



IUFRO World Congress Bulletin

A Daily Report of the XXIII IUFRO World Congress

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XXIII IUFRO WORLD CONGRESS HIGHLIGHTS: FRIDAY, 27 AUGUST 2010

Back in the COEX complex on Friday after a damp day of field trips, participants filled 20 early morning technical sessions before hearing the keynote speech by Nobel Laureate Elinor Ostrom in plenary, who also participated in a sub-plenary on new frontiers of forest economics. The two other sub-plenaries focused on agroforestry: the way forward, and enhancement of service life of wood in an environmentally conscious global society. Another 18 technical sessions met in the afternoon, as did numerous side events and business events.



IUFRO participants in a field trip to the World Cup Park, a landfill site turned Eco-Park.

FIELD TRIPS

The IUFRO XXIII Congress was on hiatus Thursday, as participants braved the elements and headed into the field on eight trips organized to experience innovative forest-related projects around the Republic of Korea. Of the eight field trips, IISD Reporting Services was there to cover two: Landscape Restoration and Sub-alpine Forest; and Old-aged Natural Forests and Landfill Restoration. Remaining field trips included excursions about: a protected area for biological diversity; non-timber forest products; conservation and utilization of forest genetic resources; forests and human health; sustainable forest management and the ecosystem approach; and the wood processing industry.

During the old-aged Natural Forests and Landfill Restoration trip, participants visited the World Cup Eco-Park, a former landfill transformed into an environmentally friendly park, where wind energy and biogas from stored waste stored is produced. In addition, participants traveled to the Gwangneung Experimental Forest, registered as an international Long-Term Ecological Research for biodiversity study in 1998.

The Landscape Restoration field trip brought participants to Mt. Balwang in the Baekdudaegan Mountain Range where they observed a typical Korean sub-alpine forest ecosystem. Participants also viewed the Daegwallyeong plantation project, which illustrated various stages of forest restoration, including a stand of 20 meter conifer sentinels on land which had been a desert only 40 years ago.

PLENARY SESSION

THE POTENTIAL ROLE OF COMMUNITIES IN SUSTAINABLE FOREST RESOURCES: Chair John Innes, University of British Columbia, introduced the keynote speaker Elinor Ostrom, Indiana University and Arizona State University, 2009 Nobel Prize laureate in economics.

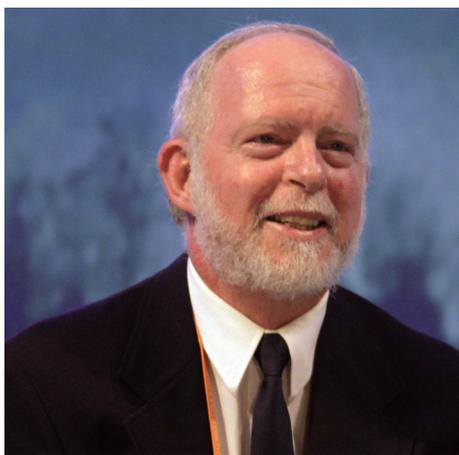
Ostrom addressed the role of communities in sustaining forest resources. Multiple factors create forest conditions, she explained, meaning a simple management model is neither useful nor satisfactory. After stating that studying socio-ecological interactions requires both understanding of dynamic processes and adaptive policies, she advocated avoiding the "paper park," a static solution, as a panacea for conservation.

Ostrom then presented several case studies addressing the following: how alternative systems of governance affect social and ecological conditions; conditions favoring collective action for the provision of resource management; how people



Elinor Ostrom, 2009 Nobel Prize laureate in economics, stressed that it was feasible to be multidisciplinary.

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David Laband, Auburn University

respond to changing ecological and social conditions; and how diverse actors jointly affect forest conditions.

Within these case studies, she highlighted three indicators central to her research: tree density and richness; forest user behavior; and illegal forest activity. She stated that these played out in her case studies as follows:

first, comparing official parks to non-parks, ownership made no statistical difference to vegetative density; second, forests lacking effective law enforcement are more susceptible to degradation and those with effective enforcement mechanisms, including user monitoring, have a higher probability of regeneration; and third, conservation potential is highly dependent upon an effective combination of official and local user involvement.

She highlighted that privately owned forests had significantly less illegal activity when local users were permitted access to forest products, as do government forests where indigenous communities provide monitoring services. She said enabling communication between forest users and authoritative agencies enhances cooperation and conservation results even if sanctions are involved. However, she added, conservation is highest when local users can choose their own sanctioning methods.

Concluding, Ostrom stressed the feasibility of multidisciplinary and underlined the importance of careful designs, proper training and consistency. Innes echoed that it was time natural and social sciences worked together.

SUB-PLenary SESSION

NEW FRONTIERS OF FOREST ECONOMICS:

Moderator Shashi Kant, University of Toronto, announced that IUFRS has founded a new group on forest economics in recognition that "You cannot create new policies based on old science, and we must step up to the plate."

Ostrom spoke about challenges of establishing whether a forest is deteriorating or improving over time. Sharing results from an 11-country study, she recognized that plot-based measurements are widely accepted but expensive, and that foresters measuring plots often lack local forest knowledge. As an alternative she highlighted how long term forest users can also provide information on forest condition, and opined on how and why their assessment of forest health may vary from foresters'.

David Laband, Auburn University, presented on public choice theory, focusing on political rent seeking activities in the forest sector, which see politicians more interested in the short term political and economic gains of the timber industry than the long-term goals of SFM. He also noted that the democracy's inability to account for intensity of voter preference can lead to a weakly motivated majority outvoting a highly motivated minority, and an overall decrease in societal welfare.

Urs Fischbacher, University of Konstanz, spoke about benefits of economic experiments in understanding how long-term forest objectives can be managed. Their value, he said, lies in the ability of the experimenter to control the situation to test for various influences. His models illustrated how conditional

cooperation is possible to preserve common pool resources, but that enforcement can be a potential issue, concluding that institutions that promote cooperation are necessary.

Karl-Gustaf Löfgren, Umeå University, considered economic modeling in forestry to avoid the "Lucas critique," which says that when policies change, one must change the parameters of the model because using previously observed behavior is no longer adequate. He said Finnish forestry, and forestry in general, can largely avoid this problem due to the richness of historical data.

AGROFORESTRY: THE WAY FORWARD: Tony Simons, ICRAF, and Ramachandran Nair, University of Florida, moderated the session.

Nair described development of agroforestry as an approach for: poverty alleviation; attainment of Millennium Development Goals (MDGs); food security; carbon sequestration; combating deforestation and desertification; fodder and fuel-wood supply; and environmental protection. He said the acquisition, effective transfer and feedback of such knowledge from practitioners are important.

Eike Luedeling, ICRAF, discussed a study on the carbon sequestration potential of agroforestry systems in African Sahel. He noted that recent conversion of large areas of Sahelian cropland to agroforestry has shown that adding trees to agricultural areas can be a strategy for sequestering atmospheric carbon, but concluded that climate change adaptation effects might be more important than mitigation.

Fergus Sinclair, ICRAF, spoke on the potential timber supply from agroforestry, saying only a proportion of tree cover has any timber value. After stating that there is a variable level of local knowledge on farm timber, he called for farmers and policy-makers to make explicit tradeoffs between trees and the agricultural landscape.

Shibu Jose, University of Missouri, presented on North American agroforestry practices, claiming they need to overcome many barriers, including a lack of public awareness.

Francisco Javier Silva Pando, University of Santiago, Spain, spoke on silvipastoral systems for forest fire prevention.

Simons summarized the history of agroforestry and listed several future recommendations including looking at agroforestry systems as a way to "bullet-proof" farms in the face of climate change.

In the panel discussion, participants debated PES' role in this field and the optimization of land use in the context of climate adaptation and mitigation needs. Many emphasized the need to attract new researchers and enlist more universities in helping communities with the complex analysis of these issues.



Majja Faehle, University of Helsinki, won the IUFRO poster award for Division 6: Social aspects of forests and forestry.



L-R: IUFRO participants Jung-Hwan Park, Republic of Korea; Frances Seymour, CIFOR; José Joaquín Campos Arce, CATIE; Niels Elers Koch, Forest and Landscape, Denmark; Don Koo Lee, IUFRO President, and Su See Lee, Malaysia.

ENHANCEMENT OF SERVICE LIFE OF WOOD IN AN ENVIRONMENTALLY CONSCIOUS GLOBAL SOCIETY:

Andrew Wong, Universiti Malaysia Sarawak, D. Pascal Kamdem, University of Michigan, and Jöran Jermer, SP Technical Research Institute, moderated the session, and Jermer described the work of the International Research Group on Wood Protection, including a collaboration with IUFRO that made the session possible.

Gerard Deroubaix, Technical Industrial Center for Forest, Wood and Furniture (FCBA), explained that wood product carbon storage is small relative to forest stocks, but there are ways to increase it, including by extending the life of wood products in use, enhancing recycling and using wood products

Wong said ways need to be found to couple wood protection and wood durability, either via wood treatment or using naturally durable species. He reviewed durability of different tropical species and pushed for use of durable wood over non-durable and non-renewable building materials.

Kamdem said durability must involve protecting against biological, physical, chemical and mechanical degradation and noted four ways to address this: proper design; use of naturally durable species; physical-chemical-mechanical modification; and use of wood preservatives. He reviewed development of micronized copper preservatives and noted their application requires careful attention to, *inter alia*, the pH of wood species.

Gyu-Hyeok Kim, Korea University, discussed work looking at fungi capable of degrading wood treated with copper chromium arsenate as a means to safely dispose of waste wood. He said they found eight fungi strains which were deemed effective in rotting the wood and that fungi were more effective in extracting chromium and arsenic than copper.



Francisco Aguilar, University of Missouri, talked about forest products, market shares and consumer preferences.

over other carbon-intensive materials.

Koichi Yamamoto, Forestry and Forest Products Research Institute, said Japan is working to enhance forest carbon via: forest management; wood promotion policies to store carbon in products, such as by requiring 100% wood construction in government buildings of four stories or less; and expanding Japan's forest area.

Henrik Heräjärvi, Finnish Forest Research Institute, presented on the strength of wood-based construction materials compared to other materials. He reviewed the life-cycle of construction timber from forest to disposal, assessing opportunities for improving environmental performance of timber, including increasing the recycling of construction wood.

TECHNICAL SESSIONS

GREEN FOREST PRODUCTS MARKETING AND BUSINESS MANAGEMENT: Richard Vlosky, Louisiana State University, moderated the session.

Bob Smith, Virginia Tech, said the hardwood industry was slow to adopt the "greening" movement, which is perceived as more regulation. He discussed low interest in green products among US consumers, noting that companies know more about forest certification than green building initiatives, and recommended better educating the hardwood industry on these issues.

Lei Wang, University of Helsinki, said corporate social responsibility (CSR), as a western concept has not done well in the Chinese market. He proposed a "harmony" CSR based on a yin-yang theory combining Confucianism and Taoism, inherent to Chinese culture, as a more natural approach.

Masami Shiba, University of Kyoto, examined certification as a marketing tool for Japanese pulp and paper companies. He said 4.3% of Japanese forests are certified, mostly through the Forest Stewardship Council (FSC), but that Japan accounts for roughly 10% of all global chain of custody certificates. He said market demand and societal expectations were key drivers of corporate interest in certification.

Francisco Aguilar, University of Missouri, detailed a study of how product origins, certification agencies, and timber prices affect market shares and UK and US consumer preferences. He noted that, *inter alia*, government agency and NGO certifications were favored in the UK, and that government schemes and temperate forest products were favored in both countries.

Ashlee Tibbets, Oregon State University, reported on interviews with US and Australian architects, engineers, builders and developers probing environmental impacts of building materials. She said interviewees felt the use of timber is a “double-edge sword,” bearing environmental benefits but also historical conflicts over forest practices.

Alison Kriscenski, FSC, emphasized that certification is more than verifying practices, involving a multi-stakeholder governance process for deliberating forest management issues. She highlighted challenges FSC faces in communicating its benefits to consumers and called for research directed to improving FSC’s work.

COMPETING ROLES OF FORESTS IN CLIMATE CHANGE MITIGATION: The session was moderated by Lauri Valsta, University of Helsinki.

Marc Hanewinkel, Forest Research Institute of Baden-Württemberg, presented on predicted harvest volume and carbon stocks in Germany. He concluded that prolonging business as usual would increase carbon stocks through to 2026 on a level above national Kyoto Protocol targets.

Bishnu Chandra Poudel, Mid Sweden University, reported a study on integrated carbon analysis of forest production and utilization in Sweden. She showed that increased temperature will significantly increase forest biomass production and that a large net reduction of carbon emissions is possible if wood replaces concrete and biomass residues replace fossil fuels.



Vanda Santos, FAO, spoke about forestry web education.

Valsta demonstrated case studies integrating SFM, wood products, and biofuels into climate change mitigation. He illustrated a need for integrated forest management and said climate policy must recognize forests provide multiple benefits.

Hans Verkerk, European Forest Institute, discussed European forests’ contribution to climate change mitigation, concluding that European forests

are expected to remain a net sink, but that this sink will decline under baseline conditions and increasing harvest levels could exacerbate decline.

Dodik Ridho Nurrochmat, Bogor Agricultural University, spoke about potential socio-economic and political consequences of carbon sequestration schemes, noting that a strong REDD scheme will have negative multiplier effects on associated industries and communities in timber exporting counties, increasing illegal logging.

Yoon Hyung Kim, Ohio State University, discussed the impact of US and European biofuels policies on forest carbon. He said his model incorporates the dynamic nature of forests to establish the geographic extent of biofuels policy impact. Kim found that the US and EU will lose significantly more forests than predicted by other models, and that Southeast Asia will actually gain forest.

Christine Fürst, Dresden University of Technology, spoke about the land-use modeling tool “pimp your landscape” to help communities and decision-makers choose from scenarios to mitigate climate change in Saxony, Germany. This tool uses a visual matrix to illustrate how various scenarios affect:



IUFRO poster exhibition showing more than 1,100 entries.

effectiveness of climate change mitigation; human well-being; aesthetic value; ecological benefits; bio-resource provision; and economic wealth.

MANAGING THE DATA DELUGE: THE CHALLENGE OF EMERGING TECHNOLOGIES: The session was moderated by Roger Mills, Oxford University. Mills explained the complexity of managing data in the contemporary world. He stressed the need for data-management toolkits built upon a short- and long-term strategy for maintaining, managing and using data.

Margaret Sraku-Lartey, Forestry Research Institute of Ghana, stressed the need for institutional repositories to preserve forestry information. She described the potential for establishing such a repository in her institute, sketched its contents and possible users, and stated that it ought to concentrate on intellectual knowledge, electronic publishing and open access.

Stella Britwum Acquah, Forestry Research Institute of Ghana, introduced an on-line gateway established by the Forestry Research Network for Sub-Saharan Africa (FORNESSA) for exchanging forestry and natural resource information in the sub-region.

Vanda Santos, FAO, outlined the FAO’s web-based forestry education platform, which serves as a repository for forestry education materials, and links to national, regional, and global forest information bases. She said its objective is to improve access to, and exchange of, information and knowledge in forestry science and technology among developing countries in Central America and the Caribbean.

Andrea Wirth, Oregon State University, discussed the Oregon Spatial Data Library, which provides access to GIS data created and managed by the State of Oregon. She reviewed the library’s searching mechanisms and a new “clip, zip and ship” option that allows users to download small parts of GIS layers.

Mills, for Gillian Petrokofsky, Oxford University, outlined many biases that affect decision-making and discussed evidence-based forestry as a corrective. This approach, he said, involves systematic attention to defining our questions, reviewing the relevant evidence, and disseminating of results. He stressed that the review needs to be rigorous, peer-reviewed, transparent, and repeatable.

Randy McCracken, US Forest Service, said the guiding principle of web design should be: “give the users what they want, and don’t create obstacles.” He reviewed, *inter alia*: key concerns for usability, such as preventing user errors; optimizing site architecture; and writing and organizing text appropriately for online users.