

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

Low-input Strategies Needed in Tree Breeding and Genetic Conservation

Findings and recommendations from the joint IUFRO Division 2 conference held in Antalya, Turkey from 9-13 October 2006, by Fikret Isik (summarized by the Editor)

Projection of human population growth indicates a high likelihood of a growing need for wood and other forest commodities. In order to meet this demand, forest tree breeding and intensive plantation management efforts will be increasingly important, especially as lands continue to be withdrawn from production and allocated to wildlands, parks and reserves. Tree breeders should keep in mind planning for diversity for current and emerging biotic and climatic stresses.

While "high-input" breeding programs of primary forest species can contribute to increased productivity and efficiency of planted forests, "low-input" strategies are essential to continue to do breeding and conservation work with many tree species, particularly in developing countries. Thus, breeding programs require a combination of "high-input" and "low-input" strategies and should always have a strong conservation component as well.

The term "low-input" does not imply low-level technology or a low-interest program but refers to relatively small budget programs that may, in fact, use complex and highly technical methodology and scientific knowledge. Low-cost methods can often accomplish multiple and complex objectives. For example, *in situ* conservation is a low-cost approach that is highly efficient and allows species for continuing adaptation to changing environments.

In any case, the methods should be readily usable by the people who work the land. The programs should match local needs, especially where high-value timber species may be missing. Of course "low-input" for users often requires "high-input" from program managers. Long-term planning and strategic thinking on how to avoid pitfalls are essential in making the process of resource allocation simple, transparent and effective.



Photo provided by Fikret Isik, Conference Chair

Developing partnerships between farmers, industry representatives, NGOs and forestry owners is a key to developing successful low-cost programs and applying them in the field. Such partnerships should be encouraged and supported. Collaboration and cooperation should also be developed and enhanced between countries working on the same species.

In the future, a range of other topics need to be addressed in forest tree breeding and conservation discussions as well, e.g.: the integration of ecosystem services and biodiversity conservation with planted forests; the need for long-term program stability; the potential for agroforestry as a means to bridge the gap between forest genetics and biodiversity conservation; and the need to make international seed exchange more "user friendly".

Summary and Recommendations of the Conference on "Low-input Breeding and Genetic Conservation of Forest Tree Species": <http://www.iufro.org/science/divisions/division-2/20000/activities/>

The Conference Panel: Lauren Fins (panel chair), Lokendra Purush Dhakal, William Dvorak, Yousry El-Kassaby, Bruno Fady and William J. Libby, Kani Isik (local organizing coordinator) and Fikret Isik (conference chair)

Conference sponsoring organizations: International Union of Forest Research Organizations; Akdeniz University, Antalya, Turkey; North Carolina State University, Raleigh NC, USA; Turkey Ministry of Environment and Forestry; Hellenic Forest Science Society, Greece; The Scientific and Technological Research Council of Turkey; Hellenic Scientific Society for Plant Genetics and Breeding, Greece; European Forest Genetic Resources Program; and Food and Agriculture Organization of the United Nations.

What does it mean ?

forest tree breeding

FR **amélioration génétique** - ES **mejora genética** - DE **Waldbaumzuchtung**

Practices applying knowledge of genetics to develop improved trees. Conventional tree breeding is based on selection of individuals for certain desired characters and mating these individuals to produce an improved population.

Note - Forest tree breeding may connote breeding systems varying from harvesting seed from only the best sources (mass selection) to sophisticated multi-phase, multi-generation programmes or controlled pollination.

[Schmidt, L., 1997. Tree Improvement Glossary. Technical Note 46. Danida Forest Seed Centre]

Contact: *Renate Prüller*, Coordinator [SilvaVoc](#) or *Michèle Kaennel Dobbertin*, Coordinator [IUFRO 6.03.02](#)

genetic conservation

FR **conservation génétique** - ES **conservación genética** - DE **genetische Erhaltung**

SYN **gene conservation, gene pool conservation, genetic resource conservation**

The collection, maintenance, storage and sustainable management of genetic resources aimed at ensuring their continued existence, evolution and availability for future generations.

[Source: Multilingual Glossary of Genetic Resources.

FAO/IUFRO <http://iufro-archive.boku.ac.at/iufro/silvavoc/glossary>]

IUFRO at the 18th CPF Meeting and UNFF ad hoc Expert Group Discussions

10-15 December 2006, New York, USA

A meeting of the **Collaborative Partnership on Forests (CPF)** was held on 10 December 2006 at the UN Headquarters New York. The CPF brings together fourteen major international forest-related organizations. IUFRO was represented in this meeting by its Executive Director Peter Mayer. Mr. Mayer used this opportunity to highlight major international activities led by IUFRO. He reported, among other things, about progress made in developing a new **joint CPF initiative on science and technology and the Global Forest Information Service (GFIS)** which will start with a new layout and a significantly improved, user friendly interface mid January 2007. The main idea behind the new joint initiative on science and technology is to establish a mechanism that will effectively link information needs of intergovernmental forest-related policy processes with available scientific expertise. The initiative shall be formally launched at the seventh session of the United Nations Forum on Forests (UNFF) in April 2007.

The CPF meeting also provided a good overview of activities of CPF partners and potentials for cooperation. For example, CIFOR has recently launched a new initiative entitled the "Rights and Resources Initiative" in partnership with IUCN, ICRAF, and a number of NGOs.

Also in December 2006, more than 300 experts gathered at a UNFF expert group meeting to begin **drafting a non-legally binding instrument on all types of forests (NLBI)**. This instrument, which shall be adopted by the UNFF in April 2007, aims to provide a coherent framework for sustainable forest management globally. Four IUFRO representatives, namely Peter Mayer, Alexander Buck, Atse Yapi (FORNESSA Secretary) and Sim Heok-Choh (APAFRI Executive Director) attended the expert group meeting.

In this meeting IUFRO aimed at a clear recognition in the text of the NLBI of the **importance of science and research for achieving the purpose of the NLBI**, as well as a clear expression of related commitments. It also strove at creating political support by governments for the new joint initiative on science and technology in support of UNFF and other international processes. The experts gathered in New York agreed on a composite text that will be forwarded for further consideration to the seventh session of the UN Forum on Forests in April 2007. Based on this composite text, delegates at UNFF-7 are likely to include text in the NLBI which addresses key aspects of science and technology of relevance to IUFRO.

By Peter Mayer and Alexander Buck

Sustainable Forest Management with Fast Growing Plantations

Charleston, South Carolina, USA, 11-13 October 2006

At this conference, the rate of increase of the world's industrial wood production supplied from fast growing plantations and research that is improving volume productivity and profitability were highlighted. In the discussions, the potential adverse effects of large scale exotic plantations and the research being carried out to improve their social and environmental benefits, in addition to improvements due to tree breeding, silviculture and management, were duly considered.

The meeting was co-sponsored by **IUFRO 4.04.02 "Planning and economics of fast growing plantations"** and organized by **North Carolina State University** and the **US Forest Service**. 85 participants from 10 countries, with two further countries represented by speakers resident in the USA were present.

[Web site](#) with all links to PowerPoint presentations, abstracts and manuscript.

Upgraded GFIS Gateway Launched in January 2007

The Global Forest Information Service GFIS is an internet gateway that provides access to forest-related information through a single entry point at www.gfis.net. This gateway has now been upgraded by IUFRO in co-operation with the other GFIS core partners (CIFOR, FAO, NBII, the UNFF Secretariat and Metla) based on the feedback from users and information provider partners.

The new gateway offers a search tool to global forest information resources and also windows to latest news, upcoming events, recent publications and job opportunities on the front page. The service will also be available in Spanish and French by the end of February 2007.

All information made available through GFIS is supplied by partner institutions from around the world that are

concerned with forest information. The main goal is to gather forest information and serve as a tool to explore this information. To make this possible GFIS needs partners who provide information feeds about different types of forest information. On behalf of GFIS, partners will be given a platform where they can share their information effectively and make their organization more visible to GFIS users and partners at the same time.

GFIS Training Workshop for Latin America

A GFIS training workshop for current and potential new Latin American GFIS information provider partners will be arranged during the first half of 2007. If your organization is interested in attending the training, please contact the GFIS coordinator (gfs_coordinator@iufro.org).

By Eero Mikkola



Don K. Lee Wins the Evergreen Grand Award

Congratulations!

Professor Lee, President of IUFRO, was awarded the Evergreen Grand Award, "Sangnok Daesang" for Excellence in Education and Research at the College of Agriculture and Life Sciences, Seoul National University (SNU). The award was established in 1989 and is awarded yearly.

Maciej Giertych Retired

In October 2006, the Institute of Dendrology in Kórnik, General Directorate of State Forests in Warsaw and the Polish Society of Foresters held a conference on "Population genetics of forest trees – challenges and perspectives" to honor Maciej Giertych, who celebrated his 70th birthday and 48 years of scientific work. On December 31, 2006, Professor Giertych retired from the Institute of Dendrology. He has also been a long-standing active member of IUFRO who, among other things, coordinated the former IUFRO units S2.01-04 *Growth processes* and S2.01-00 *Physiology*. He represented Poland at the IUFRO International Council and received the IUFRO Distinguished Service Award. IUFRO would like to express its thanks and appreciation to Professor Giertych.

W. Chalupka (edited)



Obituary

Dr. Florian Scholz, retired Director and Professor at the Federal Research Centre for Forestry and Forest Products, Hamburg, Germany

April 11, 1942 - November 22, 2006

Dr. Florian Scholz was an active IUFRO officeholder for the past 30 years. He was the founder of the "Genetic aspects of air pollution" Working Party (currently 7.01.04) and remained its coordinator from 1976-2000. From 2000-2006, Dr. Scholz was Deputy Coordinator of Research Group 7.01.00 "Impacts of Air Pollution and Climate Change on Forest Ecosystems."

His scientific work covered a wide range of topics including stress resistance mechanisms in tree species, combined studies on tree physiology and genetics, and genetic consequences of air pollution. He led many successful international collaboration initiatives, had more than 100

publications, edited prominent books including the Springer-Verlag book entitled "Genetic Effects of Air Pollutants in Forest Tree Populations". Within the fields of forest and ecological genetics, Dr. Scholz was well known for his stimulating teaching at the University of Hamburg, Germany, and the Polytechnicum in Zürich, Switzerland. Dr. Scholz was awarded the IUFRO "Distinguished Service Award" in December, 1994.

IUFRO and the scientific community have lost a prominent and outstandingly creative colleague. People who knew him will long remember the positive "Florian Scholz spirit," his extraordinary kindness, his wonderful optimistic attitude, and his willingness to help younger scientists.

Dave Karnosky+ and Gerhard Müller-Starck in the name of colleagues and friends*

+Michigan Technological University, School of Forest Resources & Environmental Science, Houghton, MI 49931-1295, USA

*Munich Technological University, Section of Forest Genetics, D-85354 Freising, Germany

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.

18-20 April 2007

Forest Research Management in an Era of Globalisation
Washington, D.C., United States
IUFRO 6.06.00

Contact: Konstantin von Teuffel, konstantin.teuffel(at)forst(dot)bwl(dot)de ; Web site: <http://www.iufro.org/science/divisions/division-6/60000/60600/activities/>

14-19 May 2007

IUFRO Conference on Forest Landscape Restoration
Seoul, Republic of Korea
IUFRO Divisions 1, 6, 8

Contact: John Stanturf, jstanturf(at)fs(dot)fed(dot)us
Web site: <http://www.srs.fs.usda.gov/korea>

21-27 May

Foliage, Shoot and Stem Diseases
Sopron, Hungary
IUFRO 7.02.02

Contact: Ilona Szabo, szaboi(at)emk(dot)nyme(dot)hu
Web site: <http://iufro.nyme.hu/>

3-7 June 2007

Small-scale Forestry Symposium
Ormoc City, Leyte, Philippines
IUFRO 6.11.02

Contact: Annerine Bosch, iufro(at)uq(dot)edu(dot)au
Web site: <http://www.uq.edu.au/forestry>

11-15 June 2007

Sharing Indigenous Wisdom
Green Bay, Wisconsin, United States
IUFRO Task Force on Traditional Forest Knowledge

Contact: Ron Trosper, Ronald(dot)Trosper(at)ubc(dot)ca
Website: <http://www.sharingindigenouswisdom.org/>

19-23 June 2007

9th International Symposium on "Legal Aspects of European Forest Sustainable Development"
Zikatar, Armenia

Contact: Peter Herbst, hp(at)net4you(dot)co(dot)at
Website: <http://www.iufro.org/science/divisions/division-6/60000/61300/activities/>

5-7 July 2007

2nd International Nearest Neighbors Workshop
Florence, Italy
IUFRO Division 4, 4.02.00, 4.02.04, 4.02.06

Contact: Gherardo Chirici, gherardo(dot)chirici(at)unimol(dot)it ; Website: <http://www.aisf.it/nn-workshop/>

29 July - 2 August 2007

Complex Stand Structures and Associated Dynamics: Measurement Indices and Modeling Approaches
Sault Ste. Marie, Ontario, Canada
IUFRO 4.01.02 and 1.05.00

Contact: Peter Newton, peter(dot)newton(at)nrcan(dot)gc(dot)ca
Website: <http://www.iufrosault.org>

14-20 August 2007

Integrative Science for Integrative Management
IUFRO Division 6 Symposium
Saariselkä, Finland

Contact: James E. Johnson, jej(at)vt(dot)edu
Web site: <http://www.metta.fi/tapahtumat/2007/iufro-d6/>

6-7 September, 2007

Forests and Forestry in the Context of Rural Development
IUFRO European Congress, Warsaw, Poland
organized in conjunction with the EFI Annual Conference

Contact: Piotr Paschalis-Jakubowicz, paschalis(at)delta(dot)sggw(dot)waw(dot)pl
Web site: <http://conference2007.wl.sggw.pl/>

18-21 September, 2007

Plantation Certification Symposium 2007
Stellenbosch, South Africa

Involving IUFRO Divisions 1.00.00 and 5.00.00

Contact: Cori Ham, coriham(at)mweb(dot)co(dot)za
Web site: <http://www.sun.ac.za/forestry/Symposium2007/Symp2007.html>

18-21 September 2007

Natural Disturbances and Natural Hazards in Mountain Forests: Challenges and Opportunities for Silviculture
Trento, Italy

IUFRO 1.01.05 and 1.05.00

Contact: Renzo Motta, Email: tn07(at)unito(dot)it
Website: <http://www.sisef.it/sisef/iufro.php>

1-4 October, 2007

3rd Forest Engineering Conference

Mont-Tremblant, Quebec, Canada

Organized jointly with IUFRO Division 3 mid-term meeting.

Contact: Jean-Francois Gingras, jf-g(at)mtl(dot)feric(dot)ca
Web site: <http://www.feric.ca/fec2007>

29 October – 2 November 2007

All Division 5 Conference

Taipei, China-Taipei

Contact: Chris Risbrudt, crisbrudt(at)fs(dot)fed(dot)us

Website: <http://www.iufro.org/science/divisions/division-5/50000/activities/>

Other Meetings

25 February – 1 March 2007

2nd Int'l Pulpwood Resources and Trade Conference
Melbourne, Australia

Website: <http://www.pulpwoodconference.com/>

19-21 March 2007

Forests, Society and Sustainable Development
Casablanca, Morocco

Organized by Sylvaworld, **Contact:** Mohammed Ellatifi, m(dot)ellatifi(at)yahoo(dot)fr
Website: www.geocities.com/sylva.world/home.htm

8-10 May 2007

ForestLeadership Conference

Vancouver, BC, Canada

Web site: <http://www.ForestLeadership.com>