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World Forestry Congress Bulletin

A Summary Report of the XIIIth World Forestry Congress (WFC 2009)

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SUMMARY OF THE THIRTEENTH WORLD FORESTRY CONGRESS: 18-23 OCTOBER 2009

The Thirteenth World Forestry Congress (XIII WFC) themed “Forests in Development: A Vital Balance,” co-organized by the Food and Agricultural Organization of the United Nations (FAO) and the Government of Argentina, took place from 18 to 23 October 2009 in Buenos Aires, Argentina. Over 7000 participants from international organizations, governments, academia, the private sector and civil society, representing 160 nations, came together to discuss forest issues at this event. Participants convened in daily plenaries; roundtables on forests and energy, forests and climate change, investment and finance and a business round; over 60 thematic parallel technical sessions; seven poster sessions; and numerous side events. The daily thematic sessions focused on the themes of: forests and biodiversity; producing for development; forests in the service of people; caring for our forests; development opportunities; organizing forest development; and people and forests in harmony.

The wide participation at the Congress ensured well-attended and lively sessions, with some keynote speakers drawing a queue in the main plenary room. Climate change, carbon storage potential and Reduced Emissions from Deforestation and Forest Degradation (REDD) generated the largest number of references in the sessions, evidencing the large interest, particularly in Latin American countries, in the potential for investments in sustainable forest management through the climate regime. The main outcome of the Congress, besides the broad interchange of ideas among participants, was a declaration from the WFC outlining nine findings and 27 strategic actions through which the “vital balance between forests and development can be improved,” and a message from the organizers to the Fifteenth Conference of the Parties of the UN Framework Convention on Climate Change (UNFCCC COP 15) calling for urgent action on, *inter alia*, the promotion of sustainable forest management and recognition that forests are more than just carbon, the need to address climate change mitigation and adaptation concurrently, the improvement of monitoring and assessment techniques, as well as inter-sectoral cooperation.

A BRIEF HISTORY OF THE WFC AND INTERGOVERNMENTAL FOREST-RELATED PROCESSES

The International Forestry Institute organized the first WFC, held in Rome, Italy, in 1926. The second WFC took place in Budapest, Hungary, in 1936, and recommended establishing a permanent international committee that would be in charge of organizing subsequent Congresses and monitoring their results.



The Tango Orchestra of the City of Buenos Aires welcomed participants to the World Forestry Congress with a classic selection of tangos and candombes

The III WFC, held in Helsinki, Finland, in 1949, recommended the organization of a future Congress with a special focus on tropical forests. The IV WFC, convened in Dehra-Dun, India, in 1954, addressed the role and importance of forest zones in economic development. Subsequent Congresses convened roughly every six years and were organized around specific themes: the V WFC in Seattle, US (1960), addressed the multiple uses of forests; the VI WFC in Madrid, Spain (1966) considered the role of forestry in world economic development; and the VII WFC in Buenos Aires, Argentina (1972), discussed forests and socioeconomic development. The FAO participates in the organization of the Congress but the main responsibility lies with the host country.

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VIII WFC: The eighth congress was held in Jakarta, Indonesia (1978), and revolved around the theme of forests and population. This Congress dealt with the diverse demands society places on forests, and forests' contribution to the social economy, particularly in rural areas.

IX WFC: The ninth congress convened in Mexico City, Mexico (1985), and addressed forest resources in society's general development. This Congress recognized the gravity of issues facing world forestry and the need for changing attitudes to ensure the conservation and development of forest resources.

X WFC: The tenth congress was held in Paris, France (1991), and focused on the theme of forests as the heritage of the future. Its recommendations included principles for: forest heritage management; integrated forest management by local communities; and long-term land-use planning.

XI WFC: The eleventh congress took place in Antalya, Turkey (1997), and focused on the theme of forestry and sustainable development. The Congress produced recommendations and conclusions and adopted the Antalya Declaration of the XI WFC, which calls for, *inter alia*: increased political will; forestry professionals to take the lead in adjusting education curricula and promoting participatory forest planning; methodologies for valuing forest goods and services; national-level criteria and indicators and forestry industries to adopt and implement voluntary codes of conduct to contribute to Sustainable Forest Management (SFM).

XII WFC: The twelfth congress took place in 2003 in Quebec City, Canada. The general theme of the Congress was "Forests, Source of Life." Thirty-eight Themed Sessions convened to address issues regarding: Forests for People; Forests for the Planet; and Forests and People in Harmony. Ecoregional Sessions were organized according to the five broad ecological regions of the Earth. The Final Statement adopted by participants includes a vision for the future accounting for the need for social justice, economic benefits, healthy forests, responsible use, good governance, research, education and capacity building. It recognizes that the prerequisites to achieving these visions include sustained financial commitments and international cooperation, policies based on best science and incorporation of local and indigenous knowledge.

SELECTED INTERGOVERNMENTAL FOREST-RELATED PROCESSES: In the absence of a coordinated forest governance regime, global forest policy has been developed in a variety of fora. The following paragraphs cover the forest-related processes of the Intergovernmental Panel on Forests (IPF), the Intergovernmental Forum on Forests (IFF), the United Nations Forum on Forests (UNFF), the International Tropical Timber Organization (ITTO), and the Committee on Forestry (COFO).

IPF: At its third session in 1995, the Commission on Sustainable Development (CSD-3) established the IPF. During its two-year mandate, the IPF developed over 100 negotiated proposals for action on SFM. The IPF's outcomes were endorsed by CSD-5 in April 1997 and at the 19th UNGASS in June 1997. The UN Economic and Social Council (ECOSOC) then established the IFF to continue this work under the auspices of the CSD.

IFF: The IFF met four times between October 1997 and January 2000 to "identify the possible elements of, and work toward consensus on, international arrangements and mechanisms, for example, a legally-binding instrument." The IFF also proposed the creation of the UNFF and invited relevant international organizations, institutions and instruments and UN

organizations to participate in a Collaborative Partnership on Forests (CPF). CSD-8 endorsed these conclusions and invited the President of ECOSOC to initiate informal consultations on options for placing the UNFF within the intergovernmental machinery of the UN system.

UNFF: On 18 October 2000, ECOSOC adopted Resolution E/2000/35, establishing the UNFF as a subsidiary body of ECOSOC. The objective of the international arrangement on forests is to promote the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end. The resolution also establishes the CPF to support the work of the UNFF and enhance cooperation and coordination. UNFF convened eight times between 2000 and 2009.

The IPF/IFF processes produced more than 270 proposals for action towards SFM, which form the basis for the UNFF Multi-Year Programme of Work and Plan of Action. Country- and organization-led initiatives have also contributed to UNFF's work.

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. In the fourth round of the UN Conference for the Negotiation of a Successor Agreement to the ITTA fourth part, in 2006, consensus was reached on a successor agreement to the ITTA. In addition, 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. The governing body of the ITTO is the International Tropical Timber Council, with 60 members, which has met 44 times.

COFO: COFO is the FAO's most significant Forestry Statutory Body, bringing together heads of forestry services and other senior government officials to identify emerging policy and technical issues, seek solutions and advise the FAO and others on appropriate action. This is achieved through: periodic reviews of international forestry problems and their appraisal; review of the FAO forestry work programmes and their implementation; advice to the FAO Director-General on the future work programmes of the FAO in the field of forestry and their implementation; reviews of and recommendations on specific matters relating to forestry referred to it by the FAO Council, Director-General or member states; and reports to the FAO Council.

XIII WFC REPORT

OPENING CEREMONY AND OPENING PLENARY

The Thirteenth World Forestry Congress (XIII WFC) convened from the evening of Sunday 18 to Friday 23 October 2009. Leopoldo Montes, Secretary General of the XIII WFC, welcomed participants to the Congress on Sunday evening. He highlighted the need to develop a forestry sector that can provide solutions for humanity in economic and environmental terms, as well as the potential to address common concerns, including climate change and bioenergy.

Jacques Diouf, Director-General of the UN Food and Agricultural Organization (FAO), highlighted the role of forests in providing food and shelter, and supporting livelihoods. He emphasized transectoral forestry issues related to water, agriculture, energy and livestock, and said these issues must be dealt with in an integrated manner to confront problems such as desertification and climate change. He highlighted the work of UN cooperation initiatives and emphasized the expected opportunity for increased forest investments as a result of the climate change negotiations to be held in Copenhagen in December 2009.



Jacques Diouf, Director-General of FAO

Mauricio Macri, Mayor of the City of Buenos Aires, Argentina, announced his administration's commitment to procure wood and paper only from certified forests by 2010 in an effort to promote sustainable forest management (SFM), labor standards and the prevention of child labor. Mario Gibeault, Director General of Forestry and Development Management of Quebec, Canada, discussed the importance of principles of SFM to Quebec's current re-drafting of its forestry legislation, and emphasized SFM's importance in mitigating and adapting to climate change.



Mauricio Macri, Mayor of Buenos Aires

Jia Zhibang, Minister of Forest Administration, China, said that throughout history, humans have ignored services provided by forests and overindulged in the acquisition of material interests gleaned from them. He praised the adoption of principles of the Non-legally Binding Instrument on All Types of Forests (NLBI) by many UN processes and organizations, and noted China's efforts to improve forest management.



Jia Zhibang, Minister of Forest Administration, China

Julián Domínguez, Minister of Agriculture, Livestock, Fisheries and Food, Argentina, said humans are stewards of the environment and that the state must play a central role in its protection. He emphasized that political and economic decisions must consider not only the interests of people, but those of nature as well. He then noted that Argentina has accepted the challenge of the FAO to put an end to world hunger by creating a comprehensive food security programme.



Homero Bibiloni, Secretary of Environment and Sustainable Development of Argentina

On Monday morning, an opening plenary was held, where Homero Bibiloni, Secretary of Environment and Sustainable Development of Argentina, urged participants to reflect critically on how forest-related environmental declarations are implemented by simplifying access to funding and working with those on the ground tasked with resource

management. Noting the need to see forests, climate change and biodiversity holistically, he highlighted the roles of forests as carbon sinks and of individuals as forest stewards.

Jan Heino, Assistant Director-General of the Forestry Department, FAO, reviewed the effect of world economic decline on forests, which has led to unemployment but also new opportunities for SFM. Referring to the Collaborative Partnership on Forests (CPF) submission to the UN Framework Convention on Climate Change (UNFCCC), he warned that SFM concepts enunciated by some at the climate meeting in Bonn during 2009, are too narrow.



Jan Heino, Assistant Director-General of the Forestry Department, FAO

David Carter, Minister of Agriculture, Biosecurity and Forests of New Zealand, recalled that global forest loss contributes to about 20% of global greenhouse gas (GHG) emissions and stressed the importance of the WFC's contribution to the global dialogue on moving the forestry sector onto a sustainable path.

Jorge Rodríguez, Minister of the Environment, Energy and Telecommunications of Costa Rica, recalled his country's efforts to increase reforestation, forest protection and payments for environmental services. He called for a new, fair climate change regime that benefits countries that have already halted deforestation, such as Costa Rica.



Henri Djombo, Minister of Sustainable Development, the Forest Economy, and the Environment, Republic of Congo

Henri Djombo, Minister of Sustainable Development, the Forest Economy, and the Environment, Republic of Congo, showcased the Congo Basin Forest Partnership, where Congo Basin countries, together with international donors, have joined together to promote SFM. He cautioned that failure to attain sustainable management could lead to catastrophic results, such as the reduction of forest area and expansion of deserts in Africa.



Thomas Tidwell, Chief of the United States Forest Service

Thomas Tidwell, Chief of the US Forest Service, described ecological services of forests, particularly carbon sequestration, and noted that deforestation is accelerating with real estate development. He cautioned that existing plans for restoration would be under added stress from drought and increasing numbers of insects brought about by climate change.

Jochen Flasbarth, President of the Conference of the Parties (COP) to the UN Convention on Biological Diversity, listed current challenges facing the forest sector, including: reversing trends of deforestation and degradation; mitigating climate change; maintaining biodiversity; and reforestation. He urged improved cooperation between the biodiversity and forest sectors in: forest protection and restoration to combat climate change, including through additional resources and Reduced Emissions from Deforestation and Forest Degradation (REDD); and implementation of sustainable forest management, where progress until now has been insufficient.

Victor Maslyakov, Deputy Chief of Forestry, the Russian Federation, said that only 20% of forestry potential is currently being exploited in Russia and priority is being given to investment to intensify forest use, increase processing capacity and construction of forest roads. He emphasized the challenge of finding a balance between harvesting and replanting, controlling forest fires and preventing illegal trade in timber.

Jim Farrell, Canadian Forest Service, recalled the XII WFC's vision in 2003 of healthy forests incorporating social justice and economic sustainability, supported by good governance and SFM.

Carlos Casamiquela, President of the National Institute of Agricultural and Livestock Technology of Argentina (INTA), highlighted the value of goods and services provided by forests, and noted that the Argentine forestry sector has improved its market presence and diversified into value-added products.



Carlos Casamiquela,
President, INTA

Euclides Pereira, representative of the indigenous peoples of the Amazon, highlighted the experience of indigenous peoples in managing forests sustainably saying that, unlike



Euclides Pereira,
representative of the
indigenous peoples of
the Amazon

conservation perspectives that see nature as 'untouchable,' indigenous peoples feel one with nature. He highlighted the need to support land tenure rights of those Amazon communities in Brazil that are currently being subjected to pressure by private interests, and to arrive at an international agreement on genetic resources with due respect to indigenous peoples' rights to their traditional knowledge.

Tim Rollinson, Director General of the UK's Forestry Commission, spoke on behalf of Justin Mundy, Senior Director of the Rainforest Project of H.R.H. Prince of Wales. Stressing the role of rainforests in regulating the climate, he said the Rainforest Project sought to have the forest "worth more alive than dead."

Participants then watched a message from H.R.H. Prince of Wales, who said the battle against climate change will be lost if destruction of old growth tropical forests continues, and the only sustainable way of saving forests is to ensure that those who depend on them benefit from maintaining the forests' ecosystem services. He urged participants to send a clear message that deforestation can be solved, but only if there is political will to do so.



Video message from H.R.H. Prince of Wales

FORUM ON FORESTS AND CLIMATE CHANGE

A Forum on Forests and Climate Change was held on the afternoon of Wednesday, with panels on: land use, land use change and forestry (LULUCF), climate change impacts on forests and people, REDD financial and methodological challenges and opportunities for countries, and REDD initiatives for early action. A panel on forests and climate change was also held on Thursday, and is included in this section of the report.

Tim Rollinson opened the Forum by describing the threat of climate change to forests and the role of forests in mitigation. Roberto Acosta, UNFCCC, indicated the importance that UNFCCC parties are giving to forest-related issues through

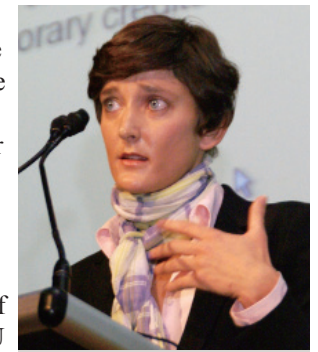


Roberto Acosta, UNFCCC

current discussions on REDD, enhancing carbon stocks (REDD+), and LULUCF issues - topics that permeate the discussions on a post Kyoto agreement and on long-term cooperative action on climate change.

He strongly urged attendees to work with their governments to facilitate an agreement in Copenhagen.

PANEL ON LULUCF: Franca Braun, World Bank, presented the Biocarbon Fund (BioCF), a financing facility that seeks to remove CO₂ from the atmosphere and improve the livelihoods of forest-dependent people, including by ensuring their access to carbon markets so that they have incentives to engage in SFM. She highlighted two of the funds' windows, namely, one for LULUCF activities and another for activities a new climate agreement might recognize. Among challenges, she noted the time lag between investment and returns in LULUCF activities, and the lack of access of forest activities to the EU Emissions Trading Scheme.



Franca Braun, World Bank

Risto Seppälä, Finnish Forest Institute, presented key findings of a Global Forest Expert Panel established in 2007



Risto Seppälä, Finnish
Forest Institute

under the CPF, including that warmer climate reduces adaptation possibilities and, as a result of climate change, forests may turn from sinks into net emission sources.

Samuel Ebia Ndongo, Ministry of Forests and Wildlife, Cameroon, presented advances in his country's forest management, including in participatory management, legislation, forest inventory and zoning plans, and protected areas.

He noted Cameroon's low capacity to measure carbon and lamented that solutions available under the current climate change regime do not meet his country's expectations.

PANEL ON CLIMATE CHANGE IMPACTS ON FORESTS AND PEOPLE: CHALLENGES AND ACTION REQUIRED: Andrea Tuttle, Pacific Forest Trust, said political winds are changing in the US, with two draft cap-



L-R: Andrea Tuttle, Pacific Forest Trust; Avrim Lazar, President of the Forest Products Association of Canada; Tim Rollinson, Director-General, UK Forestry Commission; and Risto Seppälä, Finnish Forest Institute

and-trade laws currently under consideration by Congress, including broad consideration of forests activities. Surprised at lack of discussion about the “elephant in the room,” namely the potential infusion of significant amounts of capital into forest nations through future offsets bought by American firms, she challenged forest experts not to fear the “carbon cowboys” and to confront risks, and use their expertise to identify opportunities for offset projects that incorporate high social as well as environmental standards and that may serve to transition towards a low carbon economy.

Avrim Lazar, Forest Products Association of Canada, said a lesson from the pine beetle’s devastating effect on Canada’s forests and communities is that nature “cannot be easily engineered.” While he supported carbon sequestration and trading, he said those measures will prove insufficient to tackle climate change unless they move towards a “deep retooling” of an economic system that depends on GHG emissions. This will require, he said, thinking in terms of holistic, interrelated systems, and a deep respect for nature and forests, which are much more than simply carbon sinks.

Victor Eamara Tello, Central de Pueblos Indígenas del Beni, Bolivia, said rhetoric needs to be translated into reality, and indigenous people want to participate without intermediaries in sustainable development. He recalled Bolivian indigenous people are the owners of large areas of forests, for which they have management plans to protect social, cultural and environmental values, but also noted their rights are often violated by armed illegal loggers.

PANEL ON REDD FINANCIAL AND METHODOLOGICAL CHALLENGES AND OPPORTUNITIES FOR COUNTRIES: Tiina Vahanen, UN-REDD Secretariat, said REDD is needed to recognize the role of forests in mitigation as a global good, and pathway to low-carbon sustainable development. She also contended that an investment of US\$25 billion in forest-related activities could result in a 25% reduction in the global deforestation rate.

Nazareno Castillo, Ministry of Environment, Argentina, said his country is looking forward to a REDD agreement, although he reflected on the need to simplify the large number of options on REDD currently on the table to reach a decision in Copenhagen.



Tiina Vahanen, UN-REDD Secretariat

Thais Linhares Juvenal, Head of the Brazilian Forestry Service, said Brazil is succeeding in reversing the trend in deforestation rates, albeit at high financial and political cost. Among issues to be resolved in Copenhagen she highlighted: methodologies to measure carbon stock and flow; REDD governance institutions, definition and scope; and REDD registry, monitoring and conflict resolution mechanisms.

Retno Maryani, Ministry of Forests, Indonesia, outlined Indonesia’s REDD Readiness strategy. She said Indonesia is creating the scientific, regulatory and technological framework required to jumpstart REDD by 2012, including regulations that mandate reduced emissions from deforestation and forest degradation, and establishment of national carbon accounting systems.

Discussion touched on: methodologies such as satellite imagery that must be supplemented by field studies; costs of reforestation to local residents, which involve conversion of land uses and protection of local areas; and the role of plantations versus natural forests in REDD programmes.

PANEL ON REDD INITIATIVES FOR EARLY ACTION: Trond Gabrielsen, Government of Norway, presented his country’s International Climate and Forest



Trond Gabrielsen, Government of Norway

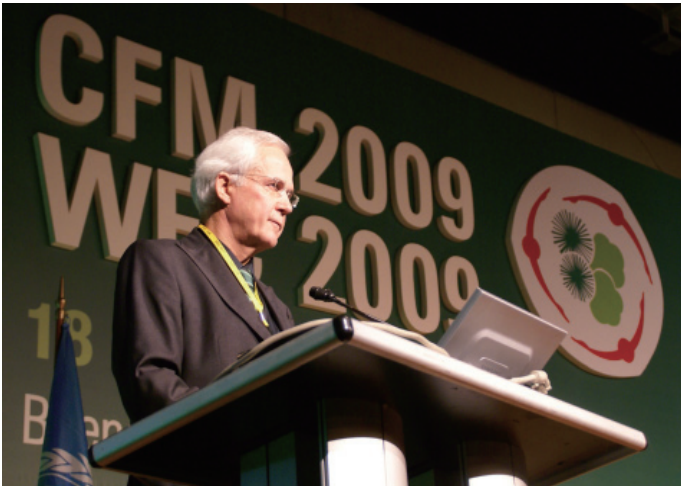
Initiative, focusing on: the importance of early REDD-related actions; coordinated efforts by donors and international agencies to provide predictable funds to developing countries, and a phased approach to results and performance-based compensation for REDD.

Gerhard Dieterle, World Bank, announced the new Forest Investment Programme (FIP), a targeted programme to provide upfront financing to initiate transformational changes and facilitate leveraging of additional public and private funding. He highlighted that FIP has already received pledges for US\$348 million and pilot countries will be selected in coming months.

Eduardo Mansur, International Tropical Timber Organization (ITTO), presented a new ITTO programme, REDDES, which adds environmental services to REDD.



Gerhard Dieterle, World Bank



Jan Heino, Chair, Assistant Director-General Forestry Department, FAO, urged participants to review and comment on the draft message of WFC 2009 to the UNFCCC meeting in Copenhagen

He said ITTO developed this programme in partnership with the CPF and the World Bank, and has a pilot project in Indonesia's Meru Betiri National Park.

Peter Saile, German Organization for Technical Cooperation GmbH (GTZ), highlighted his organization's support for capacity development and early action on REDD. On key issues for a successful REDD scheme he identified, *inter alia*, the huge information and data needed to comply with monitoring, reporting, and verification (MRV), governance aspects to implement REDD, and co-benefits from biodiversity and poverty reduction. Saile also pointed to new methodologies, actors and processes dealing with forests and the benefits of early action.

Jan Heino, Chair, CPF, urged participants to review and comment on the draft message of the XIII WFC to the UNFCCC meeting in December. Heino lamented the forestry sector's quiet voice to date on the importance of forestry issues to creating an adequate climate regime, and said the aim is to send a strong message to climate negotiators, including the notion that forests are "more than carbon" and all their services and values must be considered holistically.

PANEL ON FORESTS AND CLIMATE CHANGE:

This panel was held on Thursday under the agenda item on Forests in the Service of People. Rodney Keenan, Melbourne University, Australia, said uncertainty remains around the definition of forest degradation and how it can be applied to REDD. He suggested degradation should be defined as human-induced processes leading to long-term reduction of forest carbon stocks. He also stressed the need for balanced accounting and field measurements-based monitoring to adequately assess degradation.

Jarot Pandu Panji Asmoro, Forestry Research Institute of Manokwari, Indonesia, presented a study on the mitigation potential of agroforestry systems in South Sorong District in Papua, Indonesia. The study suggested agroforestry can sequester carbon and benefit local communities, and during discussions, participants highlighted that a mix of species in agroforestry systems can increase resilience and allow communities to better adapt to climate change.

Luca Tacconi, Australian National University, discussed incorporating Payments for Ecosystem Services (PES) schemes into REDD, noting that when well-designed, they can support livelihoods of local communities. He called for: payments reflecting adequately opportunity costs for local communities versus alternative land uses; considering land tenure issues to

enable access to PES by poor households; evaluating PES in state-owned forests, which constitute most of the forestlands in REDD-eligible countries; providing a role for communities in deciding the payment scheme schedule; and compensating local governments for lost timber-related revenues. He also said PES schemes in REDD should involve strong monitoring requirements and address poor performance issues.

FORUM ON FORESTS AND ENERGY

This forum took place on Tuesday and consisted of three panels, on: the current status of technology for wood energy production; the social and environmental impact of bioenergy production; and bioenergy policies and measures.

Adrian Whiteman, FAO, gave his keynote speech on the outlook and trends of bioenergy development and its implications for the forest sector. He outlined the main variables affecting bioenergy viability, including: waste usage; resource availability; crops for energy; and incentive policies. He brought the audience's attention to a number of environmental issues, namely: GHG emissions, which may rise with biofuels' processing; land use change, which may remove functions of carbon storage; soil, water and biodiversity impacts of harvesting bioenergy crops; and social implications of land use changes affecting ownership and income.

PANEL ON CURRENT STATUS OF TECHNOLOGY FOR WOOD ENERGY PRODUCTION:

Michael Jack, Scion, New Zealand, presented a study assessing opportunities and challenges of large-scale bioenergy production from forests for New Zealand's future energy requirements. He noted that the displacement of fossil fuels with forest biomass has land-use, economic and environmental implications. He said results showed that energy forests could significantly reduce GHG emissions and have macroeconomic benefits, but noted social aspects of land use must be considered, as economic competitiveness alone is not sufficient to convince farmers to change land use.

John Saddler, University of British Columbia, Canada, presented current stages of biorefining in the forestry sector. He suggested Canada use the die-off of millions of trees, killed by pine beetles now surviving warmer winters brought on by climate change, for bioenergy; saying that otherwise, carbon will be emitted into the atmosphere through decomposition and forest fires. He also noted biomass and residues are geographically more evenly distributed than fossil fuels, and thus are a more "democratic" energy source. He explained that



Michael Jack, Scion, New Zealand



John Saddler, University of British Columbia, Canada

production of lignocellulosic ethanol should be commercially viable in the near future, noting research and development is spurring the sector, and remarked that development of bioenergy by-products is also key to making biorefining economically viable, as these products will likely become more lucrative than the energy itself, as occurred in the petroleum-plastics industry. Highlighting energy security and climate change as drivers of new policies for, and investment in, second generation biofuels, he reminded participants that “the stone age did not come to an end due to lack of stones” and that the oil era will likely not end due to lack of oil.

In the discussion, panelists responded to questions concerning: implications of cellulosic ethanol for land use change and forests; bioenergy production in developing countries with expanding food production needs; and the use of biomass for heat and electricity generation versus its use as fuel for transport. Whiteman said projected cellulosic biofuel volumes in the US and the EU will derive not only from wood but also from energy crops and forests residues, but predicted rising demands on forests will require more intensive and efficient forest management. Jack stated that heavily food-dependent countries should not consider bioenergy production as a viable policy option, and noted that because transport fuels have a higher value than heat or electricity, residual biomass is likely to go towards heat production, and dedicated forests towards transportation fuels. Saddler said biomass use should be determined locally, depending on energy needs and efficiency of the energy used to produce biofuels.

PANEL ON THE SOCIAL AND ENVIRONMENTAL IMPACT OF BIOENERGY PRODUCTION: James Richardson, consultant, Canada, discussed criteria and



James Richardson, consultant, Canada

indicators (C&I) for sustainable production of woody biomass for energy. He said the C&I are based on: consistent and transparent policies, laws, and capacity; respect for social, cultural and human rights, e.g., land rights and ownership; ensuring economic sustainability; and sustaining productivity and environmental values. He stressed these principles can be incorporated into C&I to take advantage of

market mechanisms, coordinate with existing policies, avoid duplication and promote synergies.

Why Kong Hoi, Forest Research Institute of Malaysia, presented the implications of biomass and bioenergy systems for GHG balances. Noting that wood is widely used for energy in many developing countries, he discussed advantages of biomass, including low-carbon emissions and relatively low costs, and disadvantages such as low energy output per unit volume and storage and handling difficulties.

He described advantages of biodiesel technologies for crude palm oil production in Malaysia,

stressing that palm oil biodiesel could make an important contribution to combating climate change.

Derek Byerlee, World Bank, said land use for first generation biofuels is accelerating rapidly, threatening forests through direct and indirect land use changes. He noted biofuels could be potentially important for livelihoods in poor countries and presented the case of oil palm production as the most profitable, efficient, and fast-growing, but most controversial, feedstock for biodiesel. He noted that oil palm accounts for half of the forest conversion in Indonesia and suggested ways to better manage biofuel-forest conflicts, including by: improving governance of forestlands; reducing subsidies to non-sustainable biofuels; facilitating use of degraded lands; mapping land suitability for biofuel production; regularizing land rights to reduce transaction costs; and implementing certification schemes and codes of conduct.

In the discussion, one participant reflected on whether it made sense to refer to land for agriculture or forestry separately, and suggested looking at integrated land use assessments. Another participant asked for an example of sustainable palm oil production, with Byerlee responding that there are some examples of plantations in previously degraded lands, and Hoi noting current palm oil production in Malaysia is obtained from residual palm oil and thus is not affecting forests as a whole. A question was posed to the audience on whether increased bioenergy production is good or bad for forestry, with results showing an evenly divided audience.

PANEL ON BIOENERGY POLICIES AND MEASURES: How to plot a course for sustainable outcomes:

Maria Michela Morese, Global Bioenergy Partnership (GBEP), FAO, highlighted GBEP’s role in providing a venue for dialogue and cooperation among countries and international organizations on the issue of bioenergy. She noted sustainability is one of GBEP’s main focus areas, for which it is developing a set of C&I, as well as a methodology to assess GHG reductions of biofuels for transport and of solid biomass. She also mentioned studies currently underway looking at indirect land use change effects of bioenergy.

Jary Parviainen, Director of Research, Finnish Research Institute, explained the role of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) in setting standards for bioenergy use. He recommended that MCPFE



Why Kong Hoi, Forest Research Institute of Malaysia



Derek Byerlee, World Bank

assess performance and verification of SFM standards in European countries, and strengthen SFM for mitigation of, and adaptation to, climate change.

Christer Segersteen, President, Confederation of European Forest Owners, discussed bioenergy developments from the perspective of family forest owners. Noting that over 60% of forests in Europe are owned by families in mostly small-scale holdings, he said the EU's decision to increase renewable energy use to 20% by 2020 from the current 8.5% represents a significant opportunity for forest owners, provided they increase forest production in a sustainable way, balancing forest production and biodiversity.

THEMATIC SESSIONS

Over 60 panels grouped into seven thematic areas took place throughout the week at the XIII WFC. The themes within which the panels were grouped are as follows: forests and biodiversity; producing for development; forests in the service of people; caring for our forests; development opportunities; organizing forest development; and people and forests in harmony. Each theme was also introduced in a special plenary session. This part of the report summarizes the plenary introductions as well as a selection of the panels that took place in each of the thematic areas.

FORESTS AND BIODIVERSITY

The plenary on forests and biodiversity was held on Monday. Presentations and parallel sessions covered, *inter alia*: climate change and biodiversity; human and natural disturbances on forest ecology and dynamics; deforestation and forest fragmentation; forests and assessment techniques; management for the conservation of forests; genetic diversity, and restoration and rehabilitation of forest ecosystems.

William Jackson, Deputy Director-General of the International Union for the Conservation of Nature (IUCN),



William Jackson, Deputy Director-General, IUCN

observed that due to climate change, forests are again high on the international agenda. He said that REDD must embrace four principles to be effective: management as a matter of social choice; rights of local communities; making markets work; and resilience and restoration.

Rodney Taylor, Director, Forests, WWF International, said that while climate change is a threat to forest biodiversity, biodiversity and forest conservation are part of the solution to climate change. He urged the WFC to support the goal of zero net deforestation by 2020.

Jane Goodall, the Jane Goodall Institute, presented her "Reasons for Hope," explaining that the desperate situation presented by decreases in biodiversity and by global warming could be addressed through the protection of tropical forests. She proposed that every participant seek to reduce his/her carbon footprint by 10% by 2010 for the sake of future generations.

Ariel Lugo, International Institute of Tropical Forestry, US Department of Agriculture Forest Service, said urgent actions are needed to address effects of disturbances on forests, but cautioned against quick solutions. He said "novel" forests that



L-R: Ariel Lugo, International Institute of Tropical Forestry, USDA Forest Service; Jane Goodall, the Jane Goodall Institute; and Rodney Taylor, Director, Forests, WWF International

occupy abandoned lands are nature's response to the changing environment they have equal or higher diversity than the historical ecosystems they are replacing.

DEFORESTATION AND FOREST

FRAGMENTATION: These issues were discussed on Tuesday. Mette Løyche Wilkie, FAO, presented a global overview of status and trends in deforestation and forest loss, noting deforestation is continuing at an alarming rate globally, but the net rate of forest loss has diminished due to replanting and natural expansion of forests.

She noted that deforestation drivers vary regionally, with poverty and food insecurity leading in Africa, large-scale commercial agriculture in Latin America, and a mix of these in Asia. She concluded that the "Zero Deforestation by 2020" objective is unrealistic, and that some



Mette Løyche Wilkie, FAO



Steffen Fritz, International Institute for Applied Systems Analysis, Austria

of the agricultural expansion needed to feed increasing numbers of hungry people will occur at the expense of forests.

Steffen Fritz, International Institute for Applied Systems Analysis, Austria, presented work on a methodology for developing a cross-border deforestation index that can be used to compare similar areas. He gave examples of starkly contrasting trends in cross-border deforestation in Africa, Latin America and South East Asia.



Valerie Kapos, UNEP-WCMC

Valerie Kapos, UNEP-World Conservation Monitoring Centre (WCMC), stressed that fragmentation reduces the ability of forests to support biodiversity and to provide other ecological services, although effects differ among landscapes and taxa. She presented work on assessing forest fragmentation trends, in particular biodiversity-relevant fragmentation.

Valentina Robiglio and Ririn Salwa Purnamasari, World Bank, presented case studies using Geographic Information Systems

(GIS) in Cameroon and Indonesia respectively. They showed how forests cleared for crops and land in Cameroon revert back into forests when cleared areas lie fallow, and how small scale deforestation in Indonesia can be analyzed by overlaying maps of deforested areas with maps based on poverty surveys.

In the discussion, panel members suggested that: policymakers use cross-sectoral land-use planning with the participation of local communities, and that REDD+ be included as a mechanism to maximize benefit valuation of forest ecosystem services.

THE STATE OF FORESTS AND FOREST ASSESSMENT TECHNIQUES: State of the forests and forest assessment techniques were discussed on Wednesday.

Christoph Kleinn, Georg-August-University, Germany, highlighted the need to better evaluate the role of forestry inventories in policy processes and to develop better models for carbon estimation and improve communication between national forest inventories and non-forestry inventories. He also said that the need to incorporate socio-economic components in inventories through interviews with forest owners and users has been recognized in the last decade.



Christoph Kleinn, Georg-August-University, Germany

Rebecca Tavani, FAO, presented FAO's National Forest Monitoring and Assessment (NFMA) programme as a cost-effective forest degradation monitoring approach, and said assistance to countries to establish and maintain NFMA systems needs to continue.



Rebecca Tavani, FAO

Vibrans Alexander, Universidade Regional de Blumenau, Brazil, presented the Floristic and Forest Inventory of Santa Catarina, which he said is one of Brazil's biodiversity hotspots. He said the inventory should become a permanent institute to produce reliable data to inform forest policy and help determine ecosystem payments.

Sung-Ho Kim, Korea Forest Research Institute, said Korea's national forest inventory has expanded in scope to include not only timber production but also measurements such as forest health, biodiversity and carbon stock.

MANAGEMENT FOR THE CONSERVATION OF FORESTS: This issue was discussed on Thursday. John

Spence, University of Alberta, Canada, said Canada's new natural disturbance paradigm approach focuses on preserving biodiversity in timber-harvesting areas by protecting representative ecosystems, continuous tracts of forest and smaller landscapes to preserve species susceptible to forest fragmentation and dependent on old-growth habitats and natural disturbances.



John Spence, University of Alberta, Canada

Christian Barthod, Ministry of Ecology, France, outlined key challenges compromising the ability of protected areas to preserve biodiversity, including: inadequate size; dispersion; poor management; deficient consideration of socioeconomic aspects; and insufficient finances. He urged, *inter alia*, integration of local communities' knowledge and concerns in protected areas establishment and management.

Archi Rastogi, McGill University, Canada, presented a study on the role of role of stakeholders in a national park in India, and said stakeholder analyses can support conservation efforts in protected areas.

Charlotte Lietaer, FAO, spoke of the potential contribution of beekeeping to forest conservation and poverty reduction. Daniel Barthélémy, the French National Institute for Agricultural Research (INRA), presented the PI@ntNet project, a collaborative network on botany and a botany-related internet platform.



Charlotte Lietaer, FAO

GENETIC DIVERSITY: This issue was discussed on Thursday. Antoine Kremer, INRA, presented EVOLTREE, a European network focusing on forest ecology, genetics, evolution and genomics to address global biodiversity and climate change issues.

Eduardo Cappa, Universidad Nacional de La Plata, Argentina, presented a methodology to carry out multi-environmental spatial analyses.

Víctor Hugo Cambrón, Instituto de Investigaciones Agropecuarias y Forestales, Mexico, said the results of research on genotype competition in commercial tree species could be used by industry and companies to improve plantation success and reduce costs.

Mario Pastorino, INTA, Argentina, presented work to identify regions of origin for Patagonian native forest species with domestication potential, and suggested use of provenance studies to regularize commercial exchanges of forest tree seeds.

RESTORATION AND REHABILITATION OF FOREST ECOSYSTEMS: These issues were discussed on Friday. Jorge Rodríguez, Minister of the Environment, Energy and Telecommunications of Costa Rica, initiated a brainstorming session by providing an overview of his country's experience with PES and protecting and rehabilitating natural forests. He noted REDD provides a key opportunity to rehabilitate forest ecosystems.

In response to a question on why plantation of trees, rather than natural regeneration, is used as rehabilitation, Jerilyn Levi, US Forest Service, said the opportunity for natural regeneration depends upon the ecosystem and availability of seeds, and there are cases where planting is not necessary or efforts focus on removing unwanted vegetation to allow natural forest regeneration. Eduardo Mansur, ITTO, noted globally 250 million hectares are in a state of degradation that cannot be reverted naturally. Aurélio Padovezi, clarified that the proximity of a restoration site to a natural forest is directly related to its ability to naturally restore itself.

A participant presented an example of "analog forests," turning home gardens into forest gardens in Sri Lanka. Another highlighted that forest restoration has to clearly link to livelihoods.



L-R: Tim Rollinson, Director General of the U.K.'s Forestry Commission; Jorge Rodríguez, Minister of the Environment, Energy and Telecommunications of Costa Rica; Jerilyn Levi, US Forest Service; Stewart Maginnis, IUCN; Clive Thomas, Welsh Forestry Commission; Moujahed Achouri, FAO; and Eduardo Mansur, ITTO

Clive Thomas, Welsh Forestry Commission, responded to a question on the adaptive capacity to climate change of monoculture plantations, noting the importance of diversifying plantations and improving research to increase their resilience and adaptive capacity.

Eduardo Mansur highlighted that the time is ripe to take advantage of the opportunity of presenting carbon storage as an ecosystem service. Rodney Keenan, Melbourne University, Australia, commented on the success of "auctioning" government subsidies for the restoration of ecosystems in private lands in Australia, which were awarded to those who were able to restore lands at the lowest price. On the use of exotic species as part of restoration efforts, several panelists reflected that use of exotic species is in some cases an adequate means to restore ecosystem functions emphasizing that restoration efforts should focus on recuperating ecosystem functions, and not on reverting to a pristine ecosystem.

Finally, speakers highlighted the opportunities that REDD brings for financing restoration efforts, and the challenges that reaching high sustainability standards presents for the forest sector.

PRODUCING FOR DEVELOPMENT

The second topic on producing for development was addressed in plenary on Wednesday and discussed during panels throughout the week. It included panels on, *inter alia*: maintenance and increase of productive capacities of forests; planted forests; forest utilization practices; agroforestry systems; and non-wood forest products.

Amha Bin Buang, ITTO, delivered a keynote speech on behalf of ITTO Executive Director Emanuel Ze Meka.



Elizabeth de Carvalhaes, Brazilian Pulp and Paper Association

He reminded participants that although the right to development is enshrined in the Rio Declaration, when left unchecked development has often gone hand-in-hand with deforestation.

Elizabeth de Carvalhaes, Brazilian Pulp and Paper Association, said deforestation of natural forests should end, but halting it remains a challenge and will require offering

alternative livelihoods for the millions whose survival depends on those forests. She said carbon sequestration from cloned trees should be recognized in the new climate agreement.

MAINTENANCE AND INCREASE OF PRODUCTIVE CAPACITY OF FORESTS: This panel took place on Monday. Michael Battaglia, Department of Sustainable

Ecosystems, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, discussed how demands for carbon storage are changing forests and forestry and described how plantation productivity involves tradeoffs of biodiversity and production. He detailed some of the drivers of productivity, including local factors such as region and soil, and noted that carbon storage can be increased by converting land from agriculture to forests.

María Paulina Fernández, Department of Agronomy Engineering, Catholic University of Chile, outlined concepts of forest productivity. She presented a field-testable model on growth patterns of trees, which treats trees as "factories" of biomass and predicts effects of temperature, water availability and density of forests on their productivity.

Jean-Pierre Saucier, Ministry of Natural Resources and Fauna, Quebec, Canada, outlined a methodology for zoning forests, ranked by productivity based on temperature, altitude, water supply, nutrients and slope. The most productive zones are then identified for intensified silviculture and harvesting.

Peter Clinton, University of Canterbury, New Zealand, explained the importance of productive capacity for New Zealand's forestry industry. He identified major issues with both positive and negative effects, including increasing timber exports and enhancing carbon storage through monocropping. He lamented that trees are often seen in isolation rather than as part of ecosystems, and observed that study of soil carbon storage would improve research on sequestration.

PLANTED FORESTS: This panel took place on Tuesday. Rubens Garlipp, Sociedade Brasileira de Silvicultura, said planted forests provide 40% of global supply of wood, and noted a large proportion of the world's forests are state owned. He emphasized the need to overcome ideological conflicts to present a good case for planted forests within the ongoing



Rubens Garlipp, Sociedade Brasileira de Silvicultura

international negotiations on climate change, highlighting that planted forests are a strategic vector of sustainable development.

Frederick Cabbage, North Carolina State University, US, presented research exploring investments in forest plantations. He said it focused primarily on Latin America, where investment is hindered, despite high rates of return, by high costs of doing business stemming from, *inter alia*, complicated regulations, and political and other risks. He said non-implementation and non-enforcement of existing legislation is stifling the realization of SFM.

Brad Sanders, APRIL, Indonesia, said mosaic plantations are a way to confront the challenge of dwindling natural cover



Héctor Arce, Fondo Nacional de Financiamiento Forestal, Costa Rica

in rainforests, explaining how mosaic plantations in Sumatra create biological corridors, are able to conserve high conservation value forests, and use or rehabilitate low conservation value areas.

Héctor Arce, Fondo Nacional de Financiamiento Forestal, Costa Rica, presented the results of three decades of government subsidies and PES in Costa Rica. He noted an increase in demand for

wood from planted forests, although harvest rates for planted forests have been reduced. He highlighted the need to reorient government support schemes to creatively address current challenges for the forestry sector.

FOREST UTILIZATION PRACTICES: This panel took place on Wednesday. César Sabogal, CIATT Iniciativa Amazónica, Brazil, presented research on the adoption of reduced impact logging and other sustainable forest management practices in the Amazon forest. He highlighted that methodology for SFM should be simple to apply and low cost, have a period of early accrual of benefits, and be accompanied by specific regulations to favor adoption of SFM as well as certification schemes.



César Sabogal, CIATT Iniciativa Amazónica, Brazil

Víctor Gerding, University of Chile, presented hidden costs in whole-tree harvest of *Pinus radiata* (Monterey Pine) in Chile. Among his conclusions, he emphasized whole-tree logging must consider the costs of reinstating nutrients contained in bark, leaves and canopy, which in traditional harvests are left on the land. He said that, for example, in low



L-R: Víctor Gerding, University of Chile; Alejandro González, EUFORES, Uruguay; and César Polanco, Universidad Distrital de Bogotá, Colombia

productivity lands, costs of exported nutrients, usually not taken into account, rise to 125% of reforesting costs, which increase to 690% if the whole tree is harvested.

Alejandro González, EUFORES, Uruguay, presented variations in concentration of nutrients in harvest residues, namely leaves, fine twigs, bark and branches; concluding that export of nutrients over the lifecycle of an *Eucalyptus maidenii* (Maiden's Gum) tree is similar to other crops on an annual basis.

César Polanco, Universidad Distrital de Bogotá, Colombia, presented a project to reactivate forest areas in Carare-Opon, which studied existing production methods and presented proposals for increased productivity and income, including opening markets for new species and dimensions, and strengthening community management and monitoring.

AGROFORESTRY SYSTEMS: This panel took place on Friday. Don Mead, Lincoln University, New Zealand, talked about the rise and decline of farm forestry in his country, which peaked in 1994 and has declined since due to government policies. He contended that it would rebound in the future as demand for wood products and carbon storage rises, but that sound agroforestry requires that farmers be rewarded for environmental services as well as wood and agricultural products.

Carlos Carranza, INTA, spoke about perceptions of farming affecting silvopastoral systems: biodiversity concerns; use of water resources; and production of feed and forage crops along with wood production. He said agroforestry can help restore degraded soil and silvopastures are good replacements for either pastures or forests.

Guillermo Detlefsen, Guatemalan farmer and consultant, said that silvopastoral systems could provide sustainable forestry as well as pastureland. He described three case studies in which reforestation of pastoral areas promoted carbon storage as well as restoration of land. He suggested thinning and trimming would improve wood growth but warned that fire damage may result in some areas.

Gesine Hänsel, University of Göttingen, Germany, described case studies of severe deforestation and threats to biodiversity in Nicaragua and Costa Rica. She said that silvopastures can store carbon and improve cattle production relative to open pastures and used mathematical yield models to show that the optimal tree canopy for silvopastures is about 20%, recommending PES for



Gesine Hänsel, University of Göttingen, Germany



Carlos Carranza and Hugo Enrique Fassola, INTA

farmers be set to help cut investment costs and that technical assistance be provided for establishment and managements of silvopastures.

Hugo Enrique Fassola, INTA, discussed silvopastoral systems in Argentina, where best practices of other parts of the world have been adopted. In discussion, the question of optimal tree canopy coverage was discussed; Haensel said that 20% was optimal in the Central American cases while Carranza and Fassola said levels vary from 30-70%, depending on species and locale.

NON-WOOD FOREST PRODUCTS: This panel took place on Friday. Citing the case of natural rubber from the Brazilian Amazon, Floriano Pastore, University of Brazil/ITTO, Brazil, said extractive non-wood forest products face boom and bust cycles with initial production expansion being followed by contraction when demand exceeds natural production capacity and transfers from native forests to domesticated crops or alternative products. He said non-wood forest products extractive production systems are not economically viable and need external support for local extractors to maintain their livelihoods and preserve their culture.

David Wilsey, University of Minnesota, US, presented a study on Xate palm, produced in Southern Mexico and Northern Guatemala and exported for the floral market in the US and Europe. He said certification has positive livelihood impacts but is not feasible with respect to market, as production is lower than the market requires. This, he



Alejandro Cunningham, consultant (Argentina)

stressed, is constrained by the natural productivity of forests and by political and social factors such as rivalry, and unwillingness of communities to work together to increase production.

Alejandro Cunningham, consultant, Argentina, presented the global situation of pine resin production, used in glues, dyes and many other industrial applications.

He noted there is a ceiling on resin prices to producers set by the direct competition of petroleum derivatives.

Ina Winarni, Forest Product Research and Development Centre, Bogor, Indonesia, presented a processing technology for enhancing added value of Gaharu, a valuable aromatic resin extracted from the *Aquilaria* species. She recalled that *Aquilaria* species (agarwood) are listed in Appendix II of CITES, and their international trade is regulated.

In the discussion, Wisley explained that the Xate palm market is evenly divided between fair trade and Forest Stewardship Council (FSC) certifications; Pastore clarified that his proposal does not simply subsidize extraction in the Amazon but entails broad support to local harvesters in terms of funds, technical assistance, and market assistance; and Cunningham replied that only 10% of Chinese pine production comes from plantations.



Ina Winarni, Forest Product Research and Development Centre, Bogor, Indonesia

FORESTS IN THE SERVICE OF PEOPLE

The third topic on "Forests in the Service of People" was addressed in plenary on Thursday, and in several panel sessions during the week, including on valuation of environmental services and benefit sharing.

Balgis Osman Elasha, Sudan, detailed developing countries' concerns regarding forests and climate change, amongst others that: there is too much focus on mitigation; and the bioenergy agenda is driven by energy security concerns of developed countries rather than the rural development, food security and livelihood improvement of developing nations.



Balgis Osman Elasha, Sudan

Esteban Jobbágy, University of Buenos Aires, Argentina, discussed water-related issues in forestry plantations. He asserted that plantations with high-biomass productivity represented an opportunity for South America but that water cycles require consideration, since plants transpire water to capture carbon. He also stressed that plantations can improve water quality in semi-arid or degraded areas.



Esteban Jobbágy, University of Buenos Aires, Argentina

Discussion touched on functions of agroforestry for carbon sequestration and water storage. Osman Elasha suggested that silviculture can contribute to environmental values through bioenergy production, soil retention and carbon sequestration. Jobbágy remarked that plantations can reduce biodiversity and water retention even as they store carbon.

VALUATION OF ENVIRONMENTAL SERVICES AND BENEFIT SHARING: This panel took place on Monday. Shuirong Wu, Chinese Academy of Forestry, presented a case study on the valuation of forest ecosystem services and natural capital in Beijing, China. She remarked that: non-marketable values of forest ecosystem services are much higher than marketable forest goods; forest contribution to GDP is higher than currently measured and reported; and the knowledge about who the beneficiaries of forest services are can help in negotiating PES schemes.

Claus Eckelmann and Jhony Zapata, FAO, presented results of 27 case studies of compensatory mechanisms linking forests and water in Central America and the Caribbean, mainly related to water services. The authors identified some key elements for successful PES schemes, such as: effective local participation; facilitative external support; security of land tenure; adequate public policies and legal frameworks; political will; and financial self-sufficiency.

Paula Horne, Pellervo Economic Research Institute, Finland, presented voluntary and incentive-based instruments for biodiversity conservation in Finland. She reported the results of surveys on the legitimacy of forest policy instruments as perceived by family forest owners. She outlined conclusions including: valuation studies need to account for diversity of respondents and cultural and policy contexts; voluntary



L-R: Moderator Marco Boscolo, FAO; Shuirong Wu, Chinese Academy of Forestry; Paula Horne, Pellervo Economic Research Institute, Finland; and Ismariah Ahmad, Forest Research Institute, Malaysia

instruments seem to have potential for cost-effective implementation of biodiversity policies; collaboration is needed among forest owners themselves, between owners and professionals, as well as among environmental and forestry professionals; and that monitoring and evaluation systems of voluntary mechanisms are needed.

Ismariah Ahmad, Forest Research Institute, Malaysia, presented an ongoing research project measuring tropical forests' impacts on watershed services. She said preliminary results of hydrological and cost analysis indicate that increases in virgin forest are associated with decreases in stream flow, which is consistent with previous research. She also noted that virgin forests moderately reduce flooding and highlighted that opportunity costs of not harvesting to provide watershed services was found to vary amongst different conditions.

CARING FOR OUR FORESTS

The fourth issue "Caring for our forests" was addressed on Thursday in plenary and in several parallel sessions including one on forests and fire. Jacques Régnière, Canadian Forest Service, discussed the ravages of anthropogenic biological invasions such as Dutch elm disease and the mountain pine beetle, and listed research needs to curtail their effects. These included: identification of keystone species; international cooperation; risk analysis; and methods for monitoring, sanitation and eradication.

FORESTS AND FIRE: This issue was discussed in a parallel session on Thursday. Peter Moore, fire management consultant, Australia, described firefighting as "slaying dragons," and noted that most forest managers cope well – 85% of fires are quickly controlled – but some fires get out of control. He called for integration of the "five R's" of fire control: research; risk reduction; readiness; response; and recovery.

María Luisa Chas Amil, economist, Spain, presented a cluster analysis of causes of intentional fires in Galicia. She overlaid maps with causes of fires and found that most intentional fires are related to agriculture and arson, with lesser numbers caused by cattle ranches, revenge and hunting.

Luthfi Fatah, economist, Indonesia, delineated some options for fire prevention: institutional; technical; community participation; and non-forest areas studies to identify external causes. He said that constraints on effective fire-fighting include: risks; limited skills; incorrect methods; lack of compliance; and mismatches between power and authority.

Giselda Durigan, biologist, Brazil spoke about the science of forest fires and conservation of protected areas. She said that fire is not a management tool although some may use it for control. Her case study analyzed species richness, remaining basal area (stumps), tree density, and the tree canopy. She said recovery of the basal areas requires five to 11 years, while full biodiversity levels take up to 34 years to recover.

In the discussion, Moore said that controlled burning is not a good SFM technique. Durigan said that her research focused on trees but that other species were studied and reported on separately.

DEVELOPMENT OPPORTUNITIES

The fifth issue on "Development Opportunities" was introduced in plenary on Wednesday and several parallel sessions during the week, including on sustainability and economic viability, industry and forest development, forest products trade and forest certification.

Teresa Presas, International Council of Forest and Paper Associations, delivered a keynote speech, discussing industrial uses of wood that benefit communities and businesses. She noted that industrial forestry has not yet reached its full sustainability potential, and companies' returns on investment have not been encouraging. She advanced further industrial development of non-timber forest products, but said bioenergy projects require political support, and the recognition that wood is a climate-friendly material.



Teresa Presas, International Council of Forest and Paper Associations

SUSTAINABILITY AND ECONOMIC VIABILITY: This parallel session took place on Thursday. Jonas Kamugisha-Ruhombe, Global Mechanism, presented a case study of Ugandan mobilization and channeling of forest finance. He said in Uganda actual allocations to the forestry sector are far below the level enunciated in the country's national policies. He noted, however, that civil society organization and private sector financial resources could be adequately mobilized.

James Stevens, International Woodlands Company (IWC), Denmark, described IWC's strong commitment to socially responsible investing in its long-term funding of tropical and

boreal forests. He projected that tropical plantation forestry would achieve high value-added and expand into energy plantations.

Peter Gondo, Southern Alliance for Indigenous Resources, Zimbabwe, highlighted the role of microfinance in forest management. Noting that 30 million out of 600 million clients benefiting from microfinance services in developing countries are based in Africa, he highlighted micro credit, group loans and out-grower schemes as examples of successful microfinance in Africa. He said, however, the linkages between microfinance and formal financing need to be strengthened.

In the ensuing discussion, participants examined the details of financing, such as proportions allocated to operations versus capital costs, loans versus equities, and issues of capacity building and management of investments. Gondo noted that capacity problems limit Africa's access to PES.

INDUSTRY AND FOREST DEVELOPMENT: This issue was discussed in a parallel session on Thursday. José Urtubey, Argentinean Forestry Association, presented the development of the forest industry sector from the perspective of sustainable development. He said key challenges to achieving sustainable industrial development are: putting in place proper institutional and legal frameworks; and ensuring that all companies in the forest sector, in particular from developing countries, can meet increasing demands for sustainable forest products.

Daphne Hewitt, Rainforest Alliance, and Monica Castro, Global Consultants in Sustainable Development, Bolivia, presented a study of relationships between companies and communities in forest-value chains, based on case studies conducted in 14 Latin American countries in which communities provide forest products to companies. They noted that the study looked for practical ways to incorporate communities into value chains in ways that would be successful for both parties. They concluded that factors determining success include: the financial and business management capacities of parties; high levels of trust; technical assistance; and a supportive environment, including appropriate policies and access to financing for communities.

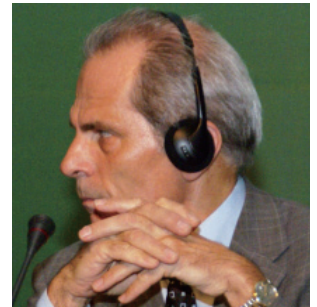
Luis Díaz Balteiro, Polytechnic University of Madrid, Spain, presented an analysis of the sustainability of the European timber industry, which ranks industries in 17 EU countries, representing about 70 percent of total EU timber production, on the basis of 40 indicators and parameters reflecting the social, environmental and economic dimensions of sustainability.

Wladyslaw Strykowski, Wood Technology Institute, Poland, presented activities of the Polish Technology Platform for the Forest and Wood Sector. He outlined the Platform's history and activities, noting its key objectives are to help integrate the Polish forest sector into the world economy and to ensure its competitiveness and sustainability.

FOREST PRODUCTS TRADE: This issue was discussed in a parallel session on Friday. Louis Putzel, New York Botanical Garden, discussed Peruvian-Chinese timber commodity chains. He said a large percentage of Peru's timber is illegally harvested, partly due to a new law marginalizing small and medium producers. Noting China is the world's largest tropical timber importer and Peru one of its key suppliers, he said China's international commitments are shifting the center of ownership of supply chains from Peru to China, which raises the question of whether it is acceptable to offer advantages to large foreign companies to the detriment of already-marginalized local actors in the name of certification.

Bill Street, Programme for the Endorsement of Forest Certification, said that while certification could not be expected to stop deforestation or poverty, the certification community must ensure that certification is more accessible to developing countries by assisting development of national certification systems. He said certification would be necessary as long as there is no legally-binding instrument on forests which codifies the key principles of SFM.

Marteen Larson, International Council of Forest and Paper Associations, said markets drive forest certification and will determine its scope. Noting that many ecosystem services are already included in certification standards, he urged consideration of how certification systems can incorporate climate and carbon issues.



Marteen Larson, International Council of Forest and Paper Associations

Roberto Waack, FSC, said the multiplication of forest certification schemes creates confusion among customers, and because reputation, credibility and legitimacy are crucial to companies, industry needs to inform consumers so they can discriminate amongst certification systems. Claiming that certification schemes should avoid simplifying the complexity of forests, he commended Brazil's new law, which reflects the criteria of FSC and makes a move toward more responsible management procedures.

Anne Toppinen, University of Helsinki, Finland, presented the impacts of roundwood export tariffs on the forest sector in the Russian Federation, the world's largest net roundwood exporter. She said Russia's new forest law gradually increases export tariffs, deviating from commitments with the EU. She concluded that improving the investment climate and road infrastructure might be a more effective way to advance Russia's forest industry's growth than restrictive trade policies.



Anne Toppinen, University of Helsinki, Finland

Mikhail Kobelov, Russian Centre of Forest Health, outlined Russia's experience with voluntary certification, which is regulated by federal law requiring forest managers to consider using certification as a tool to ensure SFM. Noting over 20 million hectares of Russia's forests are FSC-certified, he said the government promotes Russia's national, Programme for the Endorsement of Forest Certification (PEFC)-recognized scheme, which *inter alia*, prohibits use of genetically modified organisms (GMOs). He also said export tariffs will help Russia to promote SFM.



Mikhail Kobelov, Russian Centre of Forest Health

FOREST CERTIFICATION: This issue was discussed in a parallel session on Friday. Amha Bin Buang, ITTO, on behalf of ITTO Executive Director, Emmanuel Ze Meka, said impediments to certification in tropical developing countries include lack of skills and management systems in forest management units, and limited awareness of the value and

benefits of certification. He said ITTO is working on phased approaches to ease tropical producers into certification, the first being compliance with regulations, and called for a supportive international market to promote a sustainable tropical timber trade.

James Griffiths, World Business Council for Sustainable Development, discussed future challenges and opportunities for forest certification. Outlining its successes and failures, he said certification is moving “from NGO push to market pull,” and predicted that it will, *inter alia*: be increasingly shaped by customers, who can choose those standards that best suit their needs; expand to areas such as climate regulation and biodiversity; and be increasingly used by investors as a risk-management tool.

Natalia Vidal, University of British Columbia, Canada, presented a study on the role of forest certification in the adoption of a broader set of corporate responsibility practices. She argued by setting formal processes to help companies set priorities and implement new concepts and activities, forest certification can support adoption of other corporate responsibility practices, but warned it could reduce companies’ ability to innovate and react to new pressures.

Hervé Bourguignon, Inter African Forest Industries, France, for Maurice Henri Tadjuidje, IUCN, described how collaborative efforts between governments and European companies has led to FSC certification of 13% of the forests of the Congo Basin, the world’s second largest rainforest. He said FSC certification has: helped change perceptions around SFM and sustainable development; promoted consideration of how the free, prior informed consent principle applies to the Congo Basin; heightened corporate awareness around legality; and promoted a more equitable distribution of benefits.

ORGANIZING FOREST DEVELOPMENT

The sixth issue on “Organizing Forest Development” was addressed in plenary on Tuesday and in parallel sessions including discussions on: instruments for forest planning and development; institutional settings, law, compliance and good governance; and intersectoral policies and influences.

José Carlos Carvalho, Secretary of Environment and Sustainable Development from the State of Minas Gerais, Brazil, called for a strong assertion of SFM principles from the forestry sector to the climate change meetings in Copenhagen to end inconclusive international dialogues. He said a new paradigm in forest management requires interdisciplinary, integrated approaches incorporating environmental, social and economic aspects. He cautioned however, that as long as standing forests remain less valuable than cleared lands, generating change would be arduous. He stressed



James Griffiths, World Business Council for Sustainable Development

that only by recognizing the value of ecosystem services provided by forests in public policy, international markets and fora, will SFM be realized.

Jan McAlpine, Director, UN Forum on Forests (UNFF), said a cross-sectoral approach is needed to manage forests for sustainable development. She said the NLBI adopted by UNFF in 2007 is a milestone in the global forest dialogue, and that after many years of discussion, all UNFF member countries agreed in 2009 to a four-year process on forest financing. In this regard, the UNFF Secretariat has started a facilitative process to analyze existing financing mechanisms, identify gaps and suggest innovative approaches. She urged the forestry community to look beyond REDD and forest carbon benefits, and recognize all the values of forests to forest-dependent communities.



Jan McAlpine, Director, UNFF

INSTITUTIONAL SETTINGS, LAW COMPLIANCE AND GOOD GOVERNANCE: This issue was discussed on Thursday in two panel sessions.

David Brown, Researcher, Overseas Development Institute (ODI), UK, described the role of institutions in building national capacity for forest governance reform. He noted that there is a convergence of REDD and Forest Law Enforcement, Governance and Trade (FLEGT) as the two programs start addressing similar concerns. He said that with globalization, “green jurisdictions” such as California can force nations to raise standards and non-governmental organizations can reinforce state efforts, but when regulations are “routinized,” attention shifts and governance suffers. He discussed industry efforts to improve governance: large enterprises consolidate operations and make them consistent with standards, while small and medium sized enterprises (SMEs) fragmented operations and reduce standard levels and compliance.

Agustinus Taufik, Transparency International, Indonesia, described a five-year project with the objectives of reducing, *inter alia*: corruption, bribery, and timber laundering. He observed that programmes such as these are designed to address a broad range of issues such as illegal logging, lack of community participation and money laundering because no one solution is enough.

Rubén Darío Moreno, FLEGT Colombia Project, discussed the Project, which he said is being implemented in four regions of Colombia in order to promote SFM by SMEs. He said the project would address corruption and other issues to enable SMEs enterprises to obtain forest certification, which will facilitate commercialization of the forest products of those SMEs.

Rajan Kotru, Senior Advisor, Nepal, outlined community forestry governance and conflict in Nepal. He described what he called the “enigma of FLEGT:” illegal cutting; illegal trade; encroachment on forests; spread of criminal networks; and weak enforcement due to agential turnover in government. He called for more consensus and awareness of the need for SFM incentives as governments move forward with participatory regimes.

Armand Natta, Benin, discussed participation of community-based organizations in Benin. He said governance has evolved since the colonial period toward more participatory approaches, and government programmes are



José Carlos Carvalho, Secretary of Environment and Sustainable Development from the State of Minas Gerais, Brazil

now in a second, more successful phase where representatives are elected from villages to regions to participate at the regional biosphere level. He said that these representatives help governments to reduce bushmeat poaching and to support eco-tourism.

Abdallah Ramadhani, Tanzania, described how Tanzania's Project on Forestry promotes good governance in forest management through decentralization and devolution of power to local communities. He said that forest fires, poaching and encroachment are being countered with community contracts that engage communities in their own development. He noted that 80% to 90% of the population depends on charcoal for heating and cooking, and current informal controls on its production must give way to stronger SFM.

In discussion, Kotru noted that situations vary among countries but managers must analyze the cost of business as usual to design incentives that will improve SFM. A question regarding the meaning of participation elicited a number of responses: Natta suggested that illiterate residents are often excluded rather than included; Moreno said the skills and strengths of communities need to be enhanced so they can engage equally with agencies in negotiations; and Brown noted that there are different, often clashing, concepts of what democracy and participation mean.

During the second panel session, Francesca Felicani, FAO, spoke on regional integration processes in Central America and national forestry legislation, observing the importance of designing laws with realistic and socially-acceptable objectives and expectations, and which respond to countries' enforcement capacities. She also detailed the key importance of protecting stakeholder rights, public participation and accountability.

Juan Gowda, Universidad Nacional de Comahue, Argentina, emphasized laws are not implemented in a vacuum, and that new legislation determines the present and future value of forests to forest owners, a key consideration for them to decide how they use their land.

Marcia Muchagata, Brazilian Forests Service, described the creation of new forest and community-forest management legislation in Brazil, which involved broad stakeholder participation, with more than 1200 institutions participating from the drafting stage to the final congressional debate.

José Miguel Orozco Muñoz, Universidad Distrital de Bogotá, Colombia, described the process of adoption and judicial challenge of a new forests law in Colombia, illuminating how a lack of clear procedures for public participation, in particular for consultation with indigenous communities, led to the overturning of legislation that had significant SFM potential.

INTERSECTORAL POLICIES AND INFLUENCES:

This issue was discussed in a parallel session on Thursday, Richard Guldin, US Forest Service, on behalf of Margaret



Armand Natta (Benin)



Abdallah Ramadhani (Tanzania)



L-R: Christian Barthod, Ministry of Ecology, France; Lorenza Colletti, State Forest Service, Italy; and Benno Pokorny, University of Freiburg, Germany

Shannon, European Forest Institute, presented a constructivist approach to defining policy sectors, by which sectoral

boundaries are defined through actor interaction.

Christian Barthod, Ministry of Ecology, France, noted that forest laws are no longer the predominant instruments regulating forests, as legislation in other sectors is now interfering with forest laws. He lamented the dominance of Western perceptions of forest value and called for the integration of utilitarian, ethical

and aesthetic values.

Kathleen McGinley, US Forest Service, presented key results of a study on regulation and certification of SFM in the tropics, noting that "smart regulation," e.g., integrating policy instruments such as forest incentives, technical assistance and actors such as independent forest monitors, could significantly improve the effectiveness of traditional command-and-control government regulation.

Luviam Zelaya Antúnes, National Forest Institute, María Elena Díaz Vásquez, indigenous representative, Nicaragua, and Leonardo Chávez and Francesca Felicani, FAO, presented the experiences of the FAO/Multi-donor Partnership Programme (FMPP) supporting forest governance in Nicaragua. They highlighted the consultative nature of the process, which has brought together many different stakeholders, including indigenous people, to develop a regulatory framework and forest policy, and in particular, to coordinate government action at local and national levels.

Benno Pokorny, University of Freiburg, Germany, presented a review of forest projects targeting smallholders in the Amazon. He said project adoption and replication rates are very low, as few families can manage the packages proposed, and initiatives actually marginalize local smallholders. He stressed the need to reflect on prevailing approaches and adapt development agendas to local realities.

Lorenza Colletti, State Forest Service, Italy, introduced Italy's framework programme for its forest sector. She said the 25-year programme implements EU guidelines and will help fulfill Italy's international commitments, coordinate national and local legislation, mainstream forestry funding, better communicate forest issues to the public, and answer forestry challenges with the assistance of civil society.

INSTRUMENTS FOR FOREST PLANNING AND DEVELOPMENT: This issue was discussed in a parallel session on Thursday, Jhony Zapata, FAO, stressed the use of national forest programmes (NFPs) to support NLBI implementation. He said the NFP facility hosted by FAO



L-R: Jorge Menéndez, Ministry of Environment, Argentina; Yves Poss, AgroParisTech, France; and Víctor Vidal, Mesa Forestal Nacional, Paraguay

supports 75 countries, and NFPs have been successful in promoting stakeholder participation and country leadership but not in integrating forestry with other sectors.

Gustavo Braier, consultant, Argentina, presented a case study tool to analyze state incentives for forest plantations through subsidies. He said analytical tools are needed to study policies and their effects, and that there is a need to fill the gap between political and technical decisions.

Jorge Menéndez, Ministry of Environment, Argentina, presented the regional forest plan for Patagonia, a pilot phase for the preparation of an NFP based on participatory processes. The plan's objectives are to increase planted area and reduce deforestation and degradation by grazing and fire, and to increase competitiveness of the forest industry.

Yves Poss, AgroParisTech, France, presented France's NFP and an outlook study on French forests in 2050-2100. Results of the study showed, *inter alia*: changes in the forest landscape; strong competition with agricultural areas; and the importance of research, especially for genetic improvement of forest plantations.

Victor Vidal, Mesa Forestal Nacional, Paraguay, recalled Paraguay's consultative process to formulate its first national forest policy, and the creation of the Mesa Forestal Nacional, a discussion forum open to all stakeholders. He said the policy: recognizes the multidimensional nature of forestry and wide range of forest values for society; gives priority to social functions; and entrusts forest management to state forest organizations.

Discussion touched upon, *inter alia*, ways to operationalize participatory processes in forest planning, the importance of accountability, and the need for non-state actors to organize themselves.

PEOPLE AND FORESTS IN HARMONY

The seventh theme was addressed in plenary on Wednesday and in several parallel sessions including on gender and forestry, land tenure and participatory management and processes. Frances Seymour, Center for International Forestry Research (CIFOR), emphasized that to achieve harmony with local community rights and interests, forest policy must clarify and secure tenure rights, and recognize existing local institutions. Forestry agencies must also shift their focus from law enforcement and revenue collection to service provision by supporting local communities and defending their rights, accessing markets and overcoming bureaucratic requirements.

GENDER AND FORESTRY: This issue was discussed in a parallel session on Thursday. Alhassan Nantogmah Attah, UNFF, delivered a keynote message from Rachel Mayanja, Special Adviser of the UN Secretary-General on gender issues and the advancement of women. Noting women depend on healthy forests for their livelihoods and are custodians of forest knowledge and collectors of forest products, he said women are often excluded from forest management and decision-making, urging, *inter alia*: data-gathering on women's participation in forestry and effective female participation in forestry, climate and biodiversity discussions.

Emily Obonyo, Forestry Research Institute, Kenya, presented a study on women's role in forest management in Kenya. She said Kenya's government is decentralizing forest management to address forest degradation, but that the process marginalizes women due to their limited formal education, among other factors. She called for the training and education of women, and better definition of property rights.



Noemi Porro, Federal University of Pará, Brazil

Noemi Porro, Federal University of Pará, Brazil, discussed a study on gender relations in two initiatives in the Brazilian Amazon, one on agroforestry and another on forest management. She said both initiatives have provided stability to families and could contribute to gender equality, and urged increased integration and communication between forestry and agro-forestry discussions and policies.

LAND TENURE: This issue was discussed in a parallel session on Friday. Eva Muller, FAO, reflected on the diversification of forest tenure systems, which she said include not only land ownership but also forest access, use and management rights. She provided an overview of different types of forest tenure systems around the world, noting that in some cases the devolution of tenure rights to indigenous communities relates to degraded forests, which require substantial investments that are beyond their financial capacities.



Eva Muller, FAO

Pablo Pacheco, CIFOR, presented an overview of forest tenure systems and reforms in Latin America, noting that unlike the 20th century's agrarian reforms, current reforms mostly benefit indigenous communities, with rights granted on the basis of ethnic criteria and ancestral possession.

Jinlong Liu, Renmin University of China, provided an overview of forest tenure in China, noting the impacts of historical tenure reforms dealing with centralization and decentralization, and of current collective forest tenure schemes where villages are the owners of forests.

Juan M. Pulhin, University of the Philippines Los Baños, presented the impacts of forest tenure reform in the Philippines, evaluating whether the communities received bundles of rights through tenure reform or, on the contrary,



Pablo Pacheco, CIFOR

“bundles of responsibilities.” He elaborated on many examples of the latter where the state strengthened its position by giving forests back to local communities. His study used livelihood, income, forest condition, and equity (LIFE) indicators.

Discussion addressed the urgent need to improve forest tenure information and update existing databases with recent forest tenure reforms. Panelists also reflected that devolving management rights to communities increases complexity, as some may choose to perform other activities, but should still be allowed to negotiate, and decide, the conditions of their forest use.

PARTICIPATORY MANAGEMENT AND

PROCESSES: This issue was discussed in a parallel session on Thursday. Thomas Enters, Center for People and Forests, Thailand, asked whether participatory management is a silver bullet or a fundamental ingredient in SFM. He said that forest policy formulation will fail if actors don't work with people they want to influence and pointed out that illegal logging occurs because people don't consider state forests' public property and claim rights to them.

NC Jain, India, presented a behavioral approach to shaping strategies for fostering participatory SFM. He said that 90% of institutions do not develop into sustainable institutions because they do not provide self-reinforcers such as satisfaction for accomplishments. He called for the recognition that people are interested in short-term gains, and less in long-term sustenance, and that communities do not maintain collective rationality.

Amsatou Niang, forestry engineer, Senegal, promoted an approach fostering meaningful participation of all stakeholders in managing national forestry programmes. He said Senegal's forest policy has developed in three phases: development from 1981 to 1993, participatory approaches from 1993 to 2005, and decentralization from 2005 to 2025. These plans integrate SFM with poverty alleviation and transfer both objectives into local plans.

Max Alejandro Triana, Universidad Distrital de Bogotá, Colombia, discussed the role of forests in building peace in conflict areas. He said oil extraction and drug cultivation are major facilitators of illegal armed groups that thwart SFM. He advocated reconciliation between aggressors and victims as a priority to end the conflict.

Nicole Leotaud, Caribbean Institute of Natural Resources, Trinidad and Tobago, described some cases of community participation in the Caribbean. She mentioned two successful projects, in Trinidad and Dominica, where communities are involved in planning and PES programmes, explaining that one community has responsibility for a national park visitor center and is paid for conducting tours and the other is a Rastafarian community involved in land restoration projects.

Discussion focused on military influences on conflict in Colombia, and Triana said that while military dynamics only build violence, communities search for ways to solve conflicts peacefully. Jain noted that outside influences could significantly affect communities who seek to establish their rights in the context of national factors.

SIDE EVENT: THE SECOND INTERNATIONAL FORUM ON GIAHS

On Wednesday, a forum was held on the Initiative on Globally Important Agricultural Heritage Systems (GIAHS), which was launched by FAO in 2002 to give international recognition to the biodiversity, food security, livelihood and cultural roles of traditional agricultural systems of the world.



Participants during the side event on “The Second International Forum on GIAHS”

Lucrecia Santinoni, Ministry of Agriculture, Argentina, said global politics, market forces and globalization threaten



Lucrecia Santinoni, Ministry of Agriculture, Argentina

traditional agricultural systems.

Jorge de la Rocha, FAO, introduced a project concept related to the preservation of cultural heritage, which he said seeks to reduce the presence of exotic livestock species in Argentina's highlands by breeding local camelids and supporting local livestock producers.

M. S. Swaminathan, MS Swaminathan Research

Foundation, India, called for an

“ever-green revolution” based on conservation agriculture. He recalled that even the 2°C cap in temperature rise above pre-industrial levels agreed at the G8 meeting in L'Aquila may have severe impacts on agriculture.

He highlighted the importance of: genetic resources; community conservation of genetic varieties; the role of traditional knowledge; and the risk of genetic erosion.

Henri Djombo, Minister of Sustainable Development, the Forest Economy, and the Environment, Republic of Congo, on behalf of Walter Erdelen, UNESCO, recalled the World Heritage Convention adopted in 1972 and said the collaboration between UNESCO and FAO on GIAHS is helping countries with the identification, conservation and protection of agricultural systems for future generations. He said that these traditional systems testify to the spiritual and cultural vitality of humankind and are part of our common identity.

Dirk Gaul, Global Environment Facility (GEF), on behalf of GEF CEO Monique Barbut, said that while the GEF/FAO project on GIAHS has the potential to be expanded in scope and geographically, it is crucial to achieve success in ongoing activities so as to convince non-participating countries to join in the project.

FINAL STATEMENT AND CLOSING CEREMONY

A ceremony commemorating the 60th anniversary of the FAO-IUFRO cooperation agreement was held on Friday afternoon with a video featuring vignettes from Dr. Walter Liese, Germany, Prof. Dusan Mlinsek, Slovenia, Heinz Schmutzenhofer, Austria, and Dr. M. Sternberg, former Assistant Director-General, FAO. This was followed by the current Assistant Director-General Jan Heino and IUFRO President Don Koo Lee signing a renewal of the FAO-IUFRO agreement.

During the closing plenary, India and South Africa presented proposals to host the next WFC. Jan Heino, Assistant-Director General, FAO said an expression of interest to host the



L-R: Don Koo Lee, IUFRO President, and Jan Heino, Assistant Director-General of the Forestry Department, FAO

next WFC should be presented to the next session of FAO Committee on Forestry which will take place in Rome in October 2010. He then announced that 12 comments had been received on the draft message from the XIII WFC to UNFCCC COP 15, and clarified that the final text of the message recognizes the UNFCCC as the main forum for discussion on climate change issues. He also clarified that although it has the broad acceptance by participants, the message is not a negotiated text but a message from the organizers.

Tim Payne, New Zealand, chair of the WFC Drafting Committee, read the Declaration of the XIII WFC. The document contains nine findings and 27 strategic actions. Homero Bibiloni, Secretary for the Environment and Sustainable Development of Argentina, closed the XIII WFC at 4:57pm. Both the message to the UNFCCC COP 15 and the Declaration are summarized below:

MESSAGE TO COP 15: The final message to UNFCCC COP 15 notes impacts of climate change and emphasizes the role of forests in mitigation and adaptation, and in generating critical ecosystem services such as biodiversity and sequestration. WFC XIII endorses messages of the CPF Strategic Framework for Forests and Climate Change, of its Expert Panel on Adaptation of Forests to Climate Change, and of the Forests Dialogue's Statement on Forests and Climate Change on:

- contribution of forests to global carbon balance;
- requirement of SFM for successful mitigation and adaptation;
- improvement of forest governance;
- use of sustainably managed forest products to substitute high-emission materials;
- concurrent forest-based climate mitigation and adaptation measures;

- inter-sectoral collaboration, governance, incentives and improving livelihoods to reduce deforestation and forest degradation;
- accurate forest monitoring; and
- more active engagement of forest professionals.

The message stresses the need to reduce poverty as a driver of deforestation and to safeguard the rights of indigenous peoples and forest-dependent communities, and supports: inclusion of REDD+ in the agreement on long-term cooperative action; SFM and enhancement of forest carbon stocks in developing countries; and support for adaptation in the forest sector.

XIII WFC DECLARATION: The Declaration of the XIII WFC contains nine findings and highlights 27 strategic actions. *Inter alia*, it recognizes the need for:

- multi-sectoral responses to major external pressures from the forest sector;
- incorporation of local and indigenous knowledge and a strengthened interface between forest knowledge and society;
- financial incentives for landowners and communities to manage forests for multiple values, both environmental and economic;
- recognition of the importance of planted forests and of restoring degraded lands;
- sustainable energy supply and development of energy forests which minimize the risks of unintended consequences across forest, agriculture and energy sectors;
- immediate confrontation of climate change impacts via inputs to climate change negotiations, simplification of afforestation and reforestation rules in the Clean Development Mechanism (CDM) and implementation of REDD+;
- advocacy of the importance of forests in meeting local needs to adaptation to climate change;
- protection and restoration of fragile ecosystems, including efforts to combat desertification through forestry;
- creating enabling environments for the forest industry and expand research on new clean technologies and forest products;
- forest-related policies to be adapted to rapid global change;
- good governance and strengthened capacity of forestry institutions to enforce laws and regulations;
- secure tenure rights;
- increased recognition of women's role in the forestry sector;
- improved working conditions in the forest sector; and
- creative financing strategies.



L-R: Tim Payne, Chair of the WFC Drafting Committee (New Zealand); Olman Serrano, FAO; Carlos Casamiquela, President, INTA; Homero Bibiloni, Associate President of the XIII WFC and Secretary for the Environment and Sustainable Development of Argentina; Jan Heino, Assistant Director-General of the Forestry Department, FAO; and Leopoldo Montes, Secretary General of the XIII WFC 2009

UPCOMING MEETINGS

DECENTRALIZATION, POWER AND TENURE

RIGHTS OF FOREST-DEPENDENT PEOPLE: This symposium will be held from 27-28 October 2009, in Dahod, Gujarat, India. The event aims to share recent research experiences of participants and to review state-of-the-art approaches for forest-dependent indigenous peoples, tribes, and pastoralists regarding: decentralization policies and local forest institutions; power and political position of forest-dependent peoples; and legislative recognition of forest tenure rights. For more information, contact: Purabi Bose; e-mail: purabi.bose@wur.nl; internet: <http://www.forestrynepal.org/event/4149>

SPECIAL SESSION OF THE NINTH SESSION OF THE UN FORUM ON FORESTS: A special session of UNFF9 will be held on 30 October 2009 at UN Headquarters, New York, US. The session will adopt the agreed text on means of implementation. For more information contact: UNFF Secretariat; tel: +1-212-963-3401; fax: +1-917-367-3186; Internet: <http://www.un.org/esa/forests/>

ITTC-45: The 45th session of the International Tropical Timber Council (ITTC-45) and associated sessions of the four committees will be held from 9-14 November 2009 in Yokohama, Japan. For more information, contact: ITTO Secretariat; tel: +81-45-223-1110; fax: +81-45-223-1111; e-mail: itto@itto.or.jp; internet: http://www.itto.int/en/workshop_detail/id=2127

COUNTRY-LED INITIATIVE IN SUPPORT OF THE

UNFF: This country-led initiative on the theme "Forests for people - the role of national forest programmes and the non-legally binding instrument on all types of forests" will be held from 16-20 November 2009 in Guilin, China. For more information contact: tel: +1-212-963-3401; fax: +1-917-367-3186; e-mail: lude@forestry.gov.cn; Internet: <http://www.apfnct.cn/cli/>

17TH SESSION OF THE AFRICAN FORESTRY AND WILDLIFE COMMISSION:

This session to be held on 22-26 February 2010 in Brazzaville, Republic of Congo will address: forestry and wildlife in support of sustainable livelihood systems in Africa; sustainable management and benefits; climate change, forests and wildlife in Africa; and other regional issues. For more information contact: Foday Bojangm, FAO Regional Office for Africa; e-mail: Foday.bojang@fao.org; Internet: <http://www.fao.org/forestry/afwc/en/>

COUNTRY-LED INITIATIVE ON FOREST

GOVERNANCE AND REDD: This meeting, co-hosted by Switzerland and Mexico, will be held in Mexico in April or May 2010. For more information, contact: Christoph Dür, Swiss Federal Office for the Environment, Forest Division; tel: +41-31-324-7689; fax: +41-31-324-7866; e-mail: christoph.duerr@bafu.admin.ch

UNFF MAJOR GROUPS INITIATIVE: This intersessional meeting will be organized in May 2010 (dates to be decided) and will focus on the implementation of the forest instrument at national and local levels, through capacity-building and sharing the best practices. For more information, contact: UNFF Secretariat; tel: +1-212-963-3401; fax: +1-917-367-3186; e-mail: unff@un.org; internet: <http://www.un.org/esa/forests/participation.html>

18TH COMMONWEALTH FORESTRY

CONFERENCE: This conference will take place in Edinburgh, Scotland, UK from 28 June - 2 July 2010. The

theme is "Restoring the Commonwealth's Forests: Tackling Climate Change". For more information, contact the Secretariat: tel: +44 (0)131 339 9235; fax: +44 (0)131 339 9798; e-mail: cfcc@in-conference.org.uk; internet: <http://www.cfcc2010.org/index.html>

XXIII IUFRO WORLD CONGRESS: The 23rd World Congress of the International Union of Forest Research Organizations (IUFRO) will be held from 23-28 August 2010 in Seoul, Republic of Korea. The theme is "Forests for the Future: Sustaining Society and the Environment." For more information, contact: Korea Forest Research Institute; tel: +82-2-961-2591; fax: +82-2-961-2599; e-mail: iufrococ@forest.go.kr; internet: <http://www.iufro2010.com>

TWENTIETH SESSION OF THE FAO COMMITTEE ON FORESTRY (COFO):

The 20th session of the FAO Committee on Forestry will convene in October 2010 at FAO headquarters in Rome, Italy. For more information, contact: FAO Forestry Department; tel: +39-06-5705-3925; fax: +39-06-5705-3152; e-mail: COFO2010@fao.org; internet: <http://www.fao.org/forestry>

ITTC-46: The 46th meeting of the International Tropical Timber Council (ITTC-46) and associated sessions of the four committees are expected to convene during the second half of 2010 in Guatemala. For more information, contact: ITTO; tel: +81-45-223-1110; fax: +81-45-223-1111; e-mail: itto@itto.or.jp; internet: <http://www.itto.or.jp>

INTERNATIONAL YEAR OF FORESTS 2011: UN General Assembly resolution 61/193, adopted in December 2006, declared 2011 as the International Year of Forests. The UN Forum on Forests will serve as the focal point for the implementation of the International Year of Forests, in collaboration with governments, the CPF and international, regional and subregional organizations and processes as well as relevant major groups. For more information, contact: UNFF Secretariat; tel: +1-212-963-3401; fax: +1-917-367-3186; e-mail: unff@un.org; internet: <http://www.un.org/esa/forests/2011/2011.html>

XIV WFC: The fourteenth World Forestry Congress will take place in 2015. The venue will be decided at COFO-20 as both India and South Africa have offered to host the meeting. For more information, contact: FAO Forestry Department; tel: +39-06-5705-3925; fax: +39-06-5705-3152; internet: <http://www.fao.org/forestry>

GLOSSARY

CPF	Collaborative Partnership on Forests
FSC	Forest Stewardship Council
PES	Payments for Ecosystem Services
REDD	Reduced Emissions from Deforestation and Forest Degradation
REDD+	Reduced Emissions from Deforestation and Forest Degradation and enhancing carbon stocks
SFM	Sustainable forest management