REDD+ IS A POISONED APPLE

Snow White And The Seven Dwarves

Germany

Dear reader, the Oxford Dictionary describes a fairy story as a tale that is "magical, idealized, or extremely happy" – but also as "a fabricated story, especially one intended to deceive". Fairy stories are used to convince others that all will end well, often for those that are honest or brave or just plain lucky. Fables are a similar kind of story, containing more explicit moral messages; they are used to instill particular ways of behaving in children and others. If REDD+ were to be published as a book, it could well be depicted as a collection of modern fairy stories and fables, designed to lure the unwitting and unwary into the complex world of REDD+, as this series of briefings shows…

"We do not really mean, we do not really mean that what we are about to say is true. A story, a story; let it come, let it go"[1]

Snow White is a beautiful young girl whose jealous step-mother, the wicked Queen, casts her out of her castle and into the woods, sending a huntsman to kill her. But the huntsman finds he cannot kill her and she goes to live hidden deep within the woods with seven dwarves. The Queen eventually finds out that she is still alive and finds her. Dressed up as a fruit seller, the queen offers her a poisoned apple, but Snow White is reluctant to take it. So the Queen cuts the apple in half, eating the green part herself and giving the poisoned red part to Snow White. Snow White falls into a stupor and the seven dwarves, believing her to be dead, place her in a glass coffin. Luckily for Snow White this is only a fairy story, and she is awoken from her sleep by a prince.

"This is my story which I have related. If it be sweet, or if it be not sweet, take some elsewhere, and let some come back to me".[2]

What is REDD+?

REDD stands for Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. REDD is intended to facilitate the transfer of significant amounts of climate finance from developed to developing countries, in a collaborative effort to protect the world's forests thereby reducing greenhouse gas emissions from those forests. In its current form – 'REDD+' – it also includes measures intended to 'enhance carbon stocks' which means it could be used to fund monoculture tree plantations, even in place of old growth forests.

1. Traditional Ashanti introduction to a story.
2. Traditional Ashanti end to a story.

REDD+ driving expansion of plantations

'REDD+' is officially defined as "Reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries". (UNFCCC, 2010)

Under the climate regime, forests and monoculture tree plantations are treated as one and the same thing.[3] This, combined with the mandate for REDD to 'enhance' forest carbon stocks, is a green light for plantation companies to access REDD financing. National REDD+ programmes are thus likely to focus on tree plantation establishment as one of the activities that can be financed with REDD+ funding.[4] Since 'sustainable forest management' is also included, this means that logging companies can also apply, provided they can demonstrate that their activities will lead to less carbon emissions than the original logging plans.

Logging and tree plantation establishment have had serious negative impacts on indigenous peoples and other forest-dependent peoples. From Brazil to Malaysia, one can find hundreds of examples of severe conflicts between these companies and the indigenous communities that aim to defend their forests against such environmentally destructive practices.[5] Monoculture tree plantations have had an especially severe impact, as they lead to the permanent take-over of indigenous lands, while providing very little labour per hectare of land.

These industries are already very profitable by themselves, and even a relatively small financial REDD+ contribution to 'improved timber production practices' (as compared to so-called 'business as usual' practices that are even more destructive) makes such economic activities more attractive to investors, to the detriment of indigenous peoples and local communities.

In many countries, it seems that tree plantation companies and the pulp and paper sector in general are actively lobbying to ensure a significant amount of the available REDD+ funding is used to subsidise the establishment of tree plantations and 'reduced impact logging'.

REDD+ finance for toxic trees

The current definition of forests also fails to differentiate between genetically-engineered (GE) trees and non-GE trees. For this reason, REDD+ financing could also drive an increased focus on and investment in these toxic trees.

The US is already moving to build its GE trees industry. On 28 September 2011, the US Department of Agriculture announced it was making a grant of US$136 million - its largest grant ever - to several universities and private companies in the Pacific Northwest to promote development of a Northwest 'biofuels' industry. The purpose of this grant has been described as building a new industry that "would be churning out fuel from trees" in the next five years (GJEP, 2011).

But GE trees are being developed without adequate attention being paid to the very real health and environmental impacts that they pose (GJEP, 2011b). These include the inevitable and irreversible genetic contamination of native trees with engineered trees, via the spread of GE tree pollen. Such traits include coding for low-lignin, meaning that the wood is quicker and easier to process as it is not so solid. But lignin also protects trees from disease, insect infestation, animal browsing and storms. Clearly the release of such a trait into the wild could come at an enormous cost to native forests.

In addition, the health impacts of inhaling pollen that comes from trees that have been genetically engineered to produce insecticides at the cellular level has not been adequately studied. Preliminary findings, however, reveal potentially serious problems (CBD, 2008).

3. This definition was adopted for Northern forests by the Parties to the Kyoto Protocol; it includes any kind of monoculture tree plantation, and even clearcuts.
4. See for example, http://www.theredddesk.org/plan/national_forest_plantation_development_programme_ghana
5. See http://www.wrm.org.uy for a large number of examples of the negative impacts of tree plantations and logging on indigenous peoples and local communities.

Biochar

The poisonous side of the 'REDD+ apple' may eventually include 'biochar', another carbon sequestration technique that some governments and the International Biochar Initiative would like to see included in carbon markets and REDD, to generate private finance (TNI, 2009; Biochar Intl., 2011). In fact, one multilateral REDD fund, the Congo Basin Forest Fund, is already funding a biochar project in DR Congo, based on highly questionable claims by the developer (Ndameu & Biofuelwatch, 2011). Several regional and national carbon markets also seem poised to include what is now known as 'soil carbon' marketing.

Biochar is essentially fine-grained charcoal. Its proponents argue that it if is dug into soils it will sequester carbon over the long-term and make soils more fertile. They point to the famously fertile Terra Preta soils of the Amazon Basin. These were developed over hundreds of years by people adding a complex mixture of charcoal, bone, manure and other diverse residues to the Amazon's relatively infertile soils, combined with agro-ecological farming methods about which little is now known.

Yet biochar may well be just another fairy tale. Biochar has been shown to be very different from Terra Preta soils, which are complex living soils (Biofuelwatch, 2011). The structural properties and chemical nature of different forms of black carbon also vary widely depending on what type of biomass it is made from, how it is made, and what type of soil it is mixed with (Spokas, 2010). Results from field trials so far have shown that biochar cannot be relied upon to increase soil carbon. In one four-year trial in Colombia, for example, soils amended with large concentrations of biochar held less carbon than those without biochar, after just one year (Major J *et al*, 2010). A recent soil science review (Schmidt, 2011) also confirms that it is impossible to make any conclusions about 'carbon sequestration' of biochar just because it can appear 'stable' under laboratory conditions. What happens to soil carbon in a laboratory is always very different from what happens in a complex soil ecosystem with many different soil microbes, fungi, etc. The authors stressed that not enough is known about what happens to biochar carbon to make any predictions useful to policy-makers.

Field studies also show that biochar does not always help plant growth – some types of biochar combined with fertilisers boost crop growth, some make no difference and others can even reduce crop growth. The fact that so little is known about biochar makes using it a very high-risk strategy for farmers.

However, despite this high level of uncertainty biochar's proponents are promoting it on a vast scale, which could, as with agrofuels production, have stark implications in terms of food production and land-grabbing. Land-grabbing is already leading to violent evictions and human rights abuses.

One study, for example, which claimed that 12% of annual greenhouse gas emissions could be offset with biochar (Woolf *et al*, 2010), was based on the assumption that 556 million hectares of land could be 'sustainably' converted to biochar production. This is 20-25 times as much as the amount of land currently used to produce biofuels. Both the chair and the vice-chair of the International Biochar Initiative (IBI) were amongst the authors of this study. Yet this technology is still largely at the experimental stages and most field trials largely rely on traditional charcoal making.

A further problem with biochar is that smallholder farmers and rural poor are not likely to be able to afford modern pyrolysis facilities. Neither can they afford to divert land away from food production in order to produce the large amounts of biomass that would be required. Even if the technology was available it would take a family decades to produce the 10-20 tonnes of biochar that is used on each hectare in most field trials (Biofuelwatch, 2011).

If produced on a large scale, biochar may also encourage the development of genetically-engineered fast-growing trees, so that biomass can be amassed more quickly.

It general, it seems that the forestry sector is quietly contemplating the fact that there are a number of "rapidly growing energy systems based on biomass from waste, agriculture and forestry", including biochar; and it has been observed that "this range of emerging markets could dwarf the demand for wood for traditional uses of paper, building materials and consumer goods." Projected demand includes US biomass energy demand for electricity, pellets and liquid fuels in excess of 60 million tonnes per annum by 2020, and EU demand for biomass reaching 330 million tonnes by 2020, which is almost equal to the total annual EU timber production (New Forests, 2011).

Conclusion

REDD+ may turn out to be just like Snow White's poisoned apple, with an edible side that looks attractive to potential investors but primarily benefits wealthy carbon investors and elites who can 'game' the system. It also has a highly toxic side likely to have significant impacts on the lives and livelihoods of indigenous peoples and local communities living in and dependent upon forests. The other side of the apple is toxic to the environment as well.

It cannot be denied that specific communities can benefit from certain REDD+ projects. But even though REDD+ might work for some, others may find themselves locked into complex contracts where they have to shoulder much of the risk. REDD+, as currently structured, it likely to drive the expansion of monoculture tree plantations, and the spread of genetically engineered trees, both of which will lead to a loss of territories and livelihoods, through increased land-grabbing, and yet more pressure on the world's forest ecosystems. There is a growing push for integrating REDD+ with cropland and soil carbon sequestration ('REDD++'), in which case biochar would be one example of several potentially dangerous agricultural techno-fixes which would multiply these effects. Overall, the impacts on indigenous peoples and local communities are likely to be decidedly negative.

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