

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

## Precision Forestry Research and Applications along the Timber Value Chain

*By Pierre Ackerman, Department of Forest and Wood Science, Stellenbosch University, South Africa*

*Precision Forestry uses high technology sensing and analytical tools to support site-specific, economic, environmental, and sustainable decision-making for the forestry sector supporting the forestry value chain from bareland to the final customer.*

It arose from a concern originally expressed by industry and academic leaders about the challenges facing the state at the dawn of the 21<sup>st</sup> century. Around the world questions were asked about the need for new technologies that could transform traditional sectors of the economy, such as agriculture and forestry, and how technologies could create important new sectors of research and practices.

Precision Forestry therefore provides additional quality information about forests and the manufacturing of forest products. It helps to maximize economic return within accepted, current constraints, and provides tools to make good decisions, allow highly repeatable measurements, take accurate actions and provide for processes to initiate, cultivate and harvest trees. It also enhances biodiversity and other environmental resources.



The international symposium on "Precision Forestry in Plantations, Semi-natural and Natural Forests" that took place from 5 - 10 March 2006 at Stellenbosch University, South Africa 2006 therefore examined topics such as remote sensing of forestland and vegetation, real-time tracking of logs as well as decision support systems in order to take stock of the status quo in Precision Forestry.

The meeting concluded that in the future, precision forestry will need to be more than a few new technologies. Its real potential lies in its ability to improve the forestry process, not only helping to collect information but to use it for better and more transparent decision-making.

*The International Precision Forestry Symposium was co-sponsored by IUFRO Division 3. It attracted 110 delegates from some 16 countries. The good blend of South African and international delegates and speakers allowed for a diverse and stimulating discussion during the Symposium. Proceedings: <http://academic.sun.ac.za/forestry/precision/iufro2006.html>*

*(Photo by Pierre Ackerman)*

### What does it mean?

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

*From now on, this new column will, on a regular basis, address the challenge of saying exactly what you mean and meaning what you say: We will provide **definitions of emerging terms** and inform on needs for **clarification of forest terminology** in issues related to the scientific summaries of IUFRO News.*

**This time, the focus is on "precision forestry":**

The word "**precision**" has been used in recent years to refer to the use of modern electronics, computer and sensor technology in agriculture and related areas. Most often reference is made to the following definition:

*"Precision forestry uses high technology sensing and analytical tools to support site-specific, economic, environmental, and sustainable decision-making for the forestry sector supporting the forestry value chain from bareland to the customer buying a sheet of paper or board." [Precision Forestry Symposium, Washington 2002]*

However, such an emerging concept is still open and, thus, leaves room for varied interpretations. For definitions of PF sampled from the literature, visit the Web site:

<http://www.iufro.org/science/special/silvavoc/definitions-scic-summaries/>

**If you are interested** in precision forestry, the terminology initiatives in IUFRO, - [SilvaVoc](#) and [6.03.02](#) - welcome your thoughts about the definition and the following questions:

- Is the definition provided above all too encompassing, should it be more "precise"?
- How relevant is spatial scale in defining precision forestry, especially when comparing European and North-American contexts?
- And particularly, are there **equivalent terms** in the official IUFRO languages (French, Spanish, German) and **other languages**? If not, which one would you provide?

**Please contact us at:** [prueller@iufro.org](mailto:prueller@iufro.org); [kaennel@wsl.ch](mailto:kaennel@wsl.ch)  
The resulting definitions, language equivalents and/or summaries of discussions will be made available in the IUFRO [term database SilvaTerm](#).

## IUFRO Board Decides on Strategy for the Next Five Years

*By Peter Mayer, IUFRO Executive Director*

From 3 to 5 May 2006, IUFRO Headquarters was the venue for the first meeting of the new IUFRO Enlarged Board. Under the chairmanship of IUFRO President Professor Don K. Lee, the conference developed many plans for the future work of IUFRO and took important decisions.



Major attention was paid to discussing the future orientation of IUFRO's eight Divisions. In a most compelling manner, the Division Coordinators presented their visions of how the Divisions could meet the coming scientific needs. In that animated spirit, a series of changes were formulated and approved, particularly with regard to the research unit structure of the Divisions.

The same productive and forward looking approach was also taken in the lively discussions about the establishment and confirmation of IUFRO Task Forces. Task Forces work across Divisions and are set up for a limited period of time. In the five years ahead, they will deal with "hot topics" including, among others, forest biotechnology, forest and carbon, forest and water, forest law enforcement, governance and trade, and traditional forest knowledge.

After one year of intensive consultation, the IUFRO Strategy for 2006-2010 was presented to the Board for final discussion and approval. The Board adopted the Strategy unanimously and praised it for its being a very comprehensive document that is action-oriented and clearly expresses why membership in IUFRO is attractive.



The Strategy culminates in three goals, namely to strengthen research for the benefit of forests and people; to expand strategic partnerships and cooperation; and to strengthen communication and links with the scientific community and with students as well as with policy makers and society at large. These goals will serve as landmarks for the work of IUFRO in the next five years.

The Board also confirmed the high relevance of IUFRO's Special Programmes and Projects, i.e. the Special Programme for Developing Countries – SPDC; the Terminology Project – SilvaVoc; the World Forests, Society and Environment Project – WFSE; and the Global Forest Information Service – GFIS, a joint project of the Collaborative Partnership on Forests with IUFRO in the leading role. The Board members expressed their commitment to actively support all IUFRO Programmes and Projects.

The stronger role that IUFRO is now playing in international fora such as the Convention on Biological Diversity – CBD, or the United Nations Forum on Forests – UNFF, was also evaluated and considered as very positive for the visibility of IUFRO and its research. Possible future steps, especially the establishment of a scientific advisory group for UNFF, sparked a lively discussion that produced a series of suggestions with regard to potential partners in this endeavor.

Last but not least, the Board welcomed the plans for the next major IUFRO event – the Second IUFRO Latin American Congress to be convened in La Serena, Chile, from 23-27 October 2006. Many Board members confirmed their readiness to get actively involved in the Congress and help to ensure that it will become a real highlight for IUFRO in 2006.



*Photos by IUFRO Headquarters: Enlarged Board (top); Peter Mayer discussing with Enlarged Board members (centre); excursion organized in cooperation with the Federal Research and Training Centre for Forests, Natural Hazards and Landscape - BFW (left)*

## IUFRO Meetings

For a full list of IUFRO events, please visit our [online calendar](#).  
Find more details on the [homepages](#) of IUFRO Units involved.

3-7 July 2006

### Alien Invasive Species and International Trade

Jedlnia, Poland

Inaugural meeting of IUFRO Working Party (WP) [7.03.12](#)

**Contact:** Tomasz Oszako, Poland - [T.Oszako@ibles.waw.pl](mailto:T.Oszako@ibles.waw.pl)

Monika Malecka, Poland - [M.Malecka@ibles.waw.pl](mailto:M.Malecka@ibles.waw.pl)

Web site: <http://www.forestresearch.gov.uk/iufroinvasives>

24-29 July 2006

### Wood Quality and Utilization Workshop

Charlottetown, Prince Edward Island, Canada

Workshop in cooperation with IUFRO WP [5.01.02](#) in conjunction with the 30th Biannual Meeting of CTIA

**Contact:** S.Y. (Tony) Zhang, - [Tony.Zhang@QC.Forintek.ca](mailto:Tony.Zhang@QC.Forintek.ca)

Web site: <http://www.gov.ns.ca/natr/forestry/ctia/wqwg/default.asp>

20-22 August 2006

### XIV Seminar of Wood Harvesting and Forest Transportation Systems

Curitiba, Brazil

Co-sponsored by IUFRO [Division 3](#)

**Contact:** Jorge Malinowski, Universidade Federal do Paraná, [jrmalino@floresta.ufpr.br](mailto:jrmalino@floresta.ufpr.br)

29 August 2006

### IBFRA-IUFRO Conference on Forest and Wildland Fire Research

Umeå, Sweden

Jointly organized by the International Boreal Forest Research Association (IBFRA) Wildland Fire Working Group and the IUFRO [8.01.10](#) Forest Fire Research Working Party as part of the 13th IBFRA Conference.

**Contact:** Douglas McRae, IBFRA Wildland Fire Working Group Chair - [DMcRae@nrcan.gc.ca](mailto:DMcRae@nrcan.gc.ca), or Bill de Groot, IUFRO 8.01.10 Coordinator - [BDeGroot@nrcan.gc.ca](mailto:BDeGroot@nrcan.gc.ca)

Web site: <http://www.ibfra.org/page.cfm?page=6&PageAction=lasmer&id=17>

10-16 September 2006

### Forests under Anthropogenic Pressure – Effects of Air Pollution, Climate Change and Urban Development

Riverside, California, USA

22nd Int'l Meeting for Specialists in Air Pollution Effects of Forest Ecosystems; IUFRO Research Group [7.01.00](#)

**Contact:** Andrzej Bytnerowicz, [abytnerowicz@fs.fed.us](mailto:abytnerowicz@fs.fed.us)

Updated Web site: <http://www.fs.fed.us/psw/iufro/>

3-7 October 2006

### International Congress on Cultivated Forests

Bilbao, Spain

Theme: Planted forests and sustainable development with scientific forum on ecosystem goods and services from planted forests. Co-sponsored by IUFRO [Division 4](#)

**Contact:** Oscar Barreiro, USSE, [obarreiro@usse.es](mailto:obarreiro@usse.es) or

Jürgen Bauhus, University of Freiburg, [juergen.bauhus@waldbau.uni-freiburg.de](mailto:juergen.bauhus@waldbau.uni-freiburg.de)

Web site: <http://www.usse.es/homeingles.html>

16-19 October 2006

### Non-destructive Evaluation for Wood and Woody Materials to Develop the New Functional Wood-based Materials

Akita Prefectural University, Akita, Japan

Japan and Hungary Research Cooperative Program/joint seminar, co-sponsored by IUFRO WP [5.01.06](#) and [5.02.01](#)

**Contact:** Katsuhiko Takata, [katsu@iwt.akita-pu.ac.jp](mailto:katsu@iwt.akita-pu.ac.jp) or

Ferenc Divos, [divos@fmk.nyme.hu](mailto:divos@fmk.nyme.hu)

Web site: <http://www.iufro.org/science/divisions/division-5/50000/50200/50201/activities/>

23-27 October 2006

### II Latin American IUFRO Congress

La Serena, Chile

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**Temas del Congreso y**

**Presentación de Trabajos**

**THE CONGRESS WILL BE IN SPANISH AND ENGLISH !**



**Contact:** Santiago Barros,

E-mail: [seminarios@infor.gob.cl](mailto:seminarios@infor.gob.cl)

Web site: <http://www.iufro.org/science/divisions/division-6/60000/60300/60304/activities/>

11-13 December 2006

### Indicators for Sustainable Forest Management in Cultivated Forests

Porto, Portugal

Organized by IEFC; co-sponsored by IUFRO [Division 4](#)

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

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

## Non-IUFRO Meetings

1 August -14 September, 2006

### Advanced Training Workshop on Bamboo Furniture and Weaving

FeMSEDA, Addis Ababa, Ethiopia

Organizers: Chinese Ministry of Commerce, International Network for Bamboo and Rattan (INBAR), Ethiopian Government, etc.

**Contact:** Fu Jinhe, [jfu@inbar.int](mailto:jfu@inbar.int)

Tel.: +86-10-6470 6161 ext.208

Web site: <http://www.inbar.int/>

7-10 November 2006

### The Mercosur Forest and Wild Grass Fires 2nd Congress

Malargüe, Mendoza, Argentina

held by the "National Parks Friends Association"

**Contact:** Norberto Ovando,

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Ciudad Autónoma de Buenos Aires, Argentina

Web site: [http://www.fire.uni-freiburg.de/course/meeting/2006/meet2006\\_04a.htm](http://www.fire.uni-freiburg.de/course/meeting/2006/meet2006_04a.htm)