

Paying to save trees

Last gasp for the forest

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A new climate treaty could provide a highly effective way to reduce carbon emissions by paying people to not cut down forests

IN THE south-eastern corner of the Brazilian state of Amazonas, in the municipality of Novo Aripuanã, there is thick forest cover—for now. But as new, paved highways are driven into the trees, illegal loggers inevitably follow. At the current rate of deforestation, around one-third of the forest in Amazonas will have been lost by 2050, releasing a colossal 3.5 billion tonnes of carbon dioxide into the atmosphere.

Novo Aripuanã is the site of a novel response to this threat: the Juma Sustainable Development Reserve, an area of 600,000 hectares (1.2m acres) bordered by two highways. This is a nature reserve with an unusual twist: local people will be paid to prevent the trees from being cut down. Each family in the area has been issued with a debit card. Regular inspections will ensure that the trees are still standing: as long as they are, families will have 50 reais (\$28) a month credited to their accounts.

These funds come from the rich world, where governments and companies that cannot reduce their own emissions cheaply are prepared to pay others to reduce emissions on their behalf (as “carbon offsets”). Not cutting down trees in endangered areas prevents emissions that would otherwise have occurred, which gives untouched forest huge financial value—and provides people who live in the forest with an incentive to preserve it.



This idea is known as "avoided deforestation" or "reducing emissions from deforestation and degradation" (REDD). At the moment REDD is not so much a plan as a collection of proposals and some working schemes, like Juma. The fate of the forests in Brazil, Indonesia, the Philippines (pictured above) and elsewhere around the world could hang on the success of this approach. But there will need to be substantial international commitments to reduce global emissions to create demand for the carbon offsets that REDD schemes can provide. This means a lot hangs on a deal being struck in December in Copenhagen, where countries will meet to negotiate a new climate treaty.

Burning problems

Amid concern that progress towards a new treaty is slipping, Ban Ki-moon, the secretary-general of the United Nations, hosted a summit in New York this week to encourage nations to agree to carbon-reducing policies. REDD was high on the agenda, and governments and the private sector were urged to start investing in such schemes. There has also been talk of wrapping up carbon offsets into "forest bonds" to interest pension funds.

Preventing deforestation is potentially one of the simplest ways to reduce global emissions. At the moment, carbon emissions from deforestation account for some 18% of global greenhouse-gas emissions, more than all the world's trains, cars, lorries, aeroplanes and ships combined. Reducing deforestation and land-degradation will be vital if temperature increases are to be kept to within safe levels (generally assumed to mean no more than about a 2°C increase). Some argue it would be a quicker and cheaper way of reducing emissions than many alternatives, such as weaning the world's vehicle fleet off fossil fuels, forcing people to cut back on energy use or switching to low-carbon forms of power generation, such as wind farms and nuclear power. All those things will be necessary too, but they will take a long time, will require new technologies and cause controversies of their own.

Paying people to not chop down trees looks easy by comparison. It does not depend on any elaborate or costly new technology and is likely to be able to garner the required political support. Achim Steiner, the head of the UN's environment programme, thinks avoided

deforestation should be an easy thing to sell. As well as reducing carbon emissions, keeping forests standing also protects soil from erosion, improves the quality of water, helps regulate rainfall and ensures biodiversity. "How on earth can we not afford to make this work?" he asks.

2011 Pictures



Learning in the forest

But if it is to work, REDD must address the failings of the UN's Clean Development Mechanism (CDM), which forms part of the Kyoto protocol, the 1997 treaty that aims to curb greenhouse gases. Since 2006, the CDM has allowed developing countries to sell carbon offsets, known as credits, for adopting green technology: switching an entire village to energy-saving light bulbs, for example, or planting lots of trees. The CDM has been criticised, however, for allowing countries to sell credits even for dubious things like building dams. There are also concerns about enforcement. And the Kyoto rules do not allow countries to sell offsets from avoided-deforestation schemes. Planting new trees qualified, but refraining from cutting down existing ones did not.

REDD raises further concerns of its own. One of the main criticisms of it is that some rich countries might, in effect, outsource the tricky business of reducing carbon emissions to the developing world, by buying carbon offsets and continuing with business as usual at home. Some also wonder if the promised amount of carbon reduction could be so large. Gilberto Câmara, head of Brazil's National Institute for Space Research (which monitors deforestation from space), thinks that REDD's capacity to deliver global emissions cuts is being oversold. Based on his analysis of Brazil, which accounts for 40% of the world's deforestation, he says there is no way the world can cut 18% or so of emissions through avoided deforestation. This figure is based on outdated estimates of the rate of deforestation, which has fallen dramatically in Brazil in recent years, he says.

This highlights another problem with REDD: it is hard to say how much deforestation there would have been anyway. Benchmarking REDD schemes against existing data, which can be out of date with higher rates of attrition, would give an exaggerated impression of their effectiveness, overstating the volume of emissions that had been prevented and causing rich countries to pay too much.