

# **ESTABLISHMENT OF A FORESTRY RESEARCH NETWORK FOR ACP COUNTRIES (FORENET)**

## **CONCEPT NOTE FOR RESEARCH PROGRAMME**

### **Tropical forests and climate change mitigation with a focus on forest degradation**

#### **Context**

Land-use change through deforestation is a significant source of carbon emissions and an active contributor to global warming. Deforestation has contributed from 1.6GtC to 5.9 GtC per year in the 1990s (IPCC 2007). This represents about one fifth of current global carbon emissions, which is more than what comes from the fossil fuel-intensive global transport sector (IPCC 2001a, 2001b; Stern 2006).

The new climate governance regime and post 2012 negotiations bring avoided deforestation onto the international agenda. Deforestation results from various causes, most of which originate outside the forest sector. Understanding these causes is crucial to identifying appropriate incentive to curb deforestation, and put in place mechanisms for livelihoods improvement of forests depend people. It is worthwhile mentioning that forests provide a number of valuable goods and services to society. However, returns from forests do not always benefit to the poor. Additionally, returns from alternative land uses and benefits from forests' intangible goods and services do not contribute to afforestation schemes.

Understanding the drivers of deforestation and forest degradation is on the top agenda of policy-makers and the general public owing to their newly-appreciated linkages to climate change, mitigation and adaptation. The Eleventh Session of the Conference of Parties (CoP11) to the United Nations Framework Convention on Climate Change (UNFCCC) held in December 2005 initiated a two-year process for considering a policy of 'reduced emissions from deforestation and degradation' (REDD) in developing countries. In October 2006, an analysis of the economics of climate change published by the UK Government calls attention to prevention of further deforestation as one of four "key elements" of future international climate frameworks (Stern Review 2006).

Finding ways to maintain terrestrial C pools and to reduce carbon emissions from land-use change will be key elements in the future negotiations on the UNFCCC and the Kyoto Protocol, which expires in 2012. This could have large-scale implications for the forestry sector, land-use and rural livelihoods in many developing countries (CIFOR 2006). Therefore, it very important for ACP countries to be ready for REDD projects.

#### **Conceptual framework and research themes**

The objective of this research programme would be to contribute to understanding the concept of forest degradation as it is one of the important and lesser known aspects to consider in REDD. Deforestation is pretty straightforward: that's the removal of forest to different land use. Degradation is much more complicated to define and in many-cases what is considered forest degradation by some is called forest management by others!

For a REDD policy, using a national level reference historical period increases transparency, clarity, and feasibility of measurement. The historical period selected for reference periods will have profound impacts for incentives to reduce deforestation and degradation depending on each country's deforestation rate during that period relative to the potential for future deforestation. Thus, selection of a reference period will require discussion among participating nations. While some flexibility may be necessary, any reference period applied to a REDD policy should focus primarily on providing correct incentives for real emission reductions.

While forest degradation also leads to significant emissions, including degradation within a REDD regime may complicate monitoring, and consequently increase the need for capacity building efforts. While remote sensing methodologies, coupled with ground-based measurements for verification, can be used to monitor forest cover and hence deforestation reliably at a moderately coarse scale, measuring degradation currently requires finer resolution imagery coupled with ground-based measurement and this significantly increases technical demands and cost

Key technical issues that need focused effort are: (1) determining a credible policy definition and means for measuring forest degradation, and (2) determining acceptable techniques for linking measurements of deforestation and degradation to emission of greenhouse gases. Including degradation in any reference period will help expand incentives to reduce forest losses and greenhouse gas emissions, but raises several technical challenges. Linking measurement of forest loss to measurements of carbon emissions is crucial since emissions are what is being valued and traded, not land area.

Research questions can be of fundamental or more applied nature but should meet internationally high standards of scientific quality. Research must aim to link scientific advances to policy and/or practice. We envision addressing the following research themes:

- What is really tropical forest degradation? How do we assess it practically?
- What is the real impact of forest degradation in green house gas emission? Is there a role to play for reduced tropical forest degradation?
- How can we extend sustainable forest management to include maintaining and increasing forest carbon pools as an explicit additional objective and develop methods to manage forests more effectively for multiple ecosystem goods and services (including carbon sequestration)?
- What new methods of analysis in forest assessment are feasible for setting baselines and accountability measures for the inclusion of degradation in REDD schemes?
- In furthering sustainable forest management, what are the merits and drawbacks of accounting for forest degradation through changes in carbon stocks rather than reductions in forest cover?