August 20, 2010

Mr. Kevin Kennedy
Office of Climate Change
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812

RE: Sector-Based Crediting and Subnational Reducing Emissions from Deforestation and Degradation (REDD) as part of a California Cap-and-Trade Program

Dear Mr. Kennedy,

We welcome the opportunity to comment on key issues and approaches in the Preliminary Draft Regulation (PDR) [1] still under consideration, in particular, on policy design issues associated with international forest offset credits. Because international forest offset policy design is primarily addressed with placeholder narrative text within the body of the PDR, our comments on relevant policy issues are based on all of the following ARB materials:

- the regulatory language in the PDR;
- the placeholder narrative text for international forest offsets in the PDR;
- the May 19th presentation by ARB staff at the Aceh Governor's Climate and Forest Taskforce meeting;[2]
- as well as the July 30th presentation by ARB staff at the "Public Workshop to Discuss Sector-Based Crediting and Subnational Reducing Emissions from Deforestation and Degradation (REDD) as part of a California Cap-and-Trade Program."[3]

I. Introduction

Reiterating our concerns regarding offsets generally, we note that AB 32 was intended to both reduce emissions here in California and foster the policy environments necessary to achieve significant innovation and investment in California. The proposed offset limit in the PDR would permit a large share of emission reductions from the cap and trade program to occur outside of capped sectors. **The proposed offset limit would undermine the effectiveness of the program**

[1] Air Resources Board. "Preliminary Draft Regulation for a California Cap and Trade Program" November 24, 2009. Last accessed August 20, 2010 http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf

[2] Bamberger, Barbara. "International Forestry and California's Cap and Trade Program" (powerpoint presented at Governor's Climate and Forest Taskforce meeting, Aceh, Indonesia, May 19-20, 2010). Last accessed August 20, 2010:http://www.gcftaskforce.org/documents/May_Aceh/Day_1_2/California%20Presentation%20%28May%2019%202010%29.pdf

[3] Bamberger, Barbara. "Sector-Based Crediting & Subnational Reducing Emissions from Deforestation and Degradation (REDD)." (powerpoint presented at ARB Public Workshop, July 30, 2010, Sacramento, California) Last accessed August 20, 2010: http://www.arb.ca.gov/cc/capandtrade/meetings/073010/arbpresentation.pdf

by diminishing opportunities for job creation and co-pollutant reductions in the state's most heavily-polluted areas, and transfer what should be public wealth in the form of allowance value to private, and potentially international offset developers.

While we appreciate the Air Resources Board's recognition of the importance of protecting tropical forests and reducing emissions from deforestation, we believe that **the ARB's current approach towards international forest offsets falls short of a resilient, effective and equitable policy mechanism**. As the State of California and the California Air Resources Board attempt to design policies to address emissions from deforestation and degradation, it bears reflecting on the current areas of relative agreement and disagreement in international, regional and bilateral REDD policy discussions.

We highlight below the most prominent of these challenges (though this is far from an exhaustive list) to help inform and shape appropriate tropical forest related policy interventions under consideration by ARB. We then offer specific policy recommendations on the proposed "Sector-Based Crediting and Subnational Reducing Emissions from Deforestation and Degradation (REDD)."[4] **We believe that the challenges described below associated with project- and subnational-based REDD credits are incapable of meeting the environmental integrity demanded by AB 32, and they should be excluded from any cap and trade regulations promulgated by ARB.**

II. Achieving REDD objectives – a review of key principles for implementation

It is widely agreed that urgent measures need to be taken to halt deforestation and forest degradation, which account for up to one fifth of anthropogenic carbon emissions, as part of global efforts to prevent catastrophic climate change. In 2007, the international climate community under the UNFCCC agreed to negotiate new policy approaches and positive incentives to reduce emissions from deforestation and forest degradation (REDD). While there was and continues to be broad consensus among policymakers, civil society, indigenous peoples and forest-dependent communities that reducing emissions from and ultimately halting deforestation is a critical part of the global fight against climate change, the contours of how such a international policy framework might be implemented are still in design stages. Since REDD was formally included in the UNFCCC negotiations in December, 2007, policy-makers and global civil society have dedicated significant intellectual and financial resources to thinking through the considerable policy design challenges associated with achieving REDD outcomes. Importantly, much attention has focused on learning from prior, failed global forest policy initiatives in the hope that a REDD mechanism would avoid the mistakes of the past and build a robust, equitable and effective policy framework to halt deforestation.

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, **payments for carbon at the national or local level do not adequately incentivize -- and in some cases may hinder -- the suite of policy changes and new incentives that are**

[4] Ibid. For consistency, although project level crediting is also, technically, sub-national, throughout these comments, sub-national refers to province or state level accounting and implementation.

required to address deforestation and change forest management behavior.[5] 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. Importantly, the lack of state capacity to create coherent, enabling policy environments, be accountable to local stakeholders and rightsholders, as well enforce the rule of law are both major drivers of deforestation in and of themselves and a key barrier to effective action successfully engage in REDD policies and programs.[6]

Even more, in many countries a significant proportion of deforestation has been, and remains to this day, illegal and uncontrolled. Policy makers are also increasingly mindful that prior international interventions have had limited effect on deforestation and degradation rates, often due to the fact that there has been inadequate effort to recognize human rights, clarify property, access and use rights, enable local enterprise development, and encourage the transparency and accountability necessary for equitable markets and governance to develop.[7] Lastly, while it is hoped that REDD will provide significant climate, biodiversity and livelihood benefits, there is also a real risk that REDD will exacerbate existing inequities.

Similarly, significant technical and methodological constraints have prevented avoided deforestation credits from qualifying in all existing compliance-based emissions trading frameworks, including the European Union's Emissions Trading Scheme and the UNFCCC's Kyoto Protocol. Key challenges include additionality, the impermanence of forest carbon sequestration (alternately stated, the possibility for reversals of carbon stored in trees and soil) as well as international and intra-national emissions leakage. While these are not the only such constraints, they are potentially the most damaging to environmental integrity, which is paramount if REDD activities are to be used as compliance instruments. **We are concerned that in its efforts to quickly establish a REDD program, California is glossing over the significant political and technical challenges that have thus far prevented any other compliance market in the world from accepting REDD credits.** By doing so, California risks isolating its program from other compliance markets, or encouraging other compliance frameworks to weaken standards.

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[5] 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.

[6] 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).

[7] Rights and Resources Initiative. "Seeing People Through The Trees: Scaling Up Efforts to Advance Rights and Address Poverty, Conflict and Climate Change." 2008. Washington DC:RRI. Available at: http://www.rightsandresources.org/documents/files/doc_737.pdf

Some of these challenges ultimately may be insurmountable, but there is a majority consensus among policy makers[8] that **if REDD programs are to be credible, they cannot be rushed: the successful implementation of REDD requires a flexible, phased approach**, **implemented at the national level** with broad country participation. These phases would be comprised of a readiness phase for capacity building, planning and preparation (phase 1); policy implementation and scaled up investment (phase 2); and finally, results-based payments for emissions reductions (phase 3).[9] A phased approach is desirable to accommodate the diverse capabilities of REDD countries and to ensure that progressively scaled up financing is provided each stage of REDD implementation. Implementation in successive phases also provides greater clarity in how to address the unique challenges of mitigation in the forest sector while maintaining the credibility of a REDD mechanism, as performance indicators are met at each stage, within the broader global suite of developing country mitigation activities.

However, we are concerned that the general approach currently under consideration by CARB, as outlined in the PDR and in the May 19th ARB presentation **fails to acknowledge the deep institutional and governance capacity that needs to be built in advance of a REDD crediting program, and ultimately may undermine the environmental integrity required by AB 32.** To ensure environmental integrity and sustainable development, REDD policies and programs implemented by California, like all other compliance markets, must ensure the following key principles:

1. National implementation with broad country participation;
2. Clear, coherent policy laws and regulations as well as effective implementation and enforcement of, and compliance with, those policies, laws and regulations;
3. Transparent and accountable decision-making and institutions;
4. Recognize and respects the rights of indigenous peoples and local communities.
5. Safeguards for biodiversity to avoid adverse consequences for threatened and sensitive wildlife.

Early action, demonstration policies and programs may produce some climate benefits and can help generate momentum in support of a credible REDD mechanism; however, **early action demonstration policies cannot be used to generate credits for compliance** outside of robust, national policy frameworks with credible institutions at the national level, as is currently proposed by California. It would be particularly perverse, if its intention to serve as a proof of concept for REDD activities, CARB undermined much-needed and precarious confidence in REDD activities by failing to address the full suite of issues identified by the international community in protecting tropical forests.

Further, CARB must consider the significant additional costs incurred to developing countries in creating the necessary enabling policy frameworks to address deforestation and developing the

[8] UNFCCC Ad-hoc Working Group on Long-Term Cooperative Action. "Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its eighth session, held in Copenhagen from 7 to 15 December 2009." FCCC/AWGLCA/2010/7; "Report Of The Informal Working Group On Interim Finance For Redd+ (Iwg-Ifr)" October, 2009 Available at: http://princes.3cdn.net/8fe32b29f9f9fd7c36_u2m6iypad.pdf.

[9] 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.

institutional capacity to measure, report and verify carbon emissions with an accuracy adequate for trading in a carbon market. These institutional and technical foundations are essential to generating a credible REDD mechanism and securing a stable environment private investment. These costs should be covered by developed countries in line with their international legal obligations to provide new and additional financing to developing countries to meet the full, incremental cost of mitigation and adaptation activities.[1] **California does not appear willing to provide technological and financial support to enable these institutional and technical foundations**, and unless it does so, we believe using REDD credits for compliance would lead to inequitable and onerous burdens placed on developing countries.

Lastly, **many of the key, as yet unresolved, features of a durable REDD regime are not well suited to the regulatory authority of the state of California**, including improved forest governance, the development of relevant legal frameworks, the rights of indigenous peoples and local communities (including their full, effective participation and free, prior, informed consent). The UNFCCC and other institutions are better-suited to address these needs. For all the above reasons, believe that among others, we believe that project- and subnational-based REDD credits should be excluded from any cap and trade regulations promulgated by ARB.

III. Policy Recommendations: Nested Sectoral Crediting pathways

We recommend that ARB eschew a project- and subnational-based crediting approach. ARB is proposing a "nested sectoral crediting" mechanism that "combines forest sector accounting at state/province level with existing infrastructure for project-based activities."[10] CARB asserts that "by focusing at the sectoral-level, rather than on individual projects, these mechanisms also will better ensure additionality and reduce emissions leakage between facilities in a way that the CDM cannot."[11] However, sub-national accounting, at either the state or province level, is prone to both international and intra-national emissions leakage. 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. **There is simply no way to robustly quantify all potential emissions displacement. However, leakage can be minimized by requiring carbon accounting at the national scale with broad country participation in REDD programs.**

National implementation with broad country participation is a foundational principle for successful REDD outcomes. The Council of the European Union has noted that, "Nationwide implementation involving the entire forestry sector would be required so as to minimise the risk

[10] Bamberger, Barbara. "International Forestry and California's Cap and Trade Program" (powerpoint presented at Governor's Climate and Forest Taskforce meeting, Aceh, Indonesia, May 19-20, 2010). Last accessed August 20, 2010:http://www.gcftaskforce.org/documents/May_Aceh/Day_1_2/California%20Presentation%20%28May%2019%202010%29.pdf

[11] Air Resources Board. "Preliminary Draft Regulation for a California Cap and Trade Program" November 24, 2009. Last accessed August 20, 2010 http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf

of in-country leakage."[12] Similarly, the Informal Working Group on Interim Finance for REDD (IWG-IFR), composed of nearly all REDD relevant countries, has noted that, "To be effective, the incentive structure must meet two criteria: (i) it must have close to global coverage – an incentive that is attractive for one country but not others is likely to lead to international leakage (simply displacing emitting activities to another country) and hence represent an ineffective use of scarce finances; (ii) the frameworks to address deforestation and degradation in developing forest countries must be nationally coherent – finance that is made available primarily on a project basis may cause domestic leakage and similarly lead to ineffective use of public and private capital."[13] **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 percent.**[14] This potentially significant emissions displacement wholly undermines the ARB's mandate to ensure environmental integrity.

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 despite promises by the NKCAP sponsors. **Project sponsors avoided rigorous, expensive monitoring of leakage, favoring 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.**[15] Further, Murray et. al. point out that: "It is commonly argued that small projects will have negligible effects on the affected markets and therefore generate little leakage. Our results suggest otherwise. For small projects, leakage may be small in absolute terms but it tends to be larger in proportion to the direct project benefit than a larger program. Thus leakage outside the boundaries of even small projects should not be ignored."[16] 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 outside of national accounting frameworks.

Crediting individual projects, outside of national accounting frameworks with broad country participation in a global REDD mechanism, preserves the long standing technical constraints that prevented avoided deforestation credits from being included in Kyoto Protocol. It is difficult understand exactly what is meant by ARB's reference to "existing infrastructure for project-based activities" because there are no existing compliance markets for REDD projects. However, even within a jurisdiction-wide accounting system, the potential for emissions leakage

[12] European Council. "Council Conclusions on addressing the challenges of deforestation and forest degradation to tackle climate change and biodiversity loss" (Conclusions of the 2912th Environment Council meeting, Brussels, 4 December 2008). p., 5

[13] 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. p. 10

[14] 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).

[15] Ariana Densham, et. al. "Carbon Scam: Noel Kempff Climate Action Project and the Push for Sub-national Forest Offsets." 2009. Amsterdam, Greenpeace International.

[16] Brian C. Murray, et. al. "Estimating Leakage from Forest Carbon Sequestration Programs" Land Economics 80(1):109-124 (2004)

is significant. **Reconciling project-based accounting within jurisdiction-wide accounting is sure to involve unacceptably high levels of guess work and significant margins of error.**

Policy Recommendations: Baselines, reference levels and additionality

To be credible as an offset, the emissions reduced, avoided, or sequestered must be additional to business-as-usual. This concept is often called "additionality." The Congressional Research Service has found that "Additionality is at the crux of an offset's integrity. . . . [I]t may be impossible to accurately determine what 'would have happened anyway' for some projects."[17] This is particularly true in the land use and forestry sector. The complex suite of socio-economic and political forces affecting decisions about land use and land use change make it very difficult to ascertain what would be additional and therefore extremely difficult to establish sound baselines. In Costa Rica, where many have argued that national payment for ecosystem services (PES) schemes, of which REDD is one, have had a modest effect, while others have noted that the impact is negligible. The studies all agree that many landowners would have protected their forests anyway and that decline in deforestation in Costa Rica cannot be attributed to the payments.[18] 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."[19] **Because of the extraordinary complexity in defining what is a "business-as-usual" scenario, we recommend that ARB not accept international land use and forest offsets for use in the California compliance system.**

In crediting schemes, a baselines refers to the emissions scenario below which credits can be generated. How these baselines are established will be a key determinant of the environmental integrity.[20] In many cases, establishing credible baselines for REDD mechanisms is difficult because of poor monitoring and data in many nations. In addition, baselines may be exaggerated for political purposes to maximize potential revenue, thus generating "hot air." Many have argued that there needs to be additional flexibility in calculating the baseline to enable participation for countries with relatively low deforestations rates but with high forest cover (e.g. the Democratic Republic of Congo). This is a particularly difficult issue for REDD crediting schemes to accommodate, adding to the risk of international leakage. Adjusting baselines upwards to accommodate future, projected emissions functions as an incentive to increase the rates of deforestation before the system starts.

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[17] Ross W. Gorte and Jonathan L. Ramseur, "Report for Congress, Forest Carbon Markets: Potential and Drawbacks" 2008, Washington DC, Congr. Research Serv., p. 18, Available at: http://ncseonline.org/NLE/CRSreports/08Aug/RL34560.pdf.

[18] 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

[19] 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

[20] 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)

At a minimum, conservative baselines should be based on average national historic deforestation rates. National deforestation reduction goals tiered to baselines should be established to progressively move future emissions lower and achieve zero gross deforestation. Periodic achievement of these national goals should be required to allow payments for REDD activities. Zero deforestation horizons are needed to achieve the permanent emissions reductions required to address climate change.

However, even historic deforestation rates do not provide an appropriate baseline from which to generate carbon credits. Faced with domestic stakeholder concerns about the negative social and environmental impact of deforestation, some developing countries with forest resources are voluntarily taking on targets to reduce deforestation. The "business-as-usual" scenario would then still significantly reduce emissions below average historic deforestation rates. However it would not be additional and therefore should not be eligible to receive carbon credits.[21] Similarly, illegal logging and other illegal activities are pervasive in most tropical forest countries. 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. However, it is wholly inappropriate for compliance entities in California to use carbon credits generated from other countries simply complying with their own laws.

Further, how baselines are established will have profound implications for both program participation as well as distribution of benefits and costs.[22] 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."[23]

The potential negative impact of 'hot air' can also be avoided by tightening the commitments of Annex and possible other countries for overall GHG emission reductions.[24]

Policy Recommendations: Reversals, liability and double-counting

There are a wide range of social, environmental and financial risks associated with REDD policies and programs, however, of primary concern to ARB, potential California investors and funders relates to whether emissions reductions are real, additional, permanent and whether they have avoided emissions displacement (alternately called "leakage"). Addressing both human and non-human induced reversals of sequestration (or more simply land use and land use change emissions) will be necessary as forests are affected both by human-induced activity (e.g.,

[21] 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.
[22] A. Angelsen "REDD Models And Baselines" International Forestry Review Vol.10(3), 2008 465. Center For International Forestry Research (Cifor), Bogor, Indonesia.
[23] Ibid., p. 471
[24] Ibid.

logging), natural disturbances (e.g., forests fires), unpredictable changes in carbon cycles of tropical forests resulting from climate change, as well as shifts in broader socio-economic policies (e.g., commodity price fluctuations). Regardless of its cause, REDD mechanisms must ensure any emissions seen by the atmosphere are properly accounted for; **we recommend that compliance entities be fully responsible for any reversals, intentional or not, that may occur over a timeperiod that is equivalent to the period of time the additional greenhouse gas emissions will affect atmospheric greenhouse gas concentrations (i.e. 99 years) .**

We support the PDR's proposal that compliance entities be liable for offset reversals, a concept that is sometimes confusingly termed "buyer liability."[25] While we strongly believe that offset originators need to assume ultimate liability (in order to prevent the development of shoddy offsets), we anticipate that privately negotiated contracts and self-insurance schemes would emerge that would give buyers recourse to credit sellers. In most cases, responsibility would be pushed down the value chain until offset originators (project developers) were liable for the quality of credits in the end.

In the August 6, 2010 ARB brainstorming session on reversals, there was some discussion on various strategies to ensure against reversals. Regardless of what strategy is employed, ARB should require compliance entities to replace invalid offsets with allowances or with valid ones. In this sense, the use of buffer pools to provide a supply of replacement credits (perhaps even from non-REDD projects) is superior to requiring compliance entities to surrender forest offsets at higher ratio.

Simply requiring a higher surrender ratio for forest offsets is a simplistic mathematical work-around that allows ARB (as well as buyers and sellers) to ignore the complex challenges and risks associated with REDD reversals, and ultimately serves to generate cheap credits at the expense of environmental integrity. It could even encourage the development of shoddy credits, as unworthy projects would be credited at a predictable rate. As one brainstorming participant pointed out, if the market were to actually bear the full due diligence and liability required to ensure environmental integrity of REDD credits, the uncertainties and risks would be so high that buyers would resort to other offsets which reduce emissions with more confidence.

The ARB has also solicited feedback on how to address reversals in a sector-based and project-based crediting system. Mixing sector-based and project-based crediting unnecessarily and inextricably complicates the problem of reversals and liability; the option of allowing projects to be credited based on a formula that corresponds to the state's performance towards the target is particularly convoluted and could raise "free rider" problems or lead to the crediting of undeserving projects. **The problems with reversals are yet another reason why we recommend that the ARB abandon its approach of mixing subnational sector- and project-based crediting systems.**

[25] This term is confusing because not all buyers will be compliance entities with an obligation to surrender credits. In a mature carbon market, many (if not most) offset buyers will be financial speculators who buy credits for capital gains purposes. Currently, most Certified Emission Reduction (CDM credit) derivatives are traded in the secondary markets as guaranteed delivery contracts; the seller is held responsible for making the buyer whole if the credits are not delivered in the quantity, quality or timeframe promised.

Moreover, CARB has not yet addressed how it will ensure emissions reductions are not double counted in multiple compliance schemes. Even if a project-nested sectoral REDD credit could resolutely proven to be real, additional, permanent, and verifiable, which, as we argue above, it cannot be, **CARB must also ensure that these credits are not counted twice**. Developing countries are often being forced to explore multiple financing options, which makes the risk of multiple-counting all the more problematic.

For example, through an agreement with the Government of Norway, federal authorities in Brazil receive a payment of $5/ton of CO_2 reduced from deforestation in the Amazon biome. The funds are channeled through the Brazilian Development Bank (in Portuguese: Banco Nacional de Desenvolvimento Economico e Social, abbreviated: BNDES) administered Amazon Fund to support projects that contribute to reducing deforestation on local, state and federal level.[26] It is not clear how double-counting of emission reductions in the Brazilian Amazon between the federal Amazon Fund and state or project-level REDD initiatives can be avoided.

Lastly, no REDD crediting mechanisms will be permanent, if the surging demand for wood and agricultural products is not reduced. Developed countries can helpfully contribute to efforts to reduce emissions from deforestation and degradation by addressing their role in driving demand for the forest and agricultural products that provide the profit motives to clear and degrade forests. If reducing deforestation in developing countries is a primary objective for ARB, then ARB should consider undertaking a study to assess how the state's current consumption and trade policies impact Brazilian and Indonesian forests, and contemplate how it could itself reduce its role in driving demand for activities that cause deforestation and degradation.

Policy recommendations: Scope, accounting for carbon emissions and forest definitions

The scope, definitions and accounting modalities of REDD policy implementation will have significant implications for the environmental integrity of REDD.

We also recommend that ARB takes the utmost care to ensure that no perverse incentives are created to increase conversion of forests to plantations. The current UNFCCC definition is particularly damaging in this regard and should be corrected in the implementation of REDD policies and programs. The UNFCCC definition states:

> "Forest" is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ. A forest may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground or open forest. Young natural stands and all plantations which have yet to reach a crown density of 10-30 per cent or tree height of 2-5 metres are included under forest, as are areas normally forming part of the forest area which are temporarily unstocked as a result of

[26] Norwegian Ministry of Foreign Affairs & BNDES "Donation Agreement" Signed September 16, 2008. Accessible at: http://www.regjeringen.no/upload/MD/Vedlegg/Klima/klima_skogprosjektet/donation_agreement_bndes.25.03.09.pdf

human intervention such as harvesting or natural causes but which are expected to revert to forest."

By allowing plantations and what is referred to as "temporarily destocked" land to count as forests, this definition will potentially incentivize activities that harm both native ecosystems and biological diversity. Biome-specific definitions in place of the current definitions used at the UNFCCC are superior in this regard.

Further, ARB is currently proposing to exclude degradation in the scope of potential REDD credits.[27] Degradation is a process through which the carbon stocks of forests are reduced through human-induced activity, most often due to logging. Forest degradation due to logging and other intensive activities is the source of significant carbon emissions.[28] For example, under the current definition of forests and excluding degradation, a healthy primary forest (e.g. with a crown cover of 70 per cent) could be degraded to 15 per cent of crown cover and still be classified as 'forest' without any accounting for increased emissions.[29] Moreover, failing to include degradation could severely negatively impact biodiversity. Logging and associated road building in tropical forests is, in many instances, the precursor to accelerated degradation due to additional intensive human land use activities, culminating in deforestation.[30] Krug shows that 30% of the areas studied progressed to full deforestation within the study period, another 40% had an ambiguous outcome, while only 30% recovered after logging was abandoned in its early stages.[31] This failure to fully account for emissions due to forest degradation leads to a false sense of the climate benefits or neutrality of certain forest management practices.[32] **Failing to include degradation in the scope of California international forest policies and programs could leave considerable amounts of forest-based emissions unaccounted, leading to significant over-crediting.**[33]

[27] Bamberger, Barbara. "Sector-Based Crediting & Subnational Reducing Emissions from Deforestation and Degradation (REDD)." (powerpoint presented at ARB Public Workshop, July 30, 2010, Sacramento, California) Last accessed August 20, 2010: http://www.arb.ca.gov/cc/capandtrade/meetings/073010/arbpresentation.pdf

[28] Sean Cadman "Defining Forest Degradation for an Effective Mechanism to Reduce Emissions from Deforestation and Forest Degradation (REDD)" (paper submitted to UNFCCC Secretariat October 2008). Accessible at: http://unfccc.int/files/methods_science/redd/application/pdf/seancadman2_11nov08.pdf

[29] Daniel Murdiyarso et. al. "Measuring and monitoring forest degradation for REDD Implications of country circumstances" CIFOR Info Brief No. 16 Available at: http://www.cifor.cgiar.org/publications/pdf_files/Infobrief/016-infobrief.pdf

[30] Curran, L. M., et al. "Lowland Forest Loss in Protected Areas of Indonesian Borneo." Science 303: 1000 (2004); Foley et al. "Amazonia revealed: forest degradation and loss of ecosystem goods and services in the Amazon Basin." Frontiers in Ecology and the Environment 5(1): 25–32(2007).

[31] Krug, T. "Detection of Selective Logging for Estimating and Monitoring Forest Degradation: methodologies and experiences in Brazil." (Paper presented to the UNFCCC Workshop on Methodological Issues relating to Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Tokyo, Japan, 25-27 June, 2008.)

[32] Sean Cadman "Defining Forest Degradation for an Effective Mechanism to Reduce Emissions from Deforestation and Forest Degradation (REDD)" (paper submitted to UNFCCC Secretariat October 2008). Accessible at: http://unfccc.int/files/methods_science/redd/application/pdf/seancadman2_11nov08.pdf

[33] Daniel Murdiyarso et. al. "Measuring and monitoring forest degradation for REDD Implications of country circumstances" CIFOR Info Brief No. 16 Available at: http://www.cifor.cgiar.org/publications/pdf_files/Infobrief/016-infobrief.pdf

Both the definition of forests and the definition of degradation have received a great deal of attention in international policy making bodies. To help define degradation and its potential implications, Mackey et. al., note that:

> **"forest degradation needs to be defined to include the impact of all human land-use activity that reduces the current carbon stock in a natural forest compared with its natural carbon carrying capacity.** The impact of commercial logging on natural forests must therefore also be considered when accounting for forest degradation. As discussed earlier, commercially logged forests have substantially lower carbon stocks and reduced biodiversity than intact natural forests, and studies have shown carbon stocks to be 40 to 60 per cent lower depending on the intensity of logging (Brown et al. 1997; Dean et al. 2003; Roxburgh et al. 2006). In Brazilian Amazon, the area of natural forest that is logged commercially resulting in degraded carbon stocks is equivalent to that subject to deforestation and represents approximately 0.1 Gt of green carbon emissions to the atmosphere (Asner et al. 2005) [emphasis added]." [34]

Further, it is essential to establish at the earliest opportunity a list of forest degrading activities for which emissions have been quantitatively established, rather than to rely on unsubstantiated claims that certain activities have negligible, temporary and naturally reversible impacts on carbon stocks and the carbon carrying capacity of the forests. The use of both field plots and remote sensing data will be critical in establishing these data at appropriate scales.

It is also critical that baselines employ "gross" not "net" deforestation accounting to prevent additional uncertainties, intentional manipulation of data, and conversion of native forests to silvicultural or agricultural plantations. Using net accounting significantly increases the likelihood of "hot air," undermining the integrity of credits generated with such accounting.

In addition to these measures, conservation of biodiversity must be a guiding principle for any REDD mechanism. Large, intact forests and other natural forests with high biodiversity values shoud be prioritized for protection. A carbon-only approach that reduces forests to "carbon sticks" could trigger huge, deleterious effects on biodiversity. **We recommend ARB ensure all REDD policies and incentives are consistent with international conventions, including the UN Convention on Biological Diversity.**

Measuring, reporting and verifying deforestation and degradation requires monitoring of two components: (1) changes in forest area by forest type and (2) average carbon stocks per unit area and forest type.[35] The IPCC also provides three tiers for estimating emissions, with increasing levels of data requirements and analytical complexity and therefore increasing accuracy:[36]

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[34] Mackey et al. "Green Carbon: The role of natural forests in carbon storage. Part 1. A green carbon account of Australia's south-eastern Eucalypt forests, and policy implications." Australian National University Press, Canberra; p. 36.

[35] Daniel Murdiyarso et. al. "Measuring and monitoring forest degradation for REDD Implications of country circumstances" CIFOR Info Brief No. 16 Available at: http://www.cifor.cgiar.org/publications/pdf_files/Infobrief/016-infobrief.pdf

[36] Ibid.

- Tier 1 uses default emission factors (indirect estimation of the emissions based on canopy cover reduction) for forest activities ('activity data') that are collected nationally or globally.
- Tier 2 applies emission factors and activity data from country-specific data.
- Tier 3 uses methods, models and inventory measurement systems that are repeated over time, driven by high-resolution activity data and disaggregated sub-nationally at a finer scale.

The use of default values can cause significant error ranges in carbon estimates, as much as +/- 70 per cent using IPCC Tier 1 default values.[37] Tier 3 reporting for estimating emissions is superior. We note that even at this finer resolution and combined with regular and high-density ground-truthing, the emissions data are still only estimates and therefore prone to inaccuracies and gaming.

Credit issuing body, enforcement and independent monitoring

Credits in the Clean Development Mechanism (CDM) are issued by the CDM Executive Board under the UNFCCC. The Executive Board (EB) operates under the authority of and is fully accountable the Conference of the Parties (the decision making body of the UNFCCC). The EB is responsible for (a) approving new methodologies related to, inter alia, baselines, monitoring plans and project boundaries; (b) accrediting operational entities, as well as suspension and withdrawal of accreditation; (c) reviewing and approving validation, registration and certification; (d) and ultimately issues certified emissions reductions (CDM credits). In this sense, the credit issuing body is - theoretically - independent from both the credit-generating entity and the credit-purchasing entity, thus avoiding the most egregious conflicts of interest. This approach should be explored by ARB.

Additionally, a clear conflict of interest exists if governments monitor their own performance. As has been stated before, poor forest governance is endemic in tropical forest countries and while REDD policies and programs can facilitate marked improvements, clear conflicts of interests will arise if additional payments are provided based on the performance the credit generating entity itself is monitoring. Because of the unique features of REDD policies and programs, including the emphasis in improved governance, independent monitoring of governance and social safeguards should be used to complement independent verification of carbon related metrics. Global Witness notes that independent monitoring "entails the use of an independent third party that, by agreement with state authorities, provides an assessment of legal compliance, and observation of and guidance on official law enforcement systems"[38] Global Witness further notes that independent monitoring is distinctive from an audit "which verifies against a set checklist of criteria and can therefore give a conclusive, yes/no, 'pass' or 'fail' but can only operate within a clearly bounded system."[39] Independent monitoring is mandated "to look outside the audit checklist, but still retains a focus on the forest sector. It monitors system governance, identifying systemic weaknesses and failures through case studies, and reports

[37] Global Witness "Principles For Independent Monitoring Of Redd (Im-Redd)" 2010. Policy Brief
[38] Ibid.
[39] Ibid.

publicly."[40] Participatory independent monitoring, involving local civil society organizations is therefore an essential foundation for effective, transparent REDD policies and programs.[41]

Policy recommendations: Ensuring the full protection of human rights and good governance

Strengthening forest governance will be an essential readiness activity for countries seeking to achieve significant and lasting emission reductions from REDD. Promoting robust foundations of good governance for REDD can also help safeguard against perverse social and environmental impacts, while advancing broader sustainable development goals. Strengthening institutional capacity and coordination and ensuring transparent and inclusive decision-making processes can help bolster these foundations.[42]

Achieving "good governance" is not only a key requirement of ensure permanent emissions reductions, it is also necessary to ensure REDD meets the "do no harm test." In institutional terms, a country will need to demonstrate at minimum:

- Clear, coherent policy laws and regulations and effective implementation and enforcement of, and compliance with, those policies, laws and regulations;
- Transparent and accountable decision-making and institutions;
- Recognize and respects the rights of indigenous peoples and local communities, including their rights to lands, territories and resources, to full and effective participation and free, prior informed consent.[43]

Additionally, a REDD country will also need to demonstrate its capacity to effectively measure, report, and verify both carbon emissions as well as other social and environmental impacts. This requires significantly scaled institutional and technical capacity. **These issues can only be credibly addressed at the national level. While sub-national governments often helpfully participate in implementing elements of good governance, they must be couched within coherent national processes.**

Similarly, while REDD presents an opportunity, it is also a risk for the over 1.2 billion people depend on forests for their livelihoods. Indigenous peoples and local communities, in the struggle for recognition of their basic human rights have made significant progress through international instruments such as the adoption of ILO Convention 169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Core to these instruments is the principle of free, prior, informed consent (FPIC). The principle of FPIC recognizes indigenous peoples' inherent and prior rights to their lands, territories and resources, respects their legitimate authority and requires processes that allow and support meaningful choices by indigenous

[40] Ibid.
[41] Ibid.
[42] 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).
[43] Ibid.

peoples about their development path.[44] Further, the principle of FPIC is central to indigenous peoples' exercise of their right to self-determination with respect to developments affecting them and participation of indigenous peoples is key to the design, decision implementation and evaluation of any activity in providing FPIC.

These international legal obligations are however not yet fully realized and yet form a crucial foundation for effective REDD regimes. Several hundred million of these people rely on customary or informal rights to land. In Latin America and Asia, around 25 percent of forests are owned or managed by indigenous communities.[45] **In a number of key tropical-forest areas, tenure rights are contested and conflicts regularly arise over rights to access and exploit land and the trees on it. In many cases, unless these can be equitably resolved, it is not possible to introduce better control over resources.[46]**

Defining and assessing when a country is ready for REDD, is related to, put simply, fundamental questions of rule of law and human rights. While many of these issues have received significant attention and are currently being developed at the national level, proposals for addressing governance reforms at still incomplete, and in some cases inadequate. For example, the World Bank, through its Forest Carbon Partnership Facility, which has been financing the development of readiness preparation plans, has not yet defined how to determine whether a country is "ready" for REDD. In the July 30, 2010 Public Workshop, ARB staff noted that there would be a determination of a country, state or province's "readiness." However, it is not clear by which metrics ARB intends to assess governance or if ARB staff are adequately resourced to make such determinations.

At a minimum, a determination of a country's readiness must ensure the following principles related to social and environmental safeguards are met (negotiators in Copenhagen agreed that these principles should be promoted and supported), including:[47]

a) Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements
b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty
c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the General

[44] Tamang, Parshuram "An Overview of the Principle of Free, Prior and Informed Consent and Indigenous Peoples in International and Domestic Law and Practices" AUIndigLawRpr 36; (2005) 9(2) Australian Indigenous Law Reporter 111 (2005). Available at: http://www.austlii.edu.au/au/journals/AILR/2005/36.html
[45] 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
[46] 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.
[47] UNFCCC Ad-hoc Working Group on Long-Term Cooperative Action. "Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its eighth session, held in Copenhagen from 7 to 15 December 2009." FCCC/AWGLCA/2010/7

Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples

d) Full and effective participation of relevant stakeholders, including, in particular, indigenous peoples and local communities
e) Actions that are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 3 below are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits
f) Actions to address the risks of reversals
g) Actions to reduce displacement of emissions.

Social safeguards are an essential foundation to the successful implementation of REDD. However, the proliferation of policy fora developing REDD programs, including now California, runs the risk of creating duplicative, burdensome processes rather than the much needed upward harmonization of standards that is needed to ameliorate, existing barriers to the effective implementation of REDD financing. The use of multiple sets of policies and processes also directly contradicts the 2006 Paris Declaration on Harmonization in which donor governments committed to establishing common approaches in order to avoid overburdening the often weak and fragile institutions in recipient countries.

Further, while there is 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 is considerably more difficult. 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.[48] Disempowered communities could suffer from loss of access to forest resources, the unequal imposition of the costs of forest protection, and they could be ineligible for REDD benefits 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 several Corrective Action Requests (CARs), two major and eight minor. These included requests to improve the PDD and to develop an action program to address the needs of the communities adjacent to the park. The requested corrections were made to the PDD and a socioeconomic impact assessment was conducted by FAN 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**

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

> **minimum up to the level that the communities experienced before the commencement of the project**" [emphasis added]."[49]

The report went on to say: "As of this writing, key milestones in the community development action program have not been reached. The program called for the Government of Bolivia to establish the necessary legal instruments to commercialize their share of the carbon credits and to assign carbon credit revenue according to the earmarks set out in the Noel Kempff Comprehensive Agreement."[50] Benefit sharing for indigenous peoples and local communities in a REDD context includes both the equitable sharing of financial benefits but it is also includes the benefits of securing equitable land tenure and human rights. Importantly, **this case study illustrates the critical importance of national governments providing robust, equitable institutions and legal frameworks at the national level for REDD implementation.**

Finally, dispute resolution mechanisms must be made available for affected communities and individuals to seek redress when their rights have been violated. In many cases, such as the TNC –AEP – Chevron - GM Guaraquecaba forest offset project,[51] disputes arise between powerful, vested interests and marginalized social groups.

Conclusions

While it is often argued that creating and distributing new financial incentives to rainforest nations in the form of tradable carbon credits will facilitate significant reductions in deforestation and degradation,[52] policymakers have become increasingly mindful that carbon credits alone will not be sufficient to incentivize the meaningful change in forest resource management that is necessary, and may in fact, perversely, incent increased deforestation and degradation rates in tropical forest countries. If the objective is to reduce emissions from and ultimately halt deforestation, carbon credits alone are poorly suited to address the underlying drivers of deforestation, including poor governance, surging consumption of wood and agricultural products, among others.

ARB notes that even offsets credits generation within California involves "complex legal, enforcement and administrative issues."[53] Generating credits from forests in developing countries is exponentially more challenging and costly. The Governor's Climate and Forest Taskforce prepared Options paper considers the challenge to be: "how to operationalize particular substantive goals in to regulatory language without imposing prohibitive transactions

[49]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

[50] Ibid., p. 41

[51] PBS Frontline. "The Carbon Hunters: On the trail of the climate's hottest commodity" Original air date May11, 2010. Available at: http://www.pbs.org/frontlineworld/stories/carbonwatch/2010/05/the-carbon-hunters.html

[52] M. Grieg-Gran. " The cost of avoiding deforestation" Report prepared for the Stern Review of the Economics of Climate Change: IIED, London, UK. 2008

[53] Air Resources Board. "Preliminary Draft Regulation for a California Cap and Trade Program" November 24, 2009. Last accessed August 20, 2010 http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf

costs."[54] However, we note that ARB's mandate is to "ensure that any offsets credit used for compliance purposes must represent a reduction or avoidance of GHG emissions, or GHG sequestration that is real, additional, quantifiable, permanent and enforceable."[55] These principles are of primary importance to ensure that offsets contribute to ARB's mandate to meet greenhouse gas emissions reductions requirements in the state of California. These principles cannot be weakened or compromised to reduce transaction costs for emissions reductions activities in developing countries. Because REDD offset credits cannot meet this critical test of being real, additional, quantifiable, permanent and enforceable, we strongly recommend that they are excluded from AB 32 rulemaking.

Thank you in advance for your consideration.

Sincerely,

Kate Horner, Policy Analyst
Friends of the Earth

Rolf Skar, Senior Forest Campaigner
Greenpeace

[54] William Boyd. "Options Paper: Regulatory Design Options for Subnational REDD Mechanisms" (paper prepared for ARB Expert Meeting Sacramento, CA February 18- 19, 2010). p., 3 Available at: http://www.gcftaskforce.org/documents/Workshop%20Options%20Paper%20-%20REDD%20Reg%20Design.pdf

[55] Air Resources Board. "Preliminary Draft Regulation for a California Cap and Trade Program" November 24, 2009. Last accessed August 20, 2010 http://www.arb.ca.gov/cc/capandtrade/meetings/121409/pdr.pdf