

Avoiding Deforestation and Degradation

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Briefing Note

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Counting the cost: forest credits and their effect on carbon markets



Measuring carbon in forests is notoriously difficult, carbon absorption varies depending on the weather and much of a forest's carbon is stored in the soil. Image: Bigfoto.

Despite the continuing push from some to see forests included in the carbon trading arrangements of any future international climate agreement, research is increasingly showing that attributing a price to forest carbon will not be enough to save the forests or protect the climate and may lead to massive land grabs which negatively affect forest peoples. This briefing note looks at recent research into the impact of trading forest carbon credits on carbon markets, and the subsequent effect on forests and the climate.

It concludes that direct policy reform will have the most substantial effect on reducing carbon emissions and that including REDD in carbon markets will either lower the price of carbon, or not raise the funds required to make a significant impact on deforestation rates.

A lower carbon price will reduce the incentive to invest in low carbon technology, leading to higher emissions and making a peak by 2015 and drastic decline in emissions thereafter out of reach.

Unless industrialised countries commit to emission reductions by 2020 which are at least twice their current stated ambitions, using carbon trading to finance efforts to reduce deforestation will significantly increase the risk of breaching a 2°C temperature rise, with all the dangers, including forest die back, that this involves.



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Introduction

Whilst it may seem obvious that discussions around schemes to Reduce Emissions from Deforestation and Degradation (REDD) should concentrate on *how* to ensure a permanent end to deforestation, discussion so far seems to have concentrated on *where* money should come from. FERN has produced several reports looking at the drivers of deforestation that must be tackled, such as **Avoiding Deforestation and Degradation: Walking the tightrope to success.**¹ We also believe it is necessary to carefully consider the funding approaches so as to ensure action to reduce deforestation achieves its long term objectives, including of *permanently* reducing emissions.

The financing options that are currently under negotiation fall into three broad categories:

- **Market linked** - REDD credits are traded on a separate carbon market and - in contrast to market-based options do not offset targets for industrialised countries to reduce their emissions. Examples of these include the Tropical Deforestation Emissions Reduction Mechanism (TDERM)² the Dual Markets approach³ and auctioning of emissions allowances as suggested by Norway.⁴
- **Market based** - REDD credits are traded like any other carbon credit on the global carbon markets and can therefore be used by industrialised countries towards achieving their emission reduction targets.
- **Fund based** - Creating a new dedicated fund, for example under the UN Framework Convention on Climate Change (UNFCCC), which would oversee disbursement of funding to finance action that reduces emissions from deforestation. Suggestions to raise finance include taxes and levies on carbon intensive activities.

This briefing will consider the first two of these options by looking at recent research from NGOs, research institutes and the private sector. Overwhelmingly, these reports agree that carbon trading can only address part of the whole picture of emission reduction opportunities. Other policy instruments are required in addition to those that already exist, and market-based mechanisms may not provide the best response to reducing emissions from forests in particular.

FERN believes actions to reduce emissions in forests would be better tackled by more direct intervention, such as strengthening of existing laws and governance structures and clarifying land tenure rights.

Common Themes

The three main concerns that come out from the literature are:

Oversupply of carbon credits – Although estimates vary, with the Carbon Trust showing that credits from the current Kyoto mechanisms may already exceed demand up to 2020, it is clear that mechanisms will only be effective if supply and demand are balanced. The German Development Institute (DIE) find that with current low reduction ambitions, industrial countries would be able to offset half of their emissions through carbon markets,⁵ and research from FERN supports this finding.⁶

The reduction targets that are currently under discussion for a post-2012 climate agreement are not strong enough to create a balance between supply and demand, and either forest based carbon credits reduce the price of carbon or, if the sale of forest based credits were restricted, insufficient funds would be generated to make a significant dent in deforestation rates.

Negative impact on carbon prices - The reports all agree that for carbon markets to be effective a strong, stable carbon price is required, and that this has not yet been achieved, even before accounting for credits



from a future REDD mechanism. New Carbon Finance (NCF) and Greenpeace find that the inclusion of REDD credits would lower carbon prices and the Carbon Trust shows that for carbon markets to be effective in driving low-carbon innovation, they will need to focus on sectors with mature and competitive technology, and easily quantifiable greenhouse gas (GHG) emission reductions. Forests would not be among these as the issue is neither technology nor are emissions from forest loss quantifiable to the levels of accuracy required for a carbon accounting scheme.

More direct policy responses are required – Despite the effort that presently seems to be put into creating schemes and financing mechanisms to address deforestation, the conclusions from Greenpeace, DIE and the Carbon Trust seem to agree that the necessary large scale innovation and structural changes required to address deforestation will only be achieved by instruments which fall outside the scope of carbon markets.



Logs piled up in Republic of Congo which holds some of the largest tracts of standing forests anywhere in the world.
Image: Filip Verbelen/Greenpeace

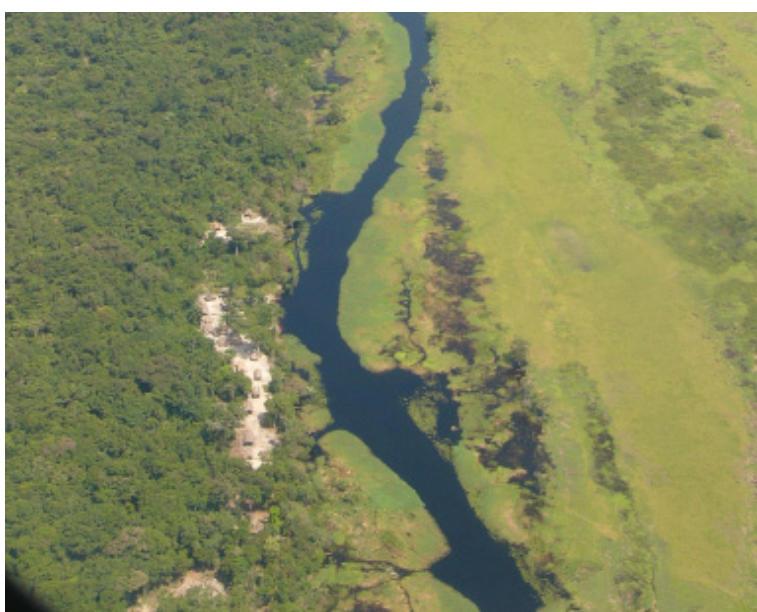
Overview of the reports

The Carbon Trust - A UK government initiative, which works with private and public business to reduce greenhouse gas emissions through innovation and investment.

The Trust's report "Global Carbon Mechanisms: Emerging lessons and implications"⁷ provides an overview of the trading mechanisms of the Kyoto Protocol, concluding that market mechanisms "will be a central pillar in the global response to 2020 but are not on their own sufficient to drive innovation at the pace or scale required for longer term, deeper emissions targets."⁸ The report also finds that the Clean Development Mechanism (CDM) is only effective in reducing emissions in sectors such as energy supply, industry and waste. Other policies will be required to drive innovation in the transport, agriculture and forestry sectors. The barriers identified, such as perceived risks and high transaction costs in the face of measurement uncertainties, are clearly relevant when assessing the effectiveness of using carbon trading to finance activities that halt deforestation. To ignore findings such as these in the design of a mechanism aimed at reducing emissions from deforestation and forest degradation will greatly undermine its effectiveness.

Another interesting point raised by the Trust is that expected emission reduction credits from CDM and Joint Implementation (JI) projects alone will exceed global demand during the current Kyoto commitment period (2008-2012) due to insufficient targets and lower than expected demand. In other words, carbon markets are already at risk of flooding from the existing carbon trading mechanisms. Offset credits from CDM projects are predicted to equal 10 per cent of industrial country emissions in 2013-2020. This is without considering credits generated from any forest related projects, which would potentially lead to an influx of over 1000MtCO₂ per year by 2020⁹ in emission reduction credits.

The Carbon Trust identifies the greatest single weakness in the current negotiations as the lack of an internationally accepted process to analyse the level of supply made available by a trading mechanism against the level of demand that would be created by future emission targets. Sufficient demand can only be created by deeper emission targets in industrialised countries, and indications so far are that nothing like the level of targets are on the cards which would be required to create the demand needed for creating another market of offset credits through REDD.



Whilst most forest campaigners are pleased to see deforestation receiving the visibility it deserves, there are also concerns that increasing the value of forests may also increase the incidents of land rights abuses.

Image: Filip Verbelen/Greenpeace



New Carbon Finance (NCF) provides research and analysis across all of the world's carbon markets with the aim of enabling clients to make better investment and trading decisions.

NCF's "The impact of forestry on the global carbon market" develops a model¹⁰ that calculates opportunity costs and models a future supply curve for REDD credits based on a reference scenario linked to historical deforestation rates ('historical baseline'). Their report finds that "unrestricted access to forestry credits for compliance post-2012 poses considerable downside risk to [Certified Emissions Reduction] CER prices."¹¹ Their model suggests that unrestricted market access for REDD credits would lead to a 40 per cent decrease in CER prices by 2020. They go on to demonstrate that the forest sector has the potential to more than satisfy all demand for international offset credits by 2020, which must pose risks to the viability of other carbon market mechanisms (in particular the CDM) although these are not analysed here. Some, such as the Eliasch Review have concluded that such problems could be countered by restricting the amount of REDD credits in the market (referred to as 'supplementary limits') to prevent an impact on carbon prices.¹² However, NCF's analysis shows that if constraints were put on supply, the impact on prices would still be a 25 per cent decrease, which would make it difficult to achieve the US\$100 per tonne which the IPCC suggest is required for carbon price signals to trigger the scale of innovation needed to limit global temperature increases to 2°C.¹³ The downside of restricting supply in such a way is that fewer resources are raised to combat deforestation, and NCF find that a 'realistic outcome' in terms of using private sector finance to fund forest protection may result in only a 5 per cent decrease in deforestation rates by 2020. The Environmental Defence Fund, who have also modelled the impact of REDD credits on carbon markets, rely on forward banking of credits to stabilise the price of carbon.¹⁴ This is a policy fix which further delays emission reductions, and an oversupply of credits will continue to maintain a downward pressure on prices. EDF calculate a drop of 13 per-cent in carbon prices, with a price of \$24 per tonne by 2020 - again a long way from the IPCC's recommended price for carbon.

German Development Institute (DIE), a development policy think-tank that aims to tie together research, consulting and professional training.

DIE have released a report 'REDD from an integrated perspective'¹⁵ which looks at the potential impact of REDD credits on carbon markets, in order to ascertain the climate, biodiversity and equity implications. The report finds that including REDD as an offset mechanism may lead to an increase in emissions, as well as lowering of the carbon price, leading to the 'lock-in' effect in investment in carbon intensive technology which has been raised by the Carbon Trust and Greenpeace. Whilst its investigations show that demand from industrialised countries through 2013-2020 would be sufficient to absorb REDD credits, this would also seriously undermine domestic abatement in these countries, "and set the world on a path towards dangerous climate change." This is due to the calculation that industrialised countries could offset 24-69 per cent of their emissions via the CDM and REDD (depending on emission reduction targets and not counting credits generated from activities to reduce deforestation in Brazil), thus avoiding the necessary domestic cuts that are required to peak emissions around 2015 in line with avoiding dangerous climate change. The report concludes that incorporating REDD as an offset mechanism without risking breaching 2°C would require a target of 38 per cent emission reduction on 1990 levels from industrial countries, as well as a reduction of 15 per cent reduction on Business-as-Usual (BAU) emissions in developing countries. Anything less than this (and currently stated ambitions fall well below) would require a limit on the amount of REDD credits allowed in the market, reducing the amount of finance available to tackle deforestation meaning that a complementary financing mechanism would be required.



Greenpeace, an environmental campaign group working on issues such as climate change and saving forests.

The Greenpeace commissioned study “The Economics of 2°C and REDD in Carbon Markets”¹⁶ aims to quantify the impact that credits generated from activities that reduce deforestation would have on the carbon market. The researchers modelled what the global carbon market may look like in 2020, using a wide variety of possible industrialised country reduction targets, from currently stated national ambitions to a 40 per cent reduction on 1990 levels. Despite the wide variety, all scenarios showed that including REDD credits in carbon markets would cause a carbon price crash of between 60 and 75 per cent. Their research showed that instead of forcing the high carbon price needed to trigger investment in low carbon technologies, a market based REDD would cause countries – both North and South – to “lock in” dirty technologies, such as coal-fired power stations in the next decade. This would significantly increase the overall long-term cost of responding to climate change, and reduce near-and mid-term investment in clean energy, thus setting energy infrastructure in both industrial and developing countries on a carbon intensive path for the next half century.

Looking at the most ambitious reduction scenario modelled (40 per cent reduction targets on 1990 levels by 2020), Greenpeace find that introducing unrestricted REDD credits into carbon markets could reduce deforestation by 82 per cent, although this would halve the price of carbon and decrease transfers to CDM regions by 34 per cent.¹⁷ This has significant implications for financial flows to developing countries, with China alone losing an estimated \$10-100 billion per year in investment in clean energy.¹⁸ In line with the findings from NCF and DIE, Greenpeace find that restricting the amount of forest based credits entering the market to solve this, will affect the levels by which deforestation could be reduced. In this case, a cap allowing 20 per cent of REDD credits into the carbon market would reduce deforestation by only 16 per cent by 2020, compared to the 82 per cent reduction modelled under the unrestricted scenario. The conundrum here is that introducing REDD credits to global carbon markets decreases compliance costs for industrialised countries (which otherwise increase with more ambitious reduction targets) but also decreases the level of global emission cuts and reduces financial flows to developing countries. The Greenpeace report concludes that “among available financing options, the direct inclusion of forest offset credits in the carbon markets carries the greatest risks to both the climate and the forests,”¹⁹ citing the danger of emissions increases as a direct result of forest carbon trading.



Image: Filip Verbelen/Greenpeace

Conclusion

Looking at the above four reports together, a very worrying picture emerges. It is clear that attempting to finance activities to reduce deforestation and forest degradation through trading of carbon credits that allow for fewer reductions in industrialised countries:

- Significantly increases the risk of dangerous climate change unless industrialised countries bring commitments for significantly higher emission cuts to the negotiating tables in Bonn and Copenhagen than they have indicated to date;
- May lock the world into huge investments between now and 2020 in carbon-intensive energy infrastructure that will generate emissions for the next half century or so despite agreement that global emission need to peak around 2015 and GHG emissions need to drop by around 80-90 per cent by mid-century.
- May provide far fewer benefits to forests or the climate compared with initiatives that do not rely on financing through carbon trading.

All of these reports outline difficulties in making supply and demand match in a way that both avoids a carbon price crash through flooding the carbon market with REDD credits and at the same time raises sufficient funding to make a significant dent in deforestation rates.

It is also worth noting that the amount of credits available will differ hugely depending on whether they come from RED (just tackling deforestation) REDD (tackling deforestation and forest degradation) or REDD+ (tackling deforestation, forest degradation, promoting conservation and the sustainable management of forests and enhancing forest carbon stocks).

Most of these reports considered the impact of credits from reduced deforestation with only the NCF report modelling a scenario closer to REDD+, which is the currently favoured option in the negotiations and will result in even more credits to potentially flood the market. Greenpeace outlines that although reducing the amount of REDD credits allowed into the carbon market may go

some way to correcting imbalances between supply and demand, this will also significantly restrict the degree to which REDD can tackle deforestation. NCF conclude that a very liberal restriction on supply (60 per cent limit on REDD credits) would result in only a 5 per cent decrease in deforestation rates by 2020, meaning that the supply/demand balance may not be solvable in this context and forests would be better financed through other means.

Recommendations

- In order to focus on how to halt deforestation and reduce forest degradation, the international negotiations should consider mechanisms beyond what carbon trading can deliver. Only when clear activities and the most appropriate policy interventions to reduce forest loss in a given region/country have been identified can a meaningful debate on financing mechanisms take place.
- Research is needed to explore the impact of supply and demand on the success of policy objectives, as well as to explore more appropriate direct policy interventions.
- Policy makers need to acknowledge that carbon credits generated by forest-related project activities cannot be comparable in quality to carbon credits from non-forest sector projects, and measurement, additionality and permanence issues remain.
- Redirect the effort that is going into making carbon trading work for forests into agreeing clear action plans to reduce forest loss and then discuss specific financing needs.

Endnotes

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