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 Puetzmann (Oregon State) entitled "UEA management: Which kind? Why do we care? in which management approaches, goals and values, and ecological and economic 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.
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.

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 or kaennel(at)wsl.ch

Forest Ecosystem Services: Social and Economic Perspectives


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 Modeling, Economics and Management, and a number of case studies, mainly from North America, South America and Europe.

Congratulations!

ICU 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.

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.


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.

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-Guentweg 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 Jerold E. Winandy, Robert W. Wellwood and Salim Hiziroglu.

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.metsa.fi/julkaisut/workingpapers/
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(at)efi.fi; or Gert-Jan Nabuurs, Gert-jan.nabuurs(at)wur.nl

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(at)indepсоссess.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, fisk(at)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(at)ensisjv.com; or Fred Cubbage, fred_cubbage(at)ncsu.edu
http://www.ces.ncsu.edu/neeos/forest/feop/iufro_plantations/

11-13 December 2006
Indicators for Sustainable Forest Management in Cultivated Forests
Porto, Portugal
IUFRO Division 4
Contact: IEFC, conference85(at)iefc.net
http://www.pierroton.inra.fr/IEFC/manifestations/2006_conf85_ISFM.en.xhtml

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.nlc.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: Fehat Gökbak, Istanbul University, Faculty of Forestry, symposium150(at)istanbul.edu.tr