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Internationaler Verband Forstlicher Forschungsanstalten

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

Restoring Forests: Advances in Techniques and Theory

By John Stanturf. Coordinator of Research Group 1.06.00

The IUFRO restoration conference held from 27-29 September 2011 in Madrid, Spain, was designed to highlight recent scientific advancement in forest restoration with focus on dynamic principles, management practices, and policy. Scientists and practitioners have addressed the new challenges associated with forest restoration under stressful site conditions. The necessity to appraise benefits of new techniques in relation to the entire restoration process was emphasized. New techniques for production of plant materials and site preparation adapted to emerging new purposes and heterogenic environmental conditions were presented.



Forest restoration is a multi-step process that can be complex and difficult. During the past decades, a pronounced evolution has occurred in both the characteristics of the restoration areas and the objectives of restoration programs. Much of the past science of forest regeneration emphasized reforestation following timber harvest for industrial purposes. This research fostered groundbreaking advances in our field. But the focal point of today's forest regeneration scientists has shifted prominently toward restoration of harsh, degraded environments.

Increasing public concern for ecological sustainability demands that restoration help to counteract environmental impacts, while simultaneously rehabilitating forest species composition, structure, and function, and enhancing the carbon sequestration capacity of the land. Further, these tasks must now be accomplished under the dynamic nature of global change that implies higher water demand in most areas.

Therefore, the impetus for this Congress stems from the increasing challenges that we face working as scientists and practitioners in the complex field of forest restoration. A primary objective of the symposium was to complement current scientific knowledge of restoration of mesic temperate forests with recent advances in restoration of dry, harsh systems.

Key conclusions of the conference:

There is a need for increased specificity of the research focus toward the challenges faced in complex restoration environments.

A cost-benefit analysis of technical alternatives is needed with recognition of restoration of forest functions.

New technology for producing and evaluating stock types is necessary, considering the almost unlimited number of new species desired for forest restoration activities and the stressful conditions of degraded forest ecosystems. Seedling quality assessment must consider the specific functional traits of groups of species.

Mechanical site preparation is crucial in harsh areas. However, new techniques and a clearer understanding of functional relationships are needed to manage vegetative competition. Facilitation effects and microenvironment heterogeneity can improve establishment of seedlings, reducing the need of herbicide and other techniques that may have negative environmental consequences.

Increased attention needs to be given to the importance of genetics in driving science and operation; in particular, the role of seed sources and breeding was recognized as having a sustained impact on restoration success. Improving the process of extending research results to operation is still critical.

The participants have committed to reinforce their role as a multidisciplinary working group that periodically gathers foresters, ecologists, and natural resources economists to collectively address forest restoration issues. A new meeting has been announced to be held at Purdue University (USA) in 2013.

The conference (http://www.restoringforests.net) was held in Madrid, Spain, and supported by the Technological University of Madrid, Spanish Department of Science and Innovation, and Purdue University. IUFRO divisions involved were <u>1.06.00</u>; <u>2.01.00</u>; <u>3.02.00</u>. A total of 105 participants attended. Along with eight invited speakers, there were 87 communications from 17 countries.



Challenging Climate Change with Forest Management and Technologies

By Hyun-Seok Kim, Woodam Chung and Joo Sang Chung, IUFRO Division 3.00.00

Mitigation of climate change requires multidisciplinary and comprehensive efforts to reduce the green house gas emissions caused by human beings. Forest management and technologies can make major contributions to these important efforts by preventing green house gas emissions, enhancing carbon sequestration, accumulating large stocks of carbon and replacing carbon-intensive commodities with wood products, biomass energy and bio fuels, and so on. The conference was able to gather forest scientists, government officials and private sectors around the world to facilitate a dialog on state-of-the-art forest management and technologies developed to mitigate climate change.

The international conference on "Forest Technologies for Mitigating Climate Change", which was held at Seoul National University, Seoul, Republic of Korea from Oct 4 to 6, 2011, attracted over 120 participants from 14 countries. Under the sponsorship provided by IUFRO Division 3.00, Korea Forest Research Institute, and many other forestry and climate change organizations in Korea, this conference featured a total of 36 oral presentations including 6 invited keynote speeches and 32 poster exhibitions.

The major topics of the conference include:

- 1) Impacts of Climate Change on Forests,
- Monitoring, Reporting and Verifying System for REDD+,
- 3) Technologies and Methods for Measuring Forest Carbon Stocks and Sequestration,
- Biomass Energy Technologies and Forest Products,
- 5) Forest Policies and Governance for Mitigating Climate Change,
- 6) Strategies and Methods for Improving Carbon Sequestration in Forests.



Group photo with Don Koo Lee, Minister of Korea Forest Service and Immediate Past President of IUFRO (Photo by Rae Ho Lee)

Participants discussed challenges in mitigating climate change, including issues and concerns regarding governance, economics, and technical barriers. In addition, a variety of forest technologies, such as remote sensing and modeling, were presented as tools for climate change study and risk assessment on forest ecosystems. Furthermore, molecular genetics, silviculture and management practices, and bio-energy technologies were presented and discussed with a view to enhancing the carbon sequestration of trees and forests and to replacing fossil fuels with forest biomass.

Discussions throughout the meeting demonstrated the importance of international and interdisciplinary collaboration on resolving the single greatest challenge of the next generation: climate change.

Novel Risks with Bark and Wood Boring Insects in Broadleaved and Conifer Forests

By Ferenc Lakatos from IUFRO WP 7.03.05
Read the report: http://www.iufro.org/science/divisions/
division-7/70000/70300/70305/activities/

Changing climatic factors have a major influence on the population dynamic of the bark beetle species everywhere. This results in changes in the distribution area and in a host tree shift. At a meeting held from 7-9 September 2011, in Sopron, Hungary, 71 participants from 23 countries discussed the impact of invasive bark and wood boring insects on their new environment, as well as eradication and pest management efforts. They mainly focused on the following issues: Population dynamics of bark beetles; Management of bark beetles; Biology of bark beetles; Insect and fungal associates of bark and wood boring insects; Other insects than bark beetles.



Meeting website: http://www.nyme.hu/IUFRO-2011
A Program and Book of Abstracts were printed, but no proceedings are planned. There are plans to hold the next meeting in Banff, Canada, in 2013.



CarboForest Conference

By Tomasz Zawila-Niedzwiecki, IUFRO 4.02.05

From 21-23 September 2011, The CarboForest Conference was held in Sekocin Stary near Warsaw, Poland. The main aims of the conference were to present actual achievements, focus the direction for further development in the area of carbon storage studies and stimulate the exchange of expertise. The Conference primarily focused on: climate changes, plant physiology, soils, carbon fluxes, forest management, inventory, modeling and reporting, geomatics with special emphasis to remote sensing.

The CarboForest conference provided a multi-disciplinary forum to discuss recent innovations and challenges related to all aspects of carbon storage and management in forest ecosystems. This meeting brought together scientists, politicians and environmentalists from different disciplines to confer and communicate their most recent findings relevant to the global carbon cycle, with an emphasis on the role of forest ecosystems and promoted the cross-fertilization of the latest ideas and concepts in research, policy and practice.

The sustainable forest management has a vital and widely-established role in climate change mitigation. Quantifying the carbon stored in forest ecosystems, as well as the rates and direction of carbon fluxes emitted from and absorbed by forests, has become very important to improve understanding of their influence on the global carbon cycle. In many countries national programs to protect and maintain forests have been initiated with the aim of reducing net carbon emissions and to stabilize or increase terrestrial carbon stocks in the long-term.



Poster session (photo provided by Tomasz Zawila)

There was critical discussion on the ecological, political, economical as well as technical aspects of carbon management, monitoring, reporting and verification of forest carbon stocks and their changes over time. Moreover, the conference offered the international community an open and creative forum for exchanging results and ideas on carbon capture and storage (CCS) in forest ecosystems.

More details including ppt presentations and a photo gallery are available under: http://www.carboforest.eu

The CarboForest conference was held under the honorary patronage of Mr. Jerzy Buzek - President of European Parliament and Mr. Janusz Zaleski - Chief Nature Conservator in the Polish Ministry of the Environment. The conference brought together 90 experts from 15 countries.

Technology and Ergonomics in the Service of Modern Forestry

By Yozo Yamada, Coordinator, IUFRO 3.03.00

The conference held in Krakow-Krynica, Poland, from 26 to 29 June 2011 was coordinated by Prof. Janusz Sowa, Deputy Coordinator of RG3.03, and hosted by the Department of Forest and Wood Utilization, the Hugo Kollataj University of Agriculture in Krakow, Poland.

At the conference, 120 participants from 18 countries discussed four main themes:

- 1) Modern techniques and technologies of timber harvesting in sustainable forestry;
- 2) Ergonomics in the execution of technology and project applications in forestry;
- Modern trends of technical and technological 3) solutions in forest utilization in the world;
- 4) Academic teaching of forest utilization and ergonomics in sustainable forestry.

More: http://www.les.ar.krakow.pl/~for-tech-erg/

Conclusions of the Conference:

http://www.iufro.org/science/divisions/division-3/ 30000/30300/activities/

9th International Beech Symposium

By Khosro Sagheb-Talebi, Coordinator of WP 1.01.07

The 9th International Beech Symposium took place from 12-17 September 2011 in Dresden, Germany. The aims of the conference were to exchange and share stateof-the-art knowledge on the ecology and silviculture of beech (Fagus) forests among researchers and forest managers worldwide.

Participants discussed current scientific achievements and future directions for sustainable management of beech forests in view of the changing social needs and global climate. Special emphasis was given to findings at the borders of the distribution range of the several beech species, e.g. northward expansion, genetic differentiation, and growth rings variation and, to experiments highlighting the eco-physiological traits relevant to the climate change phenomenon.

Main topics of the meeting:

- a) Paleoecology and distribution of beech
- b) Drought and the response of beech
- c) Beech genetics



- d) Structure and dynamics of natural beech stands
- e) Regeneration of beech forests
- f) Management of beech

Proceedings of extended abstracts will be available in 2012. *Meeting website:*

http://www.forst.tu-dresden.de/iufrobeech11

Host organization:

Institute of Silviculture and Forest Protection (Tharandt), Technische Universität Dresden, Germany Sponsor: European Forest Institute (EFI)



Photo provided by Khosro Sagheb-Talebi: Participants visiting a beech thinning experiment in Forest District Muenden

Publications

Newsletter of IUFRO Unit 7.01.00

http://www.iufro.org/science/divisions/division-7/70000/70100/newsletters/

Managing the Future of Southeast Asia's Valuable Tropical Rainforests – A Practitioner's Guide to Forest Genetics.

R. Wickneswari, National University of Malaysia, Bangi, Malaysia; C. Cannon, Xishuangbanna Tropical Botanical Garden, Menglun, China (Eds.). Springer. ISBN 978-94-007-2174-6 (Print), 978-94-007-2175-3 (Online). Available from Springer in print and as e-book.

http://www.springer.com/alert/urltracking.do?id=L1d32fbM88c275Saa8212e.

UNECE/FAO Outlook Study: possible scenarios for the future of European forests

The European Forest Sector Outlook Study II (EFSOS II), which covers the EU 27, Eastern and South-Eastern Europe, provides pictures of the consequences of today's policy choices for the forest of tomorrow.

The study is available at:

http://live.unece.org/forests/outlook/welcome.html

Positions

Head of Department of Forest Resources Management

Applications and nominations are invited for the position of Head of the Forest Resources Management Department at the University of British Columbia, Canada. This renewable appointment is available for an initial term of five years, commencing 1 July 2012. More information can be found at:

http://www.forestry.ubc.ca/dept/frm

Please direct inquiries, nominations and applications to: Dr. John L. Innes, Dean, Faculty of Forestry, john.innes(at)ubc.ca

Chaired Professor in Wood Physics

The Division of Wood Science and Engineering at Luleå University of Technology, Skellefteå, Sweden, seeks a chaired position in wood physics.

http://www.ltu.se/ltu/Lediga-jobb?l=en

Deadline for applications: 1 December 2011 For further information please contact:

Head of Division, Gunnar Landsell, phone +46 910 58 53 89, gunnar.landsell(at)ltu.se

Faculty Position in Global Environmental Change (rank open)

The Department of Environmental Sciences (DES), College of Natural Science and Mathematics, University of Toledo, US, seeks an environmental scientist with strong quantitative expertise to start in fall 2012. Review of applications will begin on 1 December 2011, until position is filled.

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

Landscape Ecologist Position

The Wilderness Society is looking for an individual experienced in forest ecology and GIS to fill the Landscape Ecologist position in Boise, Idaho. See the job posting at:

http://wilderness.org/content/landscape-ecologist-0.
Mail to: research_jobs(at)tws.org with the subject line "Boise Landscape Ecologist".

Scholarships and Grants

Grants for Short Term Scientific Missions (STSMs) for Early Stage Researchers from COST countries for EU COST Action FP1002 PERMIT (Pathway Evaluation and Pest Risk Management In Transport).

Action website (http://www.forestry.gov.uk/fr/permit). Contact: STSM coordinator, Dr Rimvys Vasaitis at SLU in Sweden, Rimvys. Vasaitis(at)slu.se.

WFI International Fellowship Program

Term: 6-12 months throughout 2012- Applications accepted year-round.

The WFI Fellowship brings professionals in natural resources to conduct a practical research project at the World Forestry Center in Portland, Oregon, USA. For information and how to apply, please visit: http://wfi.worldforestry.org/index/international-fellowship.html



Strengthening Cooperation between IUFRO and China

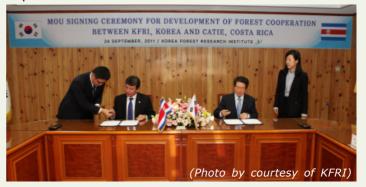
Representatives of IUFRO member organizations in all parts of China and the members of the IUFRO Management Committee discussed the status and prospects for forest science cooperation in China and the Asia-Pacific region during a seminar held on 27 September 2011 in Beijing.



The seminar which was hosted by the Chinese Academy of Forestry demonstrated the important role given to forests in the national development and the high significance of international cooperation in forest science. Participants agreed to further enhance collaboration between IUFRO and China, among others, by further increasing IUFRO membership, attracting more Chinese scientists as officeholders, and holding more IUFRO meetings in China and Asia-Pacific. The seminar also identified a number of topics for collaborative activities, such as community forestry, forest adaptation to climate change, as well as training and capacity building.

CATIE Establishes New Relation with Korea

On September 24, CATIE, the Tropical Agricultural Research and Higher Education Center with its headquarters located in Costa Rica, and KFRI, the Korea Forest Research Institute, entered into a Memorandum of Understanding (MoU). The director general of CATIE, Dr. José Joaquín Campos, and Dr. Gilbon Koo, director general of KFRI (see photo), signed the memorandum at the headquarters of KFRI in Seoul, capital of the Republic of Korea.



Dr. Campos explained the role of IUFRO, "The MoU would not have been established without IUFRO. The idea for the MoU was born at the IUFRO World Congress in Seoul in August 2010, so IUFRO was the platform that had brought the two parties together in the first place."

Among the objectives established in the MoU there are the development of a long-term international partnership for forestry research, a collaborative research program on forest plantations, bioenergy, biodiversity and other fields of mutual interest, and the development of exchange programs for researchers and practitioners.

Denmark: Forests to be Included in the Policy of the New Government

On October 6, three days after the New Danish Government came into office, the renowned Danish newspaper "Politiken" published an article with the above title by IUFRO President Niels Elers Koch, Director General of Forest & Landscape, University of Copenhagen.

Link to the article in Danish: http://politiken.dk/debat/kroniker/ECE1413834/skovene-boer-vaere-med-i-regeringens-politik/

In this article, Professors Elers Koch underlines the great potential of forests and forest products not only in the climate change debate and as a source of renewable energy but also as a supplier of a multitude of goods and services including clean drinking water, opportunities for outdoor recreation, $\mathrm{CO_2}$ storage, biodiversity, more wood for construction, furniture, etc.

One of the major goals of the new government in Denmark is to replace fossil energy sources by renewable ones. While only 17 percent of the total consumption comes from renewable sources today – and only 6 percent from forest sources – the entire energy consumption in Denmark shall be covered by renewable sources by 2050.

A particularly great potential lies in planting new forests, especially since Denmark imports a lot of wood. New forests can both produce large quantities of wood for energy in a relatively short term and deliver other important public goods. The new government in Denmark has now included the establishment of more forests in the "Nature Plan Denmark" referred to in the new government platform.

Achieving the full effect of the new forests will require political will and action, good planning and the right incentives for landowners and energy industry. However, the use of wood for energy must not override other important societal values such as recreation and biodiversity.

Consequently, there is a need for sustainability criteria for forest biomass production for energy. And it is necessary to strengthen research in sustainable forest management and ensure sound advice to forest owners in order to allow forests to deliver a multitude of services and benefits in the future.



Latest CPF Press Releases in the International Year of Forests



Ecotourism can play vital role in maintaining healthy forests -

Rural communities can maximise the benefits of sustainable ecotourism

28 September, 2011, Rome. The continuing boom in ecotourism has the potential to save endangered forests, depending on how effectively tourism expansion is managed, an international partnership for forest management and conservation said today. (...) Full text

As world goes urban, new focus on role of trees in cities -

More attention needed to maximize benefits of urban forests

3 October 2011, Rome - Focused policies and investments aimed at protecting and managing forests and trees in and around cities are needed to strengthen urban livelihoods and improve city environments as the world becomes increasingly urbanized. This was the message offered today on the occasion of World Habitat Day by the international Collaborative Partnership on Forests (CPF) (...)

Full text

Commemorating Nobel Prize Laureate Wangari Maathai

Together with all members of the Collaborative Partnership on Forests, IUFRO wishes to express its deepest condolences on the passing of Nobel Laureate Wangari Maathai. Her passionate advocacy for the environment in her native Kenya inspired many other African countries and the international community to plant and protect trees.

As part of a memorial service organized by Copenhagen University, IUFRO President Professor Niels Elers Koch, Director General of Forest & Landscape at Copenhagen University, participated in a tree-planting ceremony in her memory on 14 October (photo). Besides the title of Honorary Doctor at the Copenhagen University, the Kenyan professor and activist Wangari Maathai obtained a number of international honours for her work for the environment, peace and democracy in Kenya.



IUFRO Meetings

Search our <u>online calendar</u> for a full list of meetings! Find non-IUFRO meetings on the IUFRO Noticeboard!

Also search for forest-related events in GFIS at: http://www.gfis.net

10-11 Nov 2011

Workshop on Transition to Sustainable Forest Management and Rehabilitation in Asia-Pacific Region

Beijing, China IUFRO 9.03.05

Contact: Jinlong Liu, liujinlong(at)ruc.edu.cn http://www.iufro.org/science/divisions/division-9/ 90000/90300/90305/activities/

18 Nov 2011

2011 China-ASEAN International Wood Culture Forum

Nanning, Guanxi, China IUFRO 5.10.01

Contact: Jinling Su, su(at)iwcs.com

http://www.iufro.org/science/divisions/division-5/50000/51000/51001/activities/

23-25 Nov 2011

International Conference on Multipurpose Forest Management under Changing Conditions

Nanning, Guangxi, China

IUFRO 4.00.00, 9.04.01, 9.04.02

Contact: Heinrich Spiecker, instww(at)uni-freiburg.de http://www.iufro.org/science/divisions/division-9/90000/90400/90401/activities/

23-26 Nov 2011

4th International Conference on Forest Related Traditional Knowledge and Culture in Asia - Forests and Village: Finding New Values in Future

Seogwipo, Jeju Islands, South Korea

IUFRO <u>9.03.04</u>, <u>9.03.05</u>

Contact: Joon-hwan Shin , kecology(at)forest.go.kr http://www.iufro.org/science/divisions/division-9/90000/90300/90304/activities/

4 Dec 2011

Forest Day 5 (coinciding with the UNFCCC COP 17)

Durban, South Africa



Sunday, 4 December 2011

IUFRO and UNDP Discussion Forum:

Social safeguards: protecting the rights and interests of indigenous peoples and forest-dependent communities in REDD+

Contact: Renate Prueller, prueller(at)iufro.org http://www.forestsclimatechange.org/events/forest-day/forest-day-5.html



5-7 Dec 2011

Asia and the Pacific Workshop – Multinational and Transboundary Conservation of Valuable and Endangered Forest Tree Species

Guangzhou, China IUFRO 2.04.01

Contact: Wickneswari Ratnam, wicki(at)ukm.my http://www.iufro.org/science/divisions/division-2/20000/20400/20401/activities/

9-11 May 2012

All-Division 9 Conference

Sarajevo, Bosnia Herzegovina

IUFRO 9.00.00

Contact: Daniela Kleinschmit,

daniela.kleinschmit(at)sprod.slu.se; Konstantin von Teuffel, konstantin.teuffel(at)forst.bwl.de; Margaret

Shannon, margaret.shannon(at)efi.int

http://www.iufro.org/science/divisions/division-9/

90000/activities/

17-20 May 2012

MEDINSECT 3

Hammamet, Tunisia IUFRO 7.03.14

Contact: Mohamed Lahbib Ben Jamaa, benjamaa.lahbib(at)iresa.agrinet.tn;

François Lieutier, francois.lieutier(at)univ-orleans.fr http://www.iufro.org/science/divisions/division-7/ 70000/70300/70314/activities/

22-24 May 2012

Forests for People – International Experiences and the Vital Role for the Future

Alpbach/Tyrol, Austria

IUFRO Task Force on Forests for People

Contact: Ulrike Proebstl, ffp2012(at)boku.ac.at

http://ffp2012.boku.ac.at/

25-28 Jun 2012

Second International Conference of 2.09.02 - Somatic embryogenesis and other vegetative propagation technologies

Brno, Czech Republic IUFRO 2.09.02

Contact: Yill-Sung Park, ypark(at)nrcan.gc.ca; Jana

Krajnakova, jana.krajnakova(at)uniud.it

http://www.iufro20902.org

25-30 Jun 2012

First IUFRO-FORNESSA Regional Congress and ITTO/AFF Forest Policy Day:

Forests and Trees Serving the People of Africa and the World

Nairobi, Kenya IUFRO, FORNESSA

Contact: Joe Cobbinah, joe.cobbinah(at)ymail.com; jcobbinah(at)csir-forig.org.gh

http://fornis.net/content/first-iufro-fornessa-regional-

<u>congress</u>





8-13 Jul 2012 2012 IUFRO All-Division 5 Conference Lisbon, Portugal IUFRO 5.00.00

www.iufro2012.org

Key dates:

Deadline for technical session proposals:

October 31, 2011

Deadline for submission of abstracts:

November 14, 2011

Scientist Assistance Program (SAP), deadline for

submissions: December 15, 2011

Young Scientist Program (YSP), deadline for

submissions: December 31, 2011

Contact: Pekka Saranpää, Pekka.Saranpaa(at)metla.fi

http://www.iufro2012.org/

30 Jul-3 Aug 2012

12th International IUFRO Wood Drying Conference

Belém, Brazil IUFRO <u>5.04.06</u>

Contact: Diego Elustondo,

diego.elustondo(at)fpinnovations.ca

http://www.wdc2012.com/

5-12 Nov 2012

Biannual IUFRO Forest Landscape Ecology

Conference: Sustaining Humans and Forests in Changing Landscapes: Forests, Society and Global Change

Concepción, Chile IUFRO 8.01.02

Contact: Cristian Echeverria, cristian.echeverria(at)udec.cl

Sandra Luque, sandra.luque(at)cemagref.fr http://www.iufrole2012.cl/IUFROLE2012.html

Other Meetings

16-20 Jan 2012

Eighteenth Session of the African Forestry and Wildlife Commission (AFWC)

Second African Forestry and Wildlife Week (AFWW) Cotonou, Republic of Benin

Contact: afwc(at)fao.org, fax +233 302) 7010943/668427

http://www.fao.org/forestry/afwc

8-14 Jul 2012

International Educators Institute

Forest study tour for environmental educators, natural resource managers and conservationists

Portland, Oregon, USA

Application deadline: February 28, 2012.

http://wfi.worldforestry.org/index/international-fellowship/international-educators-institute.html