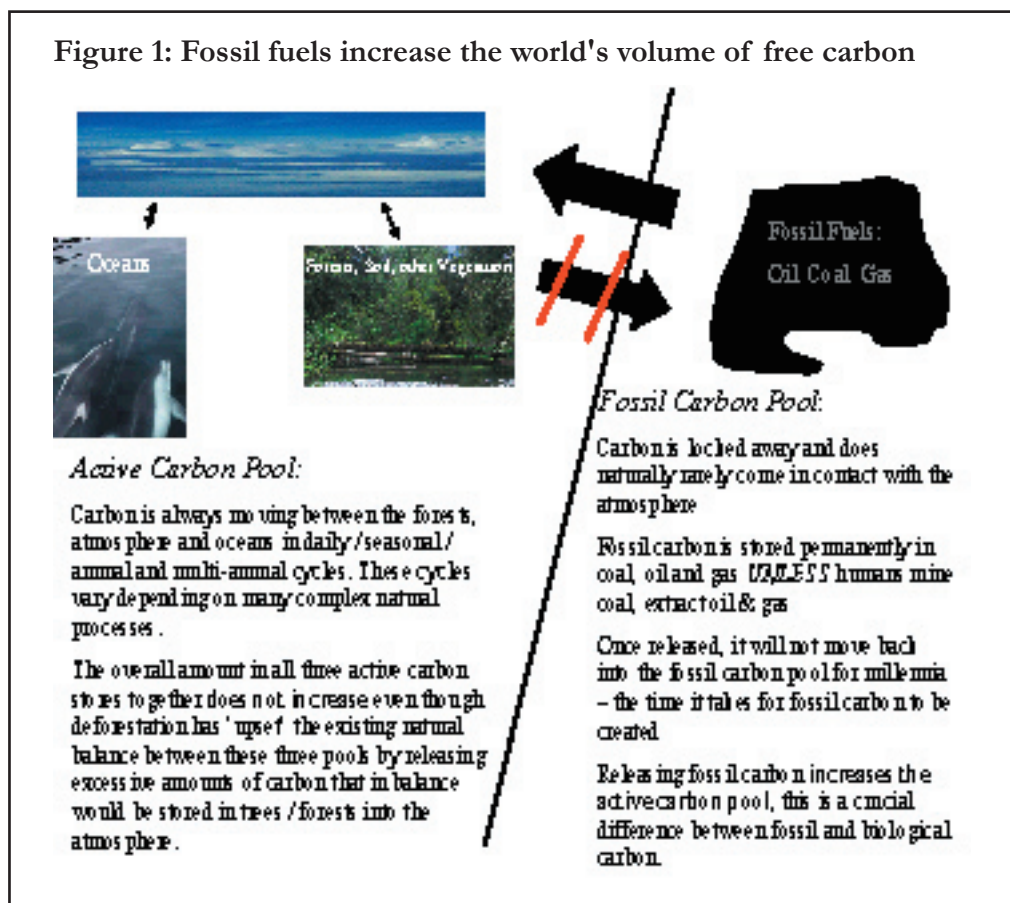
Fine as advertising copy. The problem in reality is that carbon emissions from burned oil, gas or coal *cannot* be considered as equal to the same amount of biological carbon in a tree. Why not? As the diagram on page 2 explains there exists naturally an active carbon pool with carbon freely moving between forests, oceans and air. The fossil carbon pool, in contrast, is inert. But once out of the ground, fossil carbon joins the active carbon pool and will not go back into the fossil carbon pool for millennia. Releasing fossil carbon increases the active carbon pool, and this is the crucial difference between fossil and biological carbon.

Of course trees can also die, at which point they release



most of the carbon that they keep locked away from the atmosphere. In relation to 'offset' forestry, proponents assure us they can calculate the odds of this, and take this into consideration in their calculations.

Yet, within scientific circles, intense debate continues about whether one can predict over the next century, or even over the next few decades, the carbon fluxes of complex ecosystems.



3. How accurate are the calculations?

Can anyone really calculate the carbon performance of a tree? Can they really guarantee how much carbon planted forests can mop up? At a time when we are increasingly facing aberrant storms, droughts and other climatic changes across the world, can we really predict how these forests will fare in the political turmoil that dominates many of the areas where tree planting projects are most likely to occur? Cambridge University landscape historian Oliver Rackham has the right perspective on this: “[F]or its practical effect, telling people

to plant trees is like telling them to drink more water to keep down rising sea levels.” Even if the fantasy of accurately predicting trees’ carbon performance had any solid basis in science, just dealing with the increased carbon dioxide emissions we will generate worldwide over the next half century would require completely covering Europe – from the Atlantic to the Ural mountains – with trees. For example, soaking up the UK’s annual greenhouse gas emissions would require planting an area of forest the size of Devon and Cornwall every single year – and maintaining them forever.

Figure 2: Proposed Plantar/World Bank Prototype Carbon Fund carbon 'offset' plantations in Brazil



But carbon 'offset' troubles don't end there. Norwegian-based organisation, Future in Our Hands, has described tree planting projects in Uganda and Tanzania as a new form of colonialism, under which Northern companies and affluent citizens claim lands in the South to 'compensate' for damage caused by burning fossil fuel elsewhere. Already, monoculture plantations aimed at soaking up carbon released in the North are damaging lands essential to many peoples' survival in Brazil, Ecuador, Uganda and Tanzania. Reports released by the World Rainforest Movement and the Forest Peoples Programme in 2005 show that local and indigenous communities in Ecuador and India are paying a high price for carbon 'offset' projects they signed up to on the promise of jobs and development. In reality, these projects simply entrench social inequality, demand unpaid labour to fulfill communities' contractual obligations, and further weaken traditional land rights.

Closer to home, tree planting charities are also getting the short end of the stick. Future Forests, for example, passes on to tree-planters only a small fraction (around 2 per cent) of the fee it pockets from the clients who pay them for ensuring their 'carbon neutrality'. According the *The Observer* (28 April 2002), this amounts to only 12 pence out

of each £6 collected – certainly not enough to plant and preserve a tree for 99 years.

4. So where does this leave us?

Sadly, much as we'd all like a way to combat the ever worsening problem of climate change, and wonderful though trees are, they do not provide a magic solution which will allow us to go on mining and burning fossil fuels. Carbon 'offset' projects may salve our conscience but they won't solve the problem of global warming. On the contrary, by creating the illusion that 'all is well' as long as we pay a little extra, they may further delay global agreement on decisive action to avert dangerous climate change.

The only way of slowing global warming is to stop extracting fossil fuels and make drastic reductions in greenhouse gas emissions. A good start, while also supporting the shift to low-carbon economies would be to support energy-efficiency projects and facilitate groups working to halt fossil fuel extraction, *without* looking for numerical equivalents to the carbon emissions we cause. It is with claims of 'neutrality', 'offsets' and 'zero net effect' that we foolishly relax into a false sense of security, and allow ourselves to put off making critical and urgent decisions about our future.

Say 'no' to fake carbon credits