

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

## Beech Research in the Light of Climate Change

Report from the 8th IUFRO International Beech Symposium\* by Palle Madsen, Kazuhiko Terazawa and Khosro Sagheb-Talebi, Coordinators of Working Party 1.01.07 "Ecology and silviculture of beech"

Presently, there is a strong scientific focus on predicting climate change effects and creating the best possible knowledge base for forest management to prepare the forests for an unknown future.

### Adaptive management for beech-dominated forests

At the recent IUFRO beech symposium in Japan participants had a close look at beech-dominated forests and their response to climate change with a view to providing scientific support for proper adaptive management measures. They considered it important to strengthen the linkage between recent advances in research, trends in silviculture, and the sustainable management and adaptation of beech-dominated deciduous forests in order to respond to changing social needs and the global climate.

### Understanding beech populations

The event highlighted the research progress in understanding beech populations and their present distribution, as well as their migration into the Holocene landscapes. Studies of flowering, pollen and seed dispersal, regeneration patterns and advanced functional-structural tree models were presented. Together with several studies of genetic structures and diversity, they showed that important scientific progress had been made to meet the identified challenges for beech forests and their management.

### Seeking interdisciplinary cooperation

One of the main conclusions from the symposium was to seek further cooperation and coordination among beech researchers who are active in the many scientific disciplines represented at the conference. Suggested approaches involved the use of the important beech-dominated forest types as model forests for studies of climate change effects and the development of adaptive management measures for temperate deciduous forests.

### First IUFRO beech symposium in East Asia

This conference was the first ever IUFRO Beech Symposium to be held in East Asia, one of the major distribution areas



Photo by Palle Madsen:

Symposium organizer Dr. Kazuhiko Terazawa (Deputy coordinator of 1.01.07) introducing the local host Mr. Shiro Ishibashi, who is employed as a ranger at the UNESCO World Heritage Site Sirakami-Sanchi in the northern Honshu about 50 km's south-west of Aomori. The protected area covers about 17,000 ha of virgin beech (*Fagus crenata*) dominated deciduous forest.

of the genus *Fagus* in the world. Thus, the conference also provided excellent opportunities for the participants to discuss both similarities and differences in ecology, genetics and silviculture among *Fagus* species.

### Publication of proceedings and selected papers

The Symposium proceedings will be downloadable from the following websites in January 2009:

<http://www.iufro.org/science/divisions/division-1/10000/10100/10107/>

<http://www.rifr-ac.ir/english/group/beecheforest/about.htm>

Selected papers from the symposium will be published in a special issue of Forest Ecology and Management entitled "The ecology and silviculture of beech: from gene to landscape". The special issue is scheduled for late 2009.

\* The 8th IUFRO International Beech Symposium took place from 8-13 September 2008 in Nanae, Hokkaido, Japan. It was organized by IUFRO Unit 1.01.07 "Ecology and silviculture of beech". The following organizations sponsored the meeting: Forestry Agency of Japanese government; Hokkaido government; The Ecological Society of Japan; The Japanese Forest Society; National Land Afforestation Promotion Organization; Swedish University of Agricultural Sciences; The Broadleaf Program; Municipal government of Kuromatsunai town; Kao Foundation for Art and Sciences; IUFRO-Japan

There were 91 participants from 16 countries. The presentations included 6 keynotes, 35 volunteer papers and 26 posters.

## Air Pollution and Climate Change at Contrasting Altitude and Latitude

### 23rd IUFRO Conference for Specialists in Air Pollution and Climate Change Effects on Forest Ecosystems

7-12 September 2008,  
Murten, Switzerland

[www.wsl.ch/iufro\\_ch\\_2008/index\\_EN](http://www.wsl.ch/iufro_ch_2008/index_EN)

For the **full report** by M Schaub, R. Matyssek, G. Wieser, and E. Paoletti with details on **key conclusions and future research needs**, please visit: <http://www.iufro.org/auth/science/divisions/division-7/70000/70100/activities/>



Dr. Thomas Wohlgemuth (WSL) presents the rain shelter experimental research facility located in the central-alpine region of the canton of Valais, Switzerland. Photo: P. Bleuler, WSL.

The focus of the conference was on sharing information on impacts and interactions of air pollutants and climate change on the tree and forest ecosystem performance across latitudinal and altitudinal ranges. According to the structure of IUFRO Research Group 7.01.00 'Impacts of Air Pollution and Climate Change on Forest Ecosystems', the main topics were:

- (1) mechanisms of action and indicator development,
- (2) atmospheric deposition, soils and nutrient cycles,
- (3) concept and application of critical loads for forests,
- (4) integrated effects of multiple stresses,
- (5) genetic aspects,
- (6) detection, monitoring and evaluation, and
- (7) risk assessment and modeling.

The regional specificities of tree and ecosystem responsiveness to anthropogenic stressors such as elevated CO<sub>2</sub> and O<sub>3</sub> regimes, enhanced nitrogen deposition and scenarios of climate change, as represented through altered seasonal temperature and moisture regimes were emphasized. Based on the current knowledge on this issue, there is consensus that under predicted climate change, i.e. altered seasonal temperature and water regimes, air pollution may become more harmful to vegetation. The combined effects from seasonal variability of environmental pollution, elevated CO<sub>2</sub>, altered nutrient and water availability are the key issues in respect to future forest ecosystem risk assessment.

## Broad-based Consensus of Key Stakeholders Puts Forests at the Centre of Climate Debate

In 2007 and 2008, The [Forests Dialogue](#)'s (TFD) Initiative on Forests and Climate Change brought together over 250 leaders of environmental and social groups, businesses, Indigenous Peoples' and forest-community groups, trade unions, forest owners, governments, international organizations and NGO's including IUFRO.

In its consensus statement, "[Beyond REDD: The Role of Forests in Climate Change](#)," this diverse group agreed on exactly what role forests can play in the battle to halt damaging climate change. The group specifies that sustainable forest management that reduces deforestation and degradation and that actively supports the livelihoods of millions of forest-dependent communities must now be one of the world's highest priorities. This is because forests and forest products have the unique ability to reduce greenhouse gas emissions, capture carbon, and lessen peoples' vulnerability to climate change.

For the first time, the group has agreed on five guiding principles for climate change negotiators, see: <http://research.yale.edu/gis/tfd/pdf/fcc/TFD%20FCC%20Statement%20Summary.pdf>  
All materials related to the Forests and Climate dialogue can be found at: <http://research.yale.edu/gis/tfd/climate.html>



*iufro*  
2010 SEOUL

### Invitation

**XXIII IUFRO World Congress**  
**"Forests for the Future:  
Sustaining Society and the Environment"**  
**23-28 August 2010, Seoul, Republic of Korea**

### 1st Announcement

#### **Make your plans now to come to Seoul in 2010!**

The Congress Organizing Committee will do everything to ensure that you will not only participate in an outstanding Congress, but also experience a Korean adventure that will last a lifetime! We look forward to saying "An Nyeong Ha Se Yo" (that means "Hello" in Korean) to you in Seoul. Visit: <http://www.iufro2010.com/>



## European Forest Week

Europe's forests are growing at the rate of about 360 million cubic metres annually, yet only two-thirds of this growth is being exploited. Given that forests are essential to the global energy balance, the vital role of forests in combating climate change was among the major issues debated at the first-ever [European Forest Week](#) that took place at FAO Headquarters in Rome, Italy, from 20 to 24 October 2008. The Rome meeting was jointly organized by the European Commission, FAO, the Ministerial Conference on the Protection of Forests in Europe and the United Nations Economic Commission for Europe.

In conjunction with these events, the European Economic and Social Committee held a conference in Brussels, Belgium, on the "Role of forests and the forest-based sector in meeting the EU's climate commitments".

IUFRO was actively involved in the European Forest Week. Together with SLU Sweden and FAO, a parallel event entitled "Increasing knowledge about adaptation of forests and forest management to climate change" was organized. There the results of the [Forest Adaptation Conference 2008](#) held in August in Umeå, Sweden, were presented.

IUFRO also successfully promoted the forthcoming assessment report of the [CPF Expert Panel](#) on Adaptation of Forests to Climate Change.

The IUFRO [Task Force on Forests and Human Health](#), ForHealth, held an information event on "Forests - promoting or harming human health?" in collaboration with the [Co-Hab](#) initiative. Interdisciplinary perspectives on the various links between forests and human health, including zoonotic diseases, HIV/Aids and therapeutic effects were presented.

(Sources: FAO press release, <http://www.fao.org/news-room/en/news/2008/1000939/index.html>; and meeting report by IUFRO participant Alexander Buck)

### UEF Declaration on the first European Forest Week

The Governing Council of the Union of European Foresters (UEF) met in Gmunden, Austria, from 16-19 October 2008 and signed a declaration on the first European Forest Week emphasizing the role of foresters in dealing with the increasing climate changes. <http://www.european-foresters.org>



Photo provided by: Thomas Baschny, Lebensministerium, Austria

## Announcements

### Obituary

On 24 October 2008, our colleague and longstanding officeholder in IUFRO, **Professor Dave Karnosky** of Michigan Technological University, passed away suddenly at home in Houghton, Michigan, USA. Professor Karnosky had held various offices in IUFRO since 1987. From 1996 to 2000 he was Coordinator of Division 7 and up to his sudden death he was active as Coordinator of Working Party 7.01.04. Professor Karnosky also served as a member of the distinguished IUFRO-led Expert Panel on Adaptation of Forests to Climate Change. At the IUFRO World Congress in Brisbane, Professor Karnosky was honored with the prestigious IUFRO Scientific Achievement Award, which he was extremely proud of. We offer the IUFRO Community's sincere condolences to his family, friends and colleagues!

### Position of a Professor for Forest Utilization

At the [Institute for Forest Utilization and Work Science](#) of the Faculty for Forest and Environmental Sciences, Albert Ludwigs University, Freiburg (Germany) the Position of a Professor (chair) for Forest Utilization (W3) is offered and will be filled at the earliest date possible. Applications should be sent preferably no later than 27 November 2008.

**Contact:** Inga.Armbruster(at)ffu.uni-freiburg.de

### COURSE: Designing Forests to Provide Multiple Services

17 to 21 November 2008, Stellenbosch, South Africa, The course is aimed at senior students of forestry, geography, agriculture, ecology and related disciplines and will be presented by Professor Klaus von Gadow at the Department of Forest and Wood Science.

**Contact:** Pierre Ackerman, packer(at)sun.ac.za.

### Forestry Information Session

At the [World Forestry Congress](#) there will be a session on "The evolving role of information specialists in today's rapidly changing world: are libraries still relevant?"

**Contact:** vanda.ferreira(at)fao.org



## Publications

### IUFRO Forestry Extension and Technology Transfer

Meeting held from 21 – 26 September 2008, Mattawa and Ottawa, Ontario, Canada

Post conference material including downloadable presentations is available at:

[http://www.iufroextension.org/Post\\_Conference.php](http://www.iufroextension.org/Post_Conference.php)

### IUFRO World Series Nr. 9- English

#### Terminology of Forest Management Planning

This volume is currently being updated and the new version will be available as of 2009. You are most welcome to **contribute to this revised edition** and send comments or submit terms and definitions for inclusion to Ms. Renate Pruessler at IUFRO Headquarters: [pruessler@iufro.org](mailto:pruessler@iufro.org)

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## IUFRO Meetings

### NOTE: The following list of meetings is just a selection!

For a full list of IUFRO events, please visit our online [calendar](#), or the [homepages](#) of IUFRO Units involved. Non-IUFRO meetings are also announced on the IUFRO [Noticeboard](#) on our web site.

24-25 November 2008

#### MCPFE technical meeting on European Forest Types

Copenhagen, Denmark

IUFRO [4.02.00](#), [8.02.00](#)

**Contact:** Marco Marchetti, [marchettimarco@unimol.it](mailto:marchettimarco@unimol.it)

30 November – 2 December 2008

#### International Research Group on Wood Protection, Americas Regional Meeting

Guanacaste, Costa Rica

IUFRO [5.03.00](#)

**Contact:** Andrew Wong, [awong.unimas@gmail.com](mailto:awong.unimas@gmail.com)

<http://www.irgamericas.org/>

6 December 2008

#### Forest Day 2 - UNFCCC COP 14 Parallel Event Shaping the Global Agenda for Forests and Climate Change

Poznan, Poland

Co-hosted by IUFRO

**Contact:** Alexander Buck, [buck@iufro.org](mailto:buck@iufro.org)

[http://www.cifor.cgiar.org/Events/COP14-ForestDay/forest\\_day2008.htm](http://www.cifor.cgiar.org/Events/COP14-ForestDay/forest_day2008.htm)

16-18 April 2009

#### Forest, Wildlife and Wood Sciences for Society Development

Prague, Czech Republic

IUFRO [4.00.00](#)

**Contact:** Robert Marusak, [marusak@fld.czu.cz](mailto:marusak@fld.czu.cz)

11-13 May 2009

#### 10th International Conference on Wood & Biofiber Plastic Composites & Cellulose Nanocomposites Symposium

Madison, United States

IUFRO [5.05.00](#)

**Contact:** Jerry Winandy, [jwinandy@forestprod.org](mailto:jwinandy@forestprod.org)

<http://www.forestprod.org/confcomposites09.html>

11-16 May 2009

#### Foliage, Shoot and Stem Diseases

Isparta, Turkey

IUFRO [7.02.02](#)

**Contact:** H. Tugba Dogmus Lehtijarvi,

[tugba@orman.sdu.edu.tr](mailto:tugba@orman.sdu.edu.tr)

13 July 2009

#### Disease and Insects in Forest Nurseries

Hilo, Hawaii, USA

IUFRO [7.03.04](#)

**Contact:** George Hernandez, [gghernandez@fs.fed.us](mailto:gghernandez@fs.fed.us)

31 August – 3 September 2009

#### Spruce in the Context of Global Change

Halmstad, Sweden

IUFRO [1.00.00](#), [1.01.08](#), [4.00.00](#), [8.00.00](#)

**Contact:** Jens Peter Skovsgaard, [jps@life.ku.dk](mailto:jps@life.ku.dk)

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

20-25 September 2009

#### Multipurpose Forest Management

Niigata, Japan

IUFRO [4.00.00](#)

**Contact:** Satoshi Tatsuhara, [ats@fr.a.u-tokyo.ac.jp](mailto:ats@fr.a.u-tokyo.ac.jp)

<http://www.keiri.fr.a.u-tokyo.ac.jp/multiFM/>

28 September 2009

#### International Conference on Wood Adhesives

South Lake Tahoe, Nevada, United States

IUFRO [5.00.00](#), [5.04.07](#), USDA FS et al.

**Contact:** Charles R Frihart, [cfrihart@fs.fed.us](mailto:cfrihart@fs.fed.us)

<http://www.forestprod.org/confadhesives09.html>

13-16 October 2009

#### 2nd International Conference on Wind Effects on Trees

Freiburg, Germany

IUFRO [8.01.11](#)

**Contact:** Steve Mitchell, [smitchel@interchange.ubc.ca](mailto:smitchel@interchange.ubc.ca)

<http://www.wind2009.uni-freiburg.de/>

Search for forest-  
related events at:

<http://www.gfis.net>

**GFIS.net**

Global Forest Information Service

## Other Meetings

18-21 November 2008

#### Focus on Forest Engineering

Punta del Este, Uruguay

Organized by Forestry Solutions, SGS Uruguay and  
Asociación Rural del Uruguay

<http://www.forestengineering.com.uy>

19-21 November 2008

#### 2nd International Conference of Forestry Training Centres 'Lack of qualified people – News threat to forests?'

Forestry Training Centre, Lyss, Switzerland

Supported by FOEN, Switzerland

**Contact:** Alan E Kocher, [kocher8@bzwllyss.ch](mailto:kocher8@bzwllyss.ch)

<http://www.bzwllyss.ch>

10-12 March 2009

#### IARU Congress 'Climate Change, Global Risks, Challenges and Decisions'

Copenhagen, Denmark

International Alliance of Research Universities

**Contact:** Niels Elers Koch, [nek@life.ku.dk](mailto:nek@life.ku.dk)

<http://www.climatecongress.ku.dk>

1-3 April 2009

#### Recreation and Health in Landscape and Forest

Birmensdorf, Switzerland

**Contact:** Kathrin Sommerhalder,

[kathrin.sommerhalder@bfh.ch](mailto:kathrin.sommerhalder@bfh.ch)

[http://www.wsl.ch/landscapeandhealth/index\\_EN?-C=&](http://www.wsl.ch/landscapeandhealth/index_EN?-C=&)