Climate Change, Carbon Offsets and Certified Organic Forestry

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Abstract

Carbon offset programmes are creating a new breed of forester. These are retail carbon offsetters who respond to opportunities to offset the carbon footprint of their lifestyle, for example travel, by paying for tree planting. This new cohort of de facto foresters act out of their green values and/or ecological awareness. However since modern silviculture is chemically based, the obverse of their carbon offsetting, is pesticide onsetting - consequently their "solution" is at best dirty green. Forestry standards, FSC, PEFC and SFI, are all very weak standards and allow pesticides and fertilizers. IFOAM previously rejected the adoption of an Organic Forestry Standard. Nevertheless, two organic certifiers have such standards: Debio and Naturland. The entry of retail carbon offsetting is an opportunity for the organic sector to revisit the challenges and opportunities of Certified Organic Forestry, to create a world's next practice forestry.

Introduction

The Stern Report (2006) addresses the economic implications of climate change, on the basis that the IPCC consensus of government scientists is correct, and that (a) the climate is changing, (b) this is bad, (c) this is an anthropogenic effect, or largely an anthropogenic effect, and finally (d) an anthropogenic reversal, or at least a retardation of the change, is possible and good.

According to Stern (2006, p. 450): "This Review has made a compelling case for action - on both mitigation and adaption - demonstrating that the global economic costs of business as usual paths are likely to far outweigh the costs of taking action to reduce the risks".

As a mitigation strategy Stern urges that we reduce our "carbon footprint". Planting trees is proposed as one way to achieve this. All plants photosynthesise and trees can achieve this carbon sequestration, ($6CO_2 + 12H_2O$ + light ---> $C_6H_{12}O_6 + 6O_2 + 6H_2O$), on a grand, theatrical, and highly visible, scale.

Tree planting has thus become the prerogative of the everyday traveller. When purchasing an airline ticket there is the option to contribute say an extra dollar for a carbon offsets program, an outcome of which may be more trees. For Australian motorists *Greenfleet Australia* advertises: "for $40 (tax deductible) … *Greenfleet* will plant 17 native trees to neutralise your car's greenhouse gas emissions for one year". What the trees will be doing in year 2 and thereafter is not stated.

Other things being equal, a flurry of tree planting would seem like a "good thing". This is especially so when we consider that the global forest loss over the past two centuries amounts to 30%, and deforestation is proceeding at 7.3 million hectares per annum (Mygatt, 2006).

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Chemical Forestry

Modern forestry is best characterized as chemical forestry. “Most of Australia’s plantations are in blocks of uniform age and one species and are managed intensively to optimise yield” (Parsons et al., 2006, p. 15). Optimising yield is not synonymous with optimising environmental outcome, intensive management is code for pesticide use. Jenkin & Tomkins (2006) write: “it may be possible to conduct … non-chemical pesticide forestry … [but] in large scale industrial plantations … mechanical application of chemical pesticides is required” (p. 6). They define pesticides as: “any chemical or chemical mixture used for controlling weeds, insects, fungi, nematodes and animals which adversely affect growth ... and the health of plantations” (p. 12).

Chemicals used in Australian forestry operations: 25 herbicides, including atrazine and simazine, nine insecticides, two fungicides and seven classes of adjuvants which are “designed to improve the efficacy of a pesticide”, including surfactants, wetting agents and synthetic latex (Jenkin & Tomkins, 2006, p. 117). In Australia, these pesticides are mostly applied aerially, by plane or helicopter.

In Tasmania, after clear-felling, the residual area is burnt by dropping incendiary chemicals. Carrots are then laid to attract native animals, using a bait and switch strategy. The first two carrot offerings are safe and palatable, for the third application the carrots are laced with 1080 (90% sodium fluoroacetate) poison - a minute dose of this colourless, tasteless, and highly water soluble poison is enough to kill any Tasmanian native animal - including wallabies, possums, bandicoots and wombats.

Tomkins (2004, p. 68) writes that “the use of pesticides is an important management tool … the use of residual herbicides … is essential to give long term weed control”. Glyphosate is “an essential pre-planting herbicide in plantation establishment in most situations” (p. 71). Herbicides are applied in the first two years to plantations (Jenkin & Tomkins, 2006) and insecticides usually within the first few years of establishment and as frequently as required.

Forestry Certification

The major forestry certification standards and certification schemes are weak and pro-chemical. These standards have evolved largely to suit the forestry industry, and their customers. Their environmental credentials are questionable.

Fischer et al. (2005) identify three “major forest certification programmes”. The Forest Stewardship Council (FSC), The Program for the Endorsement of Forest Certification (PEFC) - known previously as Pan European Forest Certification - and thirdly the Sustainable Forestry Initiative (SFI).

FSC, launched in 1993 (Kanowski, 1999), presents as a weak standard from the outset. “Woodmark [an FSC mark] does not insist on perfection. There will be very few forest managers who can meet every one of the norms consistently” (Woodmark, 2004, p. 3). There are ten FSC principles, within each of which are a set of criteria and a subset of norms. *Principle #1* is *Compliance with Laws and FSC Principles* and includes that “Forest management shall respect all applicable laws of the country” (p. 7). *FSC Principle #5* is *Benefits from the Forest* and includes: “Forest management operations shall encourage the efficient use of the forest’s multiple products and services to ensure economic viability” (p. 20).

The FSC Standard does not purport to be an organic standard, and is far from such a standard. *FSC Criterion 6.6a* declares that “Management systems shall … strive to

avoid the use of chemical pesticides … Chemicals are only used when absolutely necessary to achieve defined management aims … Synthetic chemicals are only used where there is no known non-chemical alternative not entailing excessive cost" (p. 30). *FSC Criterion 10.7* advises that "Plantation management should make every effort to move away from chemical pesticides and fertilisers" (p. 46). Tomkins (2004) is critical of these FSC formulations; he argues that pesticides are "essential" for forestry. He also points out that while "Simazine is a banned herbicide in the FSC" (p. 70) there is in fact a "derogation [exemption] for the use of simazine … the FSC has now extended this [exemption] Australia-wide" (p. 71)

PEFC, launched in 1999 (Kanowski, 1999) is a "framework for the mutual recognition of credible national or regional forest certification schemes that have been developed based on internationally recognised requirements for sustainable forest management" <www.pefc.org>. For the PEFC "the principles are quite elastic … the PEFC defined itself not as promulgating a single standard … but rather … as providing … recognition of variable national certification programs built upon existing practices … to be based in stakeholder groups initiated by forest owners in individual countries" (Meidinger et al., 2003, p. 18, 19).

The SFI, launched in 1994 (Kanowski, 1999) is a North America standard initiated by the American Forest & Paper Association (AF&PA). "The SFI standard is a hybrid of systems - and performance-based requirements, and it allows the companies to select optional indicators that they consider appropriate for their management systems and conditions" (Fisher et al., 2005, p. 5).

ISO 14061 is "often used in combination with other regional and national standards", and ISO 14061 certification, "lets landowners tailor the system to their objectives and and specific situations; it does not demand that any particular set of standards be followed" (Fischer et al., 2005, p. 6).

Unlike organic food, forestry standards have been developed largely in the absence of consumer demand and generally have failed to attract a price premium (Klooster, 2004). From an Organics perspective all these standards are weak, with FSC appearing as the least weak. The FSC has developed into "a document-intensive, buyer-driven preoccupation for delivering large quantities of certified wood products to market, with a focus on big forest producers and large wood consumers" (Klooster, 2005, p. 412) and that foresters "use certification to validate their activities" (p. 415).

Certified Organic Forestry fails to rate a mention in forestry literature either as an existing standard or as an emerging standard (Kanowski et al., 1999; Meidinger et al.; 2003; Fischer et al.; 2005; Klooster, 2005).

Organic Forestry

The first Certified Organic Forestry standard was implemented by the German organic certifier *Naturland* (Naturland, 1998). In 2002, the *International Federation of Organic Agricultural Movements* (IFOAM) incorporated a *Draft Standard for Organic Forestry* into its BASIC Standards document (IFOAM, 2002). That draft standard was voted out three years later. Nevertheless, the Norwegian organic certifier *Debio* established organic certification standards for forestry in 2005, and this standard was revised in 2006 (Debio, 2006). The Debio standard is the most thoroughgoing of these three documents and could feasibly be adopted with little or no modification by other certifiers worldwide, subject to usual intellectual property issues.

The fruit of this Debio excursion into organic forestry has so far been modest. Although Debio is a Norway-based certifier there appear to be no impediments, other than cost, for forests or plantations elsewhere seeking and gaining Debio certification.

Discussion and Conclusions

Are carbon-offsetting customers happy with the trade-off of reducing their carbon-footprint at the cost of increasing their pesticide-footprint? Chemical forestry is a dirty green solution, but is the target demographic led to believe they are being offered, a clean green solution? Are such invitations hovering on the edge of being deceptive and misleading, not by what is presented, but by what is not presented?

With carbon offset programmes being offered at the retail level to eco-conscious customers, it is only a matter of time before there is a consumer blowback, in the wake of the realisation that carbon offsets may mean pesticide onsets. These customers have the right to feel duped, at not being made aware of this hidden trade-off.

From the outset of organic agriculture, Steiner (1924, p. 131) declared: " regulation of woods and forests is an essential part of agriculture … It is of far-reaching significance". Through ten thousand years of agriculture, as populations have waxed and waned, and forests have waned and waxed, there has been a persistent nexus between agriculture and forests.

There is the opportunity now to create clean green carbon offsetting programmes, and the organic community can be in the vanguard by supporting, creating and proliferating Certified Organic Forestry standards. This does not solve all the problematic issues with forestry, but it will address one major cause of forestry complaints worldwide - pesticides. Certified Organic Forestry standards can redefine world's best practice forestry, and create world's next practice forestry.

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