IUFRO-FORNESSA Regional Congress Bulletin

A Summary Report of the First Regional Congress of the International Union of Forest Research Organizations (IUFRO) and Forestry Research Network of Sub-Saharan Africa (FORNESSA) and International Tropical Timber Organization (ITTO) and African Forest Forum (AFF) Forest Policy Day

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SUMMARY OF THE FIRST IUFRO-FORNESSA REGIONAL CONGRESS AND ITTO/AFF FOREST POLICY DAY

The First International Union of Forest Research Organizations (IUFRO)-Forestry Research Network of Sub-Saharan Africa (FORNESSA) Regional Congress took place from 25–29 June 2012 in Nairobi, Kenya. Organized by IUFRO and FORNESSA, with support from a number of donor organizations and institutions, the Congress was held on the theme, "Forests and Trees: Serving the People of Africa and the World." It was jointly hosted by the World Agroforestry Centre (ICRAF) and the Kenya Forestry Research Institute (KEFRI). The Congress was held in conjunction with the International Tropical Timber Organization (ITTO)/African Forest Forum (AFF) Forest Policy Day, which took place on 28 June 2012, on the theme, "The Policy/Science Interface for Sustainable Forest Management in Africa."

The Congress focused on issues relating to the conservation, sustainable management, and use of forest and tree resources in the African region, with the overall aim of showing how forest science impacts livelihoods, environmental management and development in Africa. It provided an opportunity for forest scientists, forest managers and policymakers from Africa and around the world to share and exchange information and experiences on some of the critical issues affecting forest and wildlife resources in Africa.

During the Congress, participants convened in plenary and breakout technical sessions organized around six specific themes: forests and climate change; forests and water; forest policy, governance and trade; forest biodiversity and conservation; agroforestry, energy and food security; and education, training and institutional capacity building.

At the end of the Congress, the draft Nairobi Resolution, containing key needs for enhancing goods and services from forests and trees in African landscapes, was presented to participants. Participants were invited to review the draft on the IUFRO website and propose any necessary amendments to it.

This report summarizes the presentations and discussions that took place during the Congress and Forest Policy Day.

BRIEF HISTORY OF THE IUFRO-FORNESSA REGIONAL CONGRESS AND ITTO/AFF FOREST POLICY DAY

IUFRO: Uniting scientists from around the world, IUFRO works to promote the coordination and implementation of international cooperative science on research related to forests and trees to advance the wellbeing of forests and the people who depend on them. The first IUFRO World Congress took place in 1893, with Congresses convening approximately every five years since 1948. Each Congress is organized around a specific theme and serves as an opportunity to discuss, exchange, and disseminate scientific knowledge within and beyond IUFRO's global network of member organizations.

Group photo of participants at the First IUFRO-FORNESSA Regional Congress

Within each five-year period, IUFRO holds at least one regional congress to promote and strengthen forest and tree-related science collaboration. Regional congresses have previously been held in Europe and Latin America.

FORNESSA: FORNESSA is a regional hub of IUFRO, which was established with the goal of supporting and strengthening forestry research in sub-Saharan Africa, and contributing to the conservation and sustainable management of forest resources in the sub-region.

It is a non-profit, non-governmental scientific organization and includes three sub-regional networks: the Association of the Forestry Research Institutions of Eastern Africa, the Forest Research Network of the Conférence des Responsables de la Recherche Agronomique Africains, and the Southern African Development Community.

IN THIS ISSUE

The *IUFRO-FORNESSA Regional Congress Bulletin* is a publication of the International Institute for Sustainable Development (IISD) <info@iisd.ca>, publishers of the *Earth Negotiations Bulletin* © <enb@iisd.org>. This issue was written and edited by Tomilola Akanle Eni-ibukun, Ph.D., Camellia Ibrahim, Suzi Malan and Dorothy Wanja Nyingi. The Digital Editor is Mike Muzurakis. The Editor is Robynne Boyd <robynne@iisd.org>. The Director of IISD Reporting Services is Langston James "Kimo" Goree VI <kimo@iisd.org>. Funding for coverage of this meeting has been provided by IUFRO. IISD can be contacted at 161 Portage Avenue East, 6th Floor, Winnipeg, Manitoba R3B 0Y4, Canada; tel: +1-204-958-7700; fax: +1-204-958-7710. The opinions expressed in the *Bulletin* are those of the authors and do not necessarily reflect the views of IISD. Excerpts from the *Bulletin* may be used in other publications with appropriate academic citation. Electronic versions of the *Bulletin* are sent to e-mail distribution lists (in HTML and PDF format) and can be found on the Linkages WWW-server at <http://www.iisd.ca/>. For information on the *Bulletin*, including requests to provide reporting services, contact the Director of IISD Reporting Services at <kimo@iisd.org>, +1-646-536-7556 or 300 East 56th St., 11D, New York, New York 10022, USA.

ITTO: The International Tropical Timber Agreement (ITTA), 1983, established the ITTO, headquartered in Yokohama, Japan, to provide a framework for tropical timber producer and consumer countries to discuss and develop policies on issues relating to international trade in, and utilization of, tropical timber and the sustainable management of its resource base. The Agreement was renegotiated during 1993-1994, with a successor agreement, the ITTA, 1994, being adopted on 26 January 1994 and entering into force on 1 January 1997. A second successor agreement was then adopted on 7 January 2006 and entered into force on 7 December 2011.

The ITTO's mandate was expanded to focus on the world tropical timber economy and the sustainable management of the resource base, simultaneously encouraging timber trade and improving forest management. The mandate also allows for consideration of non-tropical timber issues as they relate to tropical timber.

AFF: The AFF was established to provide a platform for stakeholders to get involved in independent and objective analysis, advocacy and advice on policy and technical issues relating to the sustainable management, use and conservation of Africa's forest and tree resources. Its ultimate objective is to contribute to efforts to reduce poverty and promote economic and social development.

The AFF operates by facilitating: networking among African forestry stakeholders; development and funding of specific programmes, projects and activities that address priority issues; and advocacy on activities relating to the sustainable management of African forests.

Summary of the Meeting

The First IUFRO-FORNESSA Regional Congress & ITTO/AFF Forest Policy Day included opening and closing ceremonies, as well as: training workshops, the IUFRO board meeting, plenary sessions, technical sessions, poster sessions and the ITTO/AFF Forest Policy Day. This report summarizes, in the following order, the opening ceremony, plenary sessions, technical sessions, the ITTO/AFF Forest Policy Day and the closing ceremony.

Editor's note: IISD Reporting Services did not cover the training workshops, IUFRO board meeting and poster sessions that were held during the IUFRO-FORNESSA Regional Congress.

OPENING CEREMONY

On Tuesday, 26 June, Ben Chikamai, Director, Kenya Forestry Research Institute (KEFRI), opened the Congress and welcomed participants and dignitaries.

Victor Agyeman, Chairman of the Forestry Research Network of Sub-Saharan Africa (FORNESSA), introduced his organization as a non-profit, non-governmental organization open to forestry and forest-related organizations in Africa. He urged participants to cooperate in building FORNESSA as a vibrant network.

Tony Simons, Director General, World Agroforestry Centre (ICRAF), thanked the Government of Kenya for its considerable support to ICRAF. He noted the significance of holding the IUFRO-FORNESSA Congress in Africa, highlighting that it is a continent facing significant forest and land degradation challenges.

Niels Elers Koch, President, International Union of Forest Research Organizations (IUFRO), highlighted that the Congress aims to give African forest scientists the opportunity to exchange information, form new alliances and projects, and forge the way forward in forest management.

Noah Wekesa, Minister for Forestry and Wildlife, Kenya, emphasized the need to eliminate forest degradation and deforestation, and outlined some of the challenges to building a just and progressive society while sustainably utilizing natural resources.

PLENARY SESSIONS

On Tuesday morning, Emmanuel Ze Meka, Executive Director, International Tropical Timber Organization (ITTO), chaired this plenary session. Tony Simons presented on landscape approaches to managing forests and tree resources in the future and underscored the social and economic value of trees. On key challenges facing forest resources, he highlighted, *inter alia:* land degradation and declining soil fertility; land and tree tenure insecurity; and lack of coherent and rigorous land health surveillance science.

Simons further noted that operationalization of landscape approaches in ecosystems requires consideration of the interaction between vegetation, farmers and the health of the land. He highlighted the Landscapes for People, Food and Nature Initiative, facilitated by EcoAgriculture Partners, as a good example of this approach.

Emmanuel Chidumayo, African Forest Forum

The Wednesday morning plenary session was chaired by Godwin Kowero, Executive Secretary, African Forest Forum (AFF). Addressing participants on forest conservation in the light of climate change, Emmanuel Chidumayo, AFF, said climate change affects tree and forest regeneration and production. He reported that pre-adult trees are more vulnerable to climate change than mature ones, and that the designation by the International Union for Conservation of Nature (IUCN) of species status based solely on adult species is thus unsuitable in regards to climate change.

Elaborating on the "climate refugia" concept, which refers to areas where isolated or relict populations of former widespread species thrive, he cautioned that 80% of current protected areas are outside favored co-habitats, and warned that expanding protected areas to include favorable habitats in a "skeptical" socio-political environment will be "a feat of Nobel prize proportions."

In the subsequent discussion, participants commented on the roles and responsibilities of local people and the issue of financial resources for forest conservation. Chidumayo argued that it is important to recognize that natural, financial, human and information-related wealth exists in Africa and can be invested in forest conservation and climate change mitigation and adaptation.

The Friday morning plenary session was chaired by Niels Elers Koch. Jerry Vanclay, Australia, presented a global perspective on incentives for small- and large-scale forests that empower commercial forestry initiatives. He stressed that forests should provide an annual income through added benefits, such as rainbow water, medicinal plants, ecotourism, streams and rivers, biodiversity, green exercise, fodder and

The audience during plenary

building materials to enhance goods and services. He identified the key issues of tenure, regulations and incentives, to generate renewable environments and economies.

Humphrey Mwaniki Ngibuini, Tanzania, provided an overview of the commercial forestry perspective, discussing management issues, incentives, constraints and challenges. Noting that forests often receive low priority in national budget processes, he discussed regulatory measures and financial resources that could support small- and large-scale growers. Among these he highlighted: addressing land tenure issues; resolving incoherent policies; providing tax incentives; linking small growers directly to markets; renewing government support for training and extension service; and developing policy and regulatory frameworks for carbon trading.

In the subsequent discussions, one participant commented on the issue of financing, and noting that grants from donors eventually run out, asked what incentives can be provided at the local level to ensure sustainability. Ngibuini provided examples of tree producers linked directly to markets and buyers, who then reinvested funds in their plantations. Responding to a question on REDD+ (reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable use of forests and enhancement of carbon stocks), he cautioned that the mechanism is too complex, and what is needed is "local schemes, that lead to local outcomes, and are funded locally."

TECHNICAL SESSIONS

From Tuesday to Friday, participants gathered in breakout technical sessions to consider a range of issues relating to conservation, and the sustainable management and use of forest and tree resources in the African region. During discussions, participants were invited to consider two questions: what is needed to enhance goods and services from forests and trees in African landscapes; and what are the implications for forest research and governance in Africa?

IISD Reporting Services covered 23 out of the 34 sessions. The presentations and discussions during these 23 technical sessions are summarized below.

OVERVIEW ON CLIMATE CHANGE: On Tuesday afternoon, Markku Kanninen, Finland, moderated this technical session. Gabriel Akinyemi, Nigeria, presenting on climate change and sustainable forest management (SFM) in Nigeria, identified strategies for encouraging SFM, including silvopastoral development, afforestation, reforestation, restoration of degraded land, and improved silvicultural techniques. He highlighted that SFM requires consideration of the administrative, legal, technical, economic, social and environmental aspects of conservation and use of forests, as well as the involvement of all stakeholders.

Ernest Foli, Ghana, described a pilot project on adaptation of forests and people to climate change, implemented in Ghana's Offinso District. He identified potential adaptation strategies, including: using community-based fire prevention and control to address forest loss due to wildfire; restoring degraded lands using agroforestry practices and planting of indigenous tree species; domesticating medicinal plants; promoting alternative livelihood schemes; and increasing crop diversification with drought-resistant varieties.

Steve Makungwa, Malawi, described a pilot project on adaptation of forests and people to climate change, implemented in Malawi's Lake Chilwa catchment area. Noting the interdependence of water, forestry, agriculture, fisheries and ancillary human activities, he underlined the need for a holistic adaptation approach. Makungwa identified specific adaptation strategies, including: improving public health surveillance; promoting community-based water and sanitary programmes; and strengthening public health and awareness.

Gérard Gouwakinnou, Benin, outlined some of the ecological characteristics and implications for habitat sustainability models for *Sclerocarya birrea birrea*, or Marula tree, in the African Savannah. He explained that habitat sustainability models are now being used to explain or predict species movement caused by climate change.

Fobissie Kalame, Burkina Faso, presented a study that examined local knowledge and perspectives of vulnerability and adaptation to climate change in his country's forest ecosystem services. He outlined some lessons learned from the study, including that: livelihood diversification is important for motivating the implementation of adaptation measures in forestry systems; and science-based adaptation strategies can be guided by current local adaptation strategies.

Anne-Marie Tiani, CIFOR, discussed her organization's project, Climate Change and Forests in the Congo Basin: Synergies between Adaptation and Mitigation, and said that although REDD+ is an option for reducing deforestation, sound adaptation and development policies and practices are needed to ensure that the vulnerability of local communities is not further increased.

In the subsequent discussion, participants commented on: the importance of devolving capacity building to the local level and sharing local best practice; and the need to identify and share information on the losses caused by poor forest management with local communities.

AGROFORESTRY: SCIENCE, POLICY AND PRACTICE: On Tuesday afternoon, Björn Hånell, Sweden, moderated this session. August Temu, ICRAF, presented on

Anne-Marie Tiani, Cameroon

future trends for forest and tree resources, focusing mainly on pressures on woodlands and dry forests. He argued that there will be more trees on farmland in the future because of: urban migration; rising demand for tree and fiber products; conservation efforts in response to preserving ecosystem services and fostering green buffer zones; expanding cultivation of tree crops; and the combined actions and local innovations of individual tree farmers.

Achille Ephrem Assogbadjo, Benin, presented research on wild edible trees conducted in Benin's three climatic zones. His study: assessed species richness; identified culturally important species; and investigated socio-economic factors that support local preferences for certain species.

Joseph Hitimana, Kenya, presented on *Calliandra calothyrsus*, a multipurpose fodder species that is popular among dairy farmers due to its high nutritional value and ability to grow in a diversity of ecosystems. He described a pilot study with 15 farmers aimed at developing fodder biomass estimation models for the area.

Samson Gwali, Uganda, discussed tree diversity and abundance on small-scale coffee farms. He explained how the proximity of farms to non-degraded natural forests influences higher species diversity, for instance with farmers collecting and planting wild coffee to tackle coffee wilt. Gwali also illustrated how land tenure insecurity influences people's preferences to intercrop fruit trees, which produce returns over the short term.

Nathalie Ewane Nonga, Cameroon, highlighted how cacao agroforestry provides opportunities for diversifying farm production and improving household livelihoods. On ecosystem services, she illustrated how trees planted for shade have higher above-ground carbon storage, and stressed that science and policy should pay more attention to agroforestry systems developed by farmers.

Chemuku Wekesa, Kenya, presented a study on three varieties of the Acacia Senegal tree and their gum yield, which aimed to examine the potential production of gum arabic in areas where the tree has been underutilized. He concluded that new management guidelines for gum production provide opportunities to develop alternative incomes and reduce poverty.

Following the presentations, discussions focused on agroforestry policy, policy gaps, and how to make a political case for agroforestry. On enhancing goods and services from forests, participants stressed that agroforestry requires inter-sectoral collaboration. Temu observed that existing sectoral policies should be modified to better integrate agroforestry. Additionally, participants stressed that national capacities for agroforestry research and development must be enhanced and put into practice. On the implications for forest research and governance, one participant stressed that economic considerations were critical, and that while much research is conducted, not enough work is done on the commercialization side. Another participant argued that not enough has been done to integrate forests and trees into national budgets.

Jolanda Roux, South Africa

NEW FRONTIERS IN FOREST HEALTH: Jolanda Roux, South Africa, moderated this session on Tuesday afternoon. In her presentation on plantation tree health in Africa, she reported a dramatic increase in the number of non-native forest plantations in Africa, noting that forest management requires strong collaboration, long-term vision with research for sustainability, improved quarantine to control pathogens and pests, and investment in capacity building.

Cosmas Abengmeneng, Ghana, reported on the effects of stem dieback disease on the Kapok tree in his country, showing that resistance to the disease varied among ecological zones and that survival rates increased with the age of progenies.

Bernard Slippers, South Africa, discussed the potential of genomics for tree health research, remarking that the reduction in the cost of DNA sequencing and the revolution in marker development have allowed the a number of species to be identified that were previously thought to be homogenous. He added that the sequencing of bacterial pathogens has increased the understanding of toxic genes, their location in the genome and infection mechanisms.

Mike Wingfield, South Africa

Tod Ramsfield, Canada, presented on DNA-based detection of exotic pathogens, highlighting a variety of molecular genetic methods, such as PCR-based diagnostics, DNA barcoding and sequences, DNA macroarrays and microarrays, and next generation sequencing. He said PCR markers were ideal for pathogens that are difficult to identify using culture-based morphological techniques, and added that DNA-based methods have increased the chances of eradicating pathogens.

Luke Jimu, Zimbabwe, said *Teratosphaeria* stem canker is one of the most virulent diseases of Eucalyptus in Africa, producing lesions that affect timber strength and quality. He reported that although the disease was first isolated in South Africa, the pathogens are endemic to Asia and South America, and that the disease has increased its host range and widened its geographical scope.

STRATEGIES FOR FOREST PLANTATIONS DEVELOPMENT: On Tuesday afternoon, Mike Wingfield, South Africa, moderated the session. Dominic Gondwe, Malawi, presented on potential farmer-friendly techniques to utilize an indigenous fruit tree species through seed desiccation, emphasizing the need for further research on seed behavior. He said optimum germination can be obtained after partially drying the seed, and stressed the importance of improving awareness of the edible crop species.


Mahamane Larwanou, Niger

Mahamane Larwanou, Niger, elaborated on the variability of growth and provenance of selection of the *Acacia nilotica* (scented-pod Acacia), with the objective of using the trees for land rehabilitation purposes. He described the tree's ecological preferences for wooded grassland, savannah and dry scrub forest, as well as riverine habitats and seasonally-flooded areas.

Shalom Addo-Danso, Ghana, discussed a study on the effects of mixed plantations of the *Nauclea diderrichii* (African peach) and the *Pericopsis elata* (African teak), and concluded that although the study did not propose any significant difference on the growth and productivity of the planting regimes, mixed-species plantations can achieve diverse economic, silvicultural and ecological goals.

Gisèle Sinasson, Benin, spoke about the ecology and structure of private teak plantations in her country. Identifying six undergrowth plant communities and describing their growth characteristics, she concluded that the undergrowth component can be an indicator of different productivity levels of teak plantations.

On the estimation of the genetic diversity of kapok trees, *Ceiba pentandra,* an economically-important species mainly used for plywood production, and the natural reasons for dieback in these species, Cosmas Abengmeneng, Ghana, said the high diversity within populations may be caused by insect pollinators and human intervention.

Participants identified improved understanding of seed germination, plant genetics and biological characteristics, as well as the need for baseline information on silvicultural management practices, as critical aspects that will enhance goods and services from African forests. They concluded that some implications for forest research and governance in Africa should be: developing improved technologies that capture added value of forests; developing research techniques for the medium and longer term; and encouraging forestry practices on marginal lands.

FOREST HYDROLOGY AND ECOSYSTEM SERVICES: On Tuesday evening, Jean-Michel Carnus, France, moderated this session. Jefferson Hall, Panama, discussed the importance of the "sponge effect" in forest soils for the absorption, storage and release of water during the dry season. He remarked that this has benefits for biodiversity and carbon sequestration, and that studies of carbon across land uses have shown that native species are more efficient at sequestering carbon.

Bilassé Zongo, Burkina Faso, reported on the importance of protected areas in regulating water quality and micro-algal structure of temporary ponds in his country. He said that ponds inside these reserves have a higher water quality due to the abundance and diversity of riparian plants that retain organic matter and nutrients from entering the pond and of aquatic fauna, which graze on the macro-algae. He added that biodiversity has an important role in maintaining ecosystem health.

Syed Ashraful Alam, Sudan, presented an evaluation of a water balance model for estimating mean annual evapotranspiration, and surface runoff and drainage in Acacia-dominated woodland vegetation in the Sudanese gum belt region. He reported that the area has suffered from considerable degradation but that woodland restoration may improve soil water conditions.

John Otuoma, Kenya, discussed the effect of watershed degradation on hydrological functions in South West Mau, an important water tower in Kenya. He reported that watershed degradation has raised ecological and economic concerns among the Nile riparian nations due to increased sediment loading into wetland ecosystems of Lake Victoria. He showed that forest degradation has not affected quantity of rainfall, just its distribution.

REDD+ AND REFORESTATION ACTIVITIES IN AFRICA: Dominic Blay, Ghana, moderated this Tuesday evening session on REDD+ and reforestation activities in Africa. John Stanturf, USA, described the forest landscape restoration approach, stating that it is a viable approach to reversing deforestation and forest degradation. He explained that REDD+ and other payments for ecosystem services (PES) can be used to more adequately fund this approach.


Dominic Blay, Ghana

Abdon Awono, Cameroon, gave an overview of two REDD+ projects in Southern Cameroon, one by the government and the other by a non-governmental organization. He outlined some lessons learned from the projects, including that: local communities often have excessively high expectations from REDD+, regarding it as an opportunity to raise income and restore communities; local communities need more capacity building and training; and the national framework should be linked to REDD+.

Anders Malmer, Sweden, described a multi-disciplinary research project in Burkina Faso that considered the linkages between biophysical and socioeconomic processes at the landscape scale, focusing specifically on the value of trees in complex landscapes. Highlighting the importance of organic matter management, he said the project found that maintaining tree densities significantly contributes to soil carbon storage, provides other co-benefits of soil organic matter, and also may prevent degradation.

Malmer, on behalf of Steffen Lackmann, USA, presented a study that assessed baselines for carbon in a Guatemalan national park, as well as the effects of fires. He noted that simply conserving forests may be insufficient, particularly where communities rely on such forests for their livelihoods. He underlined the need to actively restore and manage forests, explaining that restoring forests in mixed and more intensively managed landscapes may not only store carbon, but also reduce fire risk.

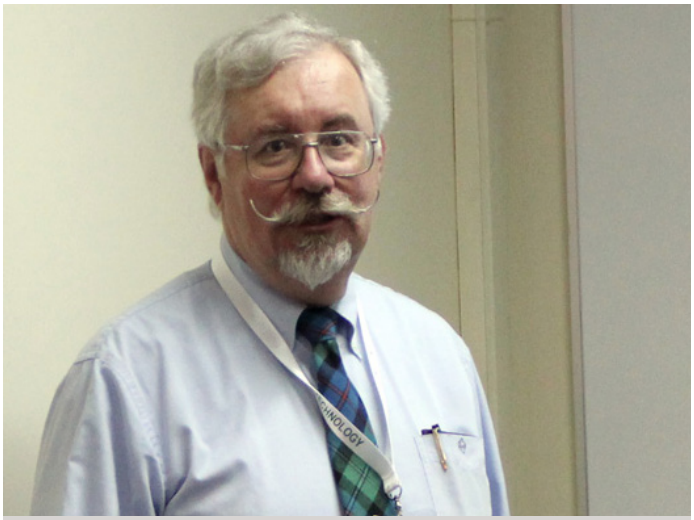
In the subsequent discussion, participants addressed the proposed questions. On what is needed to enhance goods and services from forests and trees in African landscapes, one participant proposed ascribing a monetary value to forests, which should go beyond the value of timber and include intangible uses or services. Another participant highlighted the need to design projects in a manner that will show communities the benefits of conservation over cultivation or degradation.

COMMUNITY-BASED RESOURCE MANAGEMENT: Richard Guldin, USA, moderated this session on Tuesday evening. Mirjam Ros-Tonen, the Netherlands, suggested interactive governance as a holistic approach to analyzing conflicts in Ghana's high forest zone. She identified the implications of complex governing systems, such as loss of access and rights for local population groups, lack of adequate compensation, and conflicts. Ros-Tonen called for further research on conflict and institutional dynamics, and urged understanding of the context of conflicts and mediation processes before defining interventions.

On the management of Ghana's modified taungya system and way to address deforestation, Thomas Insaidoo, Ghana, elaborated on the challenges, such as: time lapse in income from canopy closure to timber harvesting; insecurity due to lack of signed agreements; lack of benefit-sharing among individual farmers; distance from village to modified-taungya-system plot; and the fact that farmers are not allowed to plant cassava.

Josephine Musyoki, Kenya, presented on the determinants of household decisions to join community forestry associations, recommending that the Kenyan Government should seek ways to encourage youth participation in order to enhance sustainability of participatory forest management activities and ensure secure land tenure.

Joram Kagombe, Kenya, shared experiences from participatory forest management projects in Kenya, relating changing forest management strategies and community livelihood fortunes, as well as the contributions of participatory forest management to improve forest condition and community livelihoods. Among the benefits, he anticipated: enhanced markets for forest products; tapping into PES; benefits from ecotourism; and revenue sharing between community forestry associations and the Kenya Forest Service.



Richard Guldin, US Forest Service

Rukia Kitula, Tanzania, explored management practices of the mangrove forests in the Rufiji delta of Tanzania, emphasizing crucial strategies to enhance management practices, including facilitating communication, devising rules and addressing rule infractions, and accountability.

In the ensuing discussions, participants commented on unrealistic expectations of poverty alleviation by forestry, and the influence of external factors that drive forestry in Africa. On participatory forest management failures, participants identified loss of capacity and false perceptions of forest management. One participant suggested long harvesting cycles of plantations as problematic, and another participant stressed the need for a partnership approach and conflict resolution in forest management.

MULTIPURPOSE FOREST TREE SPECIES MANAGEMENT: On Tuesday evening, Yousry El-Kassaby, Canada, moderated this session. Luke Jimu, Zimbabwe, presented research assessing size class distribution, regeneration and structural diversity of *Prunus Africana* (Red stinkwood). Explaining that the results of the research showed poor regeneration at all sites, which partly explains the rarity of the species, Jimu concluded that the findings can help guide future conservation strategies of the species.

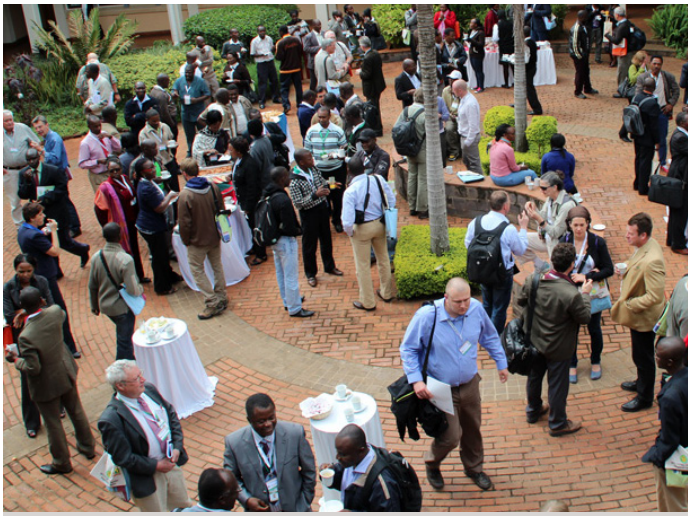
Gérard Gouwakinnou, Benin, presented the outcomes of an ethnobotanical survey and quantitative ecological study of *Prosopis africana* (African mesquite), in the context of the "W" Region Biosphere Reserve. He recommended that the species be introduced into small-scale agroforestry, not only as a strategy for conserving the species, but also because of its value as firewood, fodder and medicine, and its capacity to improve soil fertility.

Royd Vinya, Zambia, described research on *Ipomoea batatas* (sweet potatoes) and *Sesbania sesban* (Egyptian hempwood). He summarized how sweet potatoes influence phosphorus dynamics in acidic soils and can enhance the ecological performance of hempwood-improved fallows. Vinya concluded that the results could provide a biologically sound and affordable alternative to phosphorus fertilizers.

Adejoke Akinyele, Nigeria, outlined the various methodologies employed in the establishment of a protocol for *in vitro* propagation of *Parkia biglobosa* (African locust bean). She explained how her research determined plant hormone concentrations that induce higher shoot proliferation and multiplication.

Mamo Kebede, Ethiopia, described a study on floristic and structural diversity of vascular plants in a threatened Afromontane forest in Wondo Genet, Ethiopia. He said the research also examined regeneration characteristics and the soil seedbank. Kebede concluded that this forest remnant contains substantial plant species composition and diversity, including nine endemic species, adding that ethnobotanical studies are needed.

BUILDING NATIONAL SCALE MONITORING SYSTEMS FOR DETECTING CHANGES IN FORESTED AND TREE LANDSCAPES IN AFRICA: David MacFarlane, USA, moderated this session on Wednesday morning. In his presentation, he discussed generalized, biologically-motivated biomass equations for nationally-consistent and locally-accurate forest carbon inventories across diverse landscapes.



Participants networking during a break from the presentations.

He described the use of allometric equations to measure the amount of carbon in trees. MacFarlane then identified two competing issues of consistency and local accuracy, explaining that while general equations should be used to achieve consistency over large regions or nations, locally-derived estimates are more accurate, because trees of the same species do not have the same mass in different areas. He concluded that national consistency can be achieved through the use of generalized biomass equations.

David Skole, USA, presented on the linkages between carbon, forests and livelihoods, noting the impact of land use change on carbon emissions. Recalling that the Millennium Development Goals established two inter-related objectives of poverty alleviation and environmental sustainability, he asserted that simply managing for carbon is not sufficient and that the agenda must focus on smallholders in rural areas. Skole described various approaches such as: carbon sequestration through reforestation, sustainable land use, agroforestry and related livelihood activities; and reforestation, sustainable land use and agroforestry as climate change adaptation strategies.

Skole showed a video presentation on the tool for measuring, reporting and verifying the carbon management of forests, which explained that the tool was designed for a wide variety of uses such as implementation of international REDD+ projects, and the monitoring and evaluation of development projects. The video presentation outlined the functions and uses of the tool, and also explained how it can be applied.

Shem Kuyah, ICRAF, compared destructive and non-destructive methods for calibrating regional tree biomass equations in tropical agricultural landscapes. He highlighted some of the disadvantages of traditional approaches of allometric equations, such as destructive sampling. Kuyah then described the functional branch analysis approach, explaining it provides a viable non-destructive approach for building species-specific equations for estimating above-ground biomass in trees.

Vincent Oeba, Kenya, outlined some temporal-spatial growth and yield models for simulating large-scale changes in plantation forests in Kenya. He explained that plantation forestry has become a dominant feature of tropical landscapes because of timber supply, recreation, firewood and increase of carbon stocks. Oeba highlighted that growth and yield models are important because well-planned and managed plantations can efficiently satisfy the demand for various products such as timber, pulp, fuelwood and fiber.

INVASIVE ALIEN SPECIES: ECONOMIC AND ENVIRONMENTAL IMPACTS: On Wednesday morning, Clement Chilima, Malawi, moderated this session. Paul Bosu, Ghana, reported that *Broussonetia papyrifera* (the paper mulberry) is invasive in Ghana and has impacted the natural regeneration of indigenous species. He showed that physical removal of the plant by cutting, followed by spraying the stump with herbicides, can potentially stop regeneration of paper mulberry in favor of indigenous species.

John Richard Mbwambo, Tanzania, presented the potential threat of *Castilla elastica* (Panama rubber tree) to plant diversity in a lowland tropical rainforest of Tanzania. He referred to a study on the Amani botanical garden in which forest disturbance was shown to enhance the abundance of exotic plants and thereby increase the loss of lowland tropical rainforests.

Kenneth Mutitu, Kenya, discussed *Thaumastocoris peregrinus* (the invasive winter bronze bug), a pest that harms eucalyptus trees in Africa, remarking on its rapid proliferation in the Southern hemisphere and current spread into the Northern hemisphere. He reported that field and green house experiments have shown biological control using the parasitic wasp, *Cleruchoides noackae*, to be the most appropriate and sustainable management option.

Kenneth Mutitu, Kenya.

Emmanuel Suka, Cameroon, reported on the rescue of non-timber forests from *Chromolaena odorata* (Siam weed), an invasive weed in South West Cameroon, through affordable biological control and nonchemical methods. He reported that his research has shown that manual routine weeding and elimination of offshoots have greatly eliminated the weed in the region, rehabilitated and stabilized forests, and increased economic development.

Abiodun Oladoye, Nigeria, showed that the forest of the University of Agriculture, Abeokuta, is diverse in species composition, although diversity of shrubs and sedges is less than herbs and grasses. He noted that the high species richness recorded reflects the heterogeneous distribution pattern in species composition and might be due to climatic factors.

Gabriel Muturi, Kenya, discussed the effects of *Prosopis* spp. tree litter on the umbrella thorn, *Acacia tortillis,* in the Turkwel riverine forest in Northern Kenya. He reported that in areas where *Prosopis* are dominant, the ground is bare and seedling density is high, whereas in areas with Acacia dominance, the herb cover is high although fewer seedlings are found. He added that while *Prosopis* seedlings can be found among Acacia canopy areas, the inverse is not true, concluding that *Prosopis* litter reduced germination of Acacia seedlings.

Gabriel Muturi, Kenya

ON-FARM TREES IN TRADITIONAL LAND USE SYSTEMS IN TROPICAL AFRICA: BETWEEN TRADITIONAL PRACTICES AND NEW CHALLENGES: On Wednesday morning, this session was moderated by John Parrotta, IUFRO. Samson Gwali presented on traditional shea tree use and conservation practices, outlining different rituals, taboos and traditions. He stressed that voluntary traditional tree conservation practices are effective, and should be recognized and integrated into formal conservation policies, which currently tend to be top-down.

John Parrotta, IUFRO

Coert Geldenhuys, South Africa, reported on integrated multiple use resource management of Miombo woodlands in Mozambique and Zambia. He noted that local resource management practices were often ignored, and mixed-species woodlands were often mistakenly perceived as degraded, leading to clearing for the production of alien single-species stands. Geldenhuys illustrated that in well-managed slash and burn agriculture, biodiversity and productivity recover rapidly.

Samson Gwali delivered a second presentation on shea trees, focusing on local nomenclature of ethno-varieties based on fruit and nut characters. He reported that his study identified 44 ethno-varieties in three farming systems, and that while it showed no congruence between morphological variations and folk classifications, there were plans to conduct biochemical tests. Gwali explained that since shea has substantial commercial value, researchers are working with local farmers to identify varieties for plant selection and breeding purposes.

Following presentations, participants discussed how the case studies illustrated: linkages between traditional knowledge and livelihoods; dynamic land-use systems of local communities; and the need for a shift in perceptions and values in conservation policy.

FORESTS, TREES AND LIVELIHOODS: This session was moderated by Tuija Sievänen, Finland, on Wednesday morning. Zenebe Mekonnen Gebret Sadik, Ethiopia, discussed tree planting strategies used in farming systems for energy and food security in the highlands of Ethiopia, emphasizing that 90% of fuel wood and farming implements are produced by trees on farms, contributing to 30% of household incomes. He emphasized the need to resolve tenure disagreements and relieve the burden of women in rural farming practices.

Dieunedort Njankoua Wandji, Senegal, presented on the economic contributions by forests to Senegal's national income, urging that ecosystem services are included in national audits, including water, biodiversity and soil conservation, ecotourism, and cultural and spiritual values.

Presenting on the ecological and socio-economic importance of drought-resistant *Balanites aegyptiaca* (desert date) in the Tahoua region of Niger, Mahamane Larwanou, Niger, stressed its importance in contributing to livelihood strategies during critical periods through harvesting a wide variety of products from leaves, flowers and fruits as well as high quality wood. On management strategies he suggested the need for further research to improve goods and services by the species, especially through domestication and value addition.

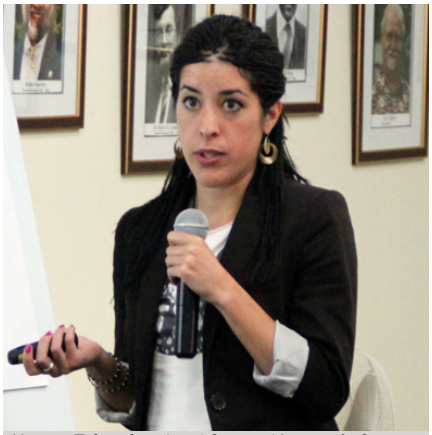
Discussing the environmental and economic practices that led to degraded ecosystems of *Gnetum* spp. in Cameroon, Abdon Awono, Cameroon, proposed curbing harmful harvesting techniques, including uprooting, cutting lianas at soil level, exclusive cutting of mature leaves, felling trees, or cutting large branches. He recommended policies that result in improved production practices.

Victor Kemeuze, Cameroon, emphasized the role of dry forests in the livelihood and ecological services of Cameroon, describing 143 tree species that produce a wide range of products including tree gum, shea butter, fruits, nuts and wood products. He underscored the co-benefits of dry forests in mitigating climate change threats, recommending improved planning and forestry services at national level.

During the ensuing discussions, participants deliberated on the lack of access to markets and focused research on market failures. On policy aspects, one participant emphasized the need to understand the added value of forest ecosystem services, and called for macro-level research and standardization of methodologies across studies in Africa to improve credibility and comparability.

EDUCATION, TRAINING AND CAPACITY BUILDING: On Thursday morning, Piotr Paschalis-Jacubowics, Poland, moderated the session on education, training and capacity building. August Temu discussed the reality, challenges and opportunities of forestry education and research in sub-Saharan Africa, highlighting that forestry institutions are often small, understaffed and lacking in capacity. He called for institutional reform, which should include: revising research strategies; retraining educators and researchers; developing new learning resources; teaching some aspects of forestry at the school level; including basic forestry principles in the curricula of all universities and technical institutions; training specialists who can manage major forests and other enterprises; and increasing the investment in technical-level training.

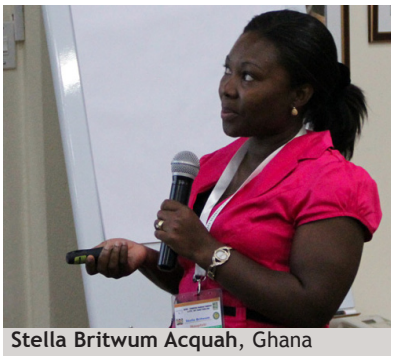
Marta Zdravkovic, African Network for Agriculture, Agroforestry and Natural Resources Education, described a study that examined forestry education in sub-Saharan Africa, with a particular focus on the dynamics of tertiary forestry education in the sub-region. She explained that the study looked at a variety of issues, including enrolment and graduation, the forestry curricula, and the skills and competencies of staff. She said the study showed, among other things, the need for a change in the forest curricula of most of the institutions studied.



Marta Zdravkovic, African Network for Agriculture, Agroforestry and Natural Resources Education (ANAFE)

Joe Cobbinah, Ghana, outlined the potentials and benefits of tropical African plants for the poor, including food, fiber, fuel, medicine, and employment. Noting the decline of plant resources and the dependence by forest communities on these resources, Cobbinah highlighted the importance of improved access to information, asserting that this would

improve conservation, management and earning opportunities for the poor. He introduced the Plant Resources of Tropical Africa (PROTA) initiative, which he said aims to collate and disseminate information on tropical African plants.


Stella Britwum Acquah, Ghana

Stella Britwum Acquah, Ghana, described a PROTA study to foster the research agenda on plant resources of tropical Africa, which involved analyzing 1530 student theses submitted to the faculties of agriculture at three Ghanaian universities with the aim of determining the research priorities of these faculties. Acquah said the study showed that the research of these universities are largely confined to five crops, namely cassava, maize, cowpea, tomato and sweet potato, on which information is already widely available. She therefore highlighted the need for diversification and for extending research to underutilized species with a high potential for addressing nutritional deficiencies, hunger and poverty in Africa.

In his presentation on using case studies to enhance capacity in managing forest genetic resources, Per Rudebjer, Bioversity International, highlighted the need to: integrate forest genetic resources conservation and diversity across a range of courses, rather than create specific courses; introduce forest genetic resource concepts in specific lectures or seminars within courses; and train teachers on how to cover forest genetic resources in their courses. Rudebjer introduced training materials developed by his organization, which contain case studies on topics related to forest genetic resources, and which aim to increase understanding of how diverse and complex forest and other tree-based ecosystems can be sustainably managed.

In the subsequent discussion, participants suggested: developing a global database of all forest-related theses; providing forestry training to children; and establishing professional forestry associations.

SUSTAINABLE DEVELOPMENT OF NON-WOOD FOREST PRODUCTS FOR RURAL LIVELIHOOD AND FOREST CONSERVATION: On Thursday morning, Andrew Oteng-Amoako, Ghana, moderated this session. He presented on non-pressurized preservation methods and treatments for wood, bamboo and other forest products. Oteng-Amoako also elaborated on equipment that can be constructed using limited resources in rural areas. He concluded that such treatment methods can increase the service life of products, reduce pressure on timber species and contribute to SFM.

Edith Daboue, Burkina Faso, presented a study on the socio-economic uses and regeneration of *securidaca longepedunculata fres* (violet tree), a threatened medicinal plant. She explained that the plant has high economic and social value, and has uses in pharmacology, food, energy, construction, agriculture and cultural ceremonies. She noted that overexploitation of the roots represent a conservation challenge, and recommended that traditional healers be engaged in the sustainable management of the plant.

Paul Donfack, Cameroon, reported on the multiple uses of Raffia palm and its value in purifying water and providing habitat for biodiversity. He outlined a number of anthropogenic threats to the species, including clearing for urbanization and agriculture, and the impact of excessive tapping for palm wine. Donfack explained how Raffia forests were locally undervalued, and how this, combined with the migration of youth to cities, led to Raffia plantation abandonment.

Stephen Lartey Tekpetey, Ghana, described a study on the physical, thermal, and phytochemical properties of *Bambusa vulgaris* (bamboo) and procedures for enhancing its processing. He reported that bamboo is currently underutilized, and concluded that information gathered could help in establishing commercially-viable and environmentally-sustainable bamboo-based industries in the country.

During the discussion, participants highlighted the need to link non-wood forest products to entrepreneurs and transmit technical knowledge to the policy arena so that resources can be allocated for product development. Daboue stressed that policymakers and practitioners should support joint management of forests with local communities.

SILVICULTURAL SYSTEMS: EFFECT OF LOGGING ON FOREST REGROWTH: On Thursday afternoon, Woodam Chung, USA, moderated this session. Gloria Djaney Djagbletey, Ghana, presented a study conducted in the Bobir Forest Reserve, which aimed to: assess vegetation carbon stock recovery after selective logging in a moist semi-deciduous forest in Ghana; and evaluate carbon stock accumulation over time. She reported that forests can recover naturally with respect to carbon stocks, and that logging enhances carbon stock accumulation.


Arthur Arnold Owiny, Uganda

Arthur Arnold Owiny, Uganda, described a study that aimed to determine the incidence and speed of tree community recovery with natural succession after anthropogenic disturbances. He concluded that the study, which was conducted in Uganda's Kibale National Park, showed that although there was evidence of tree community recovery, the speed of recovery was slow. He highlighted that the study demonstrated that human intervention can however speed up the recovery of tropical forests.

Emeline Assédé, Benin, presented a study on the effects of silvicultural regimes on tree populations, which analyzed the natural stand structures of Senegal badamier, or *Terminalia macroptera* and dry zone cedar, or *Pseudocedrela kotschyi*, both West African medicinal plants, to help plan management strategies for both species. She outlined that although an ideal management strategy for the species was not formulated, the study suggested that: *Pseudocedrela kotschyi* would likely present better evolution in pure stand; and although stand regime appears to be without effect on *Terminalia macroptera*, pure stand will likely contribute to its best development.

David Ochanda, Uganda, described the results of a project that studied the effects of logging on forest regeneration in the Kibale National Park, including that: the Kibale Forest seems

to be rapidly regenerating; light and selective logging has little impact on forest regeneration; and well-managed selective logging can encourage regeneration and sustain forest growth.

Akwasi Duah-Gyamfi, Ghana, described a study conducted in Ghana's Pra-Anum Government Forest Reserve, which aimed to determine the status of natural regeneration in logged and unlogged forests over a three-year period, and assess the changes in diversity of the logged forest environment over time. He presented some of the results, including that the areas disturbed by logging appear to be suitable for timber regeneration.

Edward Wiafe, Ghana, presented a study conducted in Ghana's Asenenyo River Forest Reserve, which aimed to evaluate the dynamics of canopy recovery of a rainforest after logging. He highlighted findings, including, that a reduction of open canopy and increase in closed canopy area could be attributable to the changes in selective timber logging.

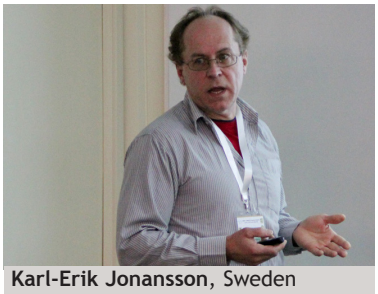
ASSESSMENT OF FOREST RESOURCES OF CONSERVATION VALUE: John Parrotta moderated this session on Thursday afternoon. Akomian Fortuné Azihou, Benin, presented on tree species distribution at the boundary between savannah and gallery forest. He elaborated on how a spatial gradient, analyzed in combination with soil type and fire occurrence, was used to assess vegetation composition and habitat specialization.

Meshack Odera Muga, Kenya, discussed the commercial value and livelihood potential of gum and resin resources in the country's drylands. He reported on the distribution, stocking density and harvesting of *Commiphora holtziana*, from which Hagar gum is derived. Muga explained that Hagar has medicinal and cosmetic uses, while other gums are used in the food industry. He noted that the species had low natural regeneration due to drought and overgrazing.

Simza Dazimwaï, Togo, presented on urban tree resources in Lomé and methodologies employed in assessing their carbon stocks. He recommended that the planting and protection of trees in urban areas should be integrated into urban planning, and predictive models for carbon sequestration in the urban context should be created.

Mary Mamle Apetorgbor, Ghana, reported on an assessment of the diversity of macrofungi and ectomycorrhizal fungal species in the Bui National Park. She described the food and medicinal value of these fungi, as well as their role in boosting the fitness and productivity of many surrounding tree, shrub and grass species. She also outlined key threats, including anthropogenic fires, species extinction and flooding of one-fourth of the National Park due to the construction of a dam.

Karl-Erik Johansson, Sweden, discussed factors that determine whether households planted and maintained agroforestry species in the Lake Victoria watershed. He explained that the study on 102 households aimed to evaluate the impact of a multi-year agroforestry project. Johansson concluded that households with surviving agroforestry species, and those likely to continue agroforestry practices shared, among other variables: positive collaboration with extension officers; belief that they had tenure rights over their trees; and residence in areas with sandy soils.



Karl-Erik Jonansson, Sweden

CLIMATE CHANGE: MITIGATION AND ADAPTATION: On Friday morning, Denis Sonwa, Centre for International Forestry Research (CIFOR), moderated this session. In his presentation on moving beyond mitigation to adaptation in the Congo Basin forests, he underscored the need to focus on the linkages between adaptation and forests, and highlighted CIFOR's Congo Basin Forest and Climate Change Adaption project, which aims to contribute to this objective. Sonwa concluded that SFM in the Congo Basin must consider forest resources and communities, and include well-planned mitigation and adaptation activities.

Denis Sonwa, CIFOR

Youssoufa Bele, Cameroon, presented on silviculture for climate change adaptation. Noting that there is little consideration of adaptation in the Congo Basin, he described a research project undertaken by CIFOR to fill this gap. Bele explained that the project focused on assessing climate variability, defining and prioritizing adaptation, and understanding the role of forests in adaptation, and that it, *inter alia:* in Cameroon, trained people to domesticate Eru, a popular Ghanaian vegetable; in the Democratic Republic of the Congo, nursed and disseminated 3000 caterpillar host plant species; and in Central African Republic, nursed and planted 4500 caterpillar host plants species on community land.

Charlotte Pavageau, CIFOR, described a study that examined the state of implementation of REDD+ and adaptation projects and initiatives in the Congo Basin. She explained that the study analyzed existing or planned REDD+ and adaptation projects and initiatives in six Congo Basin countries, and found that: adaptation and mitigation are two parallel processes; there is recognition of synergies in national strategies and local interventions; there is a need for early planning of integration; and the trade-offs between adaptation and mitigation need to be better quantified.

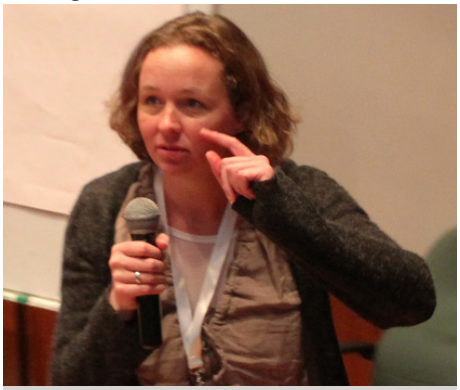
Vincent Oeba presented on the potential of carbon sequestered by *Cupressus lusitanica* (cedar of Goa) and *Pinus patula* (Mexican weeping pine) for climate change mitigation in Kenya. He outlined the results of a study that aimed to analyze and quantify the amount of carbon sequestered by these two species at different ages of growth. Oeba highlighted that: the age, tree species and sites were key determinants of the amount of carbon sequestered; and that soil carbon depends on tree species.

Gloria Djagbletey described a study that assessed the coping and adaptation strategies adopted in Ghana's Ashanti region. Highlighting that most local communities have developed indigenous adaptation practices, she outlined some of the study's findings, including that: there were temperature increases and extreme weather conditions in the study sites; climate change was negatively impacting on the communities' livelihoods; some practices, such as illegal logging, were exacerbating the problem; and more integrated climate change adaptation and mitigation policies and programmes are needed.

In the subsequent discussion, participants considered the role of civil society and the private sector in Ghana. One participant commented on the methodology used to calculate

the amount of carbon sequestered in trees. Another participant highlighted that research should be demand-driven and marketable, in order to ensure that it can have an impact on the issues being researched.

TRADITIONAL KNOWLEDGE AND SPIRITUAL VALUES IN FOREST CONSERVATION: On Friday morning, Daniela Kleinschmit, Sweden, moderated this session. Reporting on the work of the IUFRO Task Force on Traditional Forest Knowledge, John Parrotta, USA, focused on the relationships between traditional and scientific knowledge and the need to catalyze synergistic approaches to forest management. Parrotta noted that traditional woodland management and shifting agriculture are often low energy, adaptive and innovative, thus providing strategies for both climate change mitigation and adaptation. He highlighted the Task Force's report titled "Traditional Forest Knowledge: Sustaining Communities, Ecosystems and Biocultural Diversity."



Daniela Kleinschmit, Sweden

Martin Nganje, Burkina Faso, reported on experiences with integrating traditional knowledge and cultural beliefs into conservation management in Ghana. He explained how cultural heritage is often linked to plant and animal totems, but noted that cultural beliefs and practices are rarely perceived as a conservation tool. Nganje then recommended training conservation managers on how to effectively apply this knowledge in their work.

Mohamed Pakia, Kenya, highlighted that traditional knowledge "is rooted in the environment, spiritual health, culture and language, and is a way of life." Focusing on Kenya's coastal forests, he described historical resource governance institutions and systems, which are managed by elders, has eroded over time, but that recently, local communities were reintegrating traditional knowledge, crop varieties and practices into their agriculture systems as a climate change adaptation strategy.

Tene Kwetche Sop, Cameroon, described how studies using satellite imaging and remote sensing suggested that the Sahel is becoming greener. He argued that such regional scale analyses could overlook historical data and ecological questions such as plant dynamics, changing species composition and the spread of invasive species. Presenting research from Burkina Faso, Sop reported that botanical sampling and interviews with residents indicated that woody species were declining and shifting south.

On the application of traditional knowledge in health care, Asiimwe Savina, Uganda, described research into nutri-medicinal plants used to treat HIV-related infections. Savina explained that here study investigates the preparation and administration of plants, threats to conservation, and the transfer of this knowledge. On the latter, she reported that knowledge transfer was low and often transmitted only within the family unit.

GENETICS AND MOLECULAR TECHNOLOGY APPLICATIONS IN FOREST MANAGEMENT: This session was moderated by Daniel Ofori, ICRAF on Friday morning. Jason Kariuki, Kenya, presented on a polycross progeny trial of the spreading-leaved pine, *Pinus patula,* and its use in genetic improvement of the species in Kenya. He reported that his study involved: analysis of performance of progenies from parent trees used as sources of desirable seed; and estimation of heritability of traits of female trees. Kariuki highlighted the existence of substantial variation among the selected trees and indicated the potential for further genetic improvement trials which should aim to establish controlled crossings of the best material and multiple breeding populations.

Cosmas Abengmeneng discussed genetic relationships of the giant silk cotton tree, *Ceiba pentandra*, with the aim of revealing genetic diversity that would enable the species to overcome susceptibility to dieback disease. He showed that the current practice of collecting seed from the wild without knowledge of their genetic quality has led to a reduction in the diversity of the trees planted under Ghana's National Forest Plantation Development Programs. He further highlighted that the lack of genetic diversity has made the plantations vulnerable to dieback disease.

Otto Dangasuk, Kenya, discussed a study of the genetic characterization of gum arabic, *Acacia senegal*, in Kenya, to achieve improvements in the quality and production of gum arabic. He reported that although genetic analysis did not show evidence of variation among populations, morphological data showed that a higher number of branches and greater gum weight are associated with lighter seeds.

Caroline Kadu, Kenya, presented a study on the phylogeography of the African cherry, *Prunus africana*, which reveals a former migration corridor between East and West African highlands. Using microsatellite analysis of chloroplast DNA, she showed two main haplotypes of the species, one in East Africa and the other in West Africa, with high genetic differentiation. She reported that all the populations studied showed a high differentiation among them and a low diversity within the groups, suggesting that seed mediated gene flow for the species has been low.

Thomas Geburek, Austria, highlighted geographical variation of the African cherry, *Prunus africana*, at the molecular and chemical levels, and discussed implications for conservation. He reported that the species has undergone population bottlenecks in Kenya, Uganda, and Madagascar due to harvesting its bark for medicinal properties. He noted that the concentrations of antioxidants derived from bark extracts were mostly not affected by environmental effects, but speculated that molecular phylogenetic patterns are co-expressed by certain bark chemical constituents.

Thomas Geburek, Austria

Per Rudebjer presented a toolkit for enhancing capacity in managing forest genetic resources (FGRs), remarking that forest managers are often ignorant of genetic aspects of population diversity and ecological, demographic and random factors. He emphasized that this ignorance was due to the fact that FGR management is poorly covered in tertiary education. He explained that the

toolkit, which includes a training guide, is targeted for use by teachers at this level for teaching and learning about FGR use and conservation in the context of land use and rural livelihoods.

During discussions, participants addressed the two questions that had been set for the technical sessions. On what is needed to enhance goods and services in African forests, they recommended: ensuring seed sources used in planting are genetically diverse; and conserving populations of valuable trees. On the implications for forest research and governance in Africa, they highlighted the importance of international cooperation, noting that species distribution goes beyond geographical borders, and recommended collaboration and information sharing among scientists.

TENURE AND GENDER ISSUES IN FOREST MANAGEMENT: This session was moderated by Esther Mwangi, CIFOR, on Friday morning. Andrew Wardell, CIFOR, outlined the land acquisition history in Ghana, describing early resistance to land and forest legislation based on colonial resource appropriation schemes. Emphasizing that un-democratic features of customary ownership persist to this day, Wardell recounted commercial biofuel investments obtained through opaque acquisitions from traditional authorities resulting in loss of customary land to elites, with little or no compensation.


Esther Mwangi, Kenya

Beatrice Darko Obiri, Ghana, on tenure and forest reliance in Ghana, questioned key elements of forest governance including ownership, access, and user and management rights of forests, noting limited understanding of local people's forest needs. Obiri highlighted that community-managed forests with highly enforced regulations are rarely over-harvested.

Valentina Robiglio, Cameroon, presented on tenure and tree management systems in Cameroon and outlined the uses of on-farm trees by multiple users. She stressed the importance of short-term goals that include trade-offs and lamented the lack of real conservation strategies.

Esther Mwangi, Kenya, focused on civil society responses to large land acquisitions by governments in Uganda and Tanzania. She presented two case studies and emphasized that collective action separated the difference in outcomes of the case studies. Mwangi lamented community apathy and a lack of data, stressing that in a dynamic social, political and economic environment, property rights are continuously challenged.

Elaborating on gender issues and bush meat in the Congo Basin, Robert Nasi, CGIAR, urged for understanding of actors along the value chain to address exploitation of endangered species. Describing bush meat consumption patterns, he identified women as the main retailers and wholesalers, and said women tend to spend their income on food.

Anne-Marie Tiani presented on gender-differentiated vulnerability through participatory research in Cameroon and the Congo Basin, and the linkages with intensity and quality of climate change impacts. Stressing the need to address knowledge gaps in gender research, she urged for more accurate research to avoid over-simplification and ineffective adaptation results due to extrapolation.

Participants discussed, *inter alia*: the implications of gender and tenure issues for forest research and governance in Africa; improvements to the implementation of regulatory frameworks; empowerment of communities; and the control and regulation of bush meat harvesting.

FOREST POLICIES AND SUSTAINABLE FOREST MANAGEMENT: This session was moderated by Daniela Kleinschmit, on Friday afternoon. On transboundary governance in the Mano River Forest Ecosystem Conservation Programme, Emmanuel Alieu, Sierra Leone, outlined the unequal national policies and objectives between the adjoining countries of Liberia, Sierra Leone, Côte d'Ivoire and Guinea-Bissau. He said law enforcement is questionable because of a lack of capacity, an unattractive work environment and a lack of harmonization across policies. Alieu then suggested steps in the policy and legislative formulation process, including: setting an agenda; formulating alternatives; adopting policy choices; implementing programmes; and assessing policies.

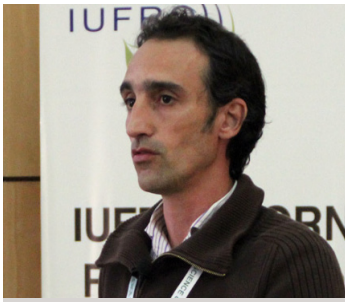
Describing the impacts of farmers' attitudes to national legislation governing Cameroon's on-farm tree planting decisions, Divine Foundjem-Tita, Cameroon, urged proper definition of property rights as effective policy instruments. On farmers' awareness of legislation, he said a majority of people are unaware of official definitions and regulations governing access and trade.

Describing a case study of public perceptions and socio-economic implications of a ten-year forestry harvesting ban in the Maji Mazuri area, Kingiri Senelwa, Kenya, , cited the impacts, including illegal logging, game poaching, illegal fires and poor harvesting methods. He highlighted that the ban undermined SFM, plantation development and the spirit of participatory management, and said it should not be encouraged.

Guillaume Lescuyer, CIRAD, presented on the sustainability of chainsaw milling in Central Africa, describing the main characteristics of artisanal timber milling, processing techniques and government taxation. He noted the need to increase domestic demand of legal timber, and urged revising forest laws, extending timber plantations and improving enforcement of forest laws.

On corruption in Central Africa, Paolo Cerutti, CIFOR, warned that suggesting policy options without understanding the networks on the ground will lead to failure, due to the built-in capacity of the social system to maintain the status quo. He suggested that moving individuals to other regions merely shifts the networks, and called for real sanctions and incentives.

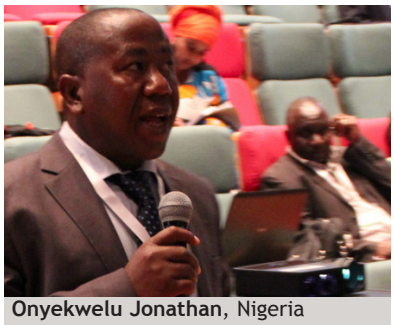
In the ensuing discussion, participants commented on: the relationship between wildlife and forests; lack of land use planning as a constraint to SFM; and sustainability of chainsaw milling operations.


Paolo Cerutti, CIFOR

FOREST AND HUMAN HEALTH: On Friday afternoon, Su See Lee, Malaysia, moderated this session. Daniel Ofori described an ethnobotanical study in Ghana that collected information on medicinal plants, including local names, diseases treated, plant parts used, supply areas, demand trends, indigenous cultivation techniques and threats. He cautioned that a reliance on wild collection is leading to over-exploitation of resources, and explained that the

project is investigating propagation methods. On challenges, he highlighted: poor market linkages; lack of training on harvesting and handling methods; and lack of a national working group that could function as a coordinating body for the medicinal plant industry.

Jonathan Onyekwelu, Nigeria, focused on edible forest fruits and presented research on their nutritional and chemical compositions. Highlighting their social, economic, cultural and medicinal attributes, he stressed their central role in local food security and rural income generation.



Onyekwelu Jonathan, Nigeria

Louise Flynn, USA, focused on emerging disease threats as extractive industries move into forests. Focusing on the timber industry, she provided examples of a number of cascading effects, including: forest fragmentation that can lead to increased contact between wildlife and humans and between wildlife and domesticated animals; road construction bringing human populations deeper into forests; poor waste management around work camps; and over-stressed healthcare services. She described tools created to help timber companies identify risks and develop mitigation measures.

During the group discussion, participants explored challenges associated with propagating medicinal plants and how their chemical properties could change once the plant is removed from its natural habitat.

WILDLIFE ECOLOGY AND MANAGEMENT: This Friday afternoon session was moderated by Sylvestre Djagoun, Benin. Babafemi Ogunjemite, Nigeria, presented an assessment of the population and conservation status of primate species in the Oluza Forest Reserve of Ondo State, Nigeria. He reported the existence of nine species of primates in the reserve, including the endemic white-throated and endangered Nigerian-Cameroon monkey, which gives the reserve a higher conservation profile.

Sylvestre Djagoun discussed the trade in animal parts for zootherapeutic purposes in Benin. He presented an inventory of animals sold in markets including pangolins, snakes, birds, bats, chameleon and frogs. He remarked that the rarer the species, the higher the demand and price, which has an impact on conservation.

Djagoun also discussed factors predicting habitat selection of bovid species in the resource-stressed environment of Benin's Pendjari Biosphere Reserve. He highlighted three classes of herbivores namely obligate grazers, variable grazers and browsers, concluding that grazers decreased in rocky zones while browsers preferred canopy cover. He recommended that forest managers consider the importance of maintaining the heterogeneity of the landscapes to allow coexistence of species.

Duncan Kimuyu, Kenya, discussed how primate seed dispersal enhances forest regeneration and connectivity. He presented a study in coastal forest fragments in Kenya where he followed the feeding habits of the Mangabey and Sykes monkeys. He reported that both monkeys have a diverse diet dominated by fruits whose seeds were disbursed by being dropped during ingestion or in feces afterwards.

Hugues Akpona, Benin, revealed key findings from a study on the ecology and ethnozoology of the tree pangolin, *Manis tricuspis*, in Benin's Lama Forest Reserve. He noted that pangolins were targeted for hunting due to their zootherapeutic characteristics and commercial value as meat. He reported that pangolins preferred habitats of closed forest composed of old teak.

Edward Wiafe discussed the impact of conservation measures on Lowe's guenon in a previously logged moist forest reserve in Ghana. He emphasized that the classification of this primate as "least concern" in the IUCN red list had harmed conservation efforts as it was difficult to receive funding for research.

ITTO/AFF FOREST POLICY DAY

OPENING CEREMONY AND KEYNOTE ADDRESSES:

On Thursday morning, Yonas Yemshaw, AFF, chaired the opening ceremony of the ITTO/AFF Forest Policy Day. Victor Agyeman, Chairman of FORNESSA, commenting on the low number of researchers and scientific publications from the African continent, called for action to turn challenges into strengths, and to build a strong regional platform for knowledge sharing.

Godwin Kowero, Executive Secretary, AFF, highlighted AFF's commitment to forging partnerships across science, policy, and private and forest industry sectors, and underscored the need to communicate scientific findings to policymakers to foster good forest governance.

Emmanuel Ze Meka, ITTO Executive Director, highlighted the need to constantly update scientific information to inform forest management policies, adding that this information is important for strengthening the environment aspect of the green economy.

Lidia Brito, UN Educational, Scientific and Cultural Organization (UNESCO), urged integrated goals for global sustainability based on scientific evidence that requires more integrative, international and solutions-oriented approaches to research. Brito highlighted the emergence of "sustainable science," which requires a paradigm shift to an inter-disciplinary science that provides solutions for sustainable development. Responding to questions on promoting interdisciplinary research at academic institutions, she stressed the need for collaboration with academics and other stakeholders, sharing across faculties and interdisciplinary scholarships.

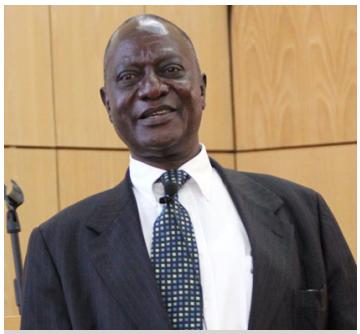
On Thursday morning, Polycarpe Masupa-Kambale, ITTO, chaired this session. Robert Nasi, Leader, CGIAR Conservation Reserve Program, presented on communicating science information to support policy and decision making in forestry, emphasizing that policy knowledge is only effective when shared appropriately. He said that educational outreach visits, social media such as blogs, Twitter and Facebook, repeated reminders, and interactive meetings, are more effective than educational materials and educational talks.for integrating research into practice and policy.

Robert Nasi, France

In ensuing discussions, participants discussed: the need to develop methods to measure the impact of policy and practice; means of ensuring that academics and

researchers are able to raise awareness of their products to improve their impact; and the need to improve understanding between researchers and media.

On the challenges to academic and research institutions in Africa, Fred Owino, Kenya, identified: the expansion of the knowledge base; a steady decline of funding for education and research; and skewed funding in favor of specific areas such as climate change. He emphasized the lack of indigenous knowledge capture and urged the development of vibrant forestry research institutions and programmes that address development needs.


Fred Owino, Kenya

Denis Koulangna, Permanent Secretary, Minister of Environment and Forestry, Cameroon, discussed policies and actions for SFM in Cameroon's forest sector, including: the emergency action programme that aims to alleviate poverty; the growth and employment strategy to enable Cameroon to become an emerging country by 2035; and the development of a land-use plan for forests, and principles and criteria for sustainable management of forests. He noted achievements such as: the development of council forest units; creation of community-based forest management units; and improved biodiversity conservation through protected area networks.

In the subsequent discussion, participants: commented on the challenge of tackling illegal logging, the conversion of forests to generate biofuels and timber exports in Cameroon; and remarked on the declining number of students in forestry institutions.

POLICIES AND GOVERNANCE IN AFRICAN FORESTRY: On Thursday afternoon, Michael Kleine, IUFRO, chaired this session, emphasizing the need for social transformation and highlighting that policymakers rely on guideline documents for formulating policies, but that governance is practiced by stakeholders and society.

Ernest Foli, Ghana, reported on pilot projects in Cameroon, Ghana, Liberia and Nigeria under the Reducing Deforestation and Forest Degradation and Enhancing Environmental Services (REDDES) initiative, lamenting the science community's reluctance to communicate findings at the science-policy interface. Outlining the activities and objectives of the pilot projects, he presented as key outputs: assessment and strategy development for implementation by policymakers; dissemination of experiences to policymakers and stakeholders; and expanding the research and networking capacity of African forest scientists.

Louis Bernard Cheteu, Cameroon, presented case studies from Cameroon, Ghana and Nigeria from the REDDES initiative. He noted that the Offinso District in Ghana, Dimako District in East Cameroon and the Akure Forest Reserve in Ondo State, Nigeria, experience similar challenges with regard to resource degradation, including forest fires, declining availability of timber and non-timber products, increased poverty among forest communities, and reduction in agricultural crop yield.

Paxie Chirwa, South Africa, highlighting the need to synchronize policies and scientific findings, stressed the link between livelihoods and resources. Calling for a socio-ecological approach to problem solving and policymaking, he lauded the development of national policies and plans that emphasize participatory forest management, but lamented the lack of benefit-sharing mechanisms between communities and governments, rendering community involvement useless.

Paolo Cerutti, CIFOR, elaborated on commercial chainsaw logging, corruption and livelihoods in Central Africa, saying that whereas illegal timber sawn-wood production makes up 61% of the total timber production, it is not subject to policy and regulation. He reported that up to 20% of log millers' costs are dedicated to bribes, which are recognized as an informal tax paid directly to state officials. Cerutti presented ideas for a policy-science interface that involves government agencies participating in research from the inception of projects to implementation of recommendations, saying that this gives government agencies a sense of ownership in the recommended solutions.

In the ensuing discussions, participants deliberated on: ineffective licensing processes that dis-empower producers in the forestry sector; agricultural diversification; site selection for pilot case studies in West Africa; up-scaling science-policy interfaces; illegal logging practices; and corruption in resource management.

THE FOOD-FIBER-FUEL NEXUS IN AFRICA: This panel discussion was chaired by Godwin Kowero. In a keynote address, Mafa Chipeta, Malawi, discussed the overwhelming need for food, fiber and fuel resources, and stressed the need to integrate forestry and agriculture in addressing these needs. He urged Africans to stop accepting mere survival over prosperity, and "begging" over being true technical partners in international cooperation.


Mafa Chipeta, Malawi

On the need for forest and land, Chipeta outlined Africa's challenges of low soil fertility, high population growth rates and "land grabs" by external powers. On further challenges, he lamented, *inter alia*: the temptation to convert crops for biofuel; poor investment in agriculture and forestry and the resulting low productivity; and Africa's dependence syndrome.

Niels Elers Koch, President, IUFRO, said IUFRO has implemented its 2010-2014 strategy by creating six new task forces to deal with six cross-cutting thematic areas of: forests for people; resources for the future; forest and water interactions; biodiversity and ecosystem services; forest bio-energy; and forests and climate change. He said that the food, fiber and fuel nexus of its work is based on all six disciplines.

Robert Nasi, CGIAR, contrasted pre-colonial agricultural landscapes in Africa, which were based on multi-crop production under low labor intensity, with post-colonial farming systems, which are monoculture and labor-intensive. He highlighted the need for re-analyzing models of sustainable management and gave the example of timber, where 95% of a tree is wasted between the harvesting and production of furniture.

Phosiso Sola, CIFOR Regional Coordinator, Eastern and Southern Africa, emphasized that forests should pay for their existence through added value accountancy, and called for policies that promote small production systems, forest management and crop production.

Ravi Prabhu, Deputy Director General Research, ICRAF, discussed ICRAF's projects to monitor the nutrient status of soils across Africa and integrate food and fuel systems, and called for integrating knowledge systems and addressing tenure issues.

Ravi Prabhu, Deputy Director General Research, ICRAF

Paxie Chirwa highlighted the consideration of renewable energy by the New Partnership for Africa's Development (NEPAD), saying that whereas it is accepted that bioenergy is important for Africa, discussions have concentrated on impacts of biofuel on the environment, food production and local economies, instead of finding solutions. He recommended improved technologies for optimal solar power generation, noting solar energy is a constant resource in Africa.

Emmanuel Chidumayo, AFF, said that complaints about land-grabbing for biofuels by foreign investors should be discussed together with the role played by governments in these allocations. He emphasized the need for concrete data on land to inform policy, adding that Africa, being large and diverse in cultures, ecosystems and climatic conditions, needs a diversity of solutions.

During the ensuing panel discussion, participants and panelists discussed: shortage of arable land in Africa; evaluation of forest ecosystems and PES; extensive use of charcoal production; and the problem of corruption. On knowledge sharing, Koch underscored the role of international conferences in sharing information of best practices and policy briefs, and Prabhu mentioned major programmes at ICRAF to launch extension initiatives. Chipeta underscored the link between corruption and genuine scarcity, as well as irrelevant controls and complexity of procedures. Responding to a question about undervaluation of forests, Sola stressed the need for proper accountancy procedures.

Participants further noted that: agricultural residue for bio-energy production should not be considered as available biomass since it is valued in farms for feeding animals and as organic matter for recycling into the soil; forest products can provide a valuable livelihood if communities can achieve value addition; final markets of forest products such as timber play a role in corruption and overexploitation in Africa; and land tenure issues in Africa need to be resolved, in order to resolve issues of land grabbing.

CONCLUSIONS AND RECOMMENDATIONS: Yonas Yemshaw, summarizing the day's proceedings, stressed that programmes are not development-oriented in Africa, and called for advanced forest research. He said development must be people centered, research should be more integrated, and science should build bridges among development actors. On science generation and communication, he lamented ineffective policymaking and inappropriate communication methods, and stressed the need for proper planning and effective educational outreach. Yemshaw highlighted that decision-making is a complex process and said future challenges include competition between agriculture and forestry. On top-down policies, he urged more integrated policies that are based on current reliable data.

BOOK LAUNCH: Joe Cobbinah, Chair, Congress Scientific Committee (CSC), chaired this session. Emmanuel Ze Meka presented the book "World Atlas of Mangroves," which was published by Earthscan Ltd and funded by ITTO. He said the book highlights the importance of mangrove ecosystems for conserving biodiversity, combating climate change and abating coastal disasters, and provides information for mangrove conservation.

Godwin Kowero launching the book "Climate Change and African Forest and Wildlife Resources," published by AFF, emphasized the need for advanced scientific knowledge in forestry relating to climate change.

CLOSING CEREMONY

On Friday evening, Ravi Prabhu chaired the closing ceremony. Joe Cobbinah presented the Nairobi Resolution, describing it as a draft document. He invited participants to access it on the IUFRO website and propose amendments. He further explained that the draft resolution captures key needs for enhancing goods and services from forests and trees in African landscapes, identified by participants during technical discussions.

In a presentation of awards, Alexander Buck, Executive Director, IUFRO, presented the Distinguished Service Award to Joe Cobbinah. He said the award is in recognition of Cobbinah's substantial contribution to furthering the scientific, technical and organizational aims of IUFRO. Cobbinah thanked IUFRO saying it had been an honor to work with such a committed and hard working team.

Niels Elers Koch, IUFRO President, moderated the plenary

Niels Elers Koch presented gifts and certificates of appreciation to several individuals and organizations, including the Congress organizing committee, ICRAF, KFS, KEFRI and AFF, thanking them for their hard work in ensuring the success of the Congress.

In his closing message, Ben Chikamai noted that this meeting would not have been successful without the dedication and team spirit of the members of the organizing committee and others who worked behind the scenes to support the Congress.

In closing remarks, Josphat Nanok, Assistant Minister of Forestry and Wildlife, Kenya, said it was a great honor for Kenya to host the Congress. He lauded the organizers for achieving successful deliberations at the meeting and highlighted the benefits of the pre-conference workshop on communicating forest research, which he said had helped equip young scientists on how to bridge the science-policy gap. He then brought the Congress to a close at 5:20pm.

THE NAIROBI RESOLUTION

In the draft resolution, Congress participants commit to:

- adopt people-centered approaches to research and education;
- expand forest research and training;
- increase information sharing through regional cooperation;
- combine traditional knowledge with formal scientific research results;
- develop reward systems for successful uptake of research outputs;
- invest in science-society communication; and
- provide effective platforms for engagement of scientists, policymakers and stakeholders.

They also urge governments, in order to make progress on these commitments, to:

- recognize local people as users and beneficiaries of forest and tree resources;
- provide for conflict resolution, equitable sharing of benefits and gender equity through adequate policies; and
- embrace and operationalize participatory forest policy formulation and forest management.

The Congress participants also call on African Union Heads of State and Government to fully implement their commitment to devote at least 1% of GDP to research and development, as endorsed by the Nairobi Ministerial Declaration of April 2012.

Upcoming Meetings

COFO 21: The 21st session of the Committee on Forestry of the UN Food and Agriculture Organization (FAO) will convene at FAO headquarters in Rome, Italy, in September 2012. **dates**: 24-28 September 2012 **venue**: FAO headquarters **location**: Rome (Lazio), Italy **contact**: Peter Cskoka, FAO, Forestry Department **phone**: +39-06-5705-3925 **fax**: +39-06-5705-3152 **e-mail**: peter.csoka@fao.org **www**: http://www.fao.org/forestry/cofo/en/

Ad Hoc Expert Group Meeting on the Assessment of Biodiversity, Forests, Mountains, Biotechnology and Tourism in Africa: The meeting is being held as part of the African preparations for the 20th session of the UN Commission on Sustainable Development (CSD) and is expected to convene immediately prior to the Eighth Session of the UN Economic Commission for Africa (UNECA) Committee on Food Security and Sustainable Development (CFSSD-8). **dates**: 15-16 October 2012 [tentative] **location**: Addis Ababa, Ethiopia **contact**: Josué Dioné **phone**: +251-11-544-3547 **fax**: +251-11-551-0350 **e-mail**: jdione@uneca.org **www**: http://www.uneca.org/index.htm

Experiences from the FLEGT/VPA Process in West and Central African Countries: The workshop will bring together government authorities, civil society organizations, private sector organizations, professionals, researchers and technicians involved in the implementation of the Forest Law Enforcement, Governance and related Trade (FLEGT)/ Voluntary Partnership Agreement (FLEGT/VPA) process in West and Central Africa to share and discuss experiences and lessons learned from seven main thematic areas of the FLEGT/VPA process. **dates**: 23-25 October 2012 **location**: Accra (Greater Accra), Ghana **contact**: Sophie Lemaitre **e-mail**: sophie.lemaitre@fao.org **www**: http://www.fao.org/forestry/acp-flegt/78338/en/

ITTC-48: The 48th Session of the International Tropical Timber Council (ITTC) and the Associated Sessions of the four Committees (Finance and Administration, Economic Information and Market Intelligence, Forest Industry, and Reforestation and Forest Management) will convene in Yokohama, Japan. **dates**: 5-10 November 2012 **location**: Yokohama (Kanagawa), Japan **contact**: ITTO Secretariat **phone**: +81-45-223-1110 **fax**: +81-45-223-1111 **e-mail**: itto@itto.or.jp **www**: http://www.itto.int/

Bi-annual IUFRO Forest Landscape Ecology Conference: The conference will focus on sustaining humans and forests in changing landscapes. **dates**: 5-12 November 2012 **location**: Concepción, Chile **contact**: Guillermo Martínez Pastur **e-mail**: gpastur@conicet.gov.ar **www**: http://www.iufrole2012.cl/

International Symposium on Tree Product Value Chains in Africa: Sharing Innovations that Work for Smallholders: The symposium is organized by ICRAF West and Central Africa Programme and partners, and will provide a forum to learn and share knowledge, experience and innovations on emerging trends relating to the production, processing and marketing of tree products by smallholder farmers **dates**: 26-28 November 2012 **location**: Yaoundé, Cameroon **contact**: ICRAF West and Central Africa Regional Programme **phone**: +237-22-21-50-84 **fax**: +237-22-21-50-89 **e-mail**: aftp-symposium@cgiar.org **www**: http://worldagroforestry.org/sites/default/files/1st%20call%20for%20abstracts_vs3.pdf

Forest Day 6: Forest Day 6 will convene in parallel with the 18th Session of the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC) and presents an opportunity for stakeholders from different backgrounds and regions to network, share their experiences, and debate the pressing issues facing forests around the world. **date**: 2 December 2012 **location**: Doha, Qatar **www**: http://unfccc.int/meetings/doha_nov_2012/meeting/6815.php

UNFF 10: The tenth session of the UN Forum on Forests will focus on forests and economic development, including agenda items on: forest products and services; national forest programmes and other sectoral policies and strategies; reducing risks and impacts of disasters; and benefits of forests and trees to urban communities. **dates**: 8-19 April 2013 **location**: Istanbul (Istanbul), Turkey **contact**: UNFF Secretariat **phone**: +1-212-963-3401 **fax**: +1-917-367-3186 **e-mail**: unff@un.org **www**: http://www.un.org/esa/forests/session.html

ITTC-49: ITTC-49 and the Associated Sessions of the four Committees are scheduled to take place in Libreville, Gabon. **dates**: 25-30 November 2013 **location**: Libreville (Estuaire), Gabon **contact**: ITTO Secretariat **phone**: +81-45-223-1110 **fax**: +81-45-223-1111 **e-mail**: itto@itto.int **www**: http://www.itto.int/

XXIII IUFRO: The IUFRO World Congress will be held in Salt Lake City in October 2014. **dates**: 5-11 October 2014 **location**: Salt Lake City, Utah, USA **contact**: IUFRO Secretariat **phone**: +43-1-877-01-51-0 fax: +43-1-877-01-51-50 **e-mail**: office@iufro.org **www**: www.iufro.org/events/congresses/2014/

GLOSSARY

AFF	African Forest Forum
CIFOR	Center for International Forestry Research
	Forestry Research Network for sub-Saharan Africa
ICRAF	World Agroforestry Centre
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
IUFRO	International Union of Forest Research Organizations
KEFRI	Kenya Forest Research Institute
REDD+	reducing emissions from deforestation and forest degradation in developing countries, and the role of conservation, sustainable use of forests and enhancement of carbon stocks
SFM	sustainable forest management