GTOS/GOFC-GOLD submission to UNFCCC on the issue for reducing emissions from deforestation in developing countries (RED-DC) following the SBSTA invitation to Parties and accredited observers to submit their views by 23 February 2007

The technical panel of the Global Terrestrial Observing System (GTOS) on "Global Observation of Forest Cover and Land Dynamics" (GOFC-GOLD) coordinated the preparation of a report as outcome of an established working group on the item "reducing emissions from deforestation in developing countries and considerations for monitoring and measuring" (available at: http://www.fao.org/gtos/doc/pub46.pdf).

The report highlights technical considerations for measuring and monitoring GHG emissions from deforestation and GHG emissions reductions from avoiding deforestation that need to be addressed in more detailed guidelines and protocols. It is a first consensus perspective from the earth observation community on related scientific and methodological issues with some key conclusions:

- Analysis of remotely sensed data from aircraft and satellite is the only practical approach to measure changes in forest area in developing countries at national scales. Since the early 1990s, changes in forest area can be measured from space with confidence.
- Various methods are available and appropriate to analyze satellite data for measuring changes in forest cover. These methods range from low cost visual photo-interpretation to sophisticated digital analysis. A variety of methods can be applied depending on national capabilities, deforestation patterns, and characteristics of the forest. Quantifying the accuracy of the result and ensuring that consistent methods are applied at different time intervals is more critical than applying standard methods across all countries.
- Data sources exist to determine reference emission scenarios for the 1990s. Averted emissions can be estimated from short term (<5 years) extrapolations of current trends and historical deforestation rates and from existing estimates of forest carbon stocks.
- Estimates of carbon stocks of forests undergoing deforestation are less well known for many developing countries, but default data exist for all are reported in recent IPCC and FAO reports. Guidelines already exist for carbon accounting and are detailed in the IPCC Good Practice Guidance Report (2003) and in the IPCC methods for national inventories of GHGs.
- Key constraints in implementing national systems for monitoring changes in forest cover are cost and access to high resolution data and capacities to use and analyze them.
- New technologies and approaches are developing for monitoring changes in carbon stocks using a combination of satellite and airborne imagery that will reduce uncertainties in accounting for changes in GHG emissions. International coordination and resources are also needed to further test and implement these technologies.

The report presents a first and general vision of the earth observation community potential assistance to this UNFCCC process. With the evolving discussions in the UNFCCC forum, the intention is to develop a more detailed technical-guidelines-type document with specific methodological recommendations. For this matter GOFC-GOLD will host a second workshop synthesizing the experiences from recent remote sensing case study in different parts of world. The workshop will be held on 17-19 April 2007 in cooperation with FAN Bolivia in Santa Cruz, Bolivia. The workshop will further discuss technical options for measuring and monitoring deforestation in developing countries and for estimating related greenhouse gas emissions with the following specific objectives:

- Discuss and synthesize the practical experiences of recent and ongoing case studies on the RED-DC issue (the workshop presentations will be focused on actual case studies, e.g. Bolivia, PNG, India, Cameroon, and Vanuatu)
- Discuss further key challenging issues (i.e. degradation monitoring, forest area change versus emissions, validation and accuracy, costs)

- Plan and organize the development of detailed technical guidelines for measuring and monitoring including ‘reliability’ assessments and recommendations for implementation at regional and national scales.

The consensus reached during this second GOFC-GOLD ad-hoc workshop will be presented at a side event at SBSTA 26 and documented outcomes will be prepared for SBSTA’s 27th Session in December 2007.