

The International Forestry Review

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- Contributions must be original* and not have been submitted for publication elsewhere.
- All diagrams are evaluated by use of electronic software. For more information on what constitutes plagiarism, and why it is important please click here.
- The text, excluding tables, references and appendices, should not exceed 7000 words, although exceptions may be permitted in special cases.
- A SUMMARY of not more than 150 words must be supplied, together with 5 keywords.
- All spelling must conform to UK/International English.
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 - o Main title in Arial, Text in Times New Roman
 - o The hierarchy of headings is: CAPITALS, bold lower case, italics lower case.

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- Manuscripts should be produced in Microsoft Word, written in Times New Roman typeface (size 12 pt), with single row spacing, left justification and without hyphenation.
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Mutually beneficial company-community partnership in ensuring its long-term viability: emerging lessons from Indonesia
A.A. NAWIR and L. SANTOSO
Center for International Forestry Research, Jl. CIFOR, Situ Gede, Sindang Barang, Bogor 16680, Indonesia
Email: a.nawir@cgifor.org and lsantoso@cgifor.org

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SMITH, W.J. 2001, Selection of tree species for arid environments. In: BLACKBURN, J.W. (ed.) *Multipurpose trees and shrubs for fuelwood and agroforestry*, CNRD Monograph No4, 366 pp.
 - o Book
PHILLIP, M.S. 1994, *Measuring trees and forests*. 2nd edition, CAB International, Wallingford, England, 310 pp.
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- HOLMGREN, J., JOYCE, S., NILSSON, M. and OLSSON, H. 2000, Estimating stem volume and basal area in forest compartments by combining satellite image data with field data, *Scandinavian Journal of Forest Research* 15: 103-111. Is correct.
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- For authors to acknowledge suggestions made by referees with a simple statement such as 'The valuable suggestions made by anonymous referees is gratefully acknowledged'.

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*The
International
Forestry Review*



**Sustaining Forests, Sustaining People:
The Role of Research**

**XXIV IUFRO World Congress, 5–11 October 2014,
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Abstracts

EDITORS

JOHN A. PARROTTA, CYNTHIA F. MOSER, AMY J. SCHERZER,
NANCY E. KOERTH and DARYL R. LEDERLE

average, and ranged from 178.41 to 369.70 metric tons C/ha. The carbon sequestered during the 2 years of the study based on biomass accumulation in the four natural mangrove stands studied was 3.83 t C/ha/yr, on average, and ranged from 1.90 to 5 t C/ha/year. For mangrove plantations, all of the plantations studied were *Rhizophora* plantations, mostly mixed *Rhizophora apiculata* and *Rhizophora mucronata* stands with trees 12–27 yr old or 18.5 yr on average. The combined carbon held by the biomass and upper 30 cm of sediment in the mangrove plantations was on average 190.59 metric tons C/ha and ranged from 117.56 to 262.45 metric tons C/ha. The yearly rate of carbon accumulation in the biomass of the four mangrove plantations based on carbon stock and plantation age was 4.01 t C/ha on the average and ranged from 2.75 to 5.15 t C/ha/year. The study demonstrated the potential of mangrove forests in the Philippines, both in natural stands and in plantations, as an option for climate change mitigation.

National assessment of non-timber forest products: prospects for improving the reporting of volumes and values of these products. Chamberlain, J., Patel-Weynand, T., Haan, T. (U.S. Forest Service, USA; jchamberlain@fs.fed.us; tpatelweynand@fs.fed.us; tjhaan@fs.fed.us).

Non-timber forest products (NTFPs) have been significant contributors to the forest products industry in the United States (Chamberlain *et al.*, 1998) since this country was established. The United States has been a major supplier of herbal forest products used for their medicinal value, though the economic contribution has not been fully accounted for in valuing the forest products industry. For more than 60 years, the U.S. Forest Service has been tracking wood production through the timber products output (TPO) assessments and can estimate production by product and county of origin. In addition, the Forest Service's Forest Inventory and Analysis (FIA) group can estimate growing stock, tree removals, and forest condition and age, as well as land ownership patterns. These estimates provide a comprehensive assessment of the trees and timber products that make up the forests and related industries. But that assessment capability is lacking for the non-tree resources or the non-timber products that are harvested from the forests. Through a series of interviews, conversations, a workshop, and reviews of policies, regulations, and literature, the Forest Service has undertaken a national assessment to examine the potential and pitfalls of improving the reporting of NTFPs. This presentation examined the status of non-timber forest products and identified gaps in the knowledge and ways to improve conservation, management, and reporting of these valuable products.

Assessment of aboveground biomass and soil carbon storage of the fallow forests after swidden cultivation in the Bago Mountains, Myanmar. Chan, N. (Kyoto University, Japan; nchan08@gmail.com), Takeda, S. (Kyoto University, Japan; takeda@asafas.kyoto-u.ac.jp), Suzuki, R. (Kyoto Gakuen University, Japan; suzuki@kyotogakuen.ac.jp), Yamamoto, S. (Kagoshima University, Japan; sotayama@cp.kagoshima-u.ac.jp).

This study was conducted to assess the aboveground biomass (AGB) accumulation and soil carbon (SC) storage in the swidden cultivated fallows of the Bago Mountains, Myanmar, by using a chronosequential approach. The 34 sample plots were randomly set up in 1-, 5-, 10-, 15-, 20-, 25-, and 30-year-old fallows, as well as in nearby old forests. The AGB in the fallows was estimated by the allometries established through destructive sampling. Similarly, the 213 soil samples were taken at 0–10 cm, 10–20 cm and 20–30 cm layers from the fallows to analyze soil carbon storage by using an NC analyzer. The average total AGB (including trees, bamboo, understorey vegetation, and vines) in 1-, 5-, 10-, 15-, 20-, 25-, 30-year-old fallows and in the nearby old forests were 13.91, 31.31, 52.96, 66.52, 103.12, 88.45, 92.42 and 112.48 Mg/ha, respectively. The average total SC was 23.31, 18.31, and 15.01 Mg ha⁻¹ in the 0–10 cm, 10–20 cm and 20–30 cm layer, respectively. The results show that the AGB increased with fallow age, with the largest contribution by bamboo biomass in the fallows. However, the average SC accumulation in the fallows was about 58.14 Mg/ha with the fluctuation trend along the fallow age.

The contribution of historical vegetational database recovery to the study of forest biodiversity in Trentino (Italy). Ciolli, M. (University of Trento, Italy; Marco.Ciolli@unitn.it), La Porta, N., Zottele, F. (Edmund Mach Foundation, Italy; nicola.laporta@fmach.it; fabio.zottele@fmach.it), Geri, F. (University of Trento, Italy; geri.francesco@gmail.com).

Multi-temporal biodiversity data for a forest ecosystem can provide useful information about the evolution of biodiversity in that area. The Edmund Mach Foundation owns an archive used to determine the main Schmid's vegetational belts in the Trento province of Italy. The archive contains data collected over 20 years, from the 1970s until the 1990s. The database was developed with tools and technologies that are now obsolete, making it unusable. As part of the FORCING project, a comprehensive process of database recovery was carried out: an analysis of the data structure was performed to reverse-engineer the database structure, and missing data were digitized from historical maps and other preserved documents. All the maps of the 16 forest districts and the related 8,000 detected transects have been georeferenced to geographically enable the whole database and to evaluate the possibility of performing comparative samplings on up-to-date data sets. Raw data for vegetation (about 200,000 specific identifications including frequency indices) remain an important and irreplaceable source of information not only for their historical value, but also for many other applications. Provided here are examples of how this kind of data can be used in different multitemporal comparisons. The potential and the limits of the specific data set and of the historical data base in general are highlighted.

An historically consistent and broadly applicable MRV system based on LiDAR sampling and Landsat time-series. Cohen, W., Andersen, H., Healey, S., Moisen, G., Schroeder, T., Woodall, C., Domke, G. (U.S. Forest Service, USA; wcohen@fs.fed.us; handersen@fs.fed.us; seanhealey@fs.fed.us; gmoisen@fs.fed.us; tschroeder@fs.fed.us; cwoodall@fs.fed.us; gmdomke@fs.fed.us), Yang, Z. (Oregon State University, USA; zhiqiang.yang@oregonstate.edu), Stehman, S. (State University of New York, USA; svstehma@syr.edu), Kennedy, R., Woodcock, C., Zhu, Z. (Boston University, USA; kennedyr@bu.edu), curtis@bu.edu; zhuzhe@bu.edu), Vogelmann, J., Steinwand, D. (U.S. Geological Survey, USA; vogel@usgs.gov), steinwand@usgs.gov), Huang, C. (University of Maryland, USA; cqhuang@umd.edu).

The authors are developing a REDD+ MRV system that tests different biomass estimation frameworks and components. Design-based inference from a costly field plot network was compared to sampling with LiDAR strips and a smaller set of plots in combination with Landsat for disturbance monitoring. Biomass estimation uncertainties associated with these different data sets