Institute for Environmental Security

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Second UNFCCC Workshop

REDUCING EMISSIONS FROM DEFORESTATION IN DEVELOPING COUNTRIES

7-9 March 2007
Cairns, Australia

Submission by

Institute for Environmental Security

February 21, 2007

H O R I Z O N 2 1

ADVANCING GLOBAL ENVIRONMENTAL SECURITY
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Introduction

The Institute for Environmental Security (IES) further to its meeting at COP12 in Nairobi is pleased to submit its views to the second UNFCCC/SBSTA workshop on reducing emissions from deforestation in developing countries to be held in Cairns, Australia from March 7-9, 2007.

This brief addresses the following topics, which are related to two of the three main themes that will be addressed at the second workshop, namely:

- Scientific, socio-economic and technical and methodological issues related to reducing emissions from deforestation (under Agenda Theme 1 " Improving the understanding of reducing emissions from deforestation in developing countries")
- Recommendations for enhancing the voluntary sector of carbon offsets and recommendations for revising CDM rules (under Agenda Theme 2 "Ongoing and potential policy approaches and positive incentives")

With tropical deforestation and degradation contributing a large proportion of greenhouse gas emissions[1] and currently not included as part of the international framework established through the Kyoto Protocol, it is essential that positive incentives continue to be provided through the voluntary carbon market both to reduce emissions from deforestation and to increase the terrestrial carbon sink to offset industrial emissions. It is also important that the rules of the CDM are revised to encourage significant expansion of afforestation and reforestation particularly in the tropics and sub-tropics and that an appropriate market regime for avoided deforestation be developed within the UNFCCC.

Properly regulated, the voluntary carbon offsets market can make a significant and immediate impact on global warming and greatly assist the achievement of other critical policy goals. Pending the introduction of a new regime for avoided deforestation under the UNFCCC and the reform of the rules of the CDM, the voluntary market provides an important arena for innovation in project design and implementation; experience which will be of significant importance as longer-term, mandatory market mechanisms are developed. Given the need for urgent action and the time it will take to find and implement new energy technology, we simply will not achieve climate stabilization over the coming decades without significant private sector investment in tropical and sub-tropical forestry of all categories.[2] In the absence of such investment, the world's most vulnerable people, the rural poor of the developing world, will be denied the tools they need to adapt to inevitable climate change. The consequences for them and for all of us of further delay in forest investment will be severe.

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[1] Stern, Nicholas, 2006, "Stern Review: The Economics of Climate Change", November 2006.
[2] Vattenfall, 2007, Global Mapping of Greenhouse Gas Abatement Opportunities up to 2030 http://www.vattenfall.com, also see Enkvist, Per-Anders et. al., "A Cost Curve for Greenhouse Gas Emissions," in The McKinsey Quarterly, No. 1, 2007

Theme I
Improving the understanding of reducing emissions from deforestation in developing countries

1. Scientific Issues

1.1. The LULUCF drivers

Land use, land use change and forestry ("LULUCF") activities are major drivers of climate change and a key focus for poverty alleviation, adaptation to climate change, and protection of bio-diversity and water resources. However, LULUCF activities are also a serious example of market failure by the existing mandatory regulatory regimes. The emergence of forest-based carbon offsets in the voluntary market serves as an example of the importance of allowing innovation and flexibility in addressing the problem of climate change and environmental services generally.[3]

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1.2. The global share of deforestation emissions

Current emissions of greenhouse gases from deforestation amount to between 20 and 25% of the enhanced greenhouse effect estimated to result from all anthropogenic emissions of greenhouse gases. This is a share larger than that contributed by the global transport sector. If current trends continue, tropical deforestation will release about 50% as much carbon to the atmosphere as has been emitted from the worldwide combustion of fossil fuels since the start of the industrial revolution. The potential for avoided deforestation to reduce future emissions of greenhouse gases is significant. [4]

1.3. The importance of carbon storage in forests

According to the FAO's 2005 *Global Forestry Resources Assessment*, the world's forests store 283 gigatonnes (Gt) of carbon in their biomass alone, while the total carbon stored in forest biomass, deadwood, litter and soil together is roughly 50% more than the amount found in the atmosphere -- adding up to one trillion tonnes. The Assessment also shows that the destruction of forests adds almost two billion tonnes of carbon to the atmosphere each year. Preventing this stored carbon from escaping is important for maintaining the global carbon balance and vital to conserving the environment. 5

1.4. The role of sustainable forestry management in climate mitigation

Deforestation is, by far, the largest source of emissions from developing countries, contributing an amount greater than total US fossil fuel emissions.[6] Indonesia, for example, is now the world's third largest emitter, after the US and China, almost entirely because of deforestation.[7]

Sustainable forestry management, particularly in the tropics and sub-tropics, must play a crucial role in the mitigation of emissions,[8] particularly over the next few decades in which

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[3] The European Emissions Trading System bans all forest credits from the developing world even if compliant with CDM and to date there is not a single commercial CDM project for afforestation or reforestation. See Linking Directive of EU ETS, Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004, Article 11a, and see http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html

[4] Mountinho, P. et al. "Tropical Deforestation and Climate Change". Published by Amazon Institute for Environmental Research. 2005. www.environmentaldefense.org/documents/4930_TropicalDeforestation_and_ClimateChange.pdf)

[5] See: http://www.fao.org/newsroom/en/news/2005/1000176/index.html

[6] Santilli et al, 2005, Tropical Deforestation and the Kyoto Protocol, Climatic Change 71, p 267-276

[7] See Wetlands International: http://www.wetlands.org/ckpp/publication.aspx?ID=1f64f9b5-debc-43f5-8c79- b1280f0d4b9a

[8] IPCC, 2000, Special Report of the Intergovernmental Panel on Climate Change: Land Use, Land-Use Change and Forestry, Cambridge University Press

stabilisation of atmospheric CO2 concentrations must occur if we are to avoid crossing critical thresholds[9]. Allowing and encouraging trade in carbon credits from tropical and sub-tropical forestry will enable swifter action to be taken to avoid deforestation and all of its repercussions, than any other single policy measure.[10]

Climate research has shown that in order to avoid catastrophic changes to the global climate and large-scale irreversible systemic disruption, temperatures must not increase above a threshold of 2 degrees C above those in pre-industrial times[11]. Stabilisation around 450 ppm would imply a medium likelihood of staying below this threshold.[12]
Stabilizing atmospheric concentration at 450ppm would allow cumulative emissions of close to 2100 Gt CO2e between 2000 and 2100.[13] Recent analysis demonstrates that to get on track for long-term stabilization in 2030, emissions should not exceed 31 Gt CO2e/yr.[14] Achieving this target requires both significant emission cuts and increased removal of greenhouse gases from the atmosphere against the business as usual scenario.

1.5. The importance of including emission reductions from the forestry sector
To achieve the necessary emission cuts against business as usual scenarios requires the inclusion of emissions reductions from the tropical and sub-tropical forestry sector. Offsetting emissions through forestry accounts for a larger share of potential reduction abatement than any other sector, including potential reductions from the power sector.[15] Recent analysis has exhaustively examined potential abatement scenarios for reduction of emissions to 31GtCO2e/yr at a cost below €40 /tCO2e.[16] Forestry accounts for 25% of the additional reduction potential in emissions required to reach this target. It is clear that to achieve stabilisation at 450ppm by 2030 requires both avoided deforestation and afforestation/reforestation. The potential 2030 abatement from reducing deforestation is ~3.3 Gt CO2e /year, and from reforestation a further 3.5 Gt CO2e /year.[17]

It is critical to understand that avoided deforestation efforts cannot stand on their own. The world needs timber for fuel, building material and paper manufacture and the global demand for wood is increasing with population growth.[18] A significant reduction in the harvest of natural forests necessarily implies an increase in supply from afforestation, reforestation and sustainable management of forest resources. The largest single use of timber (over 50%) is fuel for the rural poor in the developing world primarily in the form of charcoal. There is no readily available substitute source of energy for these dispersed communities. New and restored forest areas managed on a sustainable basis are the only practical alternative to the continued deforestation of native forests.

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[9] op. cit. Stern
[10] op. cit. McKinsey
[11] European Commission Communication "Limiting Global Climate Change to 2° Celsius: The way ahead for 2020 and beyond." Stern, N, 2006, Stern Review: The Economics of Climate Change, Meinshausen, Malte. "On the Risk of Overshooting 2°C." *Proceedings from International Symposium on Stabilisation of Greenhouse Gas Concentrations -- Avoiding Dangerous Climate Change*, Exeter, 1-3 February 2005 at www.stabilisation2005.com/programme.html.
[12] IPCC, 2001, The Scientific Basis, Cambridge University Press, Meinshausen, Malte. "On the Risk of Overshooting 2°C." *Proceedings from International Symposium on Stabilisation of Greenhouse Gas Concentrations -- Avoiding Dangerous Climate Change*, Exeter, 1-3 February 2005 at www.stabilisation2005.com/programme.html.
[13] op. cit. Stern
[14] op. cit. Vattenfall
[15] Ibid.
[16] Ibid.
[17] Ibid.
[18] "State of the World's Forests 2005" and "Global Forest Resource Assessment 2005", FAO 2006

2. Socio-Economic Issues

2.1. Carbon forestry and sustainable livelihoods

Nearly 90 percent of the 1.2 billion people living in extreme poverty worldwide depend on forests for their livelihoods.[19] Natural and planted forest resources are an integral part of the habitat, economy and socio-cultural framework of rural communities. They contribute to human capital by providing a range of goods, such as wild game, fruit and traditional medicines. Income from the sale of forest products, such as latex, resins and spices provide financial capital that can be used for working capital for trading activities or to purchase inputs for other productive activities. Forest incomes are a vital economic buffer and as well as providing essential local environmental services, including energy and freshwater, whose loss disproportionately afflicts the poor, who have fewer alternatives.[20]

2.2. The impacts of deforestation for the rural poor

While deforestation can provide short-term economic benefits from logging and short-term agricultural use, these are almost always outweighed by longer-term losses from soil erosion, flooding, degraded water quality, worsened water security, greater vulnerability to extreme weather events such as drought, and the loss of traditional livelihoods and social cohesion as well as cultural integrity. Deforestation not only degrades forest ecosystems, but the services they provide, thus depriving the poor of their 'natural capital.' As eloquently explained by Nobel Peace Prize Laureate Wangari Maathai, carbon forestry and agriculture are the only meaningful methods of offering sustainable livelihoods to these people[21] and the only way that they can meaningfully participate in and benefit from, the carbon market. The market in forest carbon is one of the few potential sources of new capital available to them.

2.3. The disproportionate climate change impacts faced by the poor

The rural poor of the developing world are the people most vulnerable to climate change not least because their "economy" is dependent on the natural environment for food, fuel, fresh water, building material and traditional medicine.[22] According to the Stern Review, the impacts of climate change are not evenly distributed with the poorest countries and people suffering earliest and most. First, developing regions are at a geographic disadvantage since they are already warmer and already suffer high rainfall variability. Second, developing countries, especially the poorest, are heavily dependent on agriculture, the most climate-sensitive sector of all economic sectors, and suffer from inadequate health and low quality public services. Third, their low natural resource dependent incomes and vulnerabilities make adaptation to climate change particularly difficult. Climatic shocks cause setbacks to economic and social development in developing countries today even with temperature increases of less than 1 degree C. The impacts of unabated climate change, i.e. increases of 3 to 4 degrees C and upwards will increase the risks and costs of these events substantially.[23]

2.4. Supporting the rural poor

The ability of the poor to adapt to climate change is inextricably linked to the level of environmental degradation that they cause out of necessity, as they have no other way to earn a living. Unless their natural environment is stabilized and their livelihoods made sustainable, they will inevitably first exhaust the land and then become environmental migrants putting

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[19] http://www.nature.org/rainforests/explore/facts.html

[20] Smith, J. and Sara J. Scherr. "Forest Carbon and Local Livelihoods: Assessment of Opportunities and Policy Recommendations". Center for International Forestry Research (CIFOR) Occasional Paper No.37. 2002.

[21] Maathai, Wangari, "Climate Change a Pressing Issue for Africa," 13 November 2006.

[22] McCarthy, James J. et. al. eds, "Climate Change 2001: Working Group II: Impacts, Adaptation, and Vulnerability: Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change," Cambridge University Press 2001

[23] See: www.hm-treasury.gov.uk/media/8AC/F7/Executive_Summary.pdf

further stress on urban areas and presenting increasingly difficult security problems for neighbouring countries and countries of destination.[24]

If the rate of tropical deforestation is to be swiftly reduced and if we are to achieve atmospheric carbon stabilization in the medium term, the rural poor of the developing world must be provided with sustainable, alternative ways of life. To accomplish this, it must be based on a reliable long-term supply of compensatory payments and incentives. At this time, only the voluntary sector of the carbon markets and forest carbon offset projects in particular, offer them and us, this prospect. In the longer term, the mandatory carbon markets should provide the required capital to achieve this.

2.5. Potential rural income from the sale for forestry based carbon credits

The sale of forestry based carbon credits is a legitimate source of income for the poorest of the poor. It can also help prevent the almost certain increase in emissions from developing countries that will otherwise ensue if large-scale agriculture, land degradation and deforestation continue. Over the longer-term, community based forest carbon projects could contribute towards increasing and diversifying rural incomes. They could open up areas that would otherwise not be available for carbon emission offsets. However, developing countries will require considerable efforts and investment to establish the enabling conditions for forest carbon projects to contribute on a large scale to local livelihoods and climate mitigation. These include capacity building for carrying out sustainability impact assessments; harmonizing carbon forestry crediting rules with the Biodiversity Convention; reducing transaction costs for establishing baselines and monitoring carbon flows; attracting investors to livelihood-enhancing forest carbon projects.[25]

3. Technical and Methodological Issues

3.1. The evolving monitoring techniques

The science is both strong and coherent in accurately assessing long-term gains and losses of carbon, and other emissions, from the forestry and land use sector. For several decades, landholders and government agencies have been measuring and monitoring forest status and growth using a combination of techniques including direct field measurements, satellite and aerial photography and computer modelling. Many protocols for measuring and monitoring carbon project benefits already exist.[26]

The only scientific uncertainties are at the margin and there is an overwhelming scientific consensus on the measurable contribution that the world's tropical and sub-tropical forests make to the global warming equation.[27]

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[24] Watson, Robert T., et. al. eds., "The Regional Impacts of Climate Change; An Assessment of Vulnerability," Cambridge University Press 1998 and Schwartz, Peter and Doug Randall, "An Abrupt Climate Change Scenario and Its Implications for United States National Security," October 2003

[25] Smith, J. and Sara J. Scherr. "Forest Carbon and Local Livelihoods: Assessment of Opportunities and Policy Recommendations". Center for International Forestry Research (CIFOR) Occasional Paper No.37. 2002.

[26] See Brown, S. O Masera, J Sathaye. 2000. 'Project-based activities' in R. Watson, I Noble, and D.Verardo (eds), Land Use, Land-Use Change and Forestry; 'Special Report to the Intergovernmental Panel on Climate Change, Cambridge University Press, Chapter 5; The Revised 1996 IPCC Guideline for National Greenhouse Gas Inventories and MacDicken, 1997, A guide to monitoring carbon storage in forestry and agroforestry projects, Winrock International Institute for Agricultural Development; and IPCC, 2003, Good Practice Guidance for Land Use, Land-Use Change and Forestry, http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.htm

[27] op. cit. Stern

3.2. Responding to leakage concerns

Leakage has often been identified as a key challenge associated with avoided deforestation. The fundamental solution to this problem is full carbon accounting on a national scale. In the forestry and land-use sector this is achievable given current measurement techniques. The critical issue from a climate change perspective is simply whether more or less carbon is present in the area's biomass over selected intervals. Currently, the perverse incentive created by the EU ban on forest credits from the developing world and the *de facto* exclusion of afforestation and reforestation under the CDM (while crediting forests in Annex 1 countries) is to cause leakage from North to South. In other words, the reduction in native forest harvest and the evident reforestation now being witnessed in the developed world[28] is causing increased pressure to harvest from native forests in the developing world. This global "leakage" not only exacerbates global warming, it deprives the poor of a sustainable way of life and accelerates extinction and bio-diversity loss. The incentives should be exactly the reverse.

Leakage that occurs at the global scale is not under the control of a project developer. However, most potential types of leakage are under the control of the project developer and can be identified and managed at the outset. These include activity displacement, incomplete accounting and temporal leakage. Thus, many types of leakage can be reduced or eliminated by appropriate project design, management and implementation. And that which cannot be eliminated can be quantified and deducted from the project's total carbon benefits within a national baseline.[29] For example, the causes of local activity displacement could be addressed and/or their magnitude estimated, and all carbon pools that decrease (and emission sources that increase) could be included in the project's baseline. Moreover, the crediting lifetime of the project could start at the time of site preparation and planting. Indeed, some of the A/R projects currently underway have made significant efforts to design the project in order to reduce these types of leakage. [30]

It is important to highlight that whilst methods are readily available for avoiding leakage, other measures are important, including the provision of economic opportunities for local communities that encourage forest protection; the provision of replacement products that are less carbon intensive such as timber from plantations rather than native forests; and improving the productivity of agricultural lands.[31] What is of further importance, for reasons that should be evident, is that the system allows for distinguishing between native forest preservation and regeneration from (but does not exclude) afforestation by assigning higher values to the former. This, in fact, is what is already happening in the voluntary market as purchasers of offsets select projects which have multiple benefits, including biodiversity and community benefits, from those that that do not offer such benefits or only on a reduced scale.

3.3. Responding to additionality concerns

The Marrakech Accords effectively define "additionality" for emission-reduction CDM projects by specifying that "*A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity*".

With deforestation continuing to increase on a global scale,[32] it can be argued that any reductions in deforestation through positive incentives offered through the carbon market are *per se* additional. Nevertheless with continued efforts through national regimes and overseas development assistance, it will be important to illustrate that deforestation is being reduced by initiatives linked to climate change abatement and that it is truly additional to any reduction in

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[28] See Kauppi, Pekka, "The Forest Identity", University of Helsinki, 2006

[29] http://www.fan-bo.org/pacuk

[30] International Energy Agency. "Forestry projects: lessons learned and implications for CDM modalities" OECD and IEA Information Paper, 2003. http://iea.org/textbase/papers/2003/forestry.pdf)

[31] See e.g. SGS. Summary, Validation and Verification Report, Programa Nacional de Cambio Climatico Noel Kempff Climate Action Project. November 27, 2005

[32] FAO, 2005, The Global Forest Resources Assessment, Rome

deforestation that may have occurred as a result of other initiatives. This can be ensured by comprehensive reporting schemes, which document the origins of finance for avoided deforestation, sustainable forestry management and tree planting initiatives. Existing voluntary market standards, such as the CCBA, all provide for such assessment and require objective, third-party verification of additionality.

Moreover, if additionality tests were properly applied, countries would not be able to claim credit for protection of unthreatened standing forests. Techniques exist for distinguishing threatened forests from those that are naturally protected, for example, by remoteness. Additionality is often easier to demonstrate for forest carbon projects (which can impose costs on landholders while providing benefits to neighbors) than for many energy projects (which reduce fuel expenditure for project sponsors and are therefore potentially economically attractive).[33] It is however, an error, for the CDM rules to be interpreted as requiring consideration of domestic environmental legislation regardless of levels of enforcement.[34] This approach, adopted by the Executive Board, effectively ignores clearly apparent illegal activity and thereby excludes financing of remedial efforts by the private sector; efforts which can provide economic incentives to cease illegal activity.

Similarly, the "Catch-22" of additionality as applied by the CDM is to require that projects can only qualify if the only basis for investment is carbon crediting. Given the inherent risks of investing in the least developed countries this is a test that no commercial organization can accept. Assessment under the CDM of what is or is not acceptable commercial risk or rates of return on investment is bound to be flawed. Where native forests are still abundant, the costs of afforestation and reforestation are almost always significantly higher than native harvest and they should, in such circumstances, be deemed additional unless there is compelling evidence to the contrary such as a history of plantation rotations in the relevant area. The burden of proof, at least in areas without such a history should be reversed.

3.4. Responding to the non-permanence concerns

Because the carbon sequestered in forest projects is stored in biomass and soils, there exists some risk that it will be released prematurely back into the atmosphere. Fire, pests, disease, and other natural and human-induced disturbances can threaten a project's carbon security. The issue of permanence represents a significant risk for potential offset purchasers but is no different than other business risks, which are routinely insured against. Indeed, the risk of such loss in professionally managed forests is so low that most large-scale forest enterprises self-insure.[35] In other words, the risks have not only been exaggerated, but readily available measures can be taken at modest cost to ensure the carbon security of a forest project registered over a long period of time and to ensure that forest lands will be regenerated if destroyed.

The permanence issue does not mean that that forest carbon offsets are worthless, but rather that they should be discounted or adjusted for risk. Ton-year adjustment is one possible approach. The possible reversibility of carbon stocks, however, does not need to be seen as an insurmountable obstacle to the use of sinks as a GHG mitigation option. Carbon accounting methodologies have been devised especially for sinks projects, taking into account the technical differences in relation to emission reduction projects based on other mitigation activities. The treatment of permanence, therefore, influences and is influenced by the choice of carbon accounting methodologies, the timeframes chosen for carbon accounting, and the approach chosen for dealing with liabilities (i.e., the need to return or replace carbon credits if carbon is released to the atmosphere).[36] The approach of the Chicago Climate Exchange and the New South Wales emissions markets both already illustrates that buffer zones and other

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[33] Chomitz, Kenneth. "Evaluating Carbon Offsets from Forestry and Energy Projects: How do they Compare?" (Policy Working Paper no. 2357, World Bank, 2000

[34] Cite Baker & Mackenzie

[35] See Hancock Timberland Investor, 2nd Quarter 2003, Risk from Natural Hazards for Timberland Investments http://www.htrg.com/research_lib

[36] Costa, Pedro Moura, "Carbon Accounting, Trading and the Temporary Nature of Carbon Storage". Report prepared for the Nature Conservancy. 2002. http://conserveonline.org/docs/2003/01/permanence_english.pdf

tools of project design can be utilized to ensure environmental integrity and minimize project risk as can insurance products offered routinely to the forestry and agricultural sectors.[37] Multilateral project risk insurance is also offered by a large number of institutions.

The country where the land-use activity takes place assumes full responsibility for managing the carbon stocks in the future, and is liable for any enhanced emissions in the future.[38] This is the approach used for Annex I countries under the Kyoto Protocol and there is no reason why it cannot be adopted for use in developing countries. Indeed there are considerable reasons why such discrimination is not only unjustified but also counter-productive.[39] It is unnecessary and counter-productive to require forest credits to be either "temporary" or "long-term" CERs, it is simply a matter of markets being allowed to price the risk of a project including whatever risk management tools it chooses to adopt. The investor company or country is simply liable for any re-emission of the carbon that has been credited as net sequestration at an earlier time. The potential of the project developer or owner to meet its delivery obligations is again a matter for purchasers to assess and value; it is not something that can prescribed by regulation as has been attempted thus far with little or no success.

Theme II

Ongoing and potential policy approaches and positive incentives

1. Market Mechanisms

1.1. Voluntary accreditation schemes for carbon offset projects of companies

IES supports the accreditation of voluntary carbon credits to ensure both integrity in the marketplace and that real, measurable and long-term emissions reductions are being offered.

The voluntary market corrects for failures in the mandatory markets and should be allowed to continue to serve as a source of innovation in the carbon markets. The voluntary markets have already developed and continue to develop accreditation schemes such as the Climate, Community, Biodiversity Standards,[40] the Gold Standard,[41] and the soon to be released Voluntary Carbon Standard.[42] These standards, which are the result of extensive consultation with the private and non-governmental sectors, provide detailed specifications for certification of emission reductions.

1.2. The limitations with current mandatory accreditation schemes

The emergence of these standards is an expression both of the demand for reliable carbon offsets and for greater flexibility than is currently available from existing mandatory regulatory schemes including the EU Trading Scheme and the Kyoto Protocol. Continuing to pursue the approaches adopted thus far would be both redundant and counter-productive. It would repeat past mistakes, stifle necessary innovation at an important point in the evolution of the carbon market and risk defeating the achievement of significant additional efforts to mitigate global warming.

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[37] See CCX Rulebook, Chapters 8 and 9; and NSW Greenhouse Gas Reduction Scheme, Greenhouse Gas Benchmark Rule (Carbon Sequestration) No. 5 of 2003

[38] Fearnside, Philip et al. "Should we include avoidance of deforestation in the international response to climate change?" Research paper supported by the European Commission. 2004. http://www.joanneum.at/carboinvent/post2012_/Bird/Schlamadinger_et_al_2004.pdf

[39] See Bettelheim, Eric, "The Case for Forestry Sequestration," in Environmental Finance, December 2005/January 2006 issue.

[40] http://www.climate-standards.org/

[41] http://www.cdmgoldstandard.org/

[42] http://www.theclimategroup.org

The approaches to regulation of forest carbon sequestration under the CDM are inappropriate models for the models for avoided deforestation and for the voluntary sector. While domestic forestry in Annex 1 Parties to the Kyoto Protocol is included, the CDM excludes credits from avoided deforestation entirely and limits forestry projects in the developing world to afforestation and reforestation ("A/R") activities, which must comply with impractical and arbitrary rules.[43] As a result, to date not a single wholly commercial CDM forestry project has been approved and those projects backed by multi-lateral institutions that have been approved represent less than 1% of all CDM carbon credits.[44] A new and less prescriptive, less bureaucratic and less costly approach is required if significant investment is to flow into forestry in the developing world.

1.3. Use existing market standards for accreditation

Guidance should be sought from well-established commodity and financial instrument markets. Carbon credits and offsets are, after all, hybrids of financial and commodity instruments traded on terms comparable to other financial instruments. Markets are excellent at developing qualitative and quantitative standards and impose discipline in an effective and efficient way. The prices of financial instruments are finely graded based upon detailed risk assessment and commodities similarly are routinely graded as to quality by respected third-party assessors. Truly fraudulent activity in such markets is usually rapidly detected and can be dealt with through existing legislation. Therefore, there is every reason to believe that a regime similar to that applicable to other financial markets would be most workable for carbon offsets. This approach would allow an appropriate balance to be struck between increasing confidence in the environmental integrity of such instruments and the need for innovation both in products and market standards.

IES therefore urges the endorsement of the existing voluntary market standards for accreditation and that they be used as a source of appropriate broad principles adopted under the UNFCCC, including compliance with other relevant treaties and international law such as the Biodiversity and the Wetlands Conventions and ILO standards. This would allow the private and NGO sectors to continue to develop specific rules and practices. Provision should be made for third-party certification of compliance and for regular review and consultation as the market for carbon offsets evolves.

1.4. Adopt appropriate standards for avoided deforestation, reform CDM rules and continue with the voluntary carbon offset market approach

Unless and until standards for avoided deforestation are adopted and the CDM rules are reformed, the voluntary carbon offset market is the only means by which the rural poor of developing world can gain access to and benefit from the carbon markets.[45] The positive incentives to reforestation and reduced deforestation which the voluntary market now offers would be excluded by modeling regulation on either of the current multinational mandatory systems.

Such exclusion precludes the multiple benefits of eco-system restoration and preservation including protection of sources of fresh water and bio-diversity, assisting adaptation to climate change and mitigating global warming. These bans, exclusions and restrictions effectively preclude the very abatement projects, which are essential to meeting emissions targets while penalising those most vulnerable to climate change.[46]

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[43] See Section 2 below, passim

[44] http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html

[45] See Wangari at http://carbonfinance.org/Router.cfm?Page=FeaturedResources&FeatResID=26935

[46] See Bettelheim and d'Origney: "The Kyoto Protocol-A Legal Analysis" in Carbon, Biodiversity, Conservation and Income: An Analysis of a Free Market Approach to Land Use Change and Forestry in Developing and Developed Countries; Royal Society Transactions, July 2002.

1.5. The critical importance of voluntary carbon offsets for forestry projects

In the absence of voluntary market carbon offsets for forestry projects the broad array of economic, environmental, social and cultural benefits, noted earlier in this submission, simply cannot be achieved. The carbon market is a powerful and innovative complement to development aid in reaching the Millennium Development Goals since it enables developing countries to build their carbon mitigation and carbon sequestration assets and trade the carbon credits on a new international market. LULUCF projects are particularly well suited as they deliver multiple development benefits, particularly to rural communities that would otherwise miss out on the benefits of the CDM. Many African countries do not possess fuel intensive industries so for these countries, LULUCF activities are the principal way they can benefit from the carbon market and contribute to global climate change mitigation. For example, Africa's share of the global carbon market is less than 5% partly because LULUCF is limited in the CDM.[47]

In any assessment of the need for carbon forestry projects in the developing world it is critical to understand that without them, the laws of supply and demand will overwhelm, as they have for decades, all other efforts to address the loss of native forests. Projected world demand for industrial round wood and sawn wood will be met partially by an increase in plantation forestry, particularly in the developed world; the balance of timber supply together with consumption of wood for fuel will, unless forest carbon offset projects are incentivised, continue to be met through the destruction of native forests. At current rates of exploitation, the tropical forests will be largely exhausted by 2050 and will have ceased to be intact eco-systems.

2. Recommendations for Reforming CDM rules

2.1. The need for CDM reform

The CDM process engages many notable experts in their individual fields, but it is notable for its lack of consultation with the private sector and financial market professionals. It is also notoriously cumbersome with high transaction costs that repel small and large projects, many developing countries and reputable investors. The results are rules and procedures that impose unnecessarily high compliance costs and which create barriers to investment. This has proved to be particularly damaging to avoided afforestation and reforestation projects which could, with support from the private sector, play a significant role in mitigating climate change, along with avoided deforestation, and provide a much needed breathing space for our planet while other longer term projects in alternative energy are put in place. The private sector has a crucial role to play in providing the funding that will make this attractive to indigenous peoples who are the guardians of the tropical and sub tropical rainforests and its contribution should be to facilitate, not discourage, such investment.

The CDM is a mechanism created to assist the developing world. To date it has served as a non-tariff barrier to carbon exports from the developing to the developed world.[48]. In the absence of CDM reform, the voluntary market is playing an important, if necessarily imperfect, role in contributing to emission reduction through forestry, which is urgently needed. The CDM rules restrict tropical and sub tropical forestry credits in ways that have made it almost impossible to invest in the sector on commercial terms. Reform of the CDM rules is a matter of high priority if equity is to be achieved between North and South.

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[47] See Report on Technical Workshop "Using Forest Carbon Credits in the Carbon Market: Focus on the European Union Trading Scheme". Brussels, March 29, 2006.
www.carbonfinance.org/docs/March29WorkshopSummaryFinal041806.doc

[48] op. cit. Bettelheim, Environmental Finance.

2.2. Remove the 1% role so Annex 1 countries can make fuller use of LULUCF projects to meet their compliance targets

The CDM forestry rules currently limit the use of LULUCF CDM credits to a maximum of 1% of each Annex 1 country's 1990 baseline emissions over the first commitment period; equivalent to 120MtCO2 annually. The 1% rule has clearly had a "chilling effect" on the market, discouraging investment in A/R projects, which offer the only meaningful alternative to meeting timber and fuel demand by continued deforestation of natural forests. There is, importantly, no such cap on Annex 1 countries' use of forestry credits from domestic or Joint Implementation ("JI") projects. The 1% cap is an artificial restraint that arbitrarily enhances the perverse incentive of encouraging A/R in the developed world while discouraging it in the developing world.

Under projected emissions growth scenarios, this 1% cap will equate to an estimated 5-6 % of the total emissions reductions effort that Annex 1 countries must undertake to reach their Kyoto targets[49]. This represents a small fraction of the 20-25 percent that the land-use sector currently contributes to global anthropogenic greenhouse gas (GHG) emissions. Fully addressing climate change requires that opportunities from all sectors with the potential to significantly reduce atmospheric GHGs, including LULUCF, be maximized. And recent experience has shown the risk of such project credits flooding the market and displacing non-LULUCF credits to be unfounded.

Therefore, this artificial and counterproductive cap should be lifted and credit should be given for all activities that increase forest cover or reduce deforestation in the developing world. By lifting this cap and expanding creditable LULUCF activities, emissions reduction targets can be cost-effectively achieved more quickly than would otherwise be possible. This will minimize the time needed to reduce atmospheric GHG levels to an acceptable level. And it would help to promote a fair, comprehensive and environmentally effective global climate protection system.

2.3. Expand LULUCF crediting beyond afforestation and reforestation, to include such activities as revegetation, ecological restoration, improved forest and agricultural management and forest conservation

By only crediting narrowly-defined afforestation and reforestation activities, the CDM is excluding many of the most important land-use types that have the potential to deliver significant GHG mitigation and ancillary benefits (including, conserving soil, restoring biodiversity habitat, protecting watersheds and improving water quality, creating sustainable livelihoods and increasing food production). Of major importance in many areas, including almost all of Sub-Saharan Africa, is to shift charcoal production from native forests to renewable sources.

2.4. Repeal or modify the rule restricting crediting to lands deforested before 1990

Currently, only lands deforested prior to 1990 are eligible for generating CDM credits. There are many key biodiversity areas that have been deforested since this date, and it is important not to preclude carbon finance from helping restore and protect these critical areas.

The FAO estimates that annual deforestation since 1990 has run at a rate of 13 million hectares per year, with a net forest loss of 8.9 million hectares per year from 1990-2000, and 7.3 million hectares annually from 2000-2005.[50] Thus, 125-195 million hectares of deforested land is now ineligible for CDM forestry (an area three times the size of France) and the area is growing (not least because of the lack of any crediting of avoided deforestation and the lack of alternative supply from A/R projects) by an area the size of Greece every year. It is

[49] "Extending the Carbon Market to the World's Poor", Ken Newcombe, World Bank, 2003 http://wbln0018.worldbank.org/eurvp/web.nsf/Pages/Paper+by+Newcombe/$File/ABCDE+KEN+NEWCOMBE+REVISED.PDF

[50] FAO, Schoene, Dieter, "Reducing Emissions from Deforestation," Rome 2006, http://www.fao.org/forestry/webview/media?mediaId=11368&langId=1

happening in the world's most bio-diverse areas and the home to many of the world's last remaining indigenous forest peoples.

One approach that would allow for dealing with continuing deforestation is to make the period of deforestation a rolling one of perhaps 5 years to ensure that it is not taking place as a form of gaming the carbon market. If such an approach were adopted it should be on terms that the 5 year rule can be waived where it is evident that deforestation is occurring as a result of subsistence activity as opposed to industrial activity.

2.5. Abolish the rule requiring the replacement of A/R credits after a maximum of 60 years

Forests are a long-term store of carbon. They have covered vast areas of the Earth's surface for millennia, and contain 60% of the carbon stored in terrestrial ecosystems.[51] CDM rules require that A/R forest credits be either temporary ("tCERs") or long term ("lCERs") and that all of them be replaced at specific intervals, which are unrelated to the forest harvest cycle, with a maximum duration of 60 years.

This rule not only reduces incentives for forest restoration but it actually encourages the liquidation of healthy forests after no more than 60 years in order to generate cash to buy replacement CERs on the open market. Forestry is wrongly discriminated against with regard to the issue of permanence. There is no equivalent replacement rule for credits from industrial installations at the end of their much shorter life span. Other mitigation efforts, whether early stage technology such as wind or tidal power, geological sequestration or hydrogen fuel cells, are no more 'permanent' than a well-managed forest; most industrial plants operate for only 20-30 years; well-managed forests last for generations.

Investors in the voluntary and compliance carbon markets have a desire for fully fungible carbon credits. Other than the Kyoto CDM market, no other carbon market in the world creates a temporary credit in any sector including forestry.[52]
Temporary credits inhibit and distort the growth of markets particularly as they begin to link with each other. Robust methods are available to address or account for the permanence issue for LULUCF projects. These include: maintenance of adequate reserves or buffers to cope with unforeseen losses in carbon stocks, insurance, discount factors based on the assessed risk of carbon loss, and general strategies to reduce risk to carbon stocks such as pest control and fire management. The risk of loss from a natural event in managed forests is very small, averaging 0.04% of loss per year.[53]

Conclusion

The long debate as to the role of LULUCF has resulted in market failure, which can no longer be tolerated if we are to achieve climate stabilization in the medium term. The role played by emissions from deforestation and forest degradation and conversion is simply too large to be ignored any longer. The rules developed so far have not only failed to achieve their goals but they have exacerbated the problem by creating perverse incentives which encourage continued deforestation in the developing world with all of its manifold and negative repercussions for the planet and for humankind.

The debate has also fragmented forestry into artificial segments, which must be re-integrated to address the problem as a whole. A coherent approach must include avoided deforestation, afforestation, reforestation, revegetation and sustainable management. An effective approach

[51] IPCC, Land use, land-use change, and forestry: a special report of the IPCC. (Cambridge & New York.Cambridge University Press, 2000)
[52] e.g. See New South Wales Greenhouse Gas Abatement Scheme: http://www.greenhousegas.nsw.gov.au/Documents/syn101.asp
[53] op. cit. Hancock, footnote 36.

must seek to avoid prescriptive rules and focus on adopting appropriate principles for such projects; principles which can be achieved in variety of ways based on local circumstances, experience and innovation. Most of all, such a regulatory structure, voluntary or mandatory, must allow the price mechanism to operate as it does in other financial and commodity markets.

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