

**THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK**

## Natural Disturbance and Uneven-aged Silviculture: Not a Common Reference!

By Brian Harvey, Sustainable Forest Management Chair, Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda, Canada

"Natural disturbance-based management: Managing for complexity" was the central theme of the recent conference of the IUFRO 1.05 Uneven-aged Silviculture Research Group, held in Rouyn-Noranda, Québec (Canada) from May 14-18, 2006. The conference was intended to highlight both recent research and conceptual approaches that draw on knowledge of natural forest and stand dynamics involved in small-scale disturbances and silvicultural approaches that find some inspiration in these dynamics.

From the opening keynote address on using natural secondary disturbances as a template for silviculture in the boreal mixedwood forest of Eastern Canada, it was evident that the reference scales of natural disturbances and even the notion of natural disturbance-based management are not common currency across all forest regions and countries. Clearly, the extent to which disturbances such as fire, insect outbreaks and windthrow events affect forest dynamics, composition and structure in boreal Canada have few equivalents in regions where forests are highly accessible and have been intensively managed for generations. Moreover, the idea of wanting to manage in ways that integrate certain aspects of these natural processes and the disturbance patterns they create would appear to be a hard sell in regions where the capability exists to control most medium- to large-scale disturbances.

Thus, whereas natural disturbance-based management is perceived as a key element to maintaining biodiversity and natural complexity in much of the North American forest science community, disturbance in many regions where natural forests are rare continues to be perceived as a destructive force with little utility as a template for management, with the exception of efforts in forest ecosystem restoration and naturalisation of forest plantations. This dichotomy was underlined in a thought-provoking talk by Klaus Puettmann (Oregon State) entitled



Keynote speaker Dan Kneeshaw (Université du Québec à Montréal) explaining gap dynamics driven by spruce budworm in old growth balsam fir-white birch-cedar stand (Lake Duparquet Research and Teaching Forest) during mid-conference excursion. (Photo: Daniel Lesieur)

*UEA management: Which kind? Why do we care?* in which management approaches, goals and values, and ecological and economics concepts were compared for management regimes based on maximum sustainable yield *versus* those focused on building complex stand structures.

Despite differing viewpoints regarding the natural disturbance paradigm, numerous scientists from all represented regions presented research results concerning fine-scale stand-level dynamics (and disturbances) and their relationship to light environments, recruitment, growth and mortality processes in natural, old growth and stands managed under UEA regimes and variants of partial harvesting.

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Conference on *Natural disturbance-based management: Managing for complexity*. Sponsored by the IUFRO Uneven-aged Silviculture Research Group ([1.05.00](http://www.iufro.org)); organized by the NSERC Industrial Chair in Sustainable Forest Management of the Université du Québec en Abitibi-Témiscamingue and the Université du Québec à Montréal in collaboration with the Canadian Forest Service and the Quebec Ministry of Natural Resources and Wildlife; 125 delegates from 12 countries. Website: <http://web2.uqat.ca/iufro/>.

A "Forum Feature" of a limited number of peer-reviewed papers from the conference is being prepared for the Canadian Journal of Forest Research.

## What does it mean?

*This column addresses on a regular basis, the challenge of saying exactly what you mean and meaning what you say: we provide definitions of terms and inform on needs for clarification of forest terminology in issues related to the Editorial of IUFRO News. This time, the focus is on forest management.*

### FOREST MANAGEMENT

French: aménagement forestier, gestion forestière

Spanish: ordenación forestal, gestión forestal, manejo forestal

German: Waldbewirtschaftung, [-] Forsteinrichtung

Formal or informal process of planning and implementing practices aimed at fulfilling relevant environmental, economic, social and/or cultural functions of the forest and meeting defined objectives.

Note - Further detailed definitions, such as those of timeframe, intensity, impacts, management level and resource requirements can be applied, depending on the purposes, such as reporting, forest resources assessment, policy formulation or resource allocation.

By Renate Prüller, Coordinator [SilvaVoc](#) and Michèle Kaennel Dobbertin, Coordinator [IUFRO 6.03.02](#)

The aforementioned definition has been elaborated in the Process on Harmonizing Forest-Related Definitions for Use by Various Stakeholders, an initiative of FAO with CIFOR, IPCC, IUFRO, ITTO and UNEP in 2005.

### UNEVEN-AGED MANAGEMENT

A combination of management practices for a stand or a forest, which maintains a range of age classes, by periodically selecting and harvesting individual trees or groups of trees. (*IUFRO World Series Vol.9-en*)

### SILVICULTURAL SYSTEM

A planned program of treatments throughout the life of the stand to achieve stand structural objectives based on integrated resource management goals. A silvicultural system includes harvesting, regeneration and stand-, group- or tree-tending methods or phases. It covers all activities for the entire length of a rotation or cutting cycle. (*IUFRO World Series Vol.9-en*)

Find equivalences in other languages from the IUFRO terminology database [SilvaTerm](#). Address your comments to: [prueller\(at\)iufro.org](mailto:prueller(at)iufro.org) or [kaennel\(at\)wsl.ch](mailto:kaennel(at)wsl.ch)

## Forest Ecosystem Services: Social and Economic Perspectives

[Report](#) of a Conference Session organized by IUFRO Unit [6.11.05](#), "Ecological Economics in Forestry" at the International Symposium on Society and Resource Management (ISSRM), Vancouver, British Columbia, Canada, June 4 – 8, 2006 (<http://www.issrm2006.rem.sfu.ca>).

Session organizers (Photo): David N. Bengston, USDA Forest Service, USA, and Youn Yeo-Chang, Seoul National University, South Korea.



The Millennium Ecosystem Assessment identified four broad categories of ecosystem services, including "provisioning services such as food, water, timber, and fiber; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling," (2005, p. v). The human economy, human well-being, and life itself are dependent on the myriad goods and services provided by ecosystems. Yet mounting evidence suggests that the impacts of growing human activity are damaging the ability of natural systems to function and endangering the provision of these vital services. The session addressed a variety of social and economic issues and themes related to forest ecosystem services.

## Managing Forests for Climate Change

Report under [Scientific Summaries](#) on the IUFRO Web site.

From 3 to 7 April 2006, IUFRO [Division 4](#) held a meeting on climate change and forestry in Palencia, Spain. The focus of the meeting was placed on the management of carbon sequestration in forests and the adaptation of forests to climate change.

Participants of the IUFRO Division 4 meeting in Spain gathering during the field day



The meeting was devoted to research in monitoring and modelling of carbon sequestration and the potential of managed forests to adapt to climate change. The contributions included papers on Monitoring and Modelling, Economics and Management, and a number of case studies, mainly from North America, South America and Europe.

Bravo Oviedo, F. (Ed.) 2006. *Proceedings of the IUFRO Division 4 International Meeting "Managing Forest Ecosystems: the Challenges of Climate Change"*. Ed. cuatroelementos, Valladolid. ISBN-13: 978-84-611-0082-8.

## Congratulations !

### ICSU Celebrates 75 Years: 1931 – 2006

Founded in 1931, the International Council for Science is a non-governmental organization representing a global membership that includes both national Scientific Bodies (currently 104 members) and International Scientific Unions (29 members). IUFRO is also a full member of ICSU.

The long-term ICSU strategic vision is for a world where science is used for the benefit of all, excellence in science is valued and scientific knowledge is effectively linked to policy-making. Visit the ICSU web site at [www.icsu.org](http://www.icsu.org).

### Frances Seymour to be the Next Director General of CIFOR

The Board of Trustees of the Center for International Forestry Research has announced the appointment of Frances Seymour as the Center's next Director General.

Ms. Seymour will replace David Kaimowitz who will soon step down after five years as Director General. She will be responsible for leading CIFOR's global activities and their focus on the sustainable use of forest resources to fight poverty and protect the environment in tropical Asia, Africa, and Latin America.



(Source: CIFOR media release <http://www.cifor.cgiar.org/docs/ref/media/release/index.htm>)



### Jan Heino Forestry Director for FAO

Mr. Jan Heino from Finland has been appointed Assistant Director General and head of the Forestry Department of the United Nations' Food and Agriculture Organization (FAO).

Mr Heino resigns from his position as Director General of the Finnish State forest enterprise Metsähallitus at the end of June 2006. Heino considers the promotion of all aspects of sustainable forestry a central factor in reducing the global scourge of poverty and hunger. For him, the creation of national policies as well as functional national forest programs that are tailored to each country are at the forefront.

(Source: Press release by Metsähallitus and Ministry of Agriculture and Forestry, <http://www.metsa.fi/janheino>)

## Publications



**JUST PUBLISHED!**

### Global Forest Decimal Classification (GFDC) IUFRO World Series 19

IUFRO announces the publication of an extensively updated bilingual full version of the English/German edition of the Global Forest Decimal Classification (GFDC).

The 400 page volume replaces the former Forest Decimal Classification (FDC) and Oxford System for Decimal Classification for Forestry (ODC). In addition to the 80 new numbers and 100 extensions of existing numbers it includes detailed schedules and comprehensive indexes in English and German, updated "place" tables and extensively revised insect tables.

**ORDER YOUR COPY TODAY!**

#### Ordering Information

35 EUR plus shipping; contact IUFRO Headquarters, Hauptstr.7, 1140 Vienna, Austria, office(at)iufro.org, <http://www.iufro.org>  
or  
Library, Austrian Federal Research and Training Centre for Forests, Natural Hazards and Landscape  
Unit: Documentation, Publication & Library  
Seckendorff-Gudentweg 8  
1131 Vienna, Austria  
Tel.: +43-1-87838-1216  
Fax: +43-1-87838-1215  
E-Mail: gudrun.csikos(at)bfw.gv.at  
<http://bfw.ac.at/>

### Using Wood Composites as a Tool for Sustainable Forestry

Proceedings of Scientific Session 90, XXII IUFRO World Congress, Brisbane, Australia, August 12, 2005  
Edited by Jerrold E. Winandy, Robert W. Wellwood and Salim Hiziroglu.  
USDA-FS, General Technical Report FPL-GTR-163

### KURU: Revista Forestal

The School of Forestry Engineering of the Costa Rican Technological Institute are happy to invite you to visit a new issue of the Kuru forestry digital magazine (number seven, volume three) at the following Web site:  
<http://www.itcr.ac.cr/revistakuru>

### 15 Years of Economies in Transition: Lessons Learned and Challenges Ahead for the Forestry Sector:

*A contribution to the work of the UNECE Timber Committee and the FAO European Forestry Commission.*

By Ján Ilavský  
Available in electronic format at:  
<http://www.metla.fi/julkaisut/workingpapers/>

**Linking Social Movements: How International Networks Can Better Support Community Action About Forests.**

CIFOR working paper no. 31. CIFOR, Bogor, Indonesia.  
By Wollenberg, E., Colchester, M., Mbugua, G. and Griffiths, T. 2005. <http://www.cifor.cgiar.org/scripts/news/scripts/publications/detail.asp?pid=1927>

**One Century of Forest Rehabilitation in the Philippines: Approaches, Outcomes and Lessons**

By Chokkalingam, U.; Carandang, A. P.; Pulhin, J. M.; Lasco, R. D.; Peras, R. J. and Toma, T. (Editors). 2006.. Bogor, Indonesia, Center for International Forestry Research (CIFOR). 132p.

<http://www.cifor.cgiar.org/scripts/news/scripts/publications/detail.asp?pid=2025>

**Global Forest Resources Assessment 2005**

*Progress towards sustainable forest management*

FAO Forestry Paper 147

ISBN 92-5-105481-9

This publication, the main report of FRA 2005, contains country-by-country data, contributed by national correspondents and reviewed and collated by FAO, for more forest key variables than in any previous assessment.

## IUFRO Meetings

**NOTE:** *The following list of meetings is not complete. For a full list of IUFRO events, please visit our [online calendar](#). Find more details on the [homepages](#) of IUFRO Units involved.*

15 September 2006

**The Role of Forestry in Integrated Environmental Assessments**

Abbey Rolduc, Kerkrade, The Netherlands

IUFRO Working Party [4.02.07](#)

**Contact:** Brita Pajari, [brita.pajari@efi.fi](mailto:brita.pajari@efi.fi); or

Gert-Jan Nabuurs, [Gert-jan.nabuurs@wur.nl](mailto:Gert-jan.nabuurs@wur.nl)

<http://www.efi.fi/events/extra/2006/2006ac>

17-20 September 2006

**Translating Global Governance Designs – The Role of Civil Society in Transition Countries**

St. Petersburg, Russia

IUFRO Research Group [6.12.00](#)

**Contact:** Maria Tysiachniouk, Center for Independent Social Research, [tysiachn@indepsores.spb.ru](mailto:tysiachn@indepsores.spb.ru)

<http://www.iufro.org/science/divisions/division-6/60000/61200/activities/unit/6.12.00/>

9-13 October 2006

**Low Input Breeding and Genetic Conservation of Forest Tree Species**

Antalya, Turkey

[IUFRO Division 2](#)

**Contact:** Fikret Isik, [fisik@ncsu.edu](mailto:fisik@ncsu.edu),

Fax: +1-919-5153169, Tel: +1-919-5138099

<http://www.akdeniz.edu.tr/english/iufro/list.htm>

10-13 October 2006

**Sustainable Forest Management with Fast Growing Plantations**

Charleston, USA

Sponsored by IUFRO Research Group [4.04.02](#), NC State University and USFS.

**Contact:** Chris Goulding, [Chris.Goulding@ensisjv.com](mailto:Chris.Goulding@ensisjv.com); or Fred Cubbage, [fred\\_cubbage@ncsu.edu](mailto:fred_cubbage@ncsu.edu)

[http://www.ces.ncsu.edu/nreos/forest/feop/iufro\\_plantations/](http://www.ces.ncsu.edu/nreos/forest/feop/iufro_plantations/)

20-22 October, 2006

**Pre-Congress Training Workshop**

**“Working Effectively at the Interface of Forest Science and Forest Policy”**

in conjunction with the

[Second Latin American IUFRO Congress](#)

La Serena, Chile

Workshop languages: Spanish/English

**For more information**, also on the Congress SAP

(Scientist Assistance Programme), please visit

<http://www.iufro.org/science/special/spdc/>

or contact IUFRO-SPDC at: [schimpf@iufro.org](mailto:schimpf@iufro.org)

11-13 December 2006

**Indicators for Sustainable Forest Management in Cultivated Forests**

Porto, Portugal

IUFRO [Division 4](#)

Contact: IEFC, [conference85@iefc.net](mailto:conference85@iefc.net)

[http://www.pierroton.inra.fr/IEFC/manifestations/2006\\_conf85\\_ISFM.en.shtml](http://www.pierroton.inra.fr/IEFC/manifestations/2006_conf85_ISFM.en.shtml)

13-15 February 2007

**Third Forest Vegetation Simulator Conference**

Fort Collins, Colorado, USA

IUFRO [Division 4](#)

Contact: Robert N Havis, [rhavis@fs.fed.us](mailto:rhavis@fs.fed.us)

[http://www.fs.fed.us/fmsc/fvs/fvs\\_conference.shtml](http://www.fs.fed.us/fmsc/fvs/fvs_conference.shtml)

## Non-IUFRO Meetings

26-30 June 2006

**24th COFLAC Meeting**

Santo Domingo, Dominican Republic

Bi-annual meeting of the FAO Forestry Commission for Latin America and the Caribbean (COFLAC). IUFRO will be represented by Santiago Barros, Coordinator of Working Party [6.03.04](#).

<http://www.rlc.fao.org/organos/coflac/2006/>

17-19 October 2007

**Bottlenecks, Solutions, and Priorities in the Context of Functions of Forest Resources**

Istanbul, Turkey

International symposium on the occasion of the 150th Anniversary of Forestry Education in Turkey.

Symposium Secretariat: Ferhat Gökbülak, Istanbul University, Faculty of Forestry, [symposium150@istanbul.edu.tr](mailto:symposium150@istanbul.edu.tr)

<http://orman.istanbul.edu.tr/fored150/english/index.htm>