

Seeing REDD in Indonesia



If Indonesia could curb peatland fires, it could potentially earn billions of dollars from REDD projects.

Every year some 11 million hectares of forest – an area almost the size of Greece – are destroyed. This destruction is having a dramatic impact not just on wildlife and the livelihoods of forest-dwelling people, but on the world’s climate. Deforestation and land clearance are responsible for roughly a fifth of the world’s greenhouse gas emissions, making them a major cause of global warming.

In some areas deforestation and land clearance matter more than in others. “Indonesia is currently losing almost 2 million hectares of forest a year, but from the point of view of climate change the scale of the problem is worse than these figures imply,” explains CIFOR climatologist Daniel Murdiyarso. The disproportionate impact stems from large expanses of Indonesian peatlands being converted to grow oil palm and other crops. In the process, huge quantities of carbon are being released.

Each year, carbon dioxide emissions from peatlands in South-east Asia amount to around 2,000 million tons. This amount is equivalent to around half of the total emissions caused by land-use change activities – deforestation in tropical countries being the most significant – and 8 per cent of global emissions from the burning of

fossil fuels. Ninety per cent of South-east Asian peatland emissions come from Indonesia, making the country the third largest emitter of greenhouse gases after the United States and China.

The scale and significance of peatland conversion to agriculture were highlighted by a series of studies conducted by the Indonesian Forest Climate Alliance and commissioned by the World Bank in 2007. The study, which involved 12 CIFOR scientists working with researchers from a number of other organisations, investigated how Indonesia might benefit from climate-change projects designed to bring about Reduced Emissions from Deforestation and Forest Degradation (REDD). The scientists assessed the various approaches required to curb carbon emissions from a range of land uses, including timber production, oil-palm plantations, industrial timber plantations and conservation, on both mineral and peat soils. The findings were discussed at a series of workshops and presented in Bali at the 13th Conference of the Parties (COP13) to the United Nations Framework Convention on Climate Change (UNFCCC).

The magnitude of Indonesia’s peatland carbon emissions is a considerable embarrassment to the



Tens of thousands of hectares of peatland forest have been cleared to make way for plantations in Kalimantan, Indonesia. (Leon Budi Prasetyo)

Government of Indonesia, but Murdiyarso believes that it also represents a considerable business opportunity. "In any future REDD negotiations," explains Murdiyarso, "Indonesia should be able to use its past emissions as a reference point for future reductions. If it could control peat forest fires, then Indonesia would have much 'hot air' to sell, for example to countries buying carbon credits to offset their own industrial emissions."

Murdiyarso points out that a similar situation prevailed in Russia when the Kyoto Protocol first came into force. Russia's quota for reducing emissions was 17 per cent of the global target, second only to the United States. During the following years, Russia experienced an economic crisis. Its emissions fell dramatically – by default rather than design – and it found itself with plenty of 'hot-air' to sell under the Kyoto Protocol's Joint Implementation and Emissions Trading schemes. If Indonesia could curb peatland fires, it could potentially earn billions of dollars from REDD projects.

Murdiyarso and his colleagues have developed an 'architecture' for future REDD projects in Indonesia. They have looked at how to establish baselines; how payments might be distributed among different stakeholders; how risks might be shared between buyers and sellers. The study was only a preliminary analysis, but it should help to inform future demonstration activities funded by the World Bank's Forest Carbon Partnership Facility and designed to explore how to make REDD projects work.

Prize performance

The 2007 Nobel Peace Prize was jointly shared by the UN Intergovernmental Panel on Climate Change (IPCC) and former US Vice-president Al Gore. The citation praised 'their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change.' While the IPCC has delivered the hard science on climate change, Al Gore has stimulated public interest with his film, *An Inconvenient Truth*.

Since the IPCC was established in 1988, it has been involved in a continuous process of assessing climate change and the measures which are needed to tackle it. CIFOR climatologist Daniel Murdiyarso is one of over 3,000 scientists from around the world who have been involved in the IPCC's assessments. Typically modest, he is quick to praise his colleagues, simply stating that he is proud to have been one of those who have contributed to the IPCC's findings. "There is no doubt in my mind that climate change is happening here and now," he says, "and the work of the IPCC has gone a long way towards establishing this." Markku Kanninen, the director of CIFOR's Environmental Services Programme, has also contributed to the work of the IPCC.

"I'm delighted that Daniel's and Markku's hard work has been recognised in such a way, and proud that CIFOR scientists are part of an effort that is helping to change the world," says Frances Seymour, CIFOR's Director General.

Daniel Murdiyarso being interviewed at UNFCCC COP13 in Bali. (Eko Prianto)



Do trees grow on money?

Maintaining existing forests is being promoted as one of the least expensive ways of tackling climate change. We now know that a fifth of current global carbon emissions come from the burning and clearing of forests. Preventing these emissions, especially in developing countries, by establishing REDD projects – the acronym stands for Reduced Emissions from Deforestation and Forest Degradation – is likely to be a major component of the global climate protection regime which will replace the Kyoto Protocol in 2012.

Do Trees Grow On Money? analyses past research on deforestation and assesses its relevance to the development of future REDD regimes. Launched at the Bali Climate Conference in 2007, the CIFOR report also highlights areas where future research and methodological developments are needed to support processes on avoided deforestation and degradation. As CIFOR's Director General, Frances Seymour, points out in the preface, 'Understanding the underlying causes of current deforestation and degradation trends is the first step towards overcoming the challenges that surely lie ahead.'



Timber destined for a pulp mill in Sumatra, Indonesia. (Ryan Woo)