Forests and Climate Change\textsuperscript{1}

Global forest covers around 30 per cent of the Earth’s land surface (nearly 4 billion hectares). Forests provide valuable ecosystem services and goods, serve as a habitat for a wide range of flora and fauna and hold a significant standing stock of global carbon. The total carbon content of forests has been estimated at 638 Gt for 2005, which is more than the amount of carbon in the entire atmosphere.

Deforestation, mainly conversion of forests for agriculture activities, has been estimated at an alarming rate of 13 million hectares per year (in the period 1990-2005). Deforestation results in immediate release of the carbon stored in trees as CO\textsubscript{2} emissions. It is estimated that deforestation contributed globally to approximately 20 per cent of annual greenhouse gas emissions in the 1990s. According to the IPCC in its Fourth Assessment Report, reducing and/or preventing deforestation is the mitigation option with the largest and most immediate carbon stock impact in the short term.

At present, developing countries can implement afforestation and reforestation project activities under the Clean Development Mechanism. However, the potential role of forests in the mitigation of climate change in developing countries is still limited.

Reducing emissions from deforestation in developing countries under the UNFCCC

At the Conference of the Parties (COP) 11 (Montreal), in 2005 talks on reducing emissions from deforestation in developing countries began, with a proposal on the issue by Papua New Guinea and Costa Rica. Parties recognized the importance of the issue in relation to addressing climate change, particularly in light of the large contribution of deforestation activities in developing countries to global greenhouse gas emissions.

COP 11 provided a mandate for further work by the Subsidiary Body for Scientific and Technological Advice (SBSTA). Between 2006 and 2008, discussions under the UNFCCC process focused on the identification of drivers of deforestation, scientific, technical and methodological issues relating to estimating and monitoring emissions, and costs and technical barriers for the implementation of activities to reduce emissions from deforestation.

Several Parties also proposed a range of policy approaches and positive incentives and considered the advantages and disadvantages of various financing options. Financing options considered

\textsuperscript{1} FAO, 2005. Forest Resources Assessment. http://www.fao.org/docrep/008/a0400e/a0400e00.htm
include voluntary contributions from developed countries, bilateral or multilateral arrangements, Official Development Assistance (ODA), and establishment of new funds and linkages to market mechanisms (as in carbon trading, payment for environmental services).

**Issues discussed at the UN Climate Change Conference in Bali**

A major decision to stimulate action on reducing emissions from deforestation and forest degradation in developing countries was adopted by Parties in Bali (2008). The decision provides a mandate for several elements and actions by Parties:

- Further strengthening and supporting ongoing efforts;
- Support for and facilitation of capacity-building, technical assistance and transfer of technology relating to methodological and technical needs and institutional needs of developing countries;
- Explore a range of actions, identify options and undertake demonstration activities to address drivers of deforestation relevant to each country’s national circumstances; and
- Mobilize resources to support the efforts mentioned above.

**Further work to date**

In 2008, a programme of work was undertaken on methodological issues related to a range of policy approaches and positive incentives that reduce emissions from deforestation and forest degradation in developing countries. Such methodological issues include finding ways to estimate emissions and changes in forest carbon stocks from forest degradation, means to establish reference emission levels and to address the displacement of emissions.

The program of work included a workshop on methodological issues that was held in Japan in June 2008. The workshop helped improve the understanding of the challenges in reducing emissions from deforestation and forest degradation in developing countries. Key messages from the workshop include the:

- need for robust and cost-effective methodologies to estimate and monitor changes in forest cover and associated carbon stocks and greenhouse gas emissions.
- need to increase technical capacities in developing countries to undertake forest carbon inventories and to estimate and monitor such emissions.

In 2008 and 2009, policy approaches and positive incentives relating to reducing emissions from deforestation and forest degradation in developing countries and the role of conservation, sustainable management of forests, and enhancement of forest carbon stocks in developing countries are being considered under the process of the Bali Action Plan (BAP).
At the Accra Climate Change Talks, August 2008, an in-session workshop was held on policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. There were several key outcomes from Accra:

- Common understanding that current knowledge of methodological issues is sufficient to initiate discussions on policy approaches and positive incentives.

- Need for flexible, practical, balanced and comprehensive policy approaches which should be voluntary, encourage wide participation, and take account of national circumstances.

- Any financial mechanism should be effective, sustainable, predictable and performance-based, supported by diversified sources.

- Many Parties recognized a need for combination of non-market financial resources and market-based mechanisms to ensure sustainability of actions.

**Ongoing efforts/Capacity Building**

To be able to participate in any future activities aiming to reduce emissions from deforestation and forest degradation, many developing countries will require capacity building, technical assistance and financial support for a number of enabling activities, including, for example, putting in place the necessary institutions to improve their data collection systems, and their estimation and reporting of emissions.

The consideration of the issue under the UNFCCC during the last two years has spurred bilateral and multilateral cooperation activities involving governments and a broad range of organizations to build capacities and enhance technical and scientific knowledge in developing countries. Intergovernmental and non-governmental organizations have ongoing projects and activities in many developing countries, which are related to reducing deforestation as well as to conservation and sustainable forest management.

In addition to the UNFCCC, the other two Rio Conventions, Convention on Biological Diversity and United Nations Convention to Combat Desertification also acknowledge the importance of protecting forests and their sustainable use for biodiversity conservation and combating desertification and land degradation. In addition, the United Nations Forum on Forests (UNFF) is starting to implement a new non-legally binding instrument to stop illegal logging and promote sustainable forest management.
Cooperation among these international bodies will enhance synergies in promoting sustainable forest management in developing countries.