

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

Forests Provide Untapped Resources for Human Health

*"It is not commonly understood how much – even in our hypermodern urban age – human health and well-being are influenced by forests and trees", said Professor Hannu Raitio, coordinator of the **IUFRO Task Force on Forests and Human Health** of the Vienna-based International Union of Forest Research Organizations, and Director General of the Finnish Forest Research Institute Metla in Vantaa, prior to World Health Day on 7 April. Research shows that there is a huge untapped economic and health potential in forest biodiversity. "Preserving biodiversity attains an autonomous value – independent of any uses known at the present time", said Professor Raitio.*

Loss of species and decrease in biodiversity always imply a potential loss of health-related ecosystem services and genetic resources. The conservation of the earth's biological diversity, of which a large part is found in forests, is increasingly recognized as an important goal. Preserving biodiversity is rational also from an economic point of view. As noted in FAO's State of the World's Forests 2011, many top-selling herbal products such as goji and echinacea are derived from forests, and the collection and trade of raw materials continues to significantly affect forest economies. Probably more than half of the most prescribed medicines – also in the Western pharmacopoeia – are based on chemical compounds found in natural organisms. "Even if the drug is produced synthetically, it is often first found in nature, or it may be a modification of some naturally occurring compound. We start to realize that every organism is a potent bioreactor with unique capabilities", stated Professor Raitio.

Medical treasures waiting to be discovered

Currently only less than one per cent of all known plants are thoroughly analyzed for pharmaceuticals and with microbes, fungi and animals the percentage is even smaller. Only a small fraction of all existing species of organisms have been discovered and described so far. Moreover, all higher plants are hosts to one or more endophytic microbes, organisms residing in tissues between or among living plant cells. Of the estimated 500,000 plant species living on the planet, only a handful has had their endophytic microflora thoroughly studied.

"There are medical treasures waiting to be discovered in forest plants literally everywhere. For example, we recently began a study on the microflora of the root system of the common Scots Pine, *Pinus sylvestris*", informed Professor Raitio, "We wanted to see what kind of chemical substances can be found in the microscopic fungi that are living symbiotically with the tree, and test them against the age-related eye disease (AREDS),



Ginkgo leaves (photo by G Wolfrum)

which is a major cause of vision loss in people of advanced age all over the world. We thought that in a few years we may find a substance that could be of potential use, but only after a few months of research we already had our first candidate. We are now cooperating with medical doctors to develop a medicine of it."

Traditional medicine also greatly relies on forest resources, for example in the treatment of malaria. Most of the hundreds of millions of cases of malaria each year are in sub-Saharan Africa, where it is the second highest cause of death from infectious disease. Poor communities have limited access to modern drugs, with the majority relying on traditional medicine in treating malaria. The World Agroforestry Centre recently published a guide entitled 'Common Antimalarial Trees and Shrubs of East Africa', which describes 22 species of trees and shrubs

In the **International Year of Forests 2011**, the members of the **Collaborative Partnership on Forests (CPF)**, in a joint initiative, publish monthly forest-related press releases.
<http://www.iufro.org/media/iyf11/>

that are used as antimalarial treatments in East Africa by traditional medical practitioners and rural communities. "These species have great potential for further study and development as readily available alternative treatments for the curse of malaria", said Najma Dharani, the main author of the book.

Sustainable management of forests to be key

Forests support the livelihoods of millions of people by providing food, water, fuel, protection against natural hazards etc., and offer a range of health-related goods and services, from medicinal compounds to the support of our psychological capacity and mental health. The key to preserve these ecosystem services is sustainable forest management (SFM), aiming at a balance between society's increasing demands for forest products and benefits, and the preservation of forest health and diversity. This balance is critical to the survival of forests and the health of people depending on forests. "These people do not only include the forest-dwelling native tribes in various corners of the world, but every one of

us, wherever we live, and whatever is our industrial or economic level. This is the most important message for us all on the World Health Day and in the United Nation's [International Year of Forests 2011](#)", said Professor Raitio.

The international group of scientists of the interdisciplinary [IUFRO Task Force](#) recently suggested taking into account human health aspects in all forest management activities systematically. This could be done through applying the [Health Impact Assessment](#) (HIA), a program which is promoted actively by the [World Health Organization](#) (WHO) and is to date mainly being used in urban planning, to forest-related issues. For this purpose, a set of forest-related human health indicators could be developed and included in public health reports in a similar way as they are often included in reports on water, energy, mining, biodiversity and agriculture.

(CPF press release, Vienna/Vantaa, 6 April 2011; for more information, contact: Gerda Wolfrum, wolfrum(at)iufro.org)

Global Forestry Institutions Call for More Community-based Forest Management

CPF Press Release on the occasion of Earth Day, 22 April 2011

The leading international organizations working to protect and manage the world's forests are calling for governments across the globe to increase communities' role in forest management. Doing so could contribute to lifting close to a billion people out of poverty, as well as improve the health and vitality of forests.

The [Collaborative Partnership on Forests](#) (CPF) is comprised of 14 international organizations specializing in the management, conservation and sustainable development of all types of forests. On the occasion of this year's Earth Day, the group has come together to speak as one to send an unequivocal message:

If we are to see an end to global poverty and the preservation of endangered biodiversity, communities living in and near forests must be involved in decision making about sustainable forest management.

"People who live in forests and are highly dependent on them for their food, fuel, and medicines, are most often not those who control the decisions on how these resources are used and managed." says Julia Marton-Lefèvre, Director General of [International Union for Conservation of Nature](#) (IUCN). "Our work in countries across the world has proven that strengthening community rights over their own forests helps reduce poverty and also benefits forest biodiversity."

A total of 1.6 billion people depend on forests for their livelihoods. About 1.4 billion of these live in the developing world, and 1 billion live in extreme poverty. Recently-released data by IUCN and the Global Partnership for Forest Landscape Restoration show that approximately 1.2 billion hectares of deforested or degraded areas could be restored through better, locally-controlled management.



The vast majority of rural populations in Africa are highly dependent on forest goods and services. (Photo by Matti Nummelin)

Guinea is a prime example of a country that could benefit from community forest management, as it has long experienced widespread environmental degradation and loss of forests, largely due to illegal logging, land clearing and poaching by people who rely on the forests to eke out a living.

"We brokered a co-management agreement between the local community and the government and introduced a program to improve incomes of people living in villages around the forests" says Dennis Garrity, Director General of the [World Agroforestry Centre](#). "Incomes dramatically improved, the pressure on forests reduced, water sources flowed again and tree cover is steadily increasing."

The CPF has seen again and again that by increasing local people's ownership in the management of forest resources, communities are frequently in a better position to start forest product-based business, from which they can derive better incomes. Such businesses include an array of activities, encompassing everything from processing and marketing of shea nuts and butter in West Africa, to community forestry enterprises managing forest concessions in Petén, Guatemala. The ability to build increased household wealth is critical as it often results in improved food security, investments in children's education as well as increased engagement in community and social improvement activities.

"When local people become equal partners in the benefits and responsibilities of sustainable forest management, many opportunities open up for them," says Eduardo Rojas-Briales, Director General of Forestry at the [Food and Agriculture Organization](#) of the United Nations. "Reliable access to forest resources means they can increase their cash income and engage in developing sustainable enterprises. What's more, there is a clear incentive to better manage their lands to ensure the sustainability of the forest resources."

The current international efforts to develop mechanisms for reducing emissions from deforestation and forest degradation and enhancing forest carbon stocks in developing countries (REDD+) represent new possibilities for local communities to benefit from sustainable management and conservation of forests. However, according to a book published by the International Union of Forest Research Organizations "... unless considerable progress is made in securing the rights of local people to access, manage, and benefit from forests ... it is unlikely that deforestation and illegal logging will be curbed."

[International Tropical Timber Organization](#) is another CPF member that promotes a holistic approach to involving communities in its various forestry projects throughout the tropics, and sees such involvement as a crucial link to improvements in both livelihoods and sustainable forest management.

At the recent [United Nations Forum on Forests](#) meeting in February, ministers stressed the crucial role of local people, including women, and local and indigenous communities in achieving sustainable forest management.

"When you have ministers from around the world recognize that communities are vital for sustainably managing forests, it becomes clear that the time to act is now", says Jan McAlpine, Director of the United Nations Forum on Forest Secretariat. "If we don't see wide-scale investment in locally-controlled forestry we will ultimately fail in some of our most important, and venerable goals, including reducing poverty and ensuring sustainable development for all."

For more information:

Daniel Shaw, shawd@iucn.org, International Union for Conservation of Nature (IUCN)



New Zealand landscape
(Photo by Claudia Göstl)

Featured IUFRO Member of the Month

SCION

is a New Zealand government-owned organization with a proud heritage in forestry science. Founded in 1947 as the New Zealand Forest Research Institute, we have provided more than 60 years of support and science innovation for the forestry and forest product sectors.

Read more at:

<http://www.iufro.org/featured-member-of-the-month/article/2011/04/14/scion/> or visit the Scion website at:

<http://www.scionresearch.com/>

Would you like your institution to become our "featured member of the month"? Just write to [office\(at\)iufro.org](mailto:office(at)iufro.org) and send us a description of your research organization.

Publications

Wood Structure and Properties '10

Proceedings of the 6th IUFRO Symposium on Wood Structure and Properties held from 6-9 September 2010 in Podbanske, High Tatras, Slovakia, and organized jointly by the Faculty of Wood Sciences and Technology of the Technical University in Zvolen and the IUFRO Research Group 5.01.00 Wood Quality. ISBN 978-80-968868-5-2

Multipurpose Forest Management

This special issue of the Journal of Forest Planning (Vol. 16, ISSN 1341-562X) published in March 2011 by the Japan Society of Forest Planning comprises 29 papers based on presentations at the International Conference on Multipurpose Forest Management held 20-25 September 2009 at Toki Messe in Niigata, Japan.

For subscription information, please visit:

<http://www.toho-shoten.co.jp>

Asia-Pacific Forests and Forestry to 2020

The FAO Regional Office for Asia and the Pacific has finalized the second Asia-Pacific Forestry Sector Outlook Study.

<http://www.fao.org/asiapacific/forestry-outlook>

For further information, please contact Patrick Durst at Patrick.Durst@fao.org

Trees are the Answer - Book and DVD

by Greenpeace co-founder and former leader Patrick Moore. The author argues the best way to sustain our forests is by growing more trees and using more wood and forest products — not less.

Visit: <http://www.treesaretheanswer.com>

FAO Forestry Paper 164 – Guide to Implementation of Phytosanitary Standards in Forestry

(Rome, 2011) This reference work provides information on international standards for phytosanitary measures (ISPM's) and how forest management practices can play a role in minimizing pest prevalence and spread.

<http://www.fao.org/docrep/013/i2080e/i2080e00.htm>

Sanidad Forestal – Guía en imágenes de plagas, enfermedades y otros agentes presentes en los bosques

By C. Muñoz López, V. Pérez Fortea, P. Cobos Suárez, R. Hernández Alonso, G. Sánchez Peña

575 pages (Spanish), 3rd edition 2011; EAN13: 9788484764236 (published by Ediciones Mundi-Prensa)

Die Politik des Waldes

By Helga Pülzl

Published by Böhlau Verlag, 2010. ISBN 978-3-205-78147-9; 264 pages (German)

<http://www.iufro.org/discover/noticeboard/#c53>

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 in GFIS at: <http://www.gfis.net>

Call for Proposals to Host the Sixth International Poplar Symposium (IPS VI)

IUFRO's Poplar and Willow Genetics Working Party 2.08.04, convenes the **International Poplar Symposium (IPS)** every four years for the presentation and discussion of the most recent and important scientific findings in *Populus* and *Salix* genetics, molecular biology, physiology, ecology, wood science, etc. The next symposium, IPS-VI, will be held in 2014. IPS-VI will follow previous poplar symposia held in Seattle, Washington, U.S.A (IPS-I, 1995), Orleans, France (IPS-II, 1999), Uppsala, Sweden (IPS-III, 2002), Nanjing, China (IPS-IV, 2006), and most recently, Orvieto, Italy (IPS-V, 2010).

The Poplar and Willow Genetics Working Party 2.08.04 welcomes all proposals to host IPS-VI.

For more information, please go to:

<http://www.iufro.org/science/divisions/division-2/20000/20800/20804/activities/>

31 Aug-2 Sep 2011

Annual meeting of IAWS 2011: Novel Materials from Wood or Cellulose

Stockholm, Sweden

IUFRO 5.00.00

Contact: Lennart Salmén, [lennart.salmen\(at\)innventia.com](mailto:lennart.salmen(at)innventia.com)

http://www.innventia.com/templates/STFICalendarPage_9287.aspx

4-11 Sep 2011

13th IUFRO Conference on "Root and Butt Rot of Forest Trees"

Florence – S. Martino Di Castrozza, Trento, Italy

IUFRO 5.11.00

Contact: Paolo Capretti, [paolo.capretti\(at\)unifi.it](mailto:paolo.capretti(at)unifi.it)

<http://nature.berkeley.edu/garbelotto/english/iufro13.php>

Positions

Two Young Scientist Contracts

INRA and the Doctoral School RP2E offer during 2010 one or two "Contrats Jeunes Scientifiques" (Young Scientist Contracts) for 3 years (duration for completion of a PhD) followed by two years of post doctoral research. Candidates may choose among the two topics proposed this year:

Topic 1. Mechanistic biophysical modelling of cambial activity and wood formation.

Topic 2. Cell division and cell elongation in the root apex: diversity of drought-induced responses.

For more information, please contact:

[presid\(at\)nancy.inra.fr](mailto:presid(at)nancy.inra.fr)

<http://www.rp2e.inpl-nancy.fr/>

12-17 Sep 2011

9th International Beech Symposium: Ecology and Silviculture of Beech

Dresden, Germany

IUFRO 1.01.07

Contact: Khosro Sagheb-Talebi, [saghebalebi\(at\)rifr-ac.ir](mailto:saghebalebi(at)rifr-ac.ir);

Nils Fahlvik, [beech2011\(at\)forst.tu-dresden.de](mailto:beech2011(at)forst.tu-dresden.de)

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

27-29 Sep 2011

IUFRO Conference on Restoring Forests: Advances in Techniques and Theory

Madrid, Spain

IUFRO 1.01.00, 1.06.00, 2.01.00, 3.02.00

Contact: Juan A. Oliet, [juan.oliet\(at\)upm.es](mailto:juan.oliet(at)upm.es)

<http://www.restoringforests.net/index.php?q=node/23>

19-22 October 2011

Rediscovering Wood, the Key to a Sustainable Future

Bangalore, India

IUFRO 5.00.00

FAO, in collaboration with the Government of India

Contact: Andrew Wong, [awong.unimas\(at\)gmail.com](mailto:awong.unimas(at)gmail.com)

<http://www.artjoywood.org/documents/AJWConferenceBooklet.pdf?attredirects=0&d=1>

24-26 Oct 2011

Tree-Stumps for Bioenergy - Harvesting Techniques and Environmental Consequences

Uppsala, Sweden

IUFRO 3.00.00

Contact: Tryggve Persson, [Tryggve.Persson\(at\)slu.se](mailto:Tryggve.Persson(at)slu.se)

<http://www.slu.se/treestumpsymposium2011>

3-5 Nov 2011

8th International Conference "Wood Science and Engineering in the Third Millennium" – ICWSE 2011

The "Transilvania" University, Brasov, Romania

IUFRO 5.00.00

Contact: Mihai Ispas, [ispas.m\(at\)unitbv.ro](mailto:ispas.m(at)unitbv.ro)

<http://www.unitbv.ro/il/en/ICWSE2011/tabid/6338/language/en-US/Default.aspx>

6-11 Nov 2011

COST-ESF High-level Research Conference on "The Future Role of Bio-energy from Tree Biomass in Europe"

Vienna, Austria

IUFRO Task Force on Forest Bioenergy, Austrian Federal Research and Training Centre for Forests, Natural Hazards and Landscape

Contact: Rolf Björheden, Rolf.Bjorheden@skogforsk.se
<http://www.esf.org/conferences/11378>

7-11 Nov 2011

Forest Vegetation Management for Timber and Non-timber Values

Valdivia, Chile

IUFRO [1.01.04](#)

Contact: Euan Mason, euan.mason(at)canterbury.ac.nz
<http://www.treesandstars.com/vmc7/>

8-11 Nov 2011

IUFRO Forest Entomology – Forest Pathology Joint Meeting

Colonia del Sacramento, Uruguay

IUFRO [7.02.00](#), [7.03.00](#)

Contact: Guillermo Perez, gperez(at)inia.org.uy
<http://www.iufrouuguay2011.org/>

18-27 May 2012

Biological Reaction of Forests to Climate and Air Pollution

Kaunas, Lithuania

IUFRO [7.01.00](#)

Contact: Algirdas Augustaitis, algirdas.augustaitis(at)lzuu.lt
Andrzej Bytnerowicz, abytnerowicz(at)fs.fed.us
<http://www.iufro-at-lzuu.lt/>

Postponement!

10-16 Jun 2012

Alien Invasive Species and International Trade

Tokyo, Japan

IUFRO [7.03.12](#)

Contact: Kenji Fukuda, fukuda(at)k.u-tokyo.ac.jp
<http://hyoka.nenv.k.u-tokyo.ac.jp/alien.htm>

8-13 Jul 2012

2012 IUFRO All-Division 5 Conference

Lisbon, Portugal

IUFRO [5.00.00](#)

Contact: Pekka Saranpää, Pekka.Saranpaa(at)metla.fi
<http://www.iufro2012.org/>

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.iufro.org/science/divisions/division-8/80000/80100/80102/activities/>

Other Meetings

23-25 May 2011

52nd session of the Advisory Committee on Paper and Wood Products (ACPWP) in conjunction with the ICFPA (International Council of Forest and Paper Associations) Annual Meeting

Montebello, Canada

Contact: Bernard de Galember, b.degalember(at)cepi.org
<http://www.fao.org/forestry/industries/9530/en/>

14-16 Jun 2011

FOREST EUROPE Ministerial Conference on the Protection of Forests in Europe

Oslo, Norway

Forest Europe

<http://www.foresteurope.org/eng/Events/>

19-29 Jun 2011

2011 INBAR Bamboo Study Tour

Hangzhou, Chengdu and Xi'an, China

Contact: Mr Fu Jinhe, jfu(at)inbar.int; Ms Li Xin, Xli(at)inbar.int

<http://www.inbar.int/show.asp?BoardID=171&NewsID=702>

23-24 Jun 2011

Present and Future Role of Forest Resources in the Socio-economic Development of Rural Areas

Rome, Italy

MIPAAF-NRN (National Rural Network - Italian Ministry of Agricultural, Food and Forestry Policies); INEA-FO (Forest Observatory of the National Institute of Agricultural Economics, Italy)

Contact: romaforest2011(at)inea.it

<http://www.reterurale.it/romaforest2011>

18-22 Jul 2011

10th Proforest Summer Training Programme

Oxford, UK

ProForest

<http://www.proforest.net/proforest-news/proforest-summer-training-2011>

18-23 Aug 2011

8th World Congress IALE

Landscape Ecology for Sustainable Environment and Culture

Beijing, China

International Association of Landscape Ecology

<http://www.iale2011.org/>

21-25 Aug 2011

4th World Conference on Ecological Restoration

Mérida, Mexico

Society for Ecological Restoration (SER)

Contact: info(at)ser2011.org

<http://www.ser2011.org/en/>

12-16 Sep 2011

Summer School: Adaptation to Climate Change in Forest Management

Vienna, Austria

ECHOES, MOTIVE, evoltrees, EFI, BOKU

Contact: Manfred J. Lexer, mj.lexer(at)boku.ac.at

Deadline for applications: 15 May 2011

<http://www.iufro.org/discover/noticeboard/#c14635>

7-11 Nov 2011

Second Asia-Pacific Forestry Week: "New challenges - new opportunities"

Beijing, China

FAO

Contact: Patrick Durst, AP-Forestry-Week(at)fao.org

<http://www.fao.org/forestry/ap-forestry-week/en/>

4-16 Sep 2011

Course on Multilateral Environmental Agreements

University of Eastern Finland – UNEP, 8th Annual Course,

Asian Institute of Technology,

Bangkok, Thailand

<http://www.uef.fi/unep>