

Submission to the United Nations Framework Convention on Climate Change regarding

FCCC/SBSTA/2006/L.25, Reducing Emissions from Deforestation in Developing Countries by The Nature Conservancy

23 February 2007

The Nature Conservancy applauds the decision¹ by the Parties to the 11th Conference of the Parties to the United Nations Framework on Climate Change (COP-11 of the UNFCCC) to explore approaches to reducing emissions from deforestation in developing countries (RED). The Nature Conservancy also congratulates the Subsidiary Body for Scientific and Technical Advice (SBSTA) on holding the successful workshop on reducing emissions from deforestation in developing countries in Rome, Italy from August 30 to September 1, 2006. To take all necessary actions to prevent dangerous levels of climate change, and to ensure that such actions are comprehensive and cost-effective, future climate change policy regimes should address all major sources of greenhouse gas emissions. Accordingly, protecting standing forests to reduce emissions from deforestation must be part of future international climate change agreements. Reductions in deforestation emissions from developing nations can make a significant contribution to global efforts to address climate change while also contributing to the sustainable development of those nations. Reducing emissions from deforestation will not by itself halt the increase in atmospheric CO₂, neither will it substitute for the necessary emission reductions from energy, industry and transport, but it is an essential element in the global effort.

Each year, the Earth loses 0.7% of its tropical forest cover. Logging, land-conversion for agriculture and grazing, and other human activities are the primary cause. Unsustainable deforestation is a major development challenge, particularly for the poorest of the poor, who are the most vulnerable to environmental change.

Approximately 25% of global carbon emissions are attributable to deforestation and other land-use changes.² Deforestation is the greatest source of emissions from many developing nations. Deforestation is also threatening critical natural habitat for the world's plants and animals. Tropical moist forests contain the highest species richness and highest levels (by an order of magnitude) of species endemism on the planet³. Protecting biodiversity by reducing deforestation is important for local and global communities alike.

The Nature Conservancy is an international, nonprofit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 U.S. states and in 30 countries and is supported by approximately one million individual members. We have helped protect more than 47 million hectares of land around the world. The Nature Conservancy

¹ UNFCCC. 2005/CP/L2, "Reducing Emissions from Deforestation in Developing Countries: Approaches To Stimulate Action". 06 December 2005.

² Houghton, R.A. Tropical deforestation as a source of greenhouse gas emissions. Tropical deforestation and climate change. Edited by Paulo Moutinho and Stephan Schwartzman, Dec 2005.

³ Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being: Global Assessment Reports* (Island Press, Washington, DC, 2005).

recognizes the impacts of climate change that would result from unrestrained carbon emissions as the single greatest threat to our mission.

Anchored in strong science and supported by our work on the ground, The Nature Conservancy is committed to finding pragmatic, achievable solutions that reduce the impacts of climate change and benefit people and nature. The Nature Conservancy supports mandatory policies and programs that reduce carbon emissions from all sources. For more than a decade The Nature Conservancy has been working to measure and monitor the reductions in heat-trapping emissions resulting from projects that protect and restore forests.

The Nature Conservancy and our partner organizations have developed five large-scale RED projects that have reduced and continue to reduce emissions from deforestation in developing countries. Through these projects in Belize, Bolivia, and Brazil, the Conservancy has protected and restored almost one million hectares. These projects were established between 1996 and 2000. The on-the-ground experience gained through these projects is directly relevant to topics highlighted in the draft conclusions on reducing emissions from deforestation in developing countries proposed by the Chair of SBSTA (FCCC/SBSTA/2006/L.25).

In this submission The Nature Conservancy will

- draw from the experience gained from the Noël Kempff Climate Action Project (NKCAP) to address topics that will be considered at the second SBSTA workshop on reducing emissions from deforestation in developing countries.
- describe research needs that can help advance the discourse on reducing emissions from deforestation in developing countries
- recommend that activities be undertaken to test and refine approaches to reducing emissions from deforestation, in order to provide valuable empirical information to policy makers and to strengthen capacity in developing countries to understand and address emissions from deforestation.

Relevant experience from the Noël Kempff Climate Action Project

The NKCAP was developed in Bolivia, jointly with Fundación Amigos de la Naturaleza, and four financial investors (the Government of Bolivia, American Electric Power, BP-Amoco, and PacifiCorp). The NKCAP represents several strategies to reduce emissions from deforestation (and forest degradation). The project activities include the formal expansion of the Noël Kempff Mercado National Park (increasing the park area from 0.75 million ha to 1.58 million ha), stopping logging through the indemnification of logging concessions within the park expansion area, and stopping deforestation through a sustainable development program for indigenous communities located nearby the project area and park protection activities.

From the experience gained from the NKCAP, The Nature Conservancy recommends that Parties and the UNFCCC Secretariat consider the following:

1. Emissions reductions from activities that reduce deforestation can be credibly measured, validated, and verified.
2. Transaction costs can be greatly reduced and leakage most readily captured in RED activities at the national or sub-national scale rather than at the project scale.
3. Sustained long-term financing is critical to the success of efforts to reduce emissions from deforestation. Incorporating deforestation into climate policy offers the opportunity to access carbon markets that can motivate investments in activities that reduce emissions from deforestation and provide the sustainable

finance needed to maintain the emission reduction, community, and biodiversity benefits of activities to reduce deforestation.

These points are explored in more detail below.

1. Emissions reductions from activities that reduce deforestation and forest degradation can be credibly measured, validated, and verified.

As detailed in the report from the SBSTA workshop held in Rome, Italy (FCCC/SBSTA/2006/10), methods for measuring and monitoring terrestrial carbon pools, based on commonly accepted principles of forest inventory, are well-established and tested. For decades, landholders and government agencies have been measuring and monitoring forest status and growth using a combination of techniques including direct field measurements, satellite and aerial photography and computer modeling. Many protocols for measuring and monitoring carbon project benefits already exist, including those established by the IPCC⁴.

The emissions reductions generated and measured by the NKCAP between the years 1997 and 2005 were recently validated and verified by Société Générale de Surveillance (SGS), a Designated Operational Entity accredited by the Clean Development Mechanism (CDM) Executive Board for projects under the Kyoto Protocol⁵. The SGS-verified emissions reductions (VERs) for the 1997-2005 period total 989,622 metric tons of carbon dioxide equivalent. The projected emissions reductions for the 30-year project life time total 5,836,961 metric tons of carbon dioxide equivalent.

It should be noted that leakage of NKCAP emissions reductions benefits was quantified⁶ and the validated and verified total of emissions reductions reflects a deduction for leakage. The deduction of 171,618 metric tons of carbon dioxide equivalent was applied to account for the quantified leakage over the 1997-2005 period. This deduction for leakage represents 15% of the total emission reduction benefits in the NKCAP.

The NKCAP and the SGS validation and verification of the NKCAP demonstrate that emissions reductions from large-scale project-level activities that reduce deforestation and forest degradation can be credibly measured, validated, and verified, we believe that this experience can be scaled up to the national level. The monitoring methods used by the NKCAP provide one credible example of methods that could be applied to measure emissions reductions from sector-wide approaches to reduce national deforestation rates. While many of the general techniques used in the project are applicable to national approaches, some modifications may be

⁴ The 2007 IPCC AFOLU Guideline for National Greenhouse Gas Inventories and the Good Practice Guidance for Land Use, Land-Use Change and Forestry

⁵ As avoided deforestation is currently not an eligible activity under the CDM, generation of certified emissions reductions (CERs) is not possible for the Noel Kempff project. However, the validation and verification process undertaken by SGS for the NKCAP is consistent with the steps required by the CDM to document emissions reductions and issue CERs

⁶ A description of the leakage quantification methodology is found in the Summary of the Final Validation and Verification Report, SGS United Kingdom Ltd, November 27 2005: "Leakage of emission reduction benefits is quantified through a dynamic optimization model which projects a baseline of timber harvesting: the potential pathway of future harvests in Bolivia both in the project area and within the entire country. In a second run, the productive area of concessions is reduced by the concessions which are indemnified to expand the park area. Removing concessions causes market effects due to price changes and shifting of market actors. This shift will not effect prices on the export market (as a small country like Bolivia is a price taker in terms of timber production), but highly impacts the domestic market. It is assumed that reduced supply and raised prices would stimulate other concessionaires to reduce the gap in the domestic supply by producing additional wood. Thus, the direct impact of the removal of concessions will be accompanied by secondary market adjustments, which are modeled by comparing the baseline with the project scenario."

necessary. A consortium of institutions⁷ is currently applying the NKCAP methods to determine national-level trends of emissions related to deforestation and forest degradation.

2. Transaction costs can be greatly reduced and leakage most readily captured in RED activities at the national or sub-national scale rather than at the project scale.

Experience with the NKCAP, and The Nature Conservancy's RED projects in Belize and Brazil's Atlantic Forest, has revealed high transaction costs related to credibly measuring emissions reductions and leakage at the project scale. The transaction costs (specifically the emission reduction and leakage measurement costs) of the NKCAP represent 12.4% of the total project costs. Statistical sampling for forest carbon measurement and monitoring becomes more cost-effective at progressively larger scales like countries and regions. National or sub-national RED activities also offer significant advantages in reducing detection and monitoring costs related to leakage, creating a further economy of scale. Expanding RED activities to the national or sub-national scale would also facilitate the use of national-level policies to address wide-ranging drivers of deforestation.

3. Sustained long-term financing is critical to the success of efforts to reduce emissions from deforestation. Incorporating deforestation into climate policy offers the opportunity to access carbon markets that can motivate investments in activities that reduce emissions from deforestation and provide the sustainable finance needed to maintain the emission reduction, community, and biodiversity benefits of activities to reduce deforestation.

The investors in the NKCAP were motivated by the learning-by-doing opportunity the project provides, the assignment of reporting rights of the emission reduction benefits that the project generates, and the community, biodiversity and climate benefits the project affords. The ability to report the emission reduction benefits in various climate frameworks (the Voluntary Reporting of Greenhouse Gases Program (1605b), the U.S. Initiative on Joint Implementation, the Chicago Climate Exchange) was a primary driver of the investment in the NKCAP. Without the potential to apply the carbon benefits in this way, the investments in this project would not have transpired. Significant funding to reduce emissions from deforestation and forest degradation in developing countries will not materialize without the ability to report and apply the emissions reductions benefits to emissions reductions frameworks.

The NKCAP partners have found that access to the carbon market is critical for the long-term financial sustainability of the NKCAP and the long-term provision of climate, community and biodiversity benefits. In the design of the NKCAP, just under one-half of the reporting rights to emission reduction benefits were reserved. Revenue generated from the sale of the reserved emission reduction benefits are stipulated to secure emission reduction benefits throughout the project term, to support management and biodiversity protection throughout the Noël Kempff Mercado National Park⁸, and to improve the standard of living of the local communities that neighbor the Noël Kempff Mercado National Park.

Projects like the NKCAP have the potential to provide long-term climate benefits, but they require on-going financing. In the NKCAP, continuing sale of the reserved VERs generated will provide that financing, and any successful RED activity will likely require a similar positive cash flow.

⁷ Superintendencia Forestal (Bolivian National Forestry Authority), Fundacion Amigos de la Naturaleza - Bolivia, GAF AG - Germany, Joanneum Research - Austria, and Treeness Consult - the Netherlands

⁸ The NKCAP is contained within the expanded Noel Kempff Mercado National Park.

Research needs that can help advance the discourse on reducing emissions from deforestation in developing countries

Forest biomass carbon can and has been accurately and precisely measured and monitored over time using standard forest inventory principles that have been in practice for decades, and have been formally recognized by the IPCC⁹. There are research and policy questions unique to a national-level approach to reducing emissions from deforestation. Targeted research can provide a better understanding of the range of possible approaches for measuring and reporting reductions in emissions from deforestation in an international framework. Such research can assist non-Annex I Parties in defining potential levels and risks of participation.

The Nature Conservancy recommends that accounting frameworks for emissions reductions from deforestation should:

- Have environmental integrity, addressing satisfactorily concerns regarding additionality, leakage, and permanence
- Provide a quantitative base for performance-based incentives
- Enable broad participation to ensure the greatest possible climate impact
- Minimize the risks of participation
- Be consistent and fair in their application
- Be practical and cost-effective
- Be transparent

Significant advances have been made or are ongoing in areas such as the refinement of remote sensing technologies in the detection of deforestation. We have identified two areas of research that should also be prioritized.

1. Evaluation of methods to develop national and sub-national reference levels to determine emissions reductions from avoided deforestation.

The relative merits of different methods can be best investigated, including through hypothetical case studies, gauging the range of potential historical and initial conditions and outcomes that reflect different developing country realities, including:

- Deforestation rates low historically and currently low
- Deforestation rates low historically and currently increasing
- Deforestation rates high historically and currently low
- Deforestation rates high historically and currently zero
- Deforestation rates high historically and currently zero with net reforestation

Candidate components of methods for consideration should include:

- Business-as-usual (projected) reference levels

⁹ The 2007 IPCC AFOLU Guideline for National Greenhouse Gas Inventories and the Good Practice Guidance for Land Use, Land-Use Change and Forestry

- Historical reference levels
- Rolling or shifting historical reference levels
- Global or regional average reference levels¹⁰
- Focus on net forest stock change or disaggregating deforestation and afforestation/reforestation
- Forest carbon stock cap-and-trade¹¹
- Universal or country-specific forest definitions

2. Exploration of national level forest carbon inventory approaches to identify the optimal balance between accuracy/precision and cost-effectiveness.

Considerable attention has been given to remote sensing and its relevance to measuring and monitoring deforestation; less attention has been given to the equally important task of developing accurate and cost-effective methodologies for measuring and monitoring forest carbon stocks at the national level. Optimal approaches to national forest carbon inventories, pairing targeted ground-truthing with remote sensing, can be best identified and their efficacy demonstrated through research trials applied at the national or sub-national level.

Activities to further address research needs and build capacity of developing nations to address emissions from deforestation

To improve understanding of the technical and policy issues around reducing emissions from deforestation, and to build the capacity in developing countries to understand and address emissions from deforestation, there have been many recommendations to consider the creation of pilot or similar programs to reduce emissions from deforestation and the need for up-front sources of funding to implement the pilot activities. Such recommendations include a January 10, 2007 communication from the European Commission to the European Council and Parliament, the Stern Review (released October 30, 2006), and 2006 submissions to the SBSTA from the governments of Indonesia, the government of Gabon (on behalf of Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea and Gabon), the governments of Bolivia, Costa Rica, Nicaragua and Papua New Guinea (supported by the governments of the Central African Republic, the Dominican Republic, and the Solomon Islands), the government of Peru (on behalf of the governments of the Colombia, Costa Rica, Ecuador, Mexico, Nicaragua and Panama, with the support of Bolivia), and the government of Austria (on behalf of the European Community and its Member States).

National or sub-national level initiatives to reduce emissions from deforestation through performance-based incentives will provide important opportunities for learning-by-doing. Tangible experiences generated through pilot activities like the NKCAP have provided valuable lessons and verifiable emission reductions; this same approach can be taken to the national or sub-national scale to inform policy makers and stakeholders and eventual participants in an international climate agreement that recognizes reducing emissions from deforestation. Combined with effective capacity building and backed with sufficient financing, pilot activities can provide the real-

¹⁰ for example, Mollicone, D., Achard, F., Federici, F., Eva, H.D., Grassi, G., Belward, A., Raes, F., Seufert, G., Matteucci, G. and E. Schulze. 2006. Avoiding deforestation: an incentive accounting mechanism for avoided conversion of intact and non-intact forests. Climatic Change.

¹¹ for example, Prior, S., Streck, C. and R. O'Sullivan. 2006. Incentivising avoided deforestation – a stock based methodology: Paying for Ecosystem Services – a Carbon Stock Based Approach. Submission to the COP UNFCCC in response to the call for views on the issue of avoided deforestation issued at the 11th session of the COP. Submitted by the Centre for International Sustainable Development Law.

world opportunity to develop replicable models that can evolve and improve iteratively through their practical application, for actions/measures to create early emissions reductions from reducing deforestation, and the legal, institutional, and logistical arrangements necessary to carry those actions and measures out.