

Introduction

James Halperin¹ and David Ganz²

Globally, approximately two-thirds of the world's forests are considered degraded, but practical, cost-effective tools for monitoring forest quality remain elusive. Techniques for monitoring deforestation and changes to forest carbon stocks are widespread and well published. However, techniques for monitoring forest degradation are relatively untested in developing countries despite their inclusion in the United Nations Framework Convention on Climate Change (UNFCCC) negotiations on Reducing Emissions from Deforestation and Forest Degradation (REDD+). The lack of a forest degradation definition, challenges in forest monitoring methodologies, access to emerging technologies and knowledge, and the development of appropriate sampling frameworks all further complicate forest degradation monitoring.

The United States Agency for International Development/Regional Development Mission for Asia (USAID/RDMA)-funded Lowering Emissions in Asia's Forests (LEAF) program is designed to assist partner countries in Southeast Asia reduce negative impacts of unsustainable forest use on Greenhouse Gas (GHG) emissions. Two of LEAF's main objectives include building technical capacity for monitoring changes in forest carbon stocks and demonstrating innovation in sustainable land management. By collaborating directly with key departments and agencies in partner countries, LEAF aims to help its institutional partners reach their goals of reducing GHG emissions through improving both forest management and forest monitoring systems needed to reliably and transparently account for GHG emissions reductions in the forest sector.

LEAF is partnering with the United States Forest Service-International Programs (USFS-IP) to provide critical technical assistance in identifying and developing forest monitoring methodologies that can estimate GHG emissions, with a special emphasis on forest degradation. The key objectives of this partnership include:

- Assessing forest degradation drivers and monitoring options at the sub-national level in Lao PDR, Vietnam, and Cambodia;
- Convening a forest monitoring experts workshop to discuss lessons learned from the sub-national assessments and operational aspects of various forest degradation monitoring approaches, highlighting potentially successful approaches given existing drivers; and
- Communicating results of these activities to develop forest degradation monitoring demonstration programs and strengthen capacity in partner countries.

¹Center for International Forestry Research, Lusaka, Zambia

²LEAF Asia, Liberty Square, Suite 2002, 287 Silom Road, Bangrak, Bangkok, 10500 Thailand

Corresponding author: j.halperin@cgiar.org

The goal of this proceedings document is to bring together the ideas and lessons learned from the forest monitoring experts' workshop. By exploring remote sensing tools, modeling, and field-based monitoring approaches, the workshop findings promote integrating feasible monitoring methods into national and sub-national forest monitoring systems, to detect how much degradation is taking place. Explicitly addressing degradation can reduce associated carbon emissions and protect largely intact forests before they suffer from degradation.

The experts who attended the forest monitoring experts' workshop represented a wide range of specialties and experience from national, regional, and global perspectives. Specific objectives of the workshop included both understanding implications of definitions in context of operationalizing forest monitoring degradation; and assessing case studies, and current and emerging best practices to detect and monitor forest degradation. Key questions from the workshop highlighted linkages between forest degradation drivers, monitoring methods and the challenges and opportunities associated with relevant monitoring methodologies.

The two-day workshop was formatted in order to take advantage of the range and depth of experience of the workshop participants. Morning presentations were followed by focus group discussions to thoroughly address questions such as:

- Which drivers and degradation sources can be detected;
- Which methods are most effective at detection and,
- What challenges and opportunities are involved in detecting degradation?

This proceedings report presents abstracts from presentations, followed by an in-depth analysis of conclusions from topic areas in remote sensing, ground based field measurements, uncertainty analysis, and integration of data sources. Key findings from the USFS sub-national assessments at LEAF intervention areas form a central component to link forest degradation drivers and monitoring options. This work thus builds upon country-level degradation assessments in Vietnam, Laos, and Cambodia, and is part of LEAF's commitment to building institutional technical capacity across the region for monitoring changes in forest carbon stocks and demonstrating innovations in sustainable land management. The focus group discussion summaries integrate combined knowledge from the participant experts with the lessons learned from the LEAF/USFS assessments in order to provide next steps for advancing forest degradation monitoring demonstration activities.

Forest degradation is a challenging concept to operationalize within forest monitoring programs. This holds true even in countries with long-standing forest monitoring experience. Spatial extent, occurrence, frequency, and intensity are all variables of forest degradation drivers that must be taken into account when developing forest degradation monitoring initiatives. LEAF and the US Forest Service hope that this document provides a solid base in addressing these issues to bring forest degradation monitoring into the mainstream.



Participants in the International Workshop on Monitoring Forest Degradation in Southeast Asia held November 13-14, 2012 in Bangkok, Thailand.
(Photo: Nicole Kravec)