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# Submission: New market-based mechanisms to enhance the cost-effectiveness of, and promote, mitigation actions

We appreciate the opportunity to present our views on the establishment of new market-based mechanisms (FCCC/AWGLCA/2010/L.7, paragraphs 80-82).

In summary, this submission argues that the only way to effectively reduce emissions in the timeframe required is through aggressive binding reductions in industrialised countries. There are various market mechanisms which might contribute to this, but carbon trading is not one of them as it does not reduce emissions, but only moves them from one place to another. Introduced as a cost containment mechanism, there is clear evidence that carbon trading is not meeting its objective of cost mitigation, and is certainly not reducing emissions. In addition, the complexity of the land use sector makes REDD particularly ill-suited for a trading-based market mechanism.

***General observation on market-based mechanisms***

*1. Terminology*
The term 'market-based mechanism' can refer to a variety of approaches, including taxation, feed-in tariff systems, levies, etc. as well as trading mechanisms. Our analysis suggests that the impacts of these different market-based mechanisms for environmental integrity differ significantly.

It would appear that in the context of this call for submissions, "new market-based mechanisms" is to mean '***trading***-based mechanisms', while in other UNFCCC calls for submissions the term appears to be interpreted more widely, to include market-based approaches other than crediting and trading of carbon. Consequently, care must be taken that submissions, negotiations and decisions referring to "market-based mechanisms" do differentiate between the different types of market related approaches and avoid ambiguity as this carries the risk of different parties interpreting the meaning of the term differently.

It would be helpful to furthering the negotiations and avoiding ambiguity if workshops and the UNFCCC Secretariat's technical paper envisaged on the topic (FCCC/AWGLCA/2010/L.7, paragraphs 38,39) could clarify whether the term is to be understood narrowly as being synonymous with 'trading-based mechanisms' or more widely - in which case non-trading market based mechanisms ought to be discussed in equal measure.

Such clarification would further aid a more differentiated assessment of the potential of different types of private sector financing for climate mitigation: just as there are more market-based approaches to climate mitigation than carbon trading, private sector finance can also be leveraged through different avenues. Carbon trading is not the only, and certainly not the most promising, avenue through which to leverage private sector finance.

The remainder of this submission will focus on evaluating trading based mechanisms, in line with the assumption that this is what is intended by "new market-based mechanisms."

***Environmental integrity***

***2. Importance of targets ('cap') to reduce emissions***

In any trading-based market mechanism, it is the overall 'cap' which determines the environmental integrity of the scheme. The 'trading' component is only a cost management tool, which in itself does not reduce emissions, but moves them from one place to another. The current emission reduction pledges of developed country parties will not prevent average temperatures rising above 2°C, let alone 1.5°C. Establishing new trading-based market mechanisms in the absence of adequate reduction commitments will deliver neither the necessary emission cuts nor the substantial financial flows to developing country parties that are expected to be generated from trading-based market mechanisms.

*3. Technology 'lock-in' in industrialised countries*

New trading-based mechanisms that generate offset credits would enable industrialised countries to 'outsource' emission reductions to developing countries while at the same time locking their own economies into another generation of fossil-fuel based power generation. A significant proportion of fossil fuel-based energy generating capacity in industrialised countries is due to be replaced over the next 10-15 years.[1] Investment choices made in the energy generating sector in industrialised countries over this period of time will thus determine whether developed countries lock themselves into another generation of fossil-fuel based power generation or whether they lay the basis for de-carbonisation of the power sector in these countries by 2050. Any decision on new market-based mechanisms must consider this context.

Thus, with inadequate reduction pledges and the risk of offset trading locking in another generation of fossil-fuel based energy generation in industrialised countries, establishing new 'credit-and-trade' market mechanisms will undermine the ability of a UN climate treaty to lead to the steep emission reductions required to achieve the 2°C objective.

***New trading-based market mechanisms will primarily increase trading volume, not environmental outcome or financial flows to actual emission reduction activities***

*4. Primary and secondary carbon markets*

Trading happens in two separate, yet linked parts of the market:[2] (1) The first sale of a 'good' in a 'primary market' and (2) the onward trading of the 'good' or a product in a 'secondary market', which is often in the form of a derivative, a financial product which derives its value from the underlying good. In the textbook version, the carbon market is usually described as being dominated by trading in the primary market, where permits or credits are sold only once and then retired by the buyer. It is primarily trade in the primary market which generates finance for the actual project, or mitigation activity. However, trading in the secondary carbon market has grown significantly in recent years, where carbon allowances and increasingly complex derivatives of carbon

[1] World Energy Council (2010): Pursuing sustainability: 2010 Assessment of country energy and climate policies. http://www.worldenergy.org/documents/assessment_2010_full_report_1.pdf

[2] For more detail, see FERN report 'Designed to Fail? The concepts, practices and controversies behind carbon trading'. How it works and why it's controversial' (http://www.fern.org/designedtofail) and Friends of the Earth report 'Smaller, simpler and more stable' http://www.foe.org/sites/default/files/CarbonMarketsReport.pdf

allowances are traded back and forth many dozen to hundreds of times before they are eventually used by a buyer to cover a greenhouse gas emission.[3]

This trading of the same carbon allowance or carbon derivative takes place mainly among financial speculators who profit from speculating on volatility of the price of carbon, not because they are subject to emission reduction targets or have an interest in climate mitigation.

This shift of emphasis of trading to the secondary carbon market has significant consequences for the environmental integrity of any emission reductions mechanisms based on carbon trading.

*5. Finance for whom?*

Profits made from trading in secondary carbon markets cannot be assumed to finance climate mitigation: an increasing number of actors in the carbon market participate to profit from speculation.[4] Just like profits made in the used automobile market do not result in more profits for car manufacturers, it must not be assumed that profits from trading in a multi-billion dollar carbon market will be invested in climate mitigation.

Reports on the amount of finance carbon markets are predicted to raise for climate mitigation have for the most part failed to properly distinguish between increases in the overall trading volume and the proportion of this revenue that would actually be available for climate mitigation activities. The assumption is often made that most of the increased revenue from expanded trading on secondary markets would automatically be available for climate mitigation. The reality is that the primary CDM market comprises only a small proportion, about 1.5 per cent of the total value of the global carbon market. Thus, only a tiny percentage of the carbon market revenue goes to climate mitigation activity that supposedly resulted in additional greenhouse gas reductions in developing countries.

*6. Price volatility from speculation renders carbon trading unsuitable as a cost-management tool*

Increased involvement of speculative actors with no interest in cost-effective implementation of greenhouse gas emission reduction targets may undermine the carbon market achieving its original objective. The motivations of the increasing number of speculative participants in the trading of carbon are diametrically opposed to the motivations of those trading to manage their cost of compliance with an emissions target. Participants whose trading is motivated by speculation will use their trading power to generate, exploit and profit from price volatility, as unpredictable price movements is how speculators profit.

Participants trading in the carbon market with the motivation to manage the cost of compliance with emissions reduction targets look to the carbon market to provide predictable price developments. High price volatility renders carbon trading unsuitable as a cost-management tool for them. Establishing new trading-based market mechanisms will most likely also increase the predominance of speculative trading in the carbon market, thus further calling into question the usefulness of carbon trading as a cost-management tool: “We’ll have a financial crisis in emissions at some point. There'll be derivatives and all these unemployed investment bankers will then

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[3] World Bank Carbon Finance Unit (2010): State and Trends of the Carbon Market 2010. http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State_and_Trends_of_the_Carbon_Market_2010_low_res.pdf and Carbon Trade Watch (2010): Carbon Market ‘growth’ is mainly fraudulent, World Bank report shows. http://www.carbontradewatch.org/articles/carbon-market-growth-is-mainly-fraudulent-world-bank-report.html

[4] World Bank Carbon Finance Unit (2010): State and Trends of the Carbon Market 2010. http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State_and_Trends_of_the_Carbon_Market_2010_low_res.pdf

go work on carbon trading and come up with products which will lead to a crisis. … You'll find few economists who disagree."[5]

***Establishing new 'trading-based' market mechanisms is likely to exacerbate already existing vulnerability of carbon trading to malpractice, fraud and cybercrime.***

*7. Fraud in the* EU Emissions Trading Scheme (*EU ETS)*

Establishing new trading-based market mechanisms will also increase the risk of 'regulatory arbitrage'[6] and fraudulent trading. The EU ETS, to date the largest regional carbon market, has recently shown just how vulnerable carbon trading is to malpractice, fraud and cybercrime:[7] First, cyber criminals generated billions of Euros worth of revenue in value-added tax (VAT) from the trade in carbon permits across the EU and then disappeared before paying the VAT to the tax authorities. Next, carbon offset credits already used by companies to cover emissions subject to the EU ETS target were swapped for Assigned Amount Units (AAUs) and then recycled into the carbon market because they fetched a higher price and were easier to sell than AAUs. Whilst technically legal under the Kyoto Protocol, the practice caused havoc in the EU's carbon markets because such recycled offset credits cannot be used a second time for compliance by companies in the EU ETS. With traders not checking the unique serial numbers before each trade and increasingly complex derivatives products obscuring the content of 'offset credit batches', the recycled offset credits soon found their way back into the accounts of traders who had intended to sell them on to companies covered by the EU ETS.

This incident was followed by cybercriminals obtaining password details from EU ETS permit holders (a type of cyber fraud referred to as 'phishing'), in order to raid the accounts and sell the permits on in rapid succession. And most recently, cybercriminals succeeded to break into accounts at national EU ETS registries, steal the permits straight out of these accounts and in many cases, trade them on before the account holders had even noticed the theft. This incident closed the EU ETS carbon 'spot market'[8] for several weeks, with many registries remaining closed at the time of writing, more than four weeks after the incident was made public. The legal wrangling over who holds ownership over the stolen permits is expected to continue for several years.[9]

Friends of the Earth and FERN have been monitoring and analysing the development of the carbon markets for the past 10 years, with a particular emphasis on the EU ETS and the trading in carbon offset credits.[10] In relation to the vulnerability of carbon trading to malpractice, fraud, corruption and cybercrime, the key lessons we have taken from this analysis are shown in number eight below.

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[5] Kenneth Rogoff, Harvard, former IMF Chief Economist, cited in: Rebecca Weisser: Tax carbon rather than trade in it. http://www.theaustralian.com.au/news/opinion/tax-carbon-rather-than-trade-in-it/story-e6frg6zo-1225787724278 17 October 2009

[6] When regional carbon markets are linked, the carbon allowances from the different markets will be considered equivalent and fungible. If the stringency of the targets is not comparable or enforcement and monitoring capacity and scrutiny vary, different prices will develop in different parts of the market for the same product – a carbon allowance. Traders will then be able to use these regulatory differences to generate profit by buying where the permits are cheap and selling for a profit but below the price level in the linked carbon market where regulation and scrutiny are more stringent. The result would be a market scheme dominated by the lowest common denominator.

[7] Chan.M. (2010): 'Ten ways to game the carbon market'. http://www.foe.org/10-ways-game-carbon-markets

[8] In the 'spot market', carbon permits and offset credits are traded for immediate delivery, as opposed to trades being agreed for delivery at a future date in the derivatives market.

[9] Carbon Market Europe (2011): Registries remain closed as traders nurse legal headaches. Point Carbon 11 February 2011. www.poiuntcarbon.com; Point Carbon: Italian trader takes EC to court over stolen EUAs. 14 Feb 2011 www.pointcarbon.com

[10] See among others: FERN report 'Trading Carbon: How it works and why it's controversial' (http://www.fern.org/sites/fern.org/files/tradingcarbon_internet_FINAL.pdf) and Friends of the Earth report 'Smaller, simpler and more stable' http://www.foe.org/sites/default/files/CarbonMarketsReport.pdf

*8. A trading scheme that is open to non-compliance actors and which allows trading across different jurisdictions will be easy to game and difficult, if not impossible to effectively regulate*.

Architects of the EU ETS quite obviously underestimated the attraction such open trading schemes will have to cybercriminals and that in order to prevent such fraud, rigorous design and due diligence ***before*** actors are allowed to open trading accounts would have been essential to preventing this particular type of crime. Even if security measures had been on par with online banking industry practice, the EU's decision to create a carbon market in which virtually anyone can open a trading account, creates regulatory challenges which the EU ETS may be unable to resolve. It is questionable if subsequent regulation will be able to remedy the flaws of poor design. This risk will equally arise when new trading-based market mechanisms are established and linked with existing trading schemes: The particular design of new trading-based market mechanisms would almost certainly vary between countries as these new mechanisms would – just as with the EU ETS and other regional carbon trading schemes, have to cater to national priorities and particularities. Such accommodation of national particularities would almost inevitably create the possibility for regulatory arbitrage when the different national or regional trading schemes are linked with existing carbon trading schemes.

*9. Scaling up the CDM's project-based approach to a sectoral or programmatic approach will not remedy the fundamental flaw at the heart of offset mechanisms: the reliance on hypothetical baselines for the calculation of offset credit volumes.*

The Kyoto Protocol has defined that carbon permits ("allowances") and carbon offset credits are equivalent, fungible, interchangeable, and that they can be traded in the same carbon market. Yet, they are in fact not comparable. While it is theoretically possible to establish the environmental integrity, and thus the underlying value of a carbon permit, verification of the underlying value of a carbon credit is not possible because it requires evaluating a hypothetical, counterfactual baseline against which the volume of offset credits has been calculated.

*10. Quantification of the underlying asset (the absence of emissions) is not sufficiently robust enough for standard trading platforms*

The error margins resulting from inadequate methodologies to quantify carbon offset volumes are significant, and far greater than error margins accepted as industry standard in derivatives trading. These methodological shortcomings, and the apparent inability of validators to adequately assess them during validation, pose considerable problems for the determination of margins required if such trades were to be cleared[11] or for detecting symptoms of non-performance.

***Land use sector and REDD particularly ill-suited for a trading-based market mechanism***

In addition to this submission's view that inclusion of new 'credit-and-trade'-based market mechanisms in the UN climate treaty currently being negotiated is inappropriate for the reasons outlined above, the following section explains why such a mechanism would be particularly ill-suited to reducing emissions in the land use sector, and hence for the financing of 'REDD'.

[11] A significant portion of carbon offset trading occurs in the still largely unregulated over-the-counter market, i.e. the type of market with was at the heart of the sub-prime mortgage derivatives trading which caused the 2008 financial crisis. Revisions of financial markets regulation currently underway are likely to severely restrict the use of over-the-counter trading due to its risk nature. These changes in financial market regulation, and the effect they will have for carbon trading in general and new trading-based market mechanisms in particular, has to date hardly been considered in the climate negotiations.

***Error margins in carbon quantification make Monitoring Reporting and Verifying (MRV) of carbon fluxes in forests 'with sufficient accuracy' impossible for the time being and possibly for the expected duration of the carbon market.***

*11.* Most, if not all, REDD countries are not currently able to measure, report or verify emissions with sufficient accuracy needed for compliance carbon markets. To achieve this level of accuracy, even if technically possible, would be prohibitively costly. What remains unanswered is what would be sufficient accuracy for quantification of carbon fluxes from the land use sector, and how big the gap is between what is currently obtainable and what would be considered 'sufficiently accurate' – not only by climate negotiators but also by financial market experts who would be expected to trade these forest carbon offsets in the (secondary) carbon market. Before creating a new market it is imperative that sufficient accuracy is clearly identified and guaranteed. Creating a market, at great cost, and later determining that it is not possible to measure and verify emissions to sufficient levels of accuracy wastes precious time and resources. Setting up new trading-based mechanisms for REDD or agriculture offset credits without knowing that such a market would actually be possible from a financial trading perspective, and have a positive impact on forests and peoples, would waste precious time and resources for developing countries to invest in 'readiness' for such a market. Focusing on non-trading based mechanisms for achieving climate mitigation in the land use sector, in particular the financing of REDD, would avoid this risk.

***Impossibility to set baselines for emissions from REDD that at the same time allow for comparability of effort, reflect national circumstances and can verifiably produce additional emission reductions.***

*12. Common baselines are only needed for the purposes of trading carbon.*

In trading-based market mechanisms, emissions are compared to a baseline. If actual emissions are below the baseline, offset credits can be generated.[12] There are different approaches to establishing baselines – and these choices will have profound implications for both programme participation and distribution of benefits and costs.[13] Angelsen notes that "To illustrate the magnitude of money flows involved, consider the scenarios run by Strassburg et al. (2008) with a carbon price of USD 5.63/tCO2, and reduced deforestation cost curves along the lines presented in the Stern-report. Depending on how the baseline is set (global or national historical deforestation, or some combination of these), annual transfers to Indonesia will vary between zero (no participation) to more than USD 3 billion."[14]

Most REDD proposals are based on the concept of a historical baseline: the reference scenario is determined on the basis of previous rates of deforestation, with the average over several years forming the baseline. When emissions from deforestation or forest degradation fall below this rate, forest carbon credits would be issued. This approach favours countries with high rates of deforestation during the historic period used for reference. Countries with low deforestation rates and those which have succeeded in reducing deforestation will not be able to claim emission reduction credits under this approach. Many have argued that there would therefore need to be additional flexibility in calculating the REDD baseline in UN climate negotiations to enable participation for countries with relatively low deforestation rates but with high forest cover (e.g. the Democratic Republic of Congo, Guyana). These suggestions propose inflating the baseline to benefit countries with historically low deforestation rates, which in turn opens the potential for countries to generate offset credits even though emissions from deforestation are increasing. Industrialised countries buying these forest offset

[12] Scholz, Imme & Lars Schmidt "Reducing emissions from deforestation and forest degradation in developing countries: meeting the main challenges ahead" 2008, Bonn: Deutsches Institut für Entwicklungspolitik / German Development Institute (Briefing Paper 6/2008)
[13] A. Angelsen "REDD Models And Baselines" International Forestry Review Vol.10(3), 2008 465. Center For International Forestry Research (Cifor), Bogor, Indonesia.
[14] Ibid., p. 471

credits would further increase emissions as they avoid reductions in domestic emissions. Yet without an inflated baseline, countries with historically low rates of deforestation would not stand to gain financially from a market-based approach to REDD.

Baselines can be established at many different levels of accuracy and for different intended outcomes. The intended policy outcome needs to be clear at the outset so as to adequately assess whether the required baseline accuracy is obtainable and if not, what other parameters can be used to achieve the set objective – in this case reducing deforestation and the resultant emissions. If there is no intention to create tradable carbon credits, then countries and regions could use different baseline parameters which would be insufficiently accurate for the purpose of MRV in a trading context but which would be sufficient to adequately monitor and verify whether the policy objective of reducing forest loss is met.

*13. Non-additionality*

Several economists argue that the setting of baselines or reference scenarios on which to base trade in forest carbon credits cannot determine additionality. Deforestation is driven by a myriad of complex political and socio-economic factors, as well as global commodity markets. Extrapolating historical deforestation rates does not take in to account changes in deforestation from one period to another according to economic development, resource scarcity and commodity price fluctuation, among other factors.[15]

The impossibility of establishing additionality of an offset credit is further complicated in the land-use sector which is characterised by poor monitoring capacity and lack of data. Further, some developing countries with large intact forests are voluntarily taking on targets to reduce deforestation under pressure from domestic stakeholders about the negative social and environmental impact of deforestation. The "business-as-usual" scenario would then still significantly reduce emissions below average historic deforestation rates. However these reductions would not be additional and therefore would generate carbon credits not backed by an additional reduction.[16] McKinsey also acknowledged that additionality is a significant issue, affecting the cost of forest mitigation: "A payment for ecosystem services approach… could have very high inefficiency, i.e, compensation is likely to go to some who would have not deforested in any case, increasing payment by a factor of between 2 times and 100 times."[17]

Similarly, illegal logging and other illegal activities are pervasive in most tropical forest countries. Tackling the complex suite of socio-economic and political drivers is the first step to reducing deforestation. Non-trading based approaches, such as the EU Forest Law Enforcement, Governance and Trade program (FLEGT) have made significant progress in incentivising reform of the forestry sector and beyond. Effective implementation as well as enforcement of, and compliance with, relevant policies, laws and regulations will contribute significantly to reducing emissions from deforestation and degradation yet it remains highly questionable that a trading-based market mechanism would be able to provide the incentives for such action.

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[15] Pirard, Roman. "The fight against deforestation (REDD): Economic implications of market-based funding." IDDRI. Idees pour le debat, N° 20, 2008. Accessed February 17, 2011: http://www.iddri.org/Publications/Collections/Idees-pour-le-debat/Id-0820_Pirard_deforestation_EN.pdf

[16] As stated above, we are strongly of the view that developing countries should be provided new, additional finance and technological resources to implement climate mitigation and adaptation activities. However, these payments should be based on costs of implementing actual policies and measures.

[17] Originally cited in: Hans Gregersen, Hosny El Lakany, Alain Karsenty, Andy White "Does the Opportunity Cost Approach Indicate the Real Cost of REDD+: Rights and Realities of Paying for REDD+" Rights and Resources Initiative, CIRAD, June 2010

***Revenue from trading-based market mechanism for REDD likely to flow to very few countries with the majority unable to tap into the predicted carbon trading revenues***

*14. Asymmetrical resource distribution*

It is often overlooked that a basic principle of investment economics is risk analysis. Experience shows that offset carbon finance to date, from the Clean Development Mechanism (CDM) and the Voluntary Carbon Market (VCM), tends to be directed towards countries where there is a strong enabling environment for private sector investment meaning that the bulk of investment has gone to the larger, more industrialised developing countries. Just two per cent of all investments made under the CDM have taken place in African countries, and most of these were in South Africa.[6]

While forest carbon markets have been presented as an opportunity for Africa to redress the missed opportunities of the CDM, a REDD mechanism which is financed by carbon trading may in fact mirror the distributional issues seen in carbon trading mechanisms to date. Different barriers have been identified preventing countries across Africa from successfully attracting private sector investment. Some can be regarded as general barriers to development, while others are more specifically linked to carbon markets, and to forests in particular, with several efforts to model the distribution of potential REDD finance from carbon markets indicating that funds from REDD trading mechanisms will not go to the poorest countries.

***Land tenure reform, improving forest governance and tackling drivers of deforestation are pre-requisites to reducing deforestation, rather than co-benefits of carbon markets.***

*15. Importance of clarifying tenure rights*

Around two billion people are customary land holders today, a large percentage of which is forested land.[18] In Latin America and Asia, around 25 per cent of forests are owned or managed by indigenous communities.[19] In most tropical-forest countries, tenure rights are contested and conflicts regularly arise over land use and land ownership. In many cases, clarification of tenure rights is a prerequisite for better control over resources.[20] The potential increase in the value of land when it is anticipated that emission reductions from forests or agriculture could be traded on global carbon markets, is likely to lead to increased conflicts and land grabbing. The same can be seen by the increased demand for land since the food crisis in 2007. To grow food and biofuels for their own economies, wealthy nations with insufficient arable land of their own, seek land on which to grow food and biofuels elsewhere. Africa is the main target, with already more than 200 million hectares leased by African governments at cheap prices, leading to increasing conflicts over land.[21] Carbon trading based REDD could further aggravate this situation

*16. Equitable benefit sharing*

While climate negotiators have confirmed broad agreement, in principle, that indigenous peoples and local communities are entitled to an equitable share of the benefits of REDD, implementing this in practice will be

[18] Liz Alden Wily; Who'se land is it; February 2011 (forthcoming); ISBN 978-1-906607-14-2
[19] Jose Roberto (Beto) Borges, "Strengthening Indigenous Rights & Climate Change Mitigation The REDD+ Opportunity" (powerpoint presented at Fifth RRI Dialogue on Forests, Governance & Climate Change June 22, 2010, Washington DC) Available at: http://www.rightsandresources.org/documents/files/doc_1563.pdf
[20] Jade Saunders & Ruth Nussbaum "Forest Governance and Reduced Emissions for Deforestation and Degradation (REDD)" Chatham House Briefing Paper, Energy, Environment And Development Programme EEDPLog BP 07/03.
[21] Liz Alden Wily; Who'se land is it; February 2011 (forthcoming); ISBN 978-1-906607-14-2

considerably more difficult, and the choice of the financing mechanism will be a key determinant in whether such equitable sharing of benefits will be achieved.

Trading is the least likely of distribution mechanisms to achieve equitable benefit sharing due to traditional barriers to market entry such as a favourable investment climate, capacity to engage, and power imbalances in contractual relationships. At a basic level, unclear land rights and uncertainty over land title can negatively impact indigenous peoples' and local communities ability to benefit from REDD implementation.[22] Disempowered communities are already suffering from loss of access to forest resources, the unequal imposition of the costs of forest protection, and they would most certainly be ineligible for REDD benefits in a trading-based framework if they do not enjoy formal title.

In a review of existing projects, The Nature Conservancy, World Conservation Society, and Conservation International found that the Noel Kempff Climate Action Project failed to ensure equitable benefit sharing and, perversely, contributed to decreased livelihoods following project implementation:

> "[Societe General de Surveillance]'s first validation and verification review resulted in […] a socioeconomic impact assessment to determine the needs of the communities. A community development action program was developed, which requires "establishment of a conditioned benefit sharing mechanism based on a participative approach" that would help "to raise the standard of living at a minimum up to the level that the communities experienced before the commencement of the project" [emphasis added]."[23]

*17. Inability of carbon trading to address forest governance*

Proponents of REDD crediting mechanisms assert that by putting a price on the carbon stored in trees, the current economic incentives to deforest could be reversed. However, as many have noted, offset payments for carbon at the national or local level do not adequately incentivise - and in some cases may hinder - the suite of policy changes and new incentives that are required to address deforestation and change forest management behaviour.[24] Typical symptoms of weak forest governance – such as corruption, illegal and unplanned forest conversion, and conflicts over access to land and resources – are critical drivers of deforestation in many countries. The capacity and political will, or lack thereof, to effectively govern forest resources represents significant challenges to achieving desired REDD outcomes, which cannot be incentivised through the establishment of new trading-based market mechanisms. Importantly, the lack of state capacity to create coherent, enabling policy environments, be accountable to local stakeholders and rightsholders, and enforce the rule of law are major drivers of deforestation which require an incentive mechanism that allows for structural reforms rather than a narrow focus on measuring and monitoring forest carbon.[25]

*18. Leakage*

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[22] UN-REDD. "Design of a REDD Compliant Benefit Distribution System for Viet Nam" January 2010

[23] Nicole R. Virgilio, et. al., "Reducing Emissions from Deforestation and Degradation (REDD): A Case-book of On-The-Ground Experience ," The Nature Conservancy, Conservation International, World Conservation Society. June 2010, p. 41

[24] Jade Saunders & Rosalind Reeve "Monitoring Governance Safeguards in REDD+" (paper presented at Expert workshop on Monitoring Governance Safeguards in REDD+ Expert Workshop, May 24-25, 2010, London, England); Hans Gregersen, Hosny El Lakany, Alain Karsenty, Andy White "Does the Opportunity Cost Approach Indicate the Real Cost of REDD+: Rights and Realities of Paying for REDD+" Rights and Resources Initiative, CIRAD, June 2010; Meridian Institute. 2009. "Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report." Prepared for the Government of Norway, by Arild Angelsen, Sandra Brown, Cyril Loisel, Leo Peskett, Charlotte Streck, and Daniel Zarin. Available at: http://www.REDD-OAR.org

[25] Jade Saunders & Rosalind Reeve "Monitoring Governance Safeguards in REDD+" (paper presented at Expert workshop on Monitoring Governance Safeguards in REDD+ Expert Workshop, May 24-25, 2010, London, England).

Leakage comes in two main forms: "activity-shifting leakage," when forest carbon activities directly cause carbon-emitting activities to be shifted to another location outside of the project boundaries (or outside the country, at the national scale); and "market leakage," when a project or policy changes the supply-and-demand equilibrium, causing market actors to shift their activities.

Even with national accounting, which theoretically, though not always in practice, should account for intra-national leakage, international leakage effects could be in excess of 50 per cent.[26] However, sub-national accounting, at either the state or province level, is prone to both international and intra-national emissions leakage. The potential for emissions leakage at the project level is even more egregious. Often heralded as the poster child for sub-national REDD projects, the Noel Kempff Climate Action Project (NKCAP) has failed to protect against leakage. Project sponsors avoided rigorous, expensive monitoring of leakage, favouring elaborate models which depended on significant guesswork. A report released last year shows leakage from the project could be as high as 42-60 per cent.[27]

The built-in incentives to cut costs and maximize carbon credits encourages REDD project developers and managers to cut corners when accounting for, and managing leakage. Even if economic barriers were not a factor, leakage remains an unsolvable problem for REDD projects, even in the context of national accounting frameworks.

***Cost-effectiveness of new 'credit-and-trade'-based market mechanisms.***

*19. Is carbon trading really more cost-effective than direct regulation?*

The claim is often made that carbon trading is more cost-effective and that implementation of trading schemes requires a lesser degree of public enforcement than other forms of regulation. Such claims are however, rarely adequately substantiated. Closer scrutiny of both these claims is advisable before they are accepted as a credible argument for the establishing of new trading-based market mechanisms. This will be particularly important in relation to UNFCCC negotiations about *establishing new trading based market mechanisms* in countries where building up and maintaining institutional infrastructure and ability to implement approaches as regulation-heavy as carbon trading may incur significant and sustained costs.

Establishing and implementing the EU ETS for example requires a vast array of regulation: The revision of the EU ETS will require 14 comitology[28] procedures, seven legal proposals and many other points to review and monitor once the directive is in force. "It is so vast that it is overwhelming," said one official.[29] Negotiating and writing these regulations, rules and guidelines is also extremely time-consuming – the European Commission's internal timetable on the EU ETS comitology shows a to-do list that extends out to the 2020 work programme.[30]

Further regulation will be required to fill the gaps in regulatory detail which have been revealed by the recent incidents of theft of EU ETS permits straight out of permit-holders' accounts:[31] Legal wrangling is expected to

[26] Brian C. Murray, Ph.D. "Seeing REDD: Addressing Additionality, Leakage, and Permanence with a National Approach" (PowerPoint presented at Presented at Forest Day, UN Framework Convention on Climate Change COP Meeting. Bali, Indonesia, December 8, 2007).
[27] Ariana Densham, et. al. "Carbon Scam: Noel Kempff Climate Action Project and the Push for Sub-national Forest Offsets." 2009. Amsterdam, Greenpeace International.
[28] The term comitology refers to the institutional process by which the European Commission and EU Member States negotiate implementing legislation once a law has been passed which requires further specification for implementation.
[29] J. Rankin (2009): A winding path to lower emissions. http://www.europeanvoice.com/article/imported/a-winding-path-to-lower-emissions-/63930.aspx
[30] Ibid.
[31] Point Carbon (2011): EU spot carbon market re-opens, buyers wary. 04 February 2011. www.pointcarbon.com

take years before it can be established who holds the rights to the stolen permits, which had in many cases been traded on several times before trading was halted.

It therefore appears that cost-effectiveness comparisons, where they have been made, have not compared like-for-like: in order to be comparable, such comparisons would have to also include the cost of setting up, maintaining, monitoring, and enforcing the carbon trading scheme. In the case of the EU ETS, a fair comparison would among others include the cost of law enforcement tracking down cybercrime incidents that occurred in the carbon market linked to the EU ETS, maintaining sufficient financial market oversight to prevent carbon markets turning into the next asset bubble and negotiating and monitoring the vast array of implementing regulation that the EU ETS requires.

In jurisdictions where such monitoring and enforcement capacity is far less developed as in the EU, establishing and maintaining such capacity will require substantial resources, which equally will have to be considered in the discussion about whether new trading-based market mechanisms are indeed as cost effective as often claimed.

*20. Cost-effective for whom?*

Cost-effectiveness often prioritises short-term cost savings over long-term cost: "Market actors fail to take positive spill-overs, e.g. benefits accruing to competitors and thence to future generations, into account in making technological choices. Because of this failure to take long-term economic development into account, the international trading markets have contributed far less to sustainable energy development than more targeted programs."[32] This is of particular concern in the case of climate change where investment decisions made concerning energy infrastructure risk locking industrialised country economies into a fossil-fuel energy pathway for many decades if decisions on how to replace existing fossil-fuel based energy infrastructure over the coming 10-15 years fail to clear the path for a phase-out of fossil fuel energy generation in industrialised countries by mid-century. A focus on policy approaches that generate short-term cost savings for large emitters while failing to provide the incentives for long-term structural change in energy generation risk causing incalculable future costs.

The carbon trading-based policy approach to climate mitigation has to date provided cost savings – and even windfall profits – to some of the biggest polluters[33] while failing to provide the strong incentives needed to invest in energy infrastructure change: "[T]he share of companies that expect fundamental change in their operations and investment increased from 4% to 10% between phase II and III [of the EUETS]"[34] and "The oversupply of pollution permits [in the EU ETS] is now so great that emissions can grow back to pre-recession levels and beyond and there will still be no need for any additional cuts to be made in the EU until 2017."[35] New trading-based mechanisms currently discussed in the UNFCCC risk exacerbating these trends further. A pre-occupation with trading-based market mechanisms also prevents meaningful consideration by the UNFCCC of other, more direct and possibly also more cost-effective approaches to climate mitigation. The risk of focusing on high-cost, high risk new trading approaches is particularly acute in relation to action taken to reduce forest

[32] Driesen, David M., "Sustainable Development and Market Liberalism's Shotgun Wedding: Emissions Trading Under the Kyoto Protocol" (2007). College of Law Faculty Scholarship. Paper 23.
[33] Sandbag (2010): The Carbon Rich List. http://www.sandbag.org.uk/site_media/pdfs/reports/carbon_fat_cats_march2010.pdf
[34] Karsten Neuhoff (2011): Carbon Pricing for Low-Carbon Investment. Climate Policy Initiative/ DIW Berlin
[35] Sandbag (2010): EU flagship climate policy fails to require any emissions reductions before 2017.

loss and the resultant emissions. A large body of research has documented how non-trading approaches to REDD are more promising, less risky and likely more cost-effective than trading of forest offset credits.[36]

***Conclusions***

In conclusion, the EU ETS and the Kyoto Protocol's carbon trading schemes have been designed to fail: they assume the contribution of carbon permits and offset credits to limiting greenhouse gas emissions to a verifiable target to be the same when in reality they are not because calculation of offsets depends on unverifiable hypothetical baselines from which offset volumes are calculated. The call for submissions on 'establishing new market-based mechanisms' suggests that these ill-conceived mixed permit-credit carbon trading schemes are to be extended to additional sectors, such as the forest and land use sector (where error margins are even bigger and risk of reversal of carbon savings is significant).[37] Linking trading schemes that operate in jurisdictions where enforcement capacity differs significantly, will provide further ground for trading in 'subprime' carbon derivatives, in particular given that much of the trading activity in carbon offsets is carried out over-the-counter.

In the words of the US Government Accountability Office, "Because additionality is based on projections of what would have occurred in the absence of the CDM, which are necessarily hypothetical, it is impossible to know with certainty whether any given project is additional."[38] The same will be true for sectoral and programmatic offset schemes that equally rely on hypothetical baselines for the calculation of offset credit volumes. In fact, the danger of significant overestimation of volumes of offset credits that will be considered additional will increase when the use of hypothetical baselines is extended from the project to the level of whole programmes or sectors.

Ultimately, without an adequate cap to incentivise deep and immediate cuts in fossil fuel emissions in industrialised countries, preventing temperature increases well beyond 2°C will not be possible. Furthermore, in the absence of ambitious and binding emission reduction commitments, there will also be no demand for increased offset credit sales from scaled-up trading mechanisms. Finally, multiple cost-effective alternatives to trading approaches abound, both market-and non-market based. Therefore, this submission concludes that establishing new trading-based market mechanisms would significantly undermine the ability of the UNFCCC to enable the emission reductions needed to avoid runaway climate change.

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[36] Hans Gregersen, Hosny El Lakany, Alain Karsenty and Andy White (2010): Does the Opportunity Cost Approach Indicate the Real Cost of REDD+ ?Rights and Realities of Paying for REDD+ . http://www.rightsandresources.org/documents/files/doc_1555.pdf

[37] See among others: M.Jonas: 'Understanding the Carbon Balance' and 'Interim summary: Ignorance of terrestrial versus fossil carbon fluxes' Power point Presentation IIASA 10 June 2008.

[38] Testimony of John Stephenson, Director of Natural Resources & Environment, Government Accountability Office, before the Subcommittee on Energy and Environment, Committee on Energy and Commerce, House of Representatives, March 5, 2009 at http://www.gao.gov/new.items/d09456t.pdf