

THE VOLUNTARY CARBON OFFSET MARKET INQUIRY

SUBMISSION TO: THE HOUSE OF COMMONS ENVIRONMENTAL AUDIT COMMITTEE

MEMORANDUM BY: SUSTAINABLE FORESTRY MANAGEMENT LTD



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Submission to the House of Commons Environmental Audit Committee

Memorandum by: Sustainable Forestry Management Ltd

Sustainable Forestry Management Ltd (“SFM”) was established in 1999 to demonstrate that reversals of tropical and subtropical forest degradation and mitigation of global warming can be accomplished by private sector investment meeting the highest commercial, environmental and social standards. As a developer of projects which generate carbon credits and offsets, SFM is concerned to ensure reliability and integrity in the voluntary carbon market. SFM commends the Environmental Audit Committee for its request for submissions on the issue of accreditation in the Voluntary Carbon Markets and concurs on the importance of ensuring credibility of carbon credits in this growing sector but cautions against repeating mistakes in regulation which have distorted the principal mandatory markets. Properly regulated the voluntary carbon offsets market can make a significant impact on global warming and greatly assist the achievement of other critical policy goals.

Summary

Sustainable Forestry Management (“SFM”) commends the Environmental Audit Committee on its inquiry into the voluntary offset carbon market. SFM agrees that there is a need for accreditation of carbon credits to ensure integrity in the marketplace, but maintains that this should be done through endorsement of existing voluntary market standards. This submission highlights the necessity of the inclusion of forestry-based carbon offsets in meeting the 450ppm climate stabilization goal needed to prevent the onset of irreversible and calamitous climate change. Forestry can and must make up a significant part of the required emissions reductions required to reach this target. The voluntary markets provide the necessary flexibility for achieving this by crediting forestry projects that are currently excluded in today’s compliance markets. These include credits for avoided deforestation, assisted natural regeneration and sustainable forest management.

A recent consultation by DEFRA recommends that the voluntary carbon market only offer accreditation to carbon offsets which are certified either through the Kyoto Protocol or the European Union Emissions Trading Scheme (“EU ETS”). SFM opposes this recommendation. The existing rules in the EU ETS exclude forestry offsets from the developing world entirely and the Kyoto Protocol puts such severe limits on forestry in developing countries that they have had a like effect. The effect is a perverse incentive to continued deforestation, legal and illegal, in the developing world and a de facto non-tariff barrier to participation by the rural poor in the carbon markets. If the voluntary carbon market is regulated in this manner essential climate stabilization goals will not be met and many other sustainable development benefits associated with forestry and currently encouraged through the voluntary carbon market will not be realised. Deforestation, particularly in the tropics and sub-tropics will continue at its current ruinous rate.



Rigorous scientific methodologies now exist to quantify and monitor carbon emission reductions generated through all types of forestry offsets programmes and are included in current voluntary market standards. In addition, these standards help to ensure that forestry and land use projects bring significant socio-economic and environmental benefits to the developing countries in which they are located. Forestry projects funded through the sale of carbon offsets are one of the only meaningful methods of offering sustainable livelihoods to rural populations in the developing world, preserving bio-diversity and fresh water resources, reducing deforestation, and assisting the world's most vulnerable people to adapt to climate change. The alternatives of continued land and eco-system degradation are already recognised sources of human distress and communal conflict. Forestry carbon offsets are not an indulgence of the rich they are essential to the planet, to the poor and to all of mankind.

1. Introduction to the role of land use, land use change and forestry (LULUCF) in climate change mitigation

1. Land use, land use change and forestry (“LULUCF”) activities are a major driver of climate change and a key focus for poverty alleviation, adaptation to climate change, and protection of bio-diversity and water resources. LULUCF activities are also, however, 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 generally¹.
2. Deforestation and other land-use activities account for 18 % of annual greenhouse gas (“GHG”) emissions, a share larger than that contributed by the global transportation sector². Ninety percent of the exchange of carbon between the atmosphere and the Earth occurs through photosynthesis primarily in the world's forests.³ Deforestation is by far the largest source of emissions from developing countries, contributing an amount greater than total US fossil fuel emissions⁴. Sustainable forestry management, particularly in the tropics and sub-tropics, must play a crucial role in the mitigation of emissions⁵, particularly over the next few decades in which stabilisation of atmospheric CO₂ concentrations must occur if we

¹ Swingland, I, 2002, Capturing Carbon and Conserving Biodiversity: The Market Approach, The Royal Society

² Stern, Nicholas, 2006, “Stern Review: The Economics of Climate Change”, November 2006: Watson, Robert et al. eds.” Land Use, Land-Use Change, and Forestry. A Special Report of the IPCC”, Cambridge University Press 2000.

³ J. K. Winjum, R. K. Dixon and P. E. Schroeder, ‘Forest management and carbon storage: an analysis of 12 key forest nations’, *Water, Air, and Soil Pollution*, 70: 1–4, 1993, pp. 239–57.

⁴ Indonesia, for example, is now the third largest emitter of greenhouse gases in the world almost entirely as a result of deforestation. See Wetlands International:

<http://www.wetlands.org/ckpp/publication.aspx?ID=1f64f9b5-debc-43f5-8c79-b1280f0d4b9a>

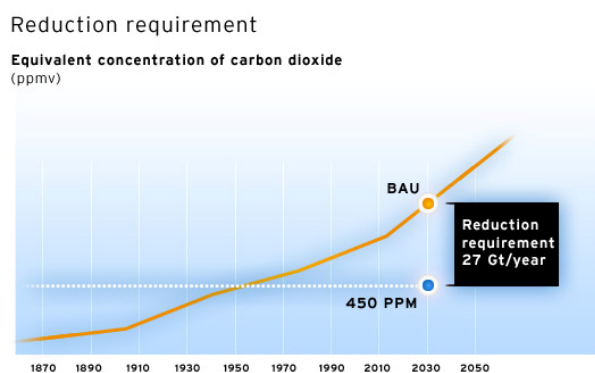
⁵ IPCC, 2000, Special Report of the Intergovernmental Panel on Climate Change: Land Use, Land-Use Change and Forestry, Cambridge University Press



are to avoid crossing critical thresholds.⁶ 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.

- Climate research has shown that to avoid catastrophic changes to the global climate and large scale irreversible systemic disruption, temperatures must not increase above a threshold of 2degrees C above those in pre-industrial times⁷. A stabilisation around 450 ppm would imply a medium likelihood of staying below this threshold⁸. Stabilizing atmospheric concentration at 450ppm would allow cumulative emissions of close to 2100 Gt CO₂e between 2000 and 2100⁹. Recent analysis has shown to get on track for long-term stabilization in 2030, emissions should not exceed 31 Gt CO₂e /yr¹⁰. Achieving this target requires significant emission cuts against the business as usual scenario.(Figure 1).

Figure 1:



Source:Vattenfall, 2007, Global Mapping of Greenhouse Gas Abatement Opportunities up to 2030

- To achieve such a reduction requires the inclusion of emissions reductions from the forestry sector. Offsetting emission through forestry accounts for a larger share of potential reduction abatement than any other sector, including potential reductions from the power sector¹¹. Recent analysis has exhaustively examined potential

⁶ Stern, N, 2006 Stern Review: The Economics of Climate Change

⁷ 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.

⁸ 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.

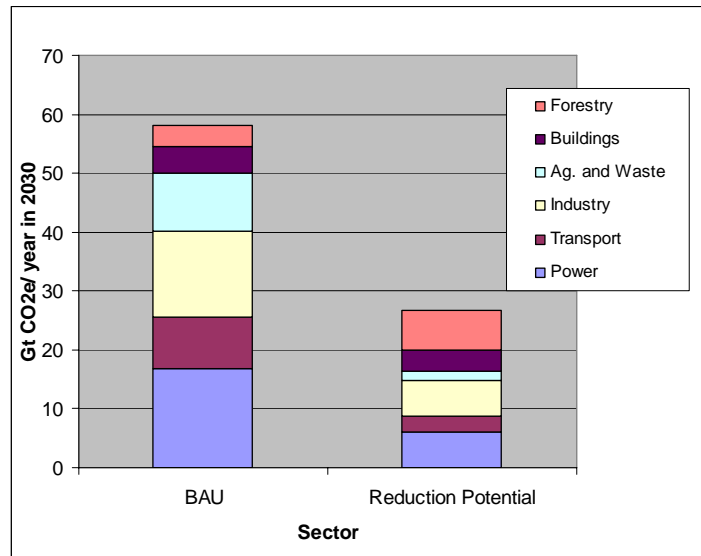
⁹ Stern, N, 2006, Stern Review: The Economics of Climate Change

¹⁰ Vattenfall, 2007, Global Mapping of Greenhouse Gas Abatement Opportunities up to 2030 <http://www.vattenfall.com>

¹¹ *Ibid.*

abatement scenarios for reduction of emissions to 31GtCO₂e/yr at a cost below €40 /tCO₂e¹². Forestry accounts for 25% of the additional reduction potential in emissions required to reach this target. It is clear that to achieve stabilisation at 450 ppm by 2030 requires both avoided deforestation and reforestation. The potential 2030 abatement from reducing deforestation is ~3.3 Gt CO₂e /year, and from reforestation a further 3.5 Gt CO₂e /year (see Figure 2). Without forestry carbon offsets achieving these emissions reductions targets at an acceptable cost is impossible. In other words, the alternative to achieving forest-based emissions abatement is the likely onset of calamitous and irreversible climate change by 2030.

Figure 2: Business-as-usual (BAU) and potential reductions in emission of GHG by sector at an abatement cost less than €40 CO₂e /year.



Data source: Vattenfall, 2007, Global Mapping of Greenhouse Gas Abatement Opportunities up to 2030

5. Research by the IPCC has demonstrated that the current potential of biological mitigation options is in the order of 100 GtC (cumulative) by 2050, equivalent to about 10 to 20 % of projected fossil fuel emission during that period.¹³ This analysis shows that emission reductions from the forestry sector, while essential to achieving medium term abatement goals, are also biologically constrained in their ability to mitigate climate change beyond a certain point.¹⁴ This should dispel fears of carbon offsets from forestry flooding the market for offsets and reducing incentives to technological change. It is clear that forestry carbon credits and offsets are necessary and it is also clear that they are not, by any means, sufficient, to dealing with climate change.

¹² *Ibid.*

¹³ IPCC, 2001, Climate Change 2001: Mitigation, Cambridge University Press

II. Ought there to be a compulsory UK or European accreditation scheme for carbon offset projects of companies? If so, how should this operate?

6. SFM 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. SFM does not, however, endorse a mandatory scheme either in the UK or EU. As explained in greater detail below, 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 Standards¹⁵, the Gold Standard¹⁶, and the soon to be released Voluntary Carbon Standard.¹⁷ These standards, which are the result of extensive consultation with the private and non-governmental sectors, provide detailed specifications for certification of emission reductions. 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. The creation at this time of a mandatory accreditation scheme for voluntary carbon offsets, or a voluntary scheme based on the standards of the existing mandatory schemes, 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.

7. SFM applauds DEFRA on its consultation launched on January 18th 2007 on establishing a voluntary 'Code of Best Practice' for the provision of carbon offsetting to UK customers. SFM does not, however, support the initial recommendation of the consultation which proposes the introduction of a voluntary code which will only accredit or give a 'quality mark' to emissions reductions which meet criteria approved by the Kyoto Protocol or the European Union Emissions Trading System (EU ETS). This is not least as both systems create a perverse incentive for temperate forestry and deny any incentive for tropical forestry which is of far greater utility in dealing with climate change.¹⁸ Each system credits temperate forestry in the rich North and excludes tropical forestry in the poor South. This results in a virtually total and indefensible exclusion of the world's most vulnerable people from the benefits of the carbon markets and their principal opportunity to adapt to climate change.¹⁹ It also incentivises continued deforestation, legal and illegal. To replicate this in the voluntary market would simply compound already perverse outcomes.

¹⁵ <http://www.climate-standards.org/>

¹⁶ <http://www.cdmgoldstandard.org/>

¹⁷ <http://www.theclimategroup.org>

¹⁸ Swingland, I et al, 2002, Carbon, biodiversity, conservation and income: an analysis of a free-market approach to land-use change and forestry in developing and developed countries, Phil. Trans .R .Soc. Lon. A (2002) 360, 1561-1900

¹⁹ Wangari Maathai, Nobel Peace Prize laureate

<http://carbonfinance.org/Router.cfm?Page=FeaturedResources&FeatResID=26935>



8. SFM recommends instead the creation of a self-regulatory framework which would set out guiding principles rather than prescriptive rules. The experience of the Financial Services Authority (FSA) is instructive in this regard. The FSA initially sought to rely on detailed prescriptive rules. Experience demonstrated that it was far more effective and efficient to set out broad principles for market participants, leaving room for innovation and adaptation. The success of the London financial markets in competition with its principal competitors is largely a result of this approach to regulation.²⁰ London's current leading position in the greenhouse gas markets will be maintained only to the extent that it extends this approach to the carbon markets. Carbon 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. Fraudulent activity can be dealt with through existing legislation. There is therefore every reason to believe that a regime similar to that applicable to other financial markets would be most workable. 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. SFM therefore urges the Environmental Audit Committee to endorse the existing voluntary market standards for accreditation and use them as a source of appropriate broad principles allowing the private and NGO sectors to continue to develop standards. Provision should be made for regular review and consultation as the market for carbon offsets evolves.
9. Examination of the regulation of forest carbon sequestration, by common consent a necessary element of mitigating climate change, by the EU and the Clean Development Mechanism ("CDM") of the Kyoto Protocol reveals their weakness as models for the voluntary sector. The EU ETS explicitly bans forestry credits from the developing world even if they conform to the regulations of the Kyoto Protocol. Forestry within the EU, in contrast, counts toward national compliance obligations.²¹ In similar fashion, domestic forestry in Annex 1 countries to the Kyoto Protocol is included but 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.²² 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.²³ Unless and until the EU ban is lifted 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

²⁰See comments by Mayor Bloomberg, of New York and Senator Schumer:
<http://www.schumer.senate.gov/SchumerWebsite/pressroom/record.cfm?id=267787&&year=2007&>,
Financial Times, January 23rd, Paulson backs efforts to tackle competitiveness threat to Wall Street
<http://www.ft.com>

²¹ See EU ETS legislation: http://ec.europa.eu/environment/climat/emission/implementation_en.htm

²² See below at paragraph 11

²³ http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html

access to and benefit from the carbon markets.²⁴ The positive incentives to reforestation and reduced deforestation which the voluntary market now offers would be excluded by modelling regulation on either of these mandatory systems. Such exclusion would also preclude 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.²⁵

10. There is little indication of reform of either the EU or the CDM in this regard in the near term.²⁶ The CDM bureaucratic process is also notoriously slow and resistant to input from the private sector. The results are rules and procedures that impose unnecessarily high compliance costs and which create barriers to investment on a commercial basis. Many of the rules reflect a policy bias against the private sector as a whole and are a function of a deliberate refusal to consult with it. The result, ironically and tragically, is that the CDM, a mechanism created to assist the developing world, in reality serves as a non-tariff barrier to carbon exports from the developing to the developed world.²⁷
11. Importing or copying the EU ban would, of course, largely destroy any possibility of the voluntary market making any contribution to emission reduction through forestry. Importing or copying the rules of the CDM would amount to virtually the same thing. The CDM rules restrict forestry credits in several ways that have made it almost impossible to invest in the sector on commercial terms. These restrictions include the following:

- i. Capping at 1% of compliance requirement the use of A/R credits by Annex 1 countries**

The CDM forestry rules cap the use of A/R credits to just 1% of an Annex 1's country's annual compliance requirement over the first commitment period; equivalent to 120MtCO₂ annually. The principal justification for this restriction is that the inclusion of forestry credits in the CDM would "flood" the Kyoto trading system with "cheap credits". This argument never bore real scrutiny either in theory or in fact. As discussed earlier, the upper bound of emissions offsets from LULUCF activities is 10-20% of total demand for emissions reductions and the realistic level is much lower.²⁸ These calculations have been more than borne out in reality. In the

²⁴ <http://carbonfinance.org/Router.cfm?Page=FeaturedResources&FeatResID=26935>

²⁵ Bettelheim and d'Origny: "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

²⁶ See Marrakech Accords Decisions, COP 7 of the UNFCCC, Decision 11/CP.7

²⁷ Bettelheim, Eric, "The Case for Forestry Sequestration," in Environmental Finance, December 2005-January 2006.

²⁸ IPCC, 2001, Climate Change 2001: Mitigation, Cambridge University Press

first nine months of 2006, A/R projects accounted for just 2.1MtCO₂.²⁹ Annual credit delivery from A/R projects over the entire first commitment period (2008-2012) is forecast to range from 7-14MtCO₂.³⁰ 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. The cap should be abolished and credit given for all activities which increase forest cover or reduce deforestation in the developing world. This would help promote a fair, comprehensive and environmentally effective global climate protection regime. The 1% cap should certainly not be adopted as a standard for the voluntary market.

ii. Limited A/R projects in location to lands deforested or in agricultural use prior to 1990.

Restoration of land deforested since 1990 and restoration of degraded land is excluded under the CDM rules. The original intention of this rule was to prevent “gaming” the then new carbon system by the cutting of natural forest to plant “carbon.” The result has been to exclude from the system any credit for regeneration or replanting of forests destroyed since 1990. 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 2000-2005.³¹ 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 happening in the world’s most bio-diverse areas and the home to many of the world’s last remaining indigenous forest peoples. A major cause of deforestation is the result of “slash and burn” conversion to subsistence agricultural use by peasant farmers; they are not “gaming” the carbon trading system; they are simply trying to survive.³² Unless such people are given an incentive to sustainably manage their habitat and deforestation is reversed, the forests of Indonesia and the Malaysian Archipelago, the Congo Basin, West Africa and the Amazon will be destroyed by the

²⁹ See: World Bank, IETA, “State and Trends of the Carbon Market 2006: Update January 1 – September 30 2006”, October 2006.

³⁰ Jung, Martina, “The Role of Forestry Sinks in the CDM - Analysing the Effects of Policy Decisions on the Carbon Market”, Hamburg Institute of International Economics, 2003.

³¹ FAO, Schoene, Dieter, “Reducing Emissions from Deforestation,” Rome 2006, <http://www.fao.org/forestry/webview/media?mediaId=11368&langId=1>

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

middle of the century.³³ The 1990 Rule arbitrarily prevents efforts to restore vast and important areas degraded or deforested after 1990; it should certainly not be replicated in regulations for the voluntary market.

iii. 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.³⁴ CDM rules require that A/R forest credits be either temporary ("tCERs") or long term ("tCERs") 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 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. This folly should not be copied. 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.³⁵ Idiosyncratic 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.³⁶

12. The standards of environmental integrity which the rules referred to above were meant to deal with are already better catered for in the voluntary carbon market. Partly this is the result of increased knowledge since the CDM rules were developed; partly the result of innovations which neither the CDM nor the EU have yet caught up with. As described in paragraph 6 above, several highly respected organisations

³³See: World Bank, IETA, "State and Trends of the Carbon Market 2006: Update January 1 – September 30 2006", October 2006

³⁴ IPCC, Land use, land-use change, and forestry: a special report of the IPCC. (Cambridge & New York. Cambridge University Press, 2000)

³⁵eg. See New South Wales Greenhouse Gas Abatement Scheme:

<http://www.greenhousegas.nsw.gov.au/Documents/syn101.asp>

³⁶ Hancock Timberland Investor, 2nd Quarter 2003, Risk from Natural Hazards for Timberland Investments http://www.htrg.com/research_lib

now provide standards with multiple safeguards dealing with all of the concerns of those sceptical of carbon offsets generally and of carbon credits from forestry in particular. Each of these standards has robust methodological and monitoring processes which ensure additionality, permanence, avoidance of leakage, verification, accurate measurement and avoidance of double counting. In addition, the CCBA Standards include evaluation of project impacts on communities and on bio-diversity a significant improvement on the EU and CDM rules. The voluntary market does not require a prescriptive, mandatory regulatory overlay beyond the standards now being developed and promulgated. It would, however, benefit from endorsement of those standards which conform to broad principles of integrity including a requirement for independent third-party verification. Attempts at prescriptive regulation of particular project sectors, such as that pursued under the CDM, should be avoided if the voluntary market is to continue to serve the critical function of providing an economic space for market innovation and broader public participation in addressing climate change.

III. Response to comment in introductory text that ‘in terms of offsetting, some commentators have suggested that the practice allows prosperous Western nations to continue to enjoy carbon-intensive lifestyles at little extra cost whilst the most immediate effects of unabated climate change will be experienced in the poorer countries of the world

13. The benefits of GHG concentration mitigation are identical regardless of where offsetting activities occur because of the even distribution of CO₂ in the atmosphere. This means that everyone, rich and poor, benefits from offsets; but the cost of adapting to climate change falls disproportionately on the rural poor of the developing world. It is both necessary and right to provide them with the resources to adapt to the impact of climate change and to do so by means of the carbon offset market. They cannot meaningfully participate in reductions of emissions from fossil fuel use as they use comparatively little. Most use wood as their primary source of energy.³⁷

14. The Coalition of Rainforest Nations, with a membership of 26 different developing countries spread across Asia, Africa and South America³⁸, have made clear that they face a stark choice: either they receive compensation for the carbon sequestration services which their native forests provide to the world or they must continue to exploit them as sources of energy and wood products.³⁹ The implications of the latter are all too clearly illustrated by the fact that Indonesia is now the third largest emitter of greenhouse gases in the world almost entirely the result of continued deforestation.⁴⁰

³⁷ Around half of world’s use of wood is as a source of energy: *Op. Cit.* 32

³⁸ <http://www.rainforestcoalition.org/eng/>

³⁹ Stilts, Joseph, “Cleaning Up Economic Growth,” Project Syndicate, 2005

⁴⁰ See Wetlands International: <http://www.wetlands.org/ckpp/publication.aspx?ID=1f64f9b5-debc-43f5-8c79-b1280f0d4b9a>

15. To achieve reforestation, stabilisation of arid areas, transition to low-till agricultural practices, protection of watersheds and bio-diversity and compensation for preserving existing forests in developing countries, funding must come from rich nations in the form of payments for ecosystem services. It is not a “loophole” or the purchase of an “indulgence” to assuage guilt or preserve a wealthy life-style - it is essential to the future of the most vulnerable people and habitats on earth as well as to mankind as a whole.

IV. Many offset projects involve afforestation or reforestation. Is the science sufficiently coherent in this area to accurately assess overall long-term carbon (or other GHG) gains and losses from such projects?

16. 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 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.⁴¹ The Good Practice Guidance for Land Use, Land-Use Change and Forestry (“GPG-LULUCF”)⁴² produced by the Intergovernmental Panel on Climate Change (“IPCC”) provides methods and guidance for estimating, measuring, monitoring and reporting on carbon stock changes and GHG emissions from LULUCF for reporting for the Kyoto Protocol. It is consistent with guidance for other sectors and can be used to quantify changes in GHG from a diverse range of forestry and land-use management practices. The guide assists in the production of inventories for the LULUCF sector that neither ‘over’ nor ‘under’ estimates, and which reduces uncertainties as far as possible. It supports the development of inventories that are transparent, documented, consistent over time, complete, comparable, assessed for uncertainties, subject to quality control and quality assurance, and efficient in the use of resources. 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.⁴³

⁴¹ Brown, S. O Maseru, 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 and see 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

⁴² IPCC, 2003, Good Practice Guidance for Land Use, Land-Use Change and Forestry, <http://www.ipcc-nggip.iges.or.jp/public/gpplulucf/gpplulucf.htm>

⁴³ Stern, N, 2006, Stern Review: The Economics of Climate Change



Crediting avoided deforestation and sustainable forestry management

17. Credits from avoided deforestation and sustainable forestry management practices (such as low-impact logging and enrichment re-stocking of degraded forests) can be accurately measured and quantified, and should be encouraged in the voluntary carbon market. Methodologies are readily available. The guiding principles for inventory in the GPG-LULUCF apply to quantification of greenhouse gas reductions from sustainable forestry management and avoided deforestation. Robust and credible project-level methodologies have already been developed for avoided deforestation.
18. The Noel Kempff Climate Action Project (NKCAP) in Bolivia provides an excellent working example of how carbon sequestered in the living biomass of forests, and emissions reductions achieved through forest conservation can be scientifically quantified, monitored and certified. In November, Société Générale de Surveillance (SGS), an internationally accredited CO₂ certifier and Designated Operational Entity of the UNFCCC, validated the project design, verified and certified emission reductions for the project.⁴⁴
19. Leakage has often been a key challenge associated with avoided deforestation projects. The NKCAP has demonstrated that active management can reduce leakage, and that which cannot be eliminated can be quantified and deducted from the project's total carbon benefits.⁴⁵ Methods are readily available for avoiding leakage; providing economic opportunities for local communities that encourage forest protection; providing replacement products that are less carbon intensive such as timber from plantations rather than native forests; and improving the productivity of agricultural lands. National rates of deforestation are available for most developing countries.⁴⁶

Additionality

20. With deforestation continuing to increase on a global scale⁴⁷, one could argue 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 over-seas development aid it will be important to illustrate that deforestation is being reduced by initiatives linked to climate change abatement and is truly additional to any reduction in deforestation that may have occurred as a result of other initiatives. This can be ensured by comprehensive reporting schemes documenting the origins of finance for avoided deforestation, sustainable forestry management and tree planting initiatives. Existing voluntary market standards, such as that of the CCBA, all require objective, third-party verification of additionality.

⁴⁴ SGS. Summary, Validation and Verification Report, Programa Nacional de Cambio Climatico Noel Kempff Climate Action Project. November 27, 2005.

⁴⁵ <http://www.fan-bo.org/pacuk>

⁴⁶ *Op.cit* 32

⁴⁷ *Op.cit* 32

IV. To what extent are the schemes and projects funded by offset companies more broadly sustainable, in an environmental, social or economic sense?

21. As explained above in detail, the existing mandatory schemes do not reach the rural poor of the developing world; only voluntary offset schemes and projects have the capacity to do so. 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; and they are simply not credited by the existing mandatory schemes.⁴⁸ Nearly 90 percent of the 1.2 billion people living in extreme poverty worldwide depend on forests for their livelihoods.⁴⁹ Natural and planted forest resources are an integral part of the habitat, economy and socio-cultural framework of rural communities. Almost all tropical forests have people living in them. Deforestation deprives the poor of their ‘natural capital.’ It degrades not only forest ecosystems but also the services they provide. 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 culture.
22. 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.⁵⁰ Their ability 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 further stress on urban areas and presenting increasingly difficult security problems for neighbouring countries and countries of destination.⁵¹
23. Deforestation threatens critical natural habitat for the world’s plants and animals. Tropical forests cover less than 7 percent of the Earth's total surface area but are home to more than 50 percent of the Earth’s species.⁵² Protecting biodiversity by

⁴⁸ *Op.cit* 19, *op.cit.* 21 and 26

⁴⁹ <http://www.nature.org/rainforests/explore/facts.html>

⁵⁰ 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

⁵¹ Schwartz, Peter and Doug Randall, “An Abrupt Climate Change Scenario and Its Implications for United States National Security,” October 2003

⁵² Myers, N, 1988. Tropical forests and their species. In *Biodiversity*, E.O.Wilson ed. Washington DC: National Academy Press

reducing deforestation and through forest restoration is important for local and global communities alike.

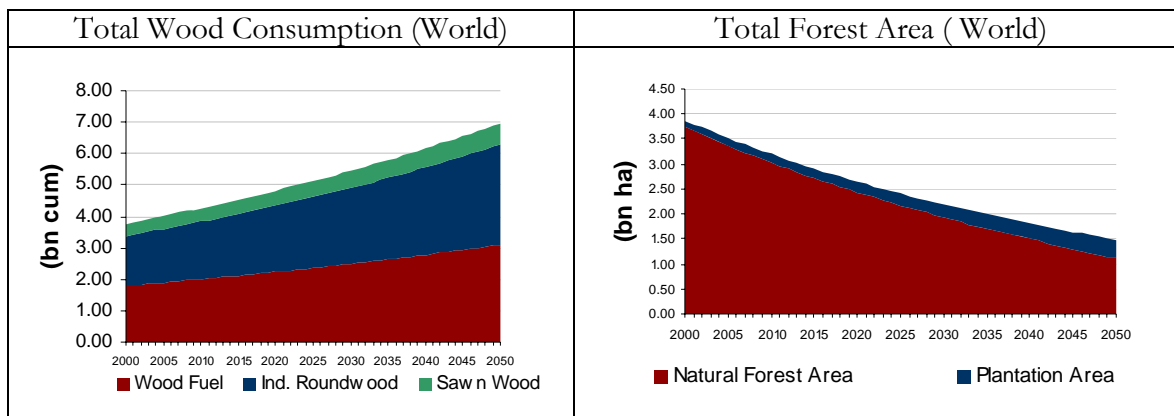
24. Forestry offset projects have many benefits which are found in no other carbon-based projects: They,

- address climate change through carbon sequestration in the short, medium and long term;
- enhance soil protection, erosion and flood control, water purification, agricultural pollination, and biodiversity protection;
- provide alternative, sustainable uses of forest and agricultural land, instead of forcing the liquidation of these natural resources for survival;
- provide access to capital that helps lift the local population out of poverty and into sustainable livelihoods;
- restore and protect ecosystem services upon which local people depend;
- preserve the habitats of the world's remaining indigenous peoples;
- combine mitigation and adaptation activities in ways that make poor communities more resilient against the impacts of climate change, including extreme weather events, droughts, storms, wildfires and floods.⁵³

In the absence of voluntary market carbon offsets for forestry projects this entire array of economic, environmental, social and cultural benefits will not be achieved.

25. 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.

⁵³ Swingland, I, 2002, Capturing Carbon and Conserving Biodiversity: The Market Approach, The Royal Society



26. Illegal logging costs developing countries worldwide around US\$15 billion a year in lost revenue⁵⁴. It also causes deforestation, environmental degradation and biodiversity loss. It damages livelihoods and is associated with corruption, organised crime and the fuelling of armed conflicts. Crediting forests with payments for carbon emission reductions provides a sustainable alternative and can reduce the incentive for illegal logging and its negative repercussions.
27. 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.

Conclusion

28. SFM supports the encouragement of the voluntary sector of carbon offsets by means of a self-regulatory system of accreditation. Such a system should be based on broad principles comparable to those adopted by the Financial Services Authority for the financial sector including a requirement for third-party verification. Such principles would be applicable to all sectors of carbon offsets allowing for market-based evolution of sector specific standards. The evolution of standards is best achieved by encouraging private sector interaction with the public and the NGO community and a regular review of progress and broad consultation. It is vital, from SFM's point of view that the voluntary markets are allowed to continue to develop appropriate standards for the forestry and land-use offsets sector. With tropical

⁵⁴ World Bank: <http://web.worldbank.org>

deforestation and degradation contributing a large proportion of greenhouse gas emissions and currently not included as part of the international framework established through the Kyoto Protocol or the EU ETS, 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. Given the need for urgent action and the time it will take to find and implement new energy technology, we simply will not make it without forestry; and neither will the world's poorest people.

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