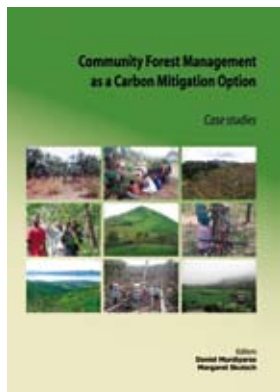


Rethinking the way we tackle climate change strategies



Deforestation is responsible for about 20 per cent of our global carbon emissions, yet international agreements designed to tackle global warming have steered well clear of the issue. The Kyoto Protocol is all about getting developed countries to reduce their industrial emissions: not about getting countries like Indonesia and Brazil to slow down the rate at which forests are cleared to make way for crops, cattle ranching and urban development. But all this is about to change.

"Until recently, forest-rich countries in the tropics resisted calls to consider reducing deforestation as a means of reducing greenhouse gas emissions," explains Markku Kanninen, director of CIFOR's Environmental Services programme, "but everyone now accepts that this could be an important way of tackling global warming." 'Reducing Emissions from Deforestation (RED)', as it is known, is now firmly on the negotiating table.

The first commitment period of the Kyoto Protocol comes to an end in 2012, and a replacement is already under discussion. As part of this process, the United Nations Framework Convention on Climate Change (UNFCCC) invited a range of organisations to submit their views on how to reduce emissions from deforestation in developing countries. CIFOR's submission—one of just four from intergovernmental organisations – had a major influence on the background paper for a UNFCCC workshop on reducing emissions from deforestation, held in Rome in August 2006.

The notion of avoided deforestation was also given considerable prominence by the Stern Review, an analysis of the economics of climate change published by the UK government in October 2006. The review suggested that this could be an important element of any future international climate change agreement. The theory is simple enough: countries rich in forests, but currently losing them at a rapid rate, would be encouraged by payment schemes and other measures to reduce their rates of deforestation, and thus their contribution to global warming.

However, as CIFOR's submission to the UNFCCC points out, deforestation is a highly complex

phenomenon, and measures to address it will be far from simple. "CIFOR has already produced a large body of research, conducted by Arild Angelsen, David Kaimowitz, William Sunderlin, Sven Wunder and others, on the underlying causes of deforestation, and we were able to draw on this in our paper," explains Kanninen. "The Stern Review suggests that measures to avoid deforestation could be relatively cheap, but our research suggests that there will be large social and institutional costs related to any such projects."

The CIFOR submission suggests that any future agreement on reducing emissions from deforestation will have to establish comprehensive monitoring systems, equivalent to the 'full carbon accounting' systems which are mandatory for the developed countries which are signatories to the Kyoto Protocol. This would entail developing countries reporting on all emissions related to land-use activities, and on their programmes to reduce them.

Cordonning off large areas of forest to prevent development is simply not possible in areas where local communities need to make a living, and the CIFOR submission argues that measures to reduce emissions from deforestation could be used to promote sustainable forest management. "Forests which are sustainably managed for timber production would contain a little bit less carbon than forests which are left in pristine conditions," says Kanninen, "but they would be infinitely preferable – in climatic terms – to other uses with very small per hectare carbon stocks, such as agriculture." What is more, they would generate a significant income for local communities, companies and government, and help to safeguard rural livelihoods.

In the meantime, CIFOR's multi-country research on tropical forests and climate change adaptation – conducted in partnership with the Tropical Agriculture Centre for Research and Higher Education (CATIE) and first described in last year's annual report – continued to make solid progress. Research teams in the countries involved – Honduras, Nicaragua, Burkina Faso, Indonesia and the Philippines – conducted their first pilot studies and stakeholder analyses.

"The Stern Review suggests that measures to avoid deforestation could be relatively cheap, but our research suggests that there will be large social and institutional costs related to any such projects." Markku Kanninen



Women planting upland rice, Sumatra, Indonesia. Photo: Neldysavrino

Communities as carbon farmers

A small number of local communities currently benefit from the Kyoto Protocol's Clean Development Mechanism (CDM), and receive payments for planting forests which act as carbon sinks. However, projects which provide carbon credits by conserving the existing forests through sustainable forest management are not allowed under the CDM. According to Daniel Murdiyarto, co-author of *Community Forest Management as a Carbon Mitigation Option*, they should be, under a new scheme known as Reducing Emission from Deforestation (RED).

The report describes 13 case studies of community forestry projects, all of which have been designed to sequester and store carbon. Six projects funded by an action research programme – 'Kyoto: think global, act local' – concerned the sustainable management of existing natural forests in countries as far a field as Nepal and Tanzania, India and Senegal. The remaining case studies focused on the sort of afforestation schemes which are eligible for CDM finance. These were in areas where the forests have long since been cleared and replaced by grasslands.

The 'Kyoto: think global, act local' case studies indicated that the increase in carbon uptake was sufficient to generate an incentive for better and more sustainable forest management, even if the rates paid were relatively low. This was because there were no obvious alternative land uses. However, at the grassland study sites researchers had wondered whether payments for carbon sequestration would be sufficient to persuade farmers to plant trees, rather than to continue subsistence farming and livestock grazing. They needn't have worried. In every case, planting trees appeared to be a good option. Not only could projects such as these generate carbon payments – if accepted for inclusion in future climate change legislation – they could yield crops of considerable value.

"This is really a win-win prospect," concludes Murdiyarto. "Community forestry programmes are good for livelihoods, they help to sequester carbon and they are frequently good for conservation." In global terms, the amount of carbon that can be sequestered through smallholder forestry may not be enormous, but such projects can make a big difference to local communities.

"Community forestry programmes are good for livelihoods, they help to sequester carbon and they are frequently good for conservation."

Daniel Murdiyarto



From left to right: pristine elephant habitat, Gabon (Terry Sunderland); forest fires are a significant source of atmospheric carbon in East Kalimantan, Indonesia (Daniel Murdiyarto); a burnt plantation, Lampung, Indonesia (Mamat Rachmat).