Submission to the UNFCCC AWG-LCA: Views on modalities and procedures for financing results-based actions and considering activities related to decision 1/CP.16, paragraphs 68-70 and 72.

February 2012

The Environmental Defense Fund (EDF) welcomes the opportunity to present views from accredited observers **on modalities and procedures for financing results-based actions** and considering activities related to decision 1/CP.16, paragraphs 68-70 and 72. This submission addresses recent critiques on the use of markets for the full implementation of results-based actions of the REDD+ mechanism established by the Cancun Agreements. EDF believes that a REDD+ system must use public and private sources of finance but that markets will play the biggest role in financing phase 3 results-based actions. We strongly support a REDD+ mechanism that compensates countries for reducing their national emissions below a historical reference level.

REDD+ is an essential and time-limited opportunity to preserve global options for averting dangerous climate change. Once deforestation occurs, it cannot be reversed within the time frame relevant for climate policy. There is also mounting evidence that near-term action to reduce deforestation could be important to avoid crossing tipping points that would, at least in the Amazon basin, increase the likelihood of large-scale forest "dieback" given rising temperatures, further escalating climate change.[1] Thus, there is no time to wait to create the necessary incentives for REDD+. Markets can begin to drive results-based actions even in the interim period before countries fully agree on emissions reduction targets and before all the rules for the inclusion of REDD in emissions trading systems. What is needed is greater assurance that actions that sustain emissions reductions already achieved and that generate additional reductions going forward will be useful for generating credits in future compliance markets, including for creating a buffer or insurance fund for future credits.

At the end of this submission, we discuss how reinforcing expectations of future market access for actions starting today could work right away to generate funding for REDD+ results. In particular, one simple way to do this would be for the UNFCCC to provide guidance on a starting date for the establishment of REDD+ reference levels in order to measure reductions going forward, even if

[1] For example, see: Vergara, Walter and Sebastian M. Scholtz, editors. 2011. *Assessment of the Risk of Amazon Dieback*. The World Bank, Washington, DC.

further criteria are still to be developed. This date should be set as soon as possible to create incentives for immediate action and ideally be a date in the recent past. A date in the recent past would avoid creating perverse incentives to game reference levels by increasing future deforestation. It would also avoid penalizing regions that have already undertaken ambitious early efforts to reduce deforestation, particularly since the 13th Conference of the Parties to the UNFCCC in Bali on December, 2007.

The Munden Critique-a project-level approach to REDD+

In 2011, the Ford Foundation commissioned a report that would examine REDD+ from a market perspective. The Munden Project is a private company with experience in derivatives trading platforms and commodities markets. Their comprehensive, market-oriented critique of forest carbon concluded that market-based REDD+ would not achieve REDD+'s stated goals for development and the environment, and that forest carbon would not be an asset class suitable for trading.

The Munden critique raised a number of concerns that follow from the understandable, yet we argue, erroneous presupposition that a future REDD+ compliance market-whether under the UNFCCC, or a national or regional cap and trade system, such as the EU ETS or California would resemble current voluntary market forest carbon transactions. The Munden critique brings the important perspective of commodities and derivatives traders to the REDD+ debate, raising a series of new issues. Starting from the premise that the goal of REDD+ is not only to reduce emissions, but to generate development benefits for "countries, communities and biodiversity," the Munden critique asks whether trading forest carbon can meet these goals. It answers "no" because:

1. Over-the-counter (OTC) REDD+ trading misallocates resources;
2. Intermediaries rather than producers benefit from commodities markets, and because of REDD+'s global scale it will give centralized buyers monopsony power, defeating development objectives;
3. Forest carbon is poorly defined and scientifically unreliable, and thus unacceptably risky, and;
4. Consequently trading forest carbon as a commodity will either not work at all, or result in a substandard, risky market.

EDF believes that, rather than an argument against future market-based REDD+ financing, the Munden critique makes a powerful case for the further development of jurisdictional-level REDD+ systems, such as those that EDF advocates, rather than a project-by-project approach that represents current voluntary market mechanisms.

EDF's REDD+ vision-Jurisdictional level systems

EDF believes that jurisdictional-level (national or state) REDD+ will, in the event that a compliance market for REDD+ should ever exist, not resemble current

voluntary market transactions and consequently not be subject to the problems the Munden critique identifies. The Munden critique thus makes a powerful case for the further development of transparent jurisdictional-level REDD+ systems, in which "nested" REDD projects are one, but not the only, approach to achieving large-scale reductions in deforestation with additional environmental and development benefits. These types of jurisdictional and national REDD+ systems are exactly those that EDF supports, and we encourage the UNFCCC to follow this model and avoid the substantial problems that have arisen from standard voluntary market, project-based approaches.

Jurisdictional REDD+ in compliance markets

The concerns outlined in the Munden critique are valid and the conclusions follow from its premises. If, however, a compliance REDD+ market more closely resembles emerging policy architecture in the jurisdictions that have had the most success in reducing deforestation, particularly in Brazil and some Amazon states, and which is consistent with policy guidelines in the UNFCCC, California and proposed U.S. legislation, a markedly different picture emerges.

If jurisdictional REDD+ is the model for REDD+ in compliance markets rather than stand-alone projects, the answer to whether this model can reduce emissions and provide development benefits is "yes" for the following reasons:

1. Appropriate measurement standards are likely to be agreed upon in compliance settings and economies of scale will reduce measurement costs and uncertainties when monitoring is performed over large areas;
2. There are also economies of scale in terms of quantifying and managing risk as well as enforcing contracts;
3. Jurisdictional programs will thus have lower transaction costs per unit than stand-alone projects, as well as larger volumes of credits;
4. Regulated entities could purchase reductions directly from REDD+ programs or authorized project developers and such trades could clear on transparent and low-cost central exchanges;
5. Forest communities or farmers would not need to deal directly with carbon markets or private intermediaries.

First, the issues of the scientific measurement and verifiability of forest carbon identified by the Munden critique as central to the inadequacy of carbon markets to meeting REDD goals appear in a very different light. The Munden critique correctly points out that existing policy statements (UN REDD, UNFCCC) on REDD+ monitoring, reporting, and verification (MRV) are vague and often inconsistent. But it fails to note that the remote sensing science community at the forefront of developing and using new technologies to measure emissions from tropical deforestation and degradation has long maintained that existing, operational technologies and methods are adequate to accurately quantify forest carbon and emissions from deforestation and degradation.

Capacity to operate these technologies is also being established in various developing countries. In fact, the issue at the international level is agreeing on standards, not the scientific verifiability of the emissions. Appropriate standards are likely to emerge in the context of compliance markets. Once these standards are agreed upon, moreover, measurement uncertainties will be greatly reduced when measurements are aggregated across large jurisdictional scales such that errors at particular locations cancel each other out.

The Munden critique also fails to appreciate that the two current standards used in forest carbon accounting under the UNFCCC framework are designed to conservatively estimate forest carbon stocks, providing both certainty and flexibility. The flexibility available from two "equally valid" approaches supports certainty in the market, rather than uncertainty, because countries can choose the method that is best suited to their own data, and there is an incentive for them to be conservative, within the range of precision and accuracy allowed by the models. The fact that countries have two options in choosing standards does not inhibit the application of an "algorithm" approach to accounting, just as it does not hinder accounting in firms, which can choose to account for capital gains and losses using a first-in-first-out approach or an average cost basis approach. Both are equally valid and all accounting procedures are capable of accepting either approach.

The ability of the dual standards to improve accounting was recently demonstrated when Russia changed from one methodology to the other, after an international review of its 2008 inventory. Estimating emissions from wildfires proved problematic for Russian accounting and created a great deal of volatility in estimated emissions from year to year. By changing methodologies, Russia was better able to quantify the physical asset of its forest carbon, improving the certainty of its accounting. The change reduced the interannual variability in the Russian accounts, giving a clearer signal to potential investors. The same effect would likely hold true for other national accounting approaches. Because clear, conservative safeguards are already in place for national inventories (through IPCC Good Practice Guidance), the option to choose from two different accounting approaches is an element that should reduce investment risk, rather than increase it (as the Munden critique claims). The Good Practice Guidance is structured to facilitate the kind of "algorithm" approach that Munden advocates, through decision trees, specialized equations, and clear rules for implementing accounting procedures. The Report seems to be unaware of these standards and how they may be applied to REDD+.

Furthermore, our ability to measure forest carbon is becoming increasingly accurate and sophisticated. Figure 1, compiled by a leading remote sensing scientist for California regulators' discussions on REDD+, based on currently operational technologies, is consistent with peer-reviewed literature and the views of the community on the reliability of best available operational technologies.

Figure 1-current operation technologies and associated uncertainty

Forest Carbon Change	Optimal Technologies	Applicable Scale*	Uncertainty
Deforestation	Satellite optical or radar	Jurisdictional	< 5%
Degradation	Satellite optical; Airborne lidar	Jurisdictional	< 10%
Reforestation	Satellite optical or radar	Jurisdictional	< 5%
Afforestation	Satellite optical or radar	Jurisdictional	< 5%
Forest Growth	Airborne lidar; plot inventory	Project	< 20%

For example, Saatchi, Houghton *et al*., (2007) published an analysis of aboveground live biomass for the Amazon basin using optical and microwave remote sensing data and statistical analysis of the relationship of basin-wide plot samples to vegetation types, with an uncertainty of ±20%. It is likely that the first jurisdictional REDD+ transactions will lead standards development, and the first movers will have strong incentives to make these transactions transparent and credible. While both REDD+ buyers and sellers can, in principle, be said to have an interest in having more rather than less tons to trade, ultimately the regulators of compliance markets will decide what counts. The level of public scrutiny focused on this issue, and potential buyers' concerns with reputational risk reduce the likelihood of adopting slipshod standards.

Jurisdictional REDD+ also has implications for the risks of monopsony and misallocation of resources the critique raises. There are also important economies of scale that will reduce measurement costs when monitoring is performed over large areas rather than on a project-by-project basis. Low-cost measurement will reduce the need to rely on intermediaries for measuring carbon at a project scale, which Munden warns would be a major expense and divert funds from the intended recipients.

Once a jurisdictional REDD+ program is recognized by compliance market regulators and/or independent third-party verifiers, such programs can sell directly to regulated entities. They could use a variety of policy levers to affect deforestation rates internally. Allocating credits to projects nested within the jurisdiction is only one option that could complement – but not substitute for – other approaches. Forest communities or farmers would not need to deal directly with carbon markets. This would solve the mismatched counterparty issue identified by Munden.

Rather than being forced by monopsonist aggregators to assume high project costs, jurisdictional programs will also have much lower transaction costs per unit than stand-alone projects, as well as large volumes of credits. Ultimately, regulatory decisions will determine the relative weight of primary and secondary

markets. California, possibly the first market that will include REDD+, has already settled on the principle of "buyer liability" for all offsets. This means that the buyer of an offset would be liable for reversals. Many observers hold that this requirement alone will eliminate the secondary market, since brokers will be unwilling to assume the risk, and will thus reduce liquidity. If, however, regulated entities see jurisdictional REDD+ as a credible, reliable means of controlling their compliance costs, they may purchase reductions directly from REDD+ programs or authorized project developers. Such trades could clear on transparent and low-cost central exchanges. This would be exactly the same as allowances in other emissions trading systems operating today, rather than through more expensive over-the-counter transactions as Munden indicates would be needed in the event of project level activities.

There are also important economies of scale in terms of quantifying and managing risks that will reduce costs and help solve the mismatched counterparties problem raised in Munden critique. Costs will be lower when risks of forest fires, for example, can be pooled over large regions, rather than requiring each project to insure against such risks independently. Jurisdictional programs may also be eligible for multilateral default protections, which as Munden points out projects would not.

A critical element of the jurisdictional approach to REDD+ is the ability of jurisdictions to enforce legal contracts within their own systems. This gives recourse to both buyers and sellers through established legal systems, obviating the need for complicated oversight systems and improving investor confidence. This ability is currently lacking in the project-oriented approach of the CDM and has required the UNFCCC to construct its own oversight system for the CDM. This process has proven costly, cumbersome, inefficient, overly restrictive – and it has failed to inspire the desired level of confidence among investors. In contrast, a jurisdictional approach brings REDD+ into existing legal frameworks, which have their own track record of enforcement for investors to judge.

Finally, the existing capacity, expertise, and administrative structures in jurisdictions create a natural framework in which REDD+ activities can aggregate themselves. Currently, project-oriented approaches create the burden on each project (or project aggregator) to develop these capacities "from scratch", increasing their internal transaction costs and diverting resources away from the goals of the project itself: to protect forests. Jurisdictional approaches can reduce or prevent the need for projects to create these redundant and costly structures. The fact that jurisdictions already have an established history of performance beyond REDD+ is an added bonus, because it gives investors a record upon which to evaluate the credibility of these institutions for delivering on commitments. Such judgments will undoubtedly lead investors initially to prefer jurisdictions that have clear tenure, strong community-driven approaches, and the capacity to use technology effectively, but as these jurisdictions prove themselves, investors will grow increasingly confident that less-well-equipped

jurisdictions can also deliver, if provided with sufficient resources. This will also stimulate jurisdictions that lack capacity to address the problems that are creating barriers to investment, leading them to make improvements in their own capacities in order to attract REDD+ investment. This can only benefit the stakeholders who want to see REDD+ succeed, as has already been demonstrated in Brazil.

Opportunities for future compliance markets to drive prompt action on REDD+

Economic modeling of carbon markets indicates that, if future limits on emissions are credible and anticipated, tightening limits on emissions over time can drive significant mitigation over the coming decades in excess of near term commitments. This occurs if rational market actors can "carry over" or "bank" excess reductions for use in complying with future targets and this is especially important in the case of avoiding deforestation where much of the opportunity occurs over the near to medium term.

The UNFCCC can start incentivizing immediate actions if it helps to make clear that actions undertaken immediately that sustain and deepen reductions in deforestation and other REDD+ activities will be recognized for future results-based financing, even if many of the specific details are still to be determined. One simple way to do this, for example, would be for the UNFCCC to provide guidance on a starting date as of which REDD+ reference levels will be used to measure reductions going forward, even if further criteria are still to be developed. This date should be as soon as possible to create incentives for immediate action and ideally be a date in the recent past. A date in the recent past would avoid creating perverse incentives to game reference levels by increasing future deforestation and avoid penalizing regions that have already undertaken ambitious early efforts to reduce deforestation, particularly since the 13th Conference of the Parties to the UNFCCC in Bali on December, 2007.

The UNFCCC could indicate that reductions as of this date will be recognized directly in future markets and/or for the purpose of establishing a "buffer reserve" that could be used to insure the integrity and permanence of future reductions credited in a market setting. Helping to establish such an insurance buffer or reserve or reductions would increase confidence in the future market value of REDD+ actions.

In addition, providing greater confidence and clarity that current and future REDD+ activities will be eligible for compensation in future markets could generate interim funding immediately for countries and regions willing to forward sell reductions or to offer investors the opportunity to reserve reductions, with the option to buy them at a future date. This can be thought of as a “rental with an option to buy” rather than an immediate purchase. While no one is likely to buy any type of carbon credit for $30 or $50 per ton of CO_2 today, potential regulatory

liability might prompt entities facing the possibility of future regulations to pay $2 or $5 now to reserve reductions already achieved or to finance future reductions with the right to buy a high-quality credit at $50 or $30 per ton in ten years, so as to limit potential future carbon price exposure. That way, if a buyer locks in a price of $30 with an option, they know they will be able to pay only $30 for a credit if the carbon price is higher than $30 in ten years time.

Such an approach could be attractive, for example, to companies covered by Australia's emerging cap and trade system, which takes effect in 2015. This market could drive significant demand for REDD+ and other types of international credits over the medium term. The criteria for international credits and which if any REDD+ activities will be recognized have not yet been determined. Nevertheless, the Australian government estimates that Australia will demand nearly 400 million tons of international credits over the period 2015-2020.[2] Demand over this period could be even higher if credits can be saved or "banked" for use after 2020. Similarly, California may start allowing limited use of REDD credits and offsets beginning in 2015, but has not yet issued specific regulations. A "rental with an option to buy" approach can help bridge the gap to 2015, by starting a flow of private funds for REDD+ initiatives now – and in doing so, making clear that private capital can indeed play a critical role in fending off deforestation. Such a mechanism could also be attractive to potential sellers such as Brazilian states that may be reluctant to sell reductions outright at relatively low prices prevailing today -- but that may be willing to sell options to deliver compliance-grade credits in the future at higher prices.

Thank you for your consideration of our views.

For further information, please contact Dr. Steve Schwartzman, Director of Tropical Forest Policy at the Environmental Defense Fund. He can be reached at sschwartzman@edf.org, or visit our web page at www.edf.org/international.

[2] Australian Government, The Treasury. 2011. *Strong Growth, Low Pollution: Modelling a Carbon Price, Update*. Chart and Table Data. Commonwealth of Australia. Available at: http://www.treasury.gov.au/carbonpricemodelling/content/chartsandtables.asp