

**Submission by the International Centre for Research in Agroforestry (ICRAF)  
To the UNFCCC**

**Issues relating to reducing emissions from deforestation  
in developing countries**

In accordance with the invitation from SBSTA at its 25<sup>th</sup> session to parties and accredited observers (paragraphs 89, [FCCC/SBSTA/2006/11](#)), the International Centre for Research in Agroforestry (ICRAF) welcomes the opportunity to submit relevant information *“potential policy approaches and positive incentives, and technical and methodological requirements related to their implementation; assessment of results and their reliability; and improving the understanding of reducing emissions from deforestation in developing countries.”*

**1. Presentation**

ICRAF is an international research and global knowledge institution that forms part of the Consultative Group on International Agricultural Research (CGIAR). The work of ICRAF is focused on producing research relevant to conserving trees and forests in agricultural landscapes and improving the livelihoods of people in the tropics. It employs over 450 staff at its headquarters in Nairobi, Kenya and at its regional offices in India, Indonesia, Mali, Malawi and Brazil.

The present submission outlines reasons why avoided deforestation has not been included the CDM and outlines how research can contribute to overcoming these obstacles. This submission focuses on issues of establishing baselines and measuring departures from the baseline, the need for whole system accounting and national level commitments to avoid problems of leakage and additionality. The submission also outlines an approach to understanding tradeoffs and abatement costs of avoided deforestation. Individual countries involved in the international mechanism should have the flexibility to meet avoided carbon emission targets. Best practice is emerging on the types of national and local mechanisms that countries can apply with much lower transaction costs than current CDM projects.

The submission is organized as follows:

- Overview of the constraints to addressing avoided deforestation in the UNFCCC
- National scale accounting to address leakage and additionality
- Full system carbon accounting
- Accuracy of accounting methods
- Tradeoffs in abatement costs
- Flexibility in mechanisms to allow countries to achieve avoided carbon emissions

## ***2. Avoided Deforestation through Sustainable Benefits: exploring how the global community can provide effective incentives to deal with the 20% of climate change due to land cover change***

There are good reasons why *avoided deforestation* has not so far been included in the international mechanisms to reduce net greenhouse gas emissions, despite the fact that it is responsible for approximately 20% of anthropogenic greenhouse gas emissions:

- Leakage and additionality issues may be surmountable for small-scale reforestation projects, but they preclude the use of ‘avoided deforestation’ concepts in projects of limited geographical scope;
- Rehabilitation of depleted C-stocks is easier to monitor and attribute than avoided degradation;
- The modified 1996 and 2006 IPCC National Guidelines for Greenhouse Gas Inventories suggest a 60% uncertainty on the reports on changes in C stocks; this is the single biggest uncertainty in the GHG quantification; and
- Much deforestation is *planned* and leads to land use with higher economic returns; completely avoiding deforestation will require offset payments that are not feasible; negotiating intermediate targets is complex.

Yet, the linkage between ‘solutions’ for Annex-I countries through imports of biofuel and the additional GHG emissions caused by land cover change in non-Annex I countries exporting biofuel, makes it clear that the current partial accounting leads to perverse incentives and inefficient use of scarce resources to bring climate change under control. The current ‘avoided deforestation’ debate offers a chance to correct some of the major inconsistencies, provided that constraints of scale, scope, political commitment, technical procedures and data quality are overcome.

### ***3. Scale***

The ‘avoided deforestation’ issue will have to be addressed at national scale (similar to the rules between Annex-I countries), or at least large, geographically well defined parts of large countries (e.g. the island of Sumatra, as part of Indonesia). This allows the issues of additionality, leakage and permanence to be integrated into a common accounting framework. Inter-country market leakages can only be addressed if all the countries with major forest resources become part of the mechanism.

### ***4. Scope***

The ‘avoided deforestation’ debate has to be interpreted as an ‘avoided carbon emission’ issue that includes the gradual loss of carbon in forest degradation as well as net emissions from other lands (e.g. peat lands, trees outside forests, agroforestry lands). Net-net accounting will take into account losses and regrowth in a common framework. The current IPCC Guidelines for National Greenhouse Gas Inventory provide a coherent framework to deal with aboveground as well as belowground impacts of Agriculture, Forestry and Other Land Use (AFOLU). This framework can become the primary

framework for reporting and accountability, aligned with the rules that apply for Annex-I countries.

### ***5. Accuracy of accounting methods***

According to ‘expert opinion’ in the IPCC community responsible for the guidelines, however, the net emission estimates from land use and land cover change may carry an uncertainty margin of as much as 60%. On the positive side: the use of these reports over multiple measurement periods will lead to a reduction of the overall error, as corrections for previous errors will be included along with the permanence issue. On the negative side, however, an uncertainty margin of 60% (IPCC Good Practice Guideline, 2004) is unacceptably high. The IPCC guidelines indicate that there is a lack of data to assess the true level of the uncertainty. Data available in the Alternatives to Slash and Burn (ASB) Partnership for the Tropical Forest Margins can be analyzed to derive better estimates of the uncertainty and ways to reduce it. The two components of uncertainty are interlinked: classification error of land cover and land cover change and uncertainty in the mean carbon stocks per unit area in each land cover class. A binary classification (forest and non-forest as classes) is insufficient. Analysis so far suggests that a classification in 5 – 10 land cover classes may lead to the lowest overall uncertainty. Further data compilation and analysis is needed and possible, as has been started for example for Asian countries through the IPCC support office at IGES.

### ***6. Tradeoffs – abatement***

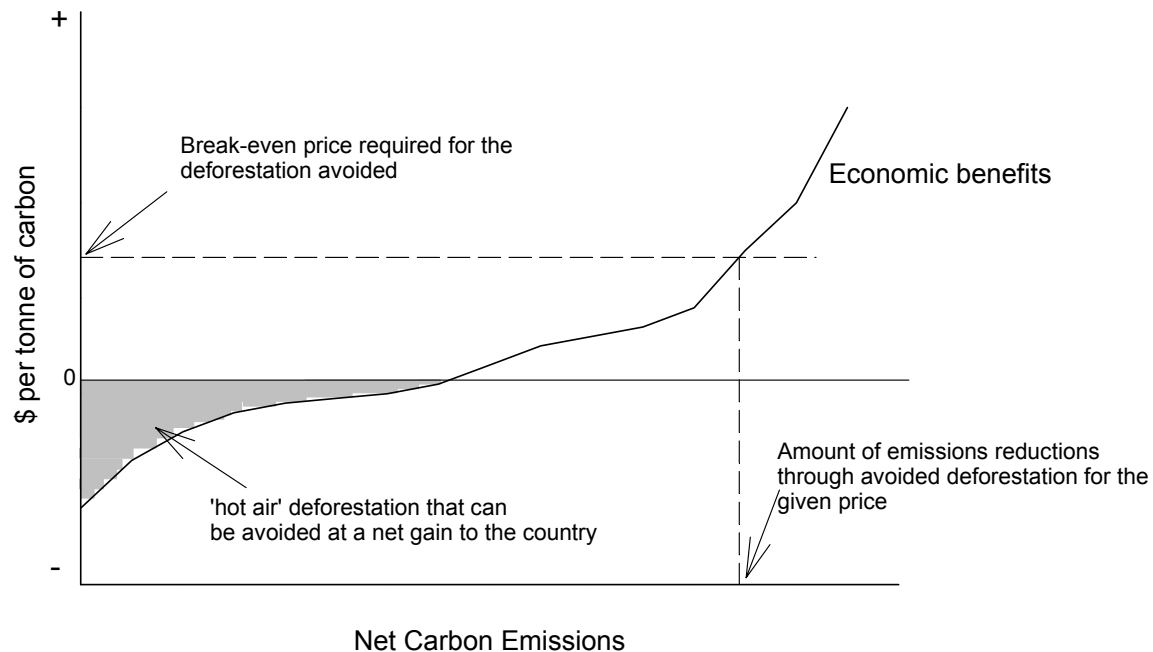
National and sub-national governments will need to know how much ‘avoided emissions’ they can provide at what cost. Summary data of this type requires appraisal of scenarios for integrating economic development and land cover change. Currently such estimates are not available.

In an earlier phase of the discussions on clean development mechanisms, an inventory was made of ‘abatement costs’, largely in the energy sector. (<http://www.adb.org/Documents/Reports/ALGAS/Summary/default.asp>). These results indicated that there was a fraction of ‘hot air’ – emissions that could be avoided at negative total economic costs, as they incur net economic costs at the societal level. There is also a range of emissions associated with moderate economic gain that can be offset at feasible levels of financial transfers. Emissions that are associated with substantial economic gains probably cannot be offset under current carbon prices (Figure 1).

For the avoided deforestation debate in tropical countries, there are, to our knowledge, no estimates available for the cumulative abatement costs (see Figure 1 for the indicative shape). ICRAF, together with CIFOR and the ASB Partnership for the Tropical Forest Margins has embarked on such an analysis for representative areas of Indonesia for the period since 1990. We expect to have preliminary data available by August 2007 and a full report in December 2007 (COP, Bali).

An effective mechanism for avoided carbon emissions from avoided deforestation would have related but separate mechanisms at the international and national levels. Between

countries, political negotiations should be convened to establish commitments to baseline and target emission levels. Countries that attain superior performance in avoided carbon emissions through avoided deforestation should be eligible for carbon offset payments or credits through multi-lateral or bilateral arrangements.



**Figure 1. Tradeoffs between reduced greenhouse gas emissions through avoided deforestation and national economic development opportunities.**

## ***7. Flexible mechanisms and scales of application***

Individual countries involved in the international mechanism should have the flexibility to meet avoided carbon emission targets through national mechanisms appropriate to individual country conditions, following principles already established among Annex 1 countries.

Best practice is emerging on the types of national and local mechanisms that countries can apply to reduce carbon emissions from avoided deforestation, potentially with much lower transaction costs than current CDM projects.

Incentive and rights-based mechanisms can be put in place to reduce carbon emissions from avoided deforestation, while sustaining the asset base, rights and well-being of people dependent on those resources. Countries such as Costa Rica and Mexico already have substantial experience in implementing such mechanisms at the national and sub-

national scale. Large-scale afforestation programmes, such as currently implemented in Indonesia, China and India, could be revised to better address avoided carbon emissions. Forest, landscape and watershed management projects can be revised to provide greater incentives to avoid carbon emissions through avoided deforestation.

Case study evidence from across Asia and a pan-tropical synthesis show that realism, conditionality, voluntarism, and pro-poor are important criteria for evaluating the performance of incentive and rights-based mechanisms ([www.worldagroforestrycentre.org/sea/networks/rupes](http://www.worldagroforestrycentre.org/sea/networks/rupes)).

Countries should be given the flexibility to adapt the design of national and local mechanisms to the various sub-national contexts, with international accountability for the outcomes of net GHG emissions.