Biochar versus top-down schemes

This page will present a comparison of biochar versus "top-down" schemes such as avoided deforestation (AD), compensated reduction (CR) and REDD.

Conceptually speaking, biochar based initiatives differ from REDD-like approaches to slowing deforestation, in that biochar tackles the local drivers leading to deforestation, whereas REDD is a top-down decision enforced by states or projects that have to invent new livelihoods for the communities that are supposed to halt deforestation.

We believe however that both approaches can supplement each other and are not necessarily oppositional. For the sake of clarity, we do present their differences here in the following schemas.

A thorough critique of the viability of top-down schemes to halt deforestation can be found in the following documents:

Center for International Forestry Research: Do Trees Grow on Money? The implications of deforestation research for policies to promote REDD [*.pdf] - December 7, 2007.

Center for International Forestry Research: New Report Warns Failure to Understand Root Causes of Deforestation Imperils New Efforts to Curb Forest-Based Carbon Emissions - December 7, 2007.

GHG abatement costs

When it comes to the cost of offsetting greenhouse gas emissions with biochar systems, it becomes apparent that they offer interesting possibilities. The GHG abatement costs of industrial-scale biochar production (in large pyrolysis plants and possibly from dedicated biomass) are reasonable. Such projects show a very large global potential.

Avoided deforestation has been found to be one of the most expensive GHG offsetting schemes, even though there is a considerable difference between the costs in SEAsia and in Latin America. For Africa, no numbers are available. Slash-and-char systems offer a smaller potential than industrial biochar, but come at a much lower estimated cost. When they are coupled to efficient bio-electricity production (which substitutes either biomass or fossil fuels), their cost can be even below zero.

When biochar is made from waste the disposal of which would normally come at a price, the GHG abatement costs can be strongly negative.