

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

Recent Advances in Wood Drying

By Lena Antti, Associate Professor, Luleå University of Technology, Sweden, IUFRO Working Party [5.04.06](#)

Wood drying is recognized as a key operation in sawmill production and affects product quality, value yield and the suitability of wood material for different end user products. The 11th International IUFRO Wood Drying Conference organized by Luleå University of Technology in Skellefteå, Sweden, January 18-22 presented important findings in six key areas of wood drying:

Drying Quality and Wood Properties

A better understanding of the thermal wood properties is essential. At the conference a method of determining wood properties on the basis of morphological characterisation by combining ESEM microscopy and image analysis was presented. Another paper looked at the physical properties and drying behaviour of white wood and red heart of European beech and stated that a good drying quality of red heart samples of beech was achieved when keeping the drying temperature below 80°C.

Methods for Monitoring the Drying Process

Neutron imaging is a non-destructive method for high resolution imaging of wood during drying. It can be used to determine diffusion coefficients and water content. Another method that was described was the combination of impedance and acoustic emission from boards.

Modelling

Emphasis was, among other things, placed on free water movement in the capillary network as well as on the inclusion of sorption hysteresis and mechanosorptive behaviour.

Applied Wood Drying

Under this theme, the relation between green sawing and final dimensions with regard to shrinkage and cupping was studied. Results indicated a possible increase in value yield by decreasing the green sawing dimension. Optimizing lumber sorting strategies based on empirical relationship between the moisture content of lumber and drying degrade showed a possibility of increasing sales depending on kiln capacity and market conditions.

Alternative Drying Methods

Super-heated steam vacuum drying of Australian hardwood and micro-wave heating for redistribution of pre-dried softwood show potential. Veneer drying using



Industrial plant for heat treatment with autoclave in nitrogen atmosphere presented by Professor Peter Niemz at ETH – Swiss Federal Institute of Technology in Zürich.

a cold plate arrangement for condensation of moisture indicated nearly 50% reduction of drying time compared to conventional drying.

Wood Modification Related to Drying

Chemical changes of thermally modified wood and colour stability of heat-treated wood exposed to outdoor conditions were among the topics discussed under this theme.



Poster session: Mr Hiroki SAKAGAMI at his poster. Photo: Estee Weng

Miscellaneous Drying Technologies

Among the many issues addressed was the treatment of lodge pole pine with cold water spray or low pressure steam to reduce treatment time and warp. Radio frequency heating with various moisture contents and power densities was investigated in order to pasteurize green lumber. Microwave drying of sawdust for biofuel production gave better strength properties of pellets without reducing the fatty acids content. Heat treatment for sterilisation against emerald ash borer was studied monitoring temperature changes during the process.

At the conference three excellent keynotes were presented addressing the historical perspective on timber drying methods, modelling issues and the future directions in drying research.

The next conference within this series will take place in July/August 2012 in Brazil.

Visit: <http://www.wdc2010.org>



XXIII IUFRO World Congress

23-28 August 2010, Seoul, Republic of Korea
<http://www.iufro2010.com/>

On-line Registration

Available on the Congress website in early March.

Registration of Presenting Authors by 30 April 2010:

All authors who will present a paper or poster at the IUFRO World Congress need to complete their registration for the Congress by 30 April 2010.

News story related to the IUFRO World Congress theme **Biodiversity Conservation and Sustainable Use of Forest Resource**

Bushmeat: Beyond the Ecological Crisis

Contemporary African societies are a mix of modernized, western society and traditional African roots. Those traditions mean that people - rural and urban - still consume bushmeat for reasons linked to culture, taste and attachment to healthy, natural products.

However, the scale of hunting occurring in Central Africa poses a threat to many tropical forest species. The response to this has typically been legal: ban the trade in bushmeat and criminalize the hunters and consumers.

This, said Nathalie Van Vliet, Bushmeat strategic advisor for TRAFFIC, has not been terribly effective. The trade continues to flourish but in a hidden economy that makes it more difficult to manage or control.

"Those in the bushmeat trade who make money out of the commercialisation of rare species for the healthy urban markets need to be strictly controlled. However, those who eat bushmeat for their own



nutrition or sell bushmeat to pay for medicines or school fees, should not be presented as criminals," she says.

Dr. Van Vliet will coordinate a session dealing with the hunting of bushmeat in Central Africa at the 2010 IUFRO World Congress in Seoul.

She hopes her session will reach beyond conservationists to also integrate the input of social, health and economic stakeholders to help develop more integrated bushmeat strategies and policies.

For more information, contact: Nathalie Van Vliet by email at vanvlietnathalie@yahoo.com

Find all Congress-related news stories in English, French, German and Spanish at: <http://www.iufro.org/media/iwc2010-news-stories/>

Photo: Young man setting a trap near Kisangani. By Casimir Nebesse (2009).

IUFRO in the New Media

Are you already registered on Facebook? Have you ever visited Youtube to watch a short video? If you have not, now you can do so with a real reason!

Join our group on Facebook!

IUFRO has its own group on Facebook! But what does this really mean? This social networking website is one of the fastest growing of its kind, to this date more than 350 million people use it actively worldwide. It does make sense for IUFRO to be on such an international communications platform because many individuals or organizations that deal with forest-related research are nowadays also Facebook users. On this platform for example, you can promote your own scientific research by posting links, let us know you will participate in the XXIII IUFRO World Congress, upload photos of IUFRO meetings and connect with old friends as well as make new ones and even write on IUFRO's wall!



Find the direct link on our homepage: <http://www.iufro.org>

Watch a video posted by IUFRO on Youtube!

A short video interview conducted with Jeremy Rayner, Chair of the new Global Forest Expert Panel (GFEP) on the International Forest Regime, has been posted to give you a better understanding of what is taking place and the reasons behind starting this new Expert Panel. More videos will be produced to raise awareness about IUFRO, our divisions and initiatives. We are only getting started, stay tuned!



Find the direct link on our home page <http://www.iufro.org> or search for IUFRO on Youtube.

Follow IUFRO on 
<http://www.twitter.com/iufro>

Visit and comment the IUFRO blog!
<http://theiufroblog.wordpress.com>



Student's Corner

Forestry Students Meet in Korea this August

The International Forestry Students' Symposium (IFSS), the biggest IFSA event in the year, will take place from 7-21 August 2010 in Korea.

For more information, please visit:
<http://www.ifsa.net/main.php>



Interview with a Recent IUFRO Trainee – Yasemin Öztürk

Yasemin (26) is a student at the Faculty of Forestry in Istanbul University and is currently doing her masters degree at the Forest Management Department of Istanbul University. She has been a member of IFSA, the International Forestry Students' Association, for 3

years and was appointed IFSA South European Regional Representative in 2008-2009, and Head of the IFSA Exchange Program in 2008-2009, and 2009-2010.

Tarun: Why did you decide to apply for an internship with IUFRO?

Yasemin: IUFRO gives us forestry students an excellent opportunity to work with issues dealing with forest science cooperation with other international organizations and when applying, I believed that this would be a great experience.

Tarun: How is the collaboration between IUFRO and the International Forestry Student Association (IFSA)?

Yasemin: Great! I came here through IFSA because I am the current head of the exchange program commission and I am also trying to organize for more students to come to the IUFRO Headquarters to gain some professional experience for their future careers. I think this collaboration benefits both IUFRO and IFSA. Communication between us is important because of the really good opportunity that IUFRO can give to forestry students to gain an experience with forest research globally, so we are trying our best to build a strong relationship.

Tarun: What has your internship experience been like and what did you enjoy the most?

Yasemin: I have enjoyed every moment of it and I liked working with the people at the headquarters because they are so friendly and there is so much to learn from them. It has been great to discuss with them and you could not hesitate to ask anything from them. I was mainly working on international forest governance issues and we had some excellent discussions about Asian forests and poverty alleviation.

Tarun: In what way has IUFRO helped you to get closer to your career goal?

Yasemin: With my studies and these experiences I think that I will end up working in a job focusing on international forest policy; it's really great for my future career!

Tarun: What do you want to say to other students?

Yasemin: Hey students! Come to IUFRO it will be a great experience for you!

Publications

Updated IUFRO Structure

Download or view the latest update of the IUFRO structure with contact details of all IUFRO officeholders:

<http://www.iufro.org/who-is-who/>

Facilitating Forests of Learning - Enabling an adaptive collaborative approach in community forest user groups

By Cynthia McDougall, and others

Guidebook based on the CIFOR-led research project titled "Enhancing Livelihoods and Equity in Community Forestry in Nepal: The Role of Adaptive Collaborative Management (2004-2007)". This document contributes also to the IUFRO Task Force on Improving the lives of People in Forests. ISBN 978-979-14-1283-4. [cifor\(at\)cigar.org](mailto:cifor(at)cigar.org)

Dictionary of the Environment and Forestry (English/German, German/English)

by Walter Warkotsch and Renate Pruessler

30,000 entries on 480 pages on environmental and forestry themes. ISBN 978-3-935638-00-5. Contact: Norbert Kessel, [nkessel\(at\)web.de](mailto:nkessel(at)web.de)

Biosphere Journal

A new scientific journal entitled "Biosphere" and initiated and sponsored by the XXI Century Research Foundation (Saint-Petersburg, Russia) has been released in Russia.

Visit: <http://www.biosphere21century.ru>

Announcements

USDA Forest Service, Pacific Southwest Research Station, 2010 Sudden Oak Death Research Request for Proposals

Approximately \$500,000 will be available in summer 2010 to fund new research projects to combat Sudden Oak Death/Phytophthora ramorum. Deadline for submission is Wednesday, March 31, 2010. For further details see:

<http://www.fs.fed.us/psw/>.

New 2010 Biodiversity Indicators Partnership Companion Website: The National Biodiversity Indicators Portal

<http://www.bipnational.net/>

This website provides guidance and examples to support the development and effective use of biodiversity indicators. These capacity building resources are the product of more than five years of experience by UNEP-WCMC and the 2010 BIP.

Full-time Faculty Appointment: Functional Ecology of Trees

The Department of Biological Sciences at UQAM (Université du Québec à Montréal), Canada, is seeking a terrestrial ecologist to fill a tenure-track faculty position. This position is connected to the new NSERC Industrial Research Chair in tree growth control.

<http://www.iufro.org/discover/noticeboard/#c14607>

WFI International Fellowship Program

The World Forestry Institute Fellowship brings professionals in natural resources to conduct a practical research project at the World Forestry Center in Portland, Oregon, <http://wfi.worldforestry.org/index/international-fellowship.html>

IUFRO Meetings

NOTE: This is not a full list of IUFRO meetings!

Search our [online calendar](#) for a full list of meetings.

Find non-IUFRO meetings on the IUFRO [Noticeboard](#).

Also search for forest-related events at: <http://www.gfis.net>

19-29 May 2010

2010 Bamboo Tour

Sichuan, Zhejiang, EXPO Shanghai, China

IUFRO 5.11.05

Contact: FU Jinhe, jfu@inbar.int

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

[show.asp?BoardID=171&NewsID=581](http://www.inbar.int/show.asp?BoardID=171&NewsID=581)

11-14 Jul 2010

Forestry Mechanization - FORMEC 2010

Padova, Italy

IUFRO 3.06.00

Contact: Raffaele Cavalli, raffaele.cavalli@unipd.it

<http://www.iufro.org/science/divisions/division-3/30000/30600/activities/>

29 Aug – 1 Sep 2010

International Conference for Urban Forestry in Challenging Environments

Beijing, China

IUFRO 6.14.00

Contact: Cecil C. Konijnendijk, cck@life.ku.dk

http://app.bjfu.edu.cn/linxy/icufce_2010/home.html

18-20 Oct 2010

Opportunities and Risks for Douglas-Fir in a Changing Climate

Freiburg, Germany

IUFRO 1.01.00

Contact: Kaisu Makkonen-Spiecker, kaisu.makkonen-spiecker@forst.bwl.de

<http://www.iufro.org/science/divisions/division-1/10000/10100/activities/>

19-21 Oct 2010

Managing the Urban Rural Interface Strategies and Tools for Urban Development and Sustainable Urban Land Use

Copenhagen, Denmark

IUFRO 6.14.00

Contact: Cecil C. Konijnendijk, cck@life.ku.dk

<http://www.plurel.net/conference>

8-10 Dec 2010

Fourth International Conference on Plant and Environmental Pollution

Lucknow, India

IUFRO 7.01.00

Contact: Conference Secretariat,

isebnrilko@sify.com; isebmail@gmail.com

<http://isebindia.com/icpep-4/icpep-4.html>

18-20 May 2011

13th International Symposium on Legal Aspects of European Forest Sustainable Development

Kaunas, Lithuania

IUFRO 6.13.00

Contact: R. Deltuvas, Romualdas.Deltuvas@lzuu.lt

<http://www.iufro.org/science/divisions/division-6/60000/61300/activities/>

26 Jun – 1 Jul 2011

Tree Biotechnology 2011 - From Genomes to Integration and Delivery

Porto Seguro, Bahia, Brazil

IUFRO 2.04.06

Contact: Dario Grattapaglia,

dario@cenargen.embrapa.br

<http://www.iufro.org/science/divisions/division-2/20000/20400/20406/activities/>

Other meetings

23 Mar 2010

Emerging Trade Measures in Timber Markets

Geneva, Switzerland

One-day workshop organized by the UNECE/FAO Timber section and the Economic Research and Statistics Division of the WTO Secretariat

<http://timber.unece.org/index.php?id=270>

4-6 May 2010

Workshop on the Assessment of Forest Fire Risks and Innovative Strategies for Fire Prevention

Rhodes, Greece

Hellenic Ministry for the Environment, Energy and Climate Change; Republic of Cyprus, Department of Forests; Ministerial Conference on the Protection of Forests in Europe (FOREST EUROPE); UNECE/FAO; Union of South European Foresters (USSE); Silva Mediterranea Committee; ToS on Forest Fires UNECE/FAO

Contact: fireprevention@usse.es

<http://www.iufro.org/discover/noticeboard/>

13-14 May 2010

Forestry, Biomass & Sustainability Conference

London, UK

Hosted by Environmental Finance

Contact: joanna@environmental-finance.com

<http://www.environmental-finance.com/conferences/2010/Forestry10/programme.htm>

26-29 Sep 2010

7th International Phytotechnology Society Conference

Parma, Italy

Hosted by the University of Parma

Contact: webmaster@phytosociety.org

<http://www.phyotosociety.org>

21-23 Oct 2010

1st International Turkish-Japanese Environment and Forestry Symposium

Trabzon, Turkey

Karadeniz Technical University Faculty of Forestry

Contact: Ercan Oktan, oktan@ktu.edu.tr

<http://www.turkjapon2010.ktu.edu.tr/en/>