

Chapter 5: Discussion and Implications

The promotion of biochar bears troubling resemblance to the history of biofuels promotion. Biofuels in general were promoted as a “green” alternative to fossil fuels, based on unsubstantiated claims. Many in civil society and elsewhere repeatedly warned that they would result in escalating competition with food production, deforestation, expanding industrial monocultures, worsening hunger, depleting water resources, more rather than less greenhouse gas emissions, human rights violations and land grabs etc. Yet subsidies and supports were put in place, above all in North America and Europe, and still remain in spite of escalating evidence of the harms.

Especially similar to the push for biochar is that underway for jatropha. Jatropha has been strongly promoted as a 'miracle crop'. As Jatenergy Ltd, a company investing in jatropha as well as coal, claims: “Properly developed, it will not compete with land or water resources for food production. It is extremely hardy, and can survive long, dry periods in a wide range of soil conditions.”ⁱⁱ Those claims have long been disproven. In fact, jatropha plantings have largely failed even on fertile soil with regular watering. A study in Kenya, published by the World Agroforestry Centre concluded: “*Based on our findings, jatropha currently does not appear to be economically viable for smallholder farming when grown either within a monoculture or intercrop plantation model.*”ⁱⁱⁱ No commercial quantities of jatropha have been sold, several years after the first plantations should have reached maturity. Nonetheless, large and growing numbers of communities have lost their land, livelihoods and food sovereignty to jatropha and forests and other ecosystems are being destroyed as a result of this land-grab. Jatropha continues to be promoted in a growing number of countries in Asia, Africa and Latin America, regardless of the lack of evidence that it 'works', let alone that it brings any wider benefits.

Biofuels, biochar and the other “green technologies” that employ use of biomass as a substitute for fossil fuels, all share a standard “blueprint” for underlying assumptions upon which advocacy is based. For example, a recent Nature Communications article on the “theoretical potential” of biochar, which claimed that 12% of global greenhouse gas emissions could be offset through 'sustainable biochar'ⁱⁱⁱ embraces this “blueprint”. The models used for this assessment were based on a study of the global potential for 'sustainable biomass', including biofuels, according to which 386 million hectares of 'abandoned cropland' exist^{iv} which are not forested and have not been built up, though they include non-forest ecosystems and pasture. This study is but one of many 'biomass potential' studies^v which are the building blocks of the “blueprint”, based on the following assumptions:

- a) The idea that large areas of land can be converted to biomass production without causing significant emissions from deforestation of other land-use change (lending biomass a 'positive carbon balance' or even carbon neutrality).
- b) That there are hundreds of millions of hectares of “idle”, “marginal” and “degraded” lands available, especially in Africa, Asia and Latin America, that could be used to grow biomass crops.
- c) That 'social impacts' (except for the overall amount of food production), for example the fact that so-called 'marginal or 'degraded' land provides the livelihood and home of hundreds of millions of pastoralists, indigenous peoples and other communities can be ignored when calculating the 'theoretical' biomass potential, (on which policies are then based).^{vi}
- d) That “standards” can be developed, agreed and implemented that will ensure that the conversion of large areas of land to biomass crop production does not worsen biodiversity losses or interfere with food production.
- e) That there are vast quantities of “wastes and residues” available from agriculture and forestry operations that could be used.^{vii}

In reality, crop producers and investors will seek not the most degraded and useless lands, but rather the best available soils – with access to water for irrigation – that their money can buy. Peasant farmers and others without formal title to their lands increasingly find themselves pitted against wealthy foreign investors (and often, complicit governments within their own countries). The current trend in land grabbing, was spurred on by the food and financial crises – investors cognizant of the growing demand for food and bioenergy crops, and seeking secure investments – have brokered deals to purchase and lease hundreds of thousands of hectares of arable lands, particularly in Africa and Latin America.^{viii} This is in addition to already escalating conflicts over access to lands such as those happening as a result of industrial expansion of soya and palm oil. This trend is countered by, for example, the worldwide peasant farmers organization, La Via Campesina, among others, have called for a ban on land grabbing and continue to mobilize resistance.^{ix}

Biochar, particularly if it does succeed in gaining supports through carbon markets and/or as a climate geo-engineering strategy, could contribute further fuel to the land grab fires.^x Concerns over the potential for biochar to contribute to the harms already underway as a result of biofuels policies, resulted in an international declaration of opposition “Biochar, a New Big Threat to People, Land and Ecosystems”, signed by 147 organizations in 44 countries.^{xi} While biochar advocates engage in discussions couched in terms of “sustainable harvests” and “sustainability standards”, there is little basis for confidence in these, which are ineffective, not least because they cannot address indirect impacts: Greater demand for crops, woods and land inevitably pushes the agricultural frontier further into forests and grasslands and no credible way of preventing this without curbing demand has ever been proposed. Furthermore, even very basic standards have been shown to be unenforceable and serve more to greenwash than to ensure protections.^{xii}

Ironically, as with biofuels, biochar is promoted largely as a “solution” to the problems of climate change and food crisis. Yet it is poised to work directly at odds with the known, proven effective and justice-based solutions that already exist: protecting biodiversity, preserving soils and water resources, and promoting diverse, locally adapted peasant farming and organic and agro-ecological practices.^{xiii} Reducing demand for wood and other biomass is key. Creating large new demands based on unfounded claims, faulty assumptions and hype, only makes these real solutions less likely to be achieved.

i www.jatenergy.com/index.php?option=com_content&view=article&id=15&Itemid=14

ii www.worldagroforestry.org/downloads/publications/PDFs/B16599.PDF

iii Sustainable biochar to mitigate global climate change, Dominic Woolf et al, Nature Communications, Vol 1, article 56, 10th August 2010

iv Biomass energy: the scale of the potential resource, CB Field et al, Trends in Ecology and Evolution Vol.23 No.2, 2008

v The contribution of biomass in the future global energy supply: a review of 17 studies Goran Berndesa et al, Biomass and Bioenergy 25 (2003) 1 – 28

vi Agrofuels and the Myth of Marginal Lands: www.econexus.info/publication/agrofuels-and-myth-marginal-lands

vii From Agrofuels To Biochar

http://www.biofuelwatch.org.uk/docs/agrofuels_and_biochar_article.pdf

viii The World Bank has estimated that near 47 million hectares of land had been requested for purchase by foreign investors between October 2008 and June 2009 alone. (see: Rising Global Interest in Farmland: Can it Yield Sustainable and Equitable Benefits? World Bank, September 2010.) See also: www.farmlandgrab.org

ix It’s Time to Outlaw Land Grabbing, Not Make It “Responsible”.

http://viacampesina.org/en/index.php?option=com_content&view=article&id=1076:its-time-to-outlaw-land-grabbing-not-to-make-it-qresponsibleq&catid=23:agrarian-reform&Itemid=36
see also the Dakar Appeal Against Land Grabbing:
<http://www.petitiononline.com/dakar/petition.html>

- x Ironically, Best Energies had for some time proudly proclaimed on their website that they were “well placed to win the global land grab”
www.bestenergies.com/downloads/BEST_BioEnergyProducts.pdf
- xi Biochar: A new big threat to people, land and ecosystems, March 2009, www.rainforest-rescue.org/news/1150/declaration-biochar-a-new-big-threat-to-people-land-and-ecosystems
- xii The longest-standing international certification scheme, the Forest Stewardship Council, for example, still regularly supplies wood from illegal logging and plantations, from legal but highly destructive plantations, from old-growth forest logging, etc. The Roundtable on Responsible Soya, and the Roundtable on Responsible Palmoil – have been soundly rejected by civil society for greenwashing what are fundamentally unsustainable practices. See for example www.fsc-watch.org, <http://www.biofuelwatch.org.uk/docs/17-11-2008-ENGLISH-RSPOInternational-Declaration.pdf> and <http://lasojamata.iskra.net/node/110>
- xiii For example: 1) Sustainable Peasant Agriculture Can Feed The World: La Via Campesina: www.viacampesina.org/downloads/pdf/en/paper6-EN-FINAL.pdf 2) Tim J. LaSalle and Paul Hepperly, Regenerative Organic Farming: A Solution to Global Warming, Rodale Institute, 2008, http://www.rodaleinstitute.org/files/Rodale_Research_Paper-07_30_08.pdf 3) Earth Matters – Tackling the Climate Crisis From The Ground UP: GRAIN, Oct 2009. <http://www.grain.org/seedling/?id=643>