



Wednesday, August 25, 2010

Barbara Bamberger  
California Air Resources Board  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

*Re: Comments on ARB 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*

Dear Ms. Bamberger:

Thank you for the opportunity to comment on ARB initial staff thinking on REDD as a part of a California cap-and-trade program.

New Forests manages investments in sustainable forestry and associated eco products, such as carbon, biodiversity and water, for institutional and private equity clients. The company is headquartered in Sydney, Australia, with offices in San Francisco and Kota Kinabalu, Malaysia. New Forests has been active as a company in forest carbon markets for five years: New Forests staff participated in the committee that developed the previous CCAR forestry protocol, contributed to the Voluntary Carbon Standard's AFOLU guidelines, contributed to the development of the New South Wales Greenhouse Gas Abatement Scheme, participated in the stakeholder working group that assisted CAR with the development of its proposed aggregation guidelines, and currently participate in the ANSI-accredited Forest Carbon Standards Committee.

We are an active investor in REDD projects in Indonesia, and we look forward to continuing to partner with Indonesian governments and forest community stakeholders to bring REDD carbon offsets to market and to achieve shared forest conservation objectives.

We strongly support ARB's work on REDD offset policy. We would make the following comments on ARB initial staff thinking related to sector-based crediting and subnational REDD:

**1. ARB's work on incorporating REDD offsets into California's cap-and-trade program is critical to effective climate mitigation and cost containment.**

By including REDD offsets in a California cap-and-trade system, ARB would reduce costs for regulated entities and consumers, spur action on reducing emissions in a sector critical to global climate mitigation, and foster significant co-benefits such as biodiversity conservation and non-extractive, sustainable development. We believe that a sectoral approach to REDD offsets that encourages both private and public sector investment is important for the following reasons:

*ARB is relying heavily on ODS for offset supply. ARB staff have noted that offsets produced through destroying stockpiles of Ozone-Depleting Substances (ODS) are currently expected to provide over 90%*

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of offset supply through 2020.<sup>1</sup> We would suggest that it may be risky to rely so heavily on one source of offset supply, given that ARB staff's March 2010 economic analysis of the AB32 Scoping Plan indicated potentially dramatic allowance price increases in the event of an offset shortage.<sup>2</sup> In addition, if ARB already plans to source more than 90% of offsets from outside of California, ARB should look to maximize co-benefits from its offset supply and use its policies to leverage broader climate mitigation – goals more readily achieved by clear, rapid support for REDD offsets.

*The available science suggests that REDD is critical to successful climate mitigation globally.* Emissions from deforestation account for approximately 12-18% of global greenhouse gas emissions – more than the global transportation sector.<sup>3</sup> The Union of Concerned Scientists has stated that “The world will not be able to meet the aggressive emissions reduction targets that scientists tell us are necessary without addressing the emissions produced by tropical deforestation and forest degradation.”<sup>4</sup> ARB has a clear opportunity in partnership with the Governors' Climate and Forests Taskforce (GCF), and potentially with other REDD host governments, to make a significant impact on this problem, given that nearly half of the world's tropical forests are located within GCF member jurisdictions<sup>5</sup> and interest in REDD readiness from other jurisdictions continues to grow.

*Private-sector investment is critical to successfully reducing tropical deforestation rates.* Governmental and scientific estimates have placed the cost of reducing global deforestation emissions by 50% by 2020 at \$20 billion to \$33 billion per year.<sup>6</sup> Practically speaking, governments cannot adequately finance this cost. If REDD is linked to carbon markets, REDD activities (whether at the national, regional, or project-level) must be financed up front to produce credits that are registered and available for sale only after verification (*ex post*). Given the cost of reducing deforestation by half by 2020, a significant funding gap exists. For example, World Bank annual lending for environmental and natural resource management between 1990 and 2007 averaged \$3.3 billion.<sup>7</sup> Overseas Development Aid from OECD member states for forestry averaged only \$439 million per annum from 2002 through 2008.<sup>8</sup> At the UNFCCC COP-15 in Copenhagen and in subsequent international meetings, wealthy nations have committed to approximately \$4.5 billion in fast-start funding for REDD over three years, or \$1.5 billion per year. Even if we assume that all of these public-sector financing sources were devoted exclusively to REDD, which is unlikely, the available funds would represent at most 26% of the funding necessary annually to halve global deforestation emissions by 2020.

Even in the GCF context, which is believed to represent the host areas with the most developed and

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<sup>1</sup> *Ibid.* at 27.

<sup>2</sup> California Air Resources Board, *Updated Economic Analysis of California's Climate Change Scoping Plan* (March 24, 2010) at 39 (indicating that the allowance price under AB32 in 2020 would increase 592% from \$25 to \$148 in the absence of offsets [base case scenario], suggesting the possibility of significant price increases from offset supply constraints short of a complete lack of supply).

<sup>3</sup> G. R. van der Werf et al, *CO2 emissions from forest loss*, 2 *Nature Geoscience* (November 2009).

<sup>4</sup> Union of Concerned Scientists, *Tropical Deforestation and Global Warming: A Solution* (November 2009), available at [http://www.ucsusa.org/assets/documents/global\\_warming/Tropical-Deforestation-Basics.pdf](http://www.ucsusa.org/assets/documents/global_warming/Tropical-Deforestation-Basics.pdf).

<sup>5</sup> Dan Nepstad et al, *REDD+ in the Post-Copenhagen World: Recommendations for Interim Public Finance* (2010), available at [http://www.idesam.org.br/ingles/releases/arquivos/Interim\\_Finance\\_Recommendations.pdf](http://www.idesam.org.br/ingles/releases/arquivos/Interim_Finance_Recommendations.pdf).

<sup>6</sup> See, e.g., UK Office of Climate Change, *Climate Change: Financing Global Forests* (2008); Union of Concerned Scientists, *Tropical Deforestation and Global Warming: A Solution* (November 2009).

<sup>7</sup> World Bank Independent Evaluation Group, *Environmental Sustainability: An Evaluation of World Bank Group Support* (2008) at 3, available at <http://siteresources.worldbank.org/EXTENVIRONMENT/Resources/EvalSumm.pdf>.

<sup>8</sup> OECD, *ODA by Sector*, [http://stats.oecd.org/Index.aspx?DataSetCode=ODA\\_SECTOR](http://stats.oecd.org/Index.aspx?DataSetCode=ODA_SECTOR) (2010).

market-ready REDD programs, many of the governments will not have the resources to finance upfront investment in activities necessary to reduce deforestation and produce REDD credits. ARB will therefore catalyze the most REDD activity and have the greatest chance of ensuring a ready supply of REDD offsets by adopting policies that encourage both private *and* public-sector investment, while maintaining the atmospheric and environmental integrity of the resulting credits.

We believe that the framework proposed by ARB for combining government and private-sector REDD initiatives is broadly the right framework for accomplishing this. However, we would like to contribute a few thoughts on slight amendments to the sectoral, “nested” REDD policy framework proposed by ARB that might help it more effectively accomplish REDD on the ground in partner jurisdictions and deliver REDD offset credits to the California market.

**2. If the Crediting Baseline is set 25-50% below the Reference Level, it is likely that many GCF partner jurisdictions will not participate.**

We appreciate the imperative that California policy be aligned with emerging REDD policy at the national and international levels, where Nationally Appropriate Mitigation Actions (NAMAs) are an established component of REDD negotiations. However, we are concerned that ARB’s current proposal for ensuring that partner jurisdictions contribute self-financed emissions reductions would preclude participation by many states and provinces. As econometric modeling by Conservation International has indicated, setting the Crediting Baseline more than 5-10% below the Reference Level would prompt many states to “opt out”, with the threshold for opt out varying with the opportunity cost presented by key drivers of deforestation in each state.

For example, the palm oil industry in Malaysia and Indonesia reportedly grossed US\$27 billion in 2007, and Indonesian companies grossed US\$12.4 billion from palm oil exports in 2008.<sup>9</sup> Approximately 57% of all palm oil production in Indonesia is associated with deforestation.<sup>10</sup> The Indonesian government’s state investment board announced in June 2010 that one Singapore-based palm oil producer plans to invest US\$2 billion in agribusiness development in Indonesia, with a focus on plantation development in Papua.<sup>11</sup> Regional and national governments in Indonesia derive substantial revenue from licensing plantations and taxing palm oil production. Given the prevailing economic incentives in favor of deforestation, it would be economically irrational, and in some cases infeasible, for many potential REDD host jurisdictions to reduce deforestation (i.e. engage in significant forest preservation) without guarantee of an economic return. And with a high degree of uncertainty over whether these host jurisdictions would accomplish emissions reductions of 25-50% below the reference level, private-sector investors would avoid REDD project investment, leading to a lack of both public and private-sector investment in REDD.

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<sup>9</sup>Rupa Damodaran, “World Bank’s palm oil policy slammed”, Malaysia Business Times (June 28, 2010), available at [http://www.btimes.com.my/Current\\_News/BTIMES/articles/rup2403/Article/](http://www.btimes.com.my/Current_News/BTIMES/articles/rup2403/Article/); “Indonesia to Develop Value-Added Palm Oil Industry”, The BioEnergy Site (Dec. 2, 2009), available at <http://www.thebioenergysite.com/news/5066/indonesia-to-develop-valueadded-palm-oil-industry>.

<sup>10</sup> Shari Freedman, *Farms Here, Forests There: Tropical Deforestation and U.S. Competitiveness in Agriculture and Timber* (2010), available at [http://adpartners.org/pdf/ADP\\_Report\\_052410a.pdf](http://adpartners.org/pdf/ADP_Report_052410a.pdf).

<sup>11</sup> “Indonesia says palm oil giant may invest US\$2B”, Malaysia Business Times (June 22, 2010), available at [http://www.btimes.com.my/Current\\_News/BTIMES/articles/wilmardo/Article/index.html](http://www.btimes.com.my/Current_News/BTIMES/articles/wilmardo/Article/index.html).

**3. Good alternatives exist that would maintain a distinction between reference levels and crediting baselines while retaining financial incentives for host jurisdiction participation.**

Rather than requiring partner jurisdictions to reduce emissions 25-50% below a reference level prior to any crediting, ARB could take one of a number of approaches that would maintain requirements for partner jurisdiction contributions to emission reductions while creating immediate incentives for sustained private and public-sector investment in REDD.

For example, ARB could adopt a variation of the “Corridor Approach” proposed by Woods Hole Research Center and others in 2006.<sup>12</sup> The Reference Level and the Crediting Baseline form a “corridor”. Initial sectoral reductions accomplished by the jurisdiction immediately below the reference level receive no credit, while as reductions approach the Crediting Baseline an increasing percentage of offset credits are awarded (as compared to verified emissions reductions) and held in escrow for the jurisdiction.<sup>13</sup> When the partner jurisdiction achieves the crediting baseline, offset credits held in escrow from earlier emissions reductions would be released – creating a direct financial incentive for the jurisdiction to invest in REDD while ensuring that the partner achieves significant emission reductions that are uncompensated, in line with the concept of NAMAs in international REDD negotiations. Alternatively and preferably, a discounted volume of credits could be released for verified emission reductions each year as the Crediting Baseline is approached (rather than being held in escrow).<sup>14</sup>

Nested project crediting should also be incorporated into the above framework to incentivize private-sector investment alongside public-sector investment (see comment #6 below). Both project and governmental crediting should, of course, be accounted for within sectoral emissions accounts to avoid double-counting.

Sectoral accounting may be simpler if the REDD activities of the REDD host jurisdiction are focused in geographically-explicit areas in the context of a forest-sector land use plan. For further discussion, see comment #5 below.

**4. ARB REDD policy should offer financial incentives directly to governments for emissions reductions achieved by governmental action – in particular a crediting pathway.**

As noted above, many potential partner jurisdictions receive tax, licensing and/or royalty revenues from agribusiness development. In addition, active conservation of native forests does involve direct costs for national, regional and local governments and communities. The combination of these direct and opportunity costs make it unlikely that many partner jurisdictions will invest substantial resources and time in native forest conservation to achieve significant emissions reductions without any expectation of compensation. While some jurisdictions have achieved significant emissions reductions

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<sup>12</sup> Joanneum Research, Union of Concerned Scientists, Woods Hole Research Center, and the Instituto de Pesquisa Ambiental da Amazonia (2006). *Reducing Emissions from Deforestation in Developing Countries: potential policy approaches and positive incentives*. Submission to UNFCCC SBSTA.

<sup>13</sup> For example, if the Crediting Baseline is 20% below the Reference Level, emissions reductions at different tiers (1-5%, 6-10%, 11-15%, 16-20%) could yield credits at zero,  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and  $\frac{3}{4}$  of verified reductions respectively. Thus (in this framework) 10 tonnes of emission reductions achieved in the 11-15% below Reference Level tier would yield 5 tonnes of offset credits held in escrow for the partner government. Please note that we recognize that ARB is considering whether crediting for governmental activities is feasible given potential legal and MRV issues. Please see comment #5 on this point.

<sup>14</sup> This would improve the net present value of the investment from the partner jurisdiction’s perspective.

over the past few years, these emission reductions have been correlated with significant decreases in commodity prices, and governmental conservation efforts have been accompanied by publicly-voiced expectations of compensation.<sup>15</sup> Recently achieved REDD, which is not yet subject to the permanence requirements of compliance-grade offsets, may be unstable and easily reversible in the event of commodity price spikes.

For this reason we would propose creating a crediting pathway for participating jurisdictions (for example, as outlined in comment #3 above). We recognize that there are potential legal and MRV issues associated with crediting governmental REDD activities, but we would suggest that these issues could be overcome through ARB policy design.

5. **Potential legal and MRV issues associated with crediting governmental REDD activities could be overcome through policy design, including a requirement that governmental REDD activities be linked to identified geographic areas in a sectoral land use plan.**

It has been suggested that there may be legal issues associated with enforcing offset contracts (such as an emissions reduction purchase agreement) against a foreign subnational government. Contracting with national and subnational governments directly is a common occurrence in many industries; private sector participants in such contracts occasionally obtain political risk insurance if the value of the transaction is high (e.g. from the Multilateral Investment Guarantee Agency, a part of the World Bank). However, we would suggest (without any special expertise in international commercial law) that it may be simpler to require participating jurisdictions to set up a subsidiary corporation or similar entity controlled by the government, which would hold the jurisdiction's credit inventory and accede contractually to personal jurisdiction in California courts.

ARB staff have also expressed concern over the measurement and verifiability of governmental REDD activities. We agree that this is a very difficult problem if governmental REDD activities are not geographically explicit in nature: measuring and verifying the emissions impact of a diffuse web of policies oriented towards reducing deforestation could easily prove impracticable – and quantifying reversals impossible.<sup>16</sup> We would suggest that these difficulties can be reduced if ARB were to require that partner jurisdiction governmental REDD activities be geographically explicit. This would require the establishment of a sectoral land use plan, in which (for example) the partner government would classify forested area within its jurisdiction according to the severity of land use threat. The government partner would commit to reducing deforestation emissions in a representative sample of its territory (across all deforestation threat levels) that are explicitly identified. Other areas could be open for private sector investment in REDD or, in the alternative and depending on price signals, agribusiness development and deforestation.

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<sup>15</sup> See, e.g., Thays Prado, "Blairo Maggi argues REDD at COP15", Legal Amazon Governor's Forum (December 14, 2009), available at <http://www.thinkgreenredd.com.br/en/index.php?pg=noticias&id=17>.

<sup>16</sup> Some have argued that governments could be credited with the difference between project emissions reductions and sectoral emissions reductions, but this would not account for the range of confounding factors that would make it problematic to establish a clear cause/effect relationship between governmental policy and emissions reductions.

- 6. Nested crediting structures should include a risk mitigation feature that provides limited protection to governmental and private-sector investment in the event of periodic sectoral non-performance.**  
As highlighted in comment #1 above, attracting private sector investment to REDD will be critical to effectively reducing deforestation emissions over time. The key issue for private-sector investment is some mitigation of the risk of sectoral underperformance on emissions reduction, which is difficult to evaluate and impossible to manage for any given private-sector investor or project developer. This is the risk that the project performs and reduces its emissions as measured against a project-level baseline but sectoral emissions within the jurisdiction either fail to decrease or actually increase over a relevant time period for accounting. Sectoral emissions could increase for any number of reasons well outside of a project's control – such as migration and land settlement sponsored by a federal government, large-scale fires prompted by an El Nino event, etc. If governmental REDD activities are geographically explicit and credited, as suggested above, such governmental crediting will also face this risk.

This is not to suggest that geographically-explicit REDD activities should be insulated entirely from sectoral emissions performance; ARB is designing a sectoral REDD program, in line with an emerging global consensus on REDD policy, and any risk mitigation tools should not contradict sectoral accounting. Rather, we would suggest a limited “nested REDD risk management reserve”, which would provide partial compensation to private-sector or governmental REDD activities that achieve emissions reductions in a specific geographic regions in time periods when the jurisdiction as a whole fails to achieve emissions reductions. As a hypothetical example, in 2015 nested project X achieves 100,000 tonnes of emissions reductions (net, after any other relevant deductions) but the sectoral emissions of the jurisdiction in which it is located actually increase.<sup>17</sup> Due to the failure of sectoral performance, no new credits are issued to project X for that year, but project X receives a percentage of its expected credits from the nested REDD risk management reserve in compensation. The percentage (e.g. 25%, 50%, 75%) would be identified by rule in advance. In the event that the jurisdiction as a whole fails to achieve sectoral emissions reductions for several years running, disbursements from the risk management reserve would cease, as would all crediting until the jurisdiction returns to successful emissions reductions and covers any reversals that occurred. The risk management reserve would be capitalized with credits through a deduction of a percentage of credits issued to private-sector nested projects and to any governmental REDD activities in previous years.

Such a nested REDD risk management reserve would partially and temporarily insulate private-sector investment from unquantifiable and unmanageable sectoral performance risk, encouraging private-sector investment, while maintaining sectoral accounting and crediting based on sectoral performance. The system could also create incentives for collaboration and collective action towards achieving sectoral performance among varied stakeholders within a jurisdiction.

- 7. The Reference Level should be structured to offer effective incentives for partner jurisdictions that are at the frontier of deforestation.**  
As ARB staff have indicated, providing effective incentives for avoiding deforestation in areas at the deforestation frontier – which have high carbon stocks and low historic flows, but which may be experiencing a rapid rise in deforestation from an initially low rate – is challenging technically. We support ARB's focus on setting reference levels using historical deforestation data and ARB's interest in

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<sup>17</sup> This hypothetical assumes that the jurisdiction has met all applicable ARB criteria for establishing a sectoral REDD program.



using an adjustment factor when necessary to provide incentives for “high stock, low flow” jurisdictions. While a number of approaches to this problem are sound, we would suggest ARB consider a simple approach of increasing the reference level (in terms of tonnes emitted per year) in high stock, low flow jurisdictions by linking an the volume of upward adjustment to the rate of change in historical emissions, such that a higher rate of change would create a larger upward adjustment in the reference level. For example, if jurisdiction X has high stocks and low historical rates of deforestation relative to its neighbors, but those low rates have been increasing significantly over the historical measurement period (e.g. 15-20%/year), jurisdiction X’s reference level would be adjusted upwards significantly to acknowledge the current trend towards increased deforestation and to provide appropriate incentives to avoid such deforestation.

8. **ARB should consider a brief period of REDD pilot project crediting to aid the transition to full sectoral crediting.**

New Forests supports the proposal on this topic submitted to ARB staff by an ad hoc coalition of environmental groups and regulated entities on August 19, which New Forests signed to signal our support. We believe that such a transitional period will be extremely important in maintaining momentum towards REDD and interest from potential REDD host jurisdictions – even a small amount of “cash in the door” through licensing fees or royalties from pilot project crediting would signal that REDD is real and worth continuing to invest governmental attention and effort towards.

We would also suggest that projects involved in pre-sectoral crediting should (along with any governmental crediting as outlined in comment #3 above) contribute credits to a nested REDD risk management reserve, which would help manage sectoral performance risk for private and governmental investors in REDD as discussed in comment #6 above.

9. **Environmental and social safeguards should be strong and involve bright-line rules.**

ARB staff’s presentation indicated that ARB is planning to include social and environmental safeguard requirements for REDD, including “community-level benefit sharing, tenure validity/assurance, free prior informed consent, dispute resolution, public participation.” We strongly support ARB’s inclusion of such social and environmental safeguards. When possible and where applicable, we would suggest that ARB design “bright line” rules rather than standards for social and environmental requirements so that it is easier to assess whether the requirements have been met in an emerging market context.

In addition, we would encourage ARB to take note of one important risk associated with REDD implementation – that local stakeholders could be “locked out” of forests and prevented from engaging in traditional subsistence activities, a situation that has been proven to rapidly undermine and reverse forest conservation efforts in developing countries. To address this, we would suggest that ARB require that REDD activities enable and facilitate the continued exercise of all legally titled, traditional or customary access, use or property rights related to forests subject to a REDD activity, provided that the exercise of such rights does not significantly increase greenhouse gas emissions from such forests.

In summary, we strongly support ARB’s work on REDD, but we would suggest that ARB consider a few possible changes to its proposed regulatory structure, including a transitional period of pilot project crediting, maintaining a distinction between reference levels and crediting baselines while creating financial incentives



for partner jurisdiction participation, requiring governmental partner REDD activities to be geographically explicit within a sectoral land use plan, including a nested REDD risk management reserve to encourage private-sector investment, structuring reference levels to offer effective incentives for high stock, low flow areas that are at the frontier of deforestation, and including strong “bright line” environmental and social safeguards.

Thank you for your work in addressing this critical climate mitigation topic and for considering our comments.

Sincerely,

Brian Shillinglaw  
New Forests