

# Is Tree Planting More Than Just Show?

Thomas Kluyver

Recently, the practice of carbon offsetting has become fashionable. The principle is simple enough: if you pay for someone else to soak up the amount of carbon dioxide that you've released, you can call yourself 'carbon neutral.' One of the first popular ways of doing this was to plant trees – as they grow and photosynthesise, they take up carbon dioxide from the air, and store it as carbohydrates.

Early last year, a paper published in *Nature* raised serious questions about the benefits of tree planting. A German research group found that plants emit methane – a greenhouse gas even more potent than carbon dioxide (1). If they were right, then these findings suggests that tree planting could actually be accelerating global warming, rather than slowing it. This summer, a Dutch team has challenged the findings (2), but the environmental community, never really convinced by the idea of offsetting initially (3), quickly became particularly suspicious of tree planting.

This focus on methane can drown out other questions about carbon offsetting. The carbon we're now releasing into the atmosphere has been locked up in fossil fuels for millions of years. Any way of storing it must lock it up for a similarly long period of time, or we will merely be postponing the problem. While trees are long lived by human standards, their lifespans are hardly comparable with the geological timescales from which we are still releasing carbon. When they die, trees rot and release the carbon they have stored back into the environment. Some ambitious projects are investigating the possibility of sequestering carbon so that it is not so quickly released, by sending it into the deep ocean, for example, but the potential side effects of these schemes are not so well understood (4).

Happily, the British Government has now released a code of practice for anyone claiming to offset carbon (5). While this is unlikely to answer every concern about the practice, we can at least hope that it will make it more difficult for unethical opportunists to make a quick buck from the environmental concerns of others.

Carbon offsetting, however, is just one example of a human tendency to try to reduce a complex matter to a single measure. We affect the environment in numerous ways throughout our lives. While carbon emissions are important,



given the potential problems that global warming may cause, they are not the whole story. That the focus on our 'carbon footprint' leads to the dangerous impression that being 'carbon neutral' is the same as having 'no environmental impact,' giving us an excuse to forget what other damage we might be doing. Ultimately, the waste we generate, the resources we use up, and the habitats we indirectly wreck, are all parts of our impact on the environment, and can't easily be expressed in terms of tonnes of carbon.

*Thomas Kluyver is a 2<sup>nd</sup> year at Peterhouse reading Biological Natural Sciences. He is currently Assistant Editor-in-Chief for The Triple Helix, Cambridge. His last article entitled 'The Future of Biofuels' was featured in The Science and Society Review worldwide, given as an example at an educational conference and used for our community outreach activities.*

#### References:

1. Keppler, F. et al, *Nature*, **439**, 187-191 (2006).
2. Dueck et al, *New Phytologist*, **175**, 29-35 (2007)
3. Smith, K. The Carbon Neutral Myth. [http://www.tni.org/detail\\_pub.phtml?know\\_id=56&menu](http://www.tni.org/detail_pub.phtml?know_id=56&menu)
4. Bently, M. Sea creatures' global warming fix. BBC News online. <http://news.bbc.co.uk>.
5. <http://www.defra.gov.uk/environment/climatechange/uk/carbonoffset/codeofpractice.htm>

