

**Summary report of the international workshop on “National Forest Inventory: The Experiences of Non-Annex I Countries”**  
**ICFRE, Dehradun, India**  
**27-29 April 2009**

The three day international workshop on “National Forest Inventory: The Experiences of Non-Annex I Countries” was organized by the Indian Council of Forestry Research and Education (ICFRE) and Coalition for Rainforest Nations (CfRN) from 27 to 29 April 2009 at ICFRE, Dehradun. The workshop was attended by 61 overseas delegates from 32 countries, and subject experts from six international organizations (GTZ, FAO, World Bank Forest Carbon Partnership Facility, EU JRC, CfRN, and Japan International Cooperation Agency). Other participants of the workshop included senior officers and scientists from state forest departments; Ministry of Environment and Forests, Government of India; research organizations - Indian Institute of Remote Sensing (IIRS), Forest Survey of India (FSI), ICFRE, and Forest Research Institute (FRI). The list of participants is appended at **Annexure I**.

The technical workshop in Dehradun was the third workshop in a series of technical workshops being organized by the CfRN on capacity building and methodological issues to facilitate wider understanding and implementation of the UNFCCC agenda on ‘Reducing emissions from deforestation in developing countries’ (REDD). The objective of the workshop was to enable experts of developing countries to better understand the technical aspects and options related to the measurement of forest carbon stocks for developing national forest inventories.

Agenda of the workshop is placed at **Annexure II** of the report.

**Day 1: 27 April 2009**

The workshop was inaugurated by Mr Jagdish Kishwan, Director General, ICFRE who while welcoming the delegates underlined the relevance and role of the national forest inventory (NFI) in preparation of the forest carbon accounts at national level. Mr Kishwan highlighted the importance of forests in climate regime and UNFCCC deliberations. Distinguished guests Mr Reinhard Wolf from GTZ, Ms Catherine Kamara from Coalition for Rainforest Nations, Mr Danilo Mollicone from United Nations REDD

Programme, and Mr Ken Andrasko from World Bank Forest Carbon Partnership Facility (FCPF) also addressed the delegates of the workshop, and appreciated the timely organization of the workshop for building the capacity of developing country partners of UNFCCC.

In the technical session one, “**REDD under UNFCCC**”, Mr Danilo Mollicone of Coalition of Rainforest Nations provided a detailed introduction to the workshop, and informed the participants that more technical workshops would soon be organized in 2009 by the CfRN on capacity development and methodological issues related to REDD. He also gave a brief account of REDD history and negotiations under the UNFCCC. Mr Jagdish Kishwan, Director General, ICFRE made a presentation on “Estimation of Forest Carbon Stocks in India: A Methodology based on National Forest Inventory”, and said that the procedure followed by India as part of the Second National Communication (SNC) to UNFCCC for estimation of biomass carbon and soil organic carbon (SOC) has the potential of being developed and adopted as a general REDD methodology for assessing changes in forest carbon stocks at national level in a country over a stipulated period.

In the afternoon, the participants were taken to Sal (*Shorea robusta*) forests of Lachchhiwala of Dehradun Forest Division for a field trip. Demonstration related to physical and procedural details of observations and measurements related to forest carbon accounting comprising estimation of biomass carbon and soil organic carbon was made by experts and scientists of Forest Survey of India, ICFRE, and Indian Institute of Remote Sensing.

## **Day 2: 28 April 2009**

The second technical session, “**National Forest Inventory**”, continued throughout the day. In the forenoon, FAO experts provided an overview of developing, monitoring, assessment, and reporting of National Forest Inventory (NFI) in countries of Asia, Africa, and Latin America. Following is the list of presenters in this session together with the subject of presentation:

1. Dr. Kailash Govil, FAO: “National Forest Inventories in Asia in context of UN-REDD : A review”

2. Mr. Marco Piazza, FAO: “Review of National Forest Inventories in South America”
3. Mr. Masahiro Otsuka, FAO: “Scope of forest monitoring, assessment and reporting”
4. Dan Altrell, NFMA Programme, FAO: “National Forest Inventories (NFIs) & REDD”
5. Mr. Ing. Wing Lau Williams, Republic of Nicaragua: “National Forest Inventory : Experiences and preliminary results”
6. Ms. Carla Ramírez Zea, NFMA Programme, FAO: “One Approach - Many Solutions”
7. Mr. Kim Hyung-Kwang, FAO: “A long-term strategy for NFMA activities in Asia and the Pacific”

Dr D. Pandey, Director General, Forest Survey of India, Dehradun made a presentation on National Forest Inventory and assessment of forest biomass carbon stocks of India’s forests. Mr. Subhash Ashutosh, Joint Director, Forest Survey of India (FSI), Dehradun discussed and informed participants about the progress of FSI project on mapping of forest types of India. Both the presentations were highly appreciated by the international experts and foreign country delegates.

The afternoon session of the workshop focused on the estimation of soil organic carbon in forests. Experts from Indian Institute of Remote Sensing, Dehradun, Dr V. K. Dadhwal and Dr Vellumurugan, in their presentations respectively discussed national carbon project for India, and the methodology being followed for preparation of soil organic carbon inventory of India’s forests. The technical aspects of the methodologies described in the two presentations caught the eye of the participants and earned their appreciation. Later on, experts from China, Mexico, and Malaysia provided details of forest inventory and assessment of forest carbon stocks in their countries.

### **Day 3: 29 April 2009**

In the morning session of “**National Forest Inventory – From Theory to Practice: Implementing and Institutionalizing**”, Mr Sandro Federici, from CfRN – UNFCCC roster of experts made a presentation on “From Forest Inventory data to GHGs Inventory”, and Mr D. Mollicone from FAO UN-REDD Programme discussed and delivered a talk on “National Monitoring, Assessment, Reporting, and Verification System under the UN-REDD Programme”.

Later during the day, Mr. Jagdish Kishwan, DG, ICFRE moderated and facilitated the discussions of panelists of the Round Table on **“Meeting the Potential REDD requirements under UNFCCC”**. Besides the moderator, the panel comprised Dr V. K. Dadhwal, Dean, IIRS, Dehradun, Mr Kevin Conrad, Papua New Guinea, Mr Ken Andrasko, World Bank, Mr Danilo Mollicone, FAO UN REDD Programme, and Mr Reinhard Wolf from GTZ. To stimulate the panel discussion, Mr. Dan Altrel from FAO made a presentation on “Country needs, priorities and institutional capacity” describing the experience, information and data related to various aspects of national forest monitoring and assessment in Zambia, Honduras, Nicaragua, Bangladesh, and Cameroon. The deliberations and discussions of the round table with many interventions from floor led to finalization of the workshop conclusions. Important outcomes of the panel discussion and workshop conclusions are summarized below:

1. A global climate agreement without forests is not possible. Considering the fact that about 20% of the global greenhouse gas emissions is caused by deforestation alone, forestry sector has the potential of offering 20% of the global climate change solution. A comprehensive REDD mechanism (*REDD-plus*) provides an unprecedented opportunity to mitigate climate change, and developing countries must make use of the opportunity in implementing activities that would contribute in such mitigation.
2. It is advisable for the developing countries to first identify the mitigation activity or activities in the forestry sector that they are implementing or could implement according to their national circumstances as part of REDD, and which could be associated with the policy approaches listed in the Bali Action Plan (BAP) as *REDD-plus*. Subsequently, they should focus on adopting a particular REDD methodology and putting in place a national forest inventory system supported by an independent and transparent national monitoring system. (*The activities and approaches that are mentioned under BAP include reducing deforestation, conservation, sustainable management of forests and enhancement of forest carbon stocks*).

3. Finance, and strengthening scientific and technical capabilities of developing countries are the basic requirements for an effective and efficient implementation of a REDD instrument. Capacity building is the most fundamental issue to move towards fulfilling various technical aspects of a future REDD methodology.
4. It was apparent that while some countries like India, China and Brazil had institutional and infrastructural capacity, others needed more concrete efforts and support to build scientific and technical capacity and expertise for establishment of institutions to meet the requirements of REDD. India was considered to be an important location for imparting training to other countries in models and methodologies relating to forest carbon accounting under REDD. ICFRE, India accepted the proposal in principle, and said that finer points would be sorted out with potential partners like FSI and IIRS. It was agreed that ICFRE could formulate a proposal of capacity building for other countries in Indian institution(s) on receiving a suggestion to this effect from the UN-REDD Programme (Mr Danilo Mollicone).
5. Intense cooperation among international organizations like World Bank FCPF, FAO, and UN-REDD Programme is required to channelise sufficient resources for creating necessary tools and techniques for capacity building of developing countries. Help should also be provided to REDD countries to prepare a readiness plan (overall framework to achieve readiness) covering training needs and guidance. Viewing lack of trained human resources in the field of climate and forestry as the most important limiting factor, it was also suggested that a concrete roadmap for capacity building, reflecting country specific needs- technical and manpower- should be developed by focal points of countries or their REDD representatives.
6. The delegates acknowledged the importance of holding technical workshops. It was recommended that more workshops on emerging areas of '*reference emissions levels, reference levels*', and other topics should be held to increase the level of knowledge, and sharing of information among developing countries. It was also agreed that it was necessary to have workshops and meetings for policy

makers also in addition to technical workshops for experts, with a view to increasing sensitization and awareness to forests and climate change linkages.

7. It was recommended that all developing countries should unitedly push the concept of *REDD-plus* in all forthcoming deliberations and negotiations of UNFCCC to ensure that maximum number of developing countries were able to contribute in climate change mitigation by undertaking forestry activities according to their national circumstances, and be part of a future *REDD-plus* financial mechanism to incentivize their actions.