

Proceedings from the Conference:

**Market-Based Approaches to Sustainable Forestry
Development and Forestry-Based Poverty
Alleviation:
Global Trends and Implications for China**

An International Conference on Sustainable Forestry Development in China

11 – 12 May 2001

Huáng Shān (Yellow Mountain), China

Co-Sponsors:

**Center for Chinese Agricultural Policy ,
Chinese Academy of Sciences**

**Department of Law and Legislation,
State Forestry Administration of China**

**Research Center for Environmental and
Ecological Economics,
Chinese Academy of Social Sciences**

**CCICED Task Force on Forests and
Grasslands
Forest Trends**

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Purpose of the Conference

The purpose of this conference was to present Chinese policymakers with market-based approaches to forestry development and forestry-based poverty alleviation. Participants focused on the potential for using market- and incentive-based instruments and the role of government and the private sector to bolster forestry development and help alleviate poverty. Discussion highlighted examples of successful market-based innovations around the world. The conference sought to inform China's growing debate on policy reforms designed to further forestry's contributions to rural development and also help protect the environment and meet domestic demand for forest products and services.

Description of the Conference

The two-day conference, entitled "Market-based Approaches to Sustainable Forestry Development and Forestry-based Poverty Alleviation: Global Trends and Implications for China," was held in Tunxi near Huáng Shān National Park in Anhui province. Over 100 Chinese and 20 international forestry experts and forest industry representatives attended. Chinese participants included members of the Chinese Academy of Forestry, the State Forestry Administration, over 30 provincial forest administration agencies, the Chinese Academy of Sciences and representatives of non-governmental organizations. International participants represented the Center for International Forestry Research, the University of Maryland, the State Forests of New South Wales, the University of California, the U.S. Forest Service, Conservation International, Michigan State University, IKEA Company, Westvaco Corporation, the World Bank, the Planning Commission of the Government of India, Forest Trends, the International Institute for the Environment and Development, Friends of the Earth – Brazil, the Pacific Environment and Resource Center, The Nature Conservancy, Bureau of Regional Outreach Campaigns (Russia), Forest Certification Centre (Russia), and the Institute for Global Environmental Studies. On the third day of the conference, participants visited a local community forestry development area, the Huicun Joint Forest Farm in Xiuning County, where they observed some of the community's forest and discussed land tenure and profit-sharing arrangements.

Summary of presentations

Friday, 11 May

Wel come

Xu Jintao (Deputy Director, Chinese Centre for Agricultural Policy) opened the morning with greetings and logistical information and guided participants through the agenda for the coming two days. Michael Jenkins (Executive Director, Forest Trends) and Cheng Shengqui (Deputy Director General, Institute of Geographic Sciences and Natural Resources Research [IGSNRR], Chinese Academy of Sciences), greeted participants and described in more detail the intended purpose of the conference and the logic behind the agenda.

“Forest Conservation and Development: Challenges and Missions of China”

Madam Wang

Deputy Director General
Department of Policy and
Legislation, State Forestry
Administration

Madam Wang started the first morning session with a description of the new directions in forest policy in China. Madam Wang described the challenges of forest protection in China, the major programs designed to address these challenges and some of the legal and systemic reforms required. China’s two major programs are the Western Development Strategy, which emphasizes promoting tree cover and economic development in Western China, and the Natural Forest Protection Program, which has reduced wood output in several key forest regions. Other programs include shelterbelt projects in three northern areas, the return of cultivated land to grasslands to control erosion, the Tenjung biosphere and the creation of reserves to protect habitat and wild animals.

Madam Wang highlighted efforts to channel financial investments to help preserve the ecology and economic output of forests. Sources for such investments include the government and diverse multilateral sources. Madam Wang also discussed the need to lower tax rates for forestry investment. She recommended lower interest rates over a longer term, as forests provide a variety of long-term benefits. Finally, she suggested that forests established by individuals should be promoted and that several policy steps would facilitate this. These include more secure land tenure, managerial freedom to establish commodity forests, ownership of trees by those who plant them, and stronger market information systems and forest laws.

“Global Trends in Forests and Forestry”

Andy White

Forest Trends

Andy White cited numerous conflicts and debates in the forestry sector, posing the question: What are the drivers of conflict and debate over forests and forestry? He proposed some drivers, including extensive forest degradation and deforestation since the 1980s, the global and local costs associated with loss of forests’ environmental services, the boom-and-bust cycles in forest exploitation and resource extraction, rampant illegal logging in public forests and society’s growing power to raise visibility and demand accountability on these issues.

Andy White then presented key trends characterizing the global forest sector. Demand for roundwood is projected to increase, but commodity prices in general have been declining. Protected conservation areas have increased dramatically, along with community ownership and reserves. The increase in community ownership and claims is likely to affect the supply of wood products and forest services. Andy White said the forest industry is changing as well. The pulp and paper sector is characterized by consolidation, there are more plantations, and there is increased use of lower-quality wood. The timber/lumber sector has seen a declining resource base, some experimentation with sustainable natural forest management, and interest in selling forest services. Andy White described the forestry sector’s future as following two possible

paths: mining (which would double the extent of industrial logging) or sustainable management (with large areas of protected and community managed forest, and smaller secondary forests and plantations).

Finally, he presented key approaches to help sustain forests and communities, such as: reforming policies away from command and control and toward incentives; promoting voluntary Best Management Practices to lower costs and increase transparency; the small but growing trend of payment for water and biodiversity services from forests, the increasing value of stumpage, and the negative correlation of forestlands with stocks in the US. Andy White said the growth in certified wood production and demand is only likely to increase and spread in Asia. However, the boom-and-bust cycle of employment associated with predatory logging provides another incentive for sustainable harvesting.

In his comments, **Yin Runsheng** (Michigan State University) described land tenure and market access as examples of providing institutional frameworks for forest and community development. These frameworks can determine which forests flourish and whether forest products are used or sold. **Gary Man** (International Programs division of the U.S. Forest Service) stressed operational issues. He discussed the need to be careful with the use of high technology, such as tree improvement, and the benefits of flexible guidelines, such as the number of trees planted per hectare.

Questions were raised about the conditions under which industry might adopt voluntary practices –such as the threat of regulation, conditional market access, and education and training investment. Some participants also questioned the relationship between declining returns on investment in the forestry sector and increasing timberland values. This phenomenon was explained by rising stumpage values.

“International Impacts of Chinese Forest Policy”

Zhu Chunquan

Director, Forest Program
World Wildlife Fund in
China

For his presentation, Zhu Chunquan drew on the initial findings from a World Wildlife Fund report due out later in the summer. He briefly reviewed the scope and impacts of forest-related policies in China: trade measures, such as the lowering of trade barriers and tariffs, construction and residential housing reforms; the Grain for Green policy; the Western China Development Program; and, significantly, the logging ban under the Natural Forest Protection Program. He noted the total national reduction of timber production from 1997 to 2000, which was about 18.242 million m³. He additionally noted that the predicted gap of commercial timber supply in 2003 is 75.00 million m³.

Mr. Zhu then assessed China's trends in importing wood products, highlighting international impacts from 1997-2000. He stated that the logging ban has mostly affected timber supply. As expected, imports have risen as logging has been curtailed and trade restrictions have been eased. A large portion of imports, however, come from a small number of countries. Russia leads in the supply of softwood logs (85.7% in 2000), while Malaysia, Gabon and Papua New Guinea accounted for 50% of hardwood logs in 2000. Malaysia, Indonesia, America and Germany are the top lumber suppliers (65.9% in 2000) while Malaysia and Indonesia accounted for 88.2% of the imported plywood in 2000.

Often, these countries experience crises of illegal or unsustainable timber harvest, and the new Chinese demand is exacerbating the problem. Zhu Chunquan gave examples of impacts in supplier countries, especially Papua New Guinea, Russia, Malaysia, and Central Africa.

Finally, Mr. Zhu made several recommendations to mitigate China's negative impact on forests. He called for forest certification to promote sustainable use of forests, support for timber plantations that promote mixed forest development, ending the logging quota for commercial timber plantations so that timber producers can harvest independently, and

termination of the favorable policy (the half tariff and tax policy) for small border trade with neighbor countries. He also recommended cracking down on timber smuggling along borders, creating incentives for the use of non-wood fiber and substitutes, efficient use of fuel wood and other energy sources, promoting the transfer of forest resources and investment into the forestry sector, and enhancing efficient use of forest resources to promote a sustainable way of life.

In his comments, **Yang Shimin** (Deputy Division Chief, Natural Forest Conservation Center, State Forestry Administration) described various efforts to protect forests and improve their productivity. He discussed the National Forest Protection Program, reform in state-owned forest areas, and forestry investments of 18.8 billion RMB in the last two years. He said that these measures have reduced short-term domestic wood production. While there is an impact on global markets, he described it as not earthshaking. He stressed that large-scale plantations will come online in the near future. The demand for small diameter wood is stable, but large diameter wood demand is rising, he added.

Questions and comments regarding Zhu Chunquan's presentation—as well as the following supplement by David Gordon—highlighted the difficulty of environmental governance when there is a general decline of governance. Other areas of discussion included the agreement between Chinese and Russian prime ministers for development of Russian forests, the ownership of forests where the logging ban is in place, the quality of forestry data, and the incentive to reduce imports and increase long-term forestry investment.

“Recommendations to Reduce the Illegal Russia – China Timber Trade”

David Gordon

Pacific Environment and Resource Center

As a supplement to Zhu Chunquan's presentation, David Gordon offered the results of a joint Chinese-Russian-North American conference in Chita, Russia, in September 2000. The conference focused on the growing illegal and unsustainable practices of the Russian – Chinese timber trade. He presented the findings and the key recommendations resulting from that conference.

He gave some reasons for the breakdown in the Russian government's efforts to control illegal logging and trade. His list included poor customs enforcement for raw log export shipments, difficulty in tracking chain of custody from logging to export, lack of import restrictions reciprocal to Russian Far East export restrictions in importing countries, and failure to release information on timber trade and export.

The Action Plan to combat illegal logging developed at the conference in Chita featured the following key steps: ensuring open, accurate, and transparent data; providing for accurate and reliable documentation; strengthening customs control; cracking down on corruption and bribery; and promoting greater cross-border cooperation

“Forests, Livelihoods and Poverty Alleviation: Lessons Learned”

Sara Scherr

University of Maryland and
Fellow, Forest Trends

Sara Scherr sketched out global forestry challenges for the 21st century. She mentioned the need to meet increasing demand for forest products, to stem forest loss and degradation, to conserve environmental services, and to meet the livelihood needs of rural people, especially in developing countries. She discussed different models of forestry development, such as logging concessions on public lands, plantation development, ecological forestry using conservation and protected areas, subsistence-oriented community forestry, and community-based forest production for the market. She also discussed the forestry market's contributions to local livelihoods, highlighting the enhanced value of natural assets (wealth), the ability to leverage other capital, the increasing income and diversifying income sources to reduced risk, the expansion in local employment, and the resulting incentive to protect environmental services.

Sara Scherr reviewed statistics on community control of forest resources around the

world and the growth of agroforestry. She also gave statistics on the international demand for different types of forest products, including high-quality timber, industrial pulpwood, certified wood, non-timber forest products, the demand for environmental services of forests, and less developed countries' domestic demand for lower-value wood. Sara Scherr advocated strengthening community land and forest rights, removing market distortions, strengthening the voice of local producers, and improving communities' market position. She also called for more strategic partnerships, more support services for local forest business; and more diverse financing for community forestry. At the same time she also noted business factors limiting local market participation.

Finally, Ms. Scherr noted the significant potential for poverty alleviation. She recommended protecting forests by increasing their value to local people, pursuing opportunities based on market trends, devolving public forests to local communities, reducing market distortions, encouraging direct partnerships between the private sector and communities, and investing in institutional development for small-scale production.

In his comments, **Scott Rozelle** highlighted the value of market mechanisms—rather than top-down planning—in guiding forestry activities in China, given the enormous diversity in bio-physical variables as well as human factors like population density, throughout the country. He emphasized "value chain" analysis to identify places to intervene, and discussed the impact of non-forest policies and economic forces on timber activities. **N.C. Saxena** emphasized the need to clearly define the relative roles of farm households, communities, and industrial operations. He described the Indian experience, in which individual farmers are most effective in pre-harvest production and nursery activities, industrial units are best in post-harvest bulking and transporting, and communities excel in building consensus on forest resource management and functioning as an economic unit where capital to labour ratios are low.

Questions from conference participants covered the relation between farmers, communities and corporations, the relationship between poverty alleviation and inequality, and evidence supporting the idea that forestry can lift people out of poverty. Uma Lele commented that the people who derive their livelihoods from forests are often the poorest individuals and minorities who live in marginal forest areas. In addition, poor individuals are usually neglected in project planning and the impacts of forestry interventions on them are not well understood. Others stated that depopulation of marginal areas may occur in the industrial west, but in Asia a large proportion of inhabitants will still live in rural areas—despite the global trends of urbanization.

"Privatizing Sustainable Forestry: a Review of Global Experiences"

Natasha Landell-Mills

International Institute for the Environment and Development

Natasha Landell-Mills presented the background and findings from the IIED's global review of privatizations and private-sector sustainable forestry projects. The review was based on the rationale that markets fail to account for forests' social and environmental benefits. She said the private sector is increasingly dominant and diverse, government capacity is weak, and civil society is a growing force in promoting sustainable forestry and monitoring forest use. The intent of the review was to identify and promote effective instruments for ensuring that the private sector produces social and environmental benefits from forests. The review received 142 responses from 76 countries; 23 countries were selected for detailed investigation and included companies, community enterprises, communities, and individuals in the private sector.

According to the review, reform is widespread. Specifically, all countries responding are implementing reforms to increase private sector performance, all countries have introduced at least one market-based instrument in the forest sector, and just under 70 percent of countries have introduced changes such as contracting for services, privatization, and corporatization. Innovative approaches include forest management

certification, developing markets for forests' environmental services of forests, and company – community partnerships. Findings for each of these approaches were presented.

Lu Wenming (Chinese Academy of Forestry) stressed the applicability of the findings to China. Dr. Lu outlined the China country study undertaken by IIED and a group of Chinese forestry experts, including the Chinese Academy of Forestry. **Wang Qianjin** (Deputy Director, FEDRC) also discussed Ms. Landell-Mills' presentation.

"Global Review of Forest Tenure: Strategies to Enhance Community Security."

Lynn Ellsworth

Consultant, Forest Trends

Lynn Ellsworth posed an argument for community ownership of forests. She described the global trend toward increased community claims, ownership, and management of forests. Lynn Ellsworth nuanced her presentations with definitions and caveats, outlining big issues about forest property rights: the declining acceptance of governments as the owners and managers of forests; the search for alternatives and the question of providing a forest with group title or individual title; and the effort to support local property rights. She noted growing disenchantment with government ownership of forests, citing competing claims in Cambodia and forest fires in Indonesia. She considered the implications for forest quality and local welfare. Alternatives are being explored throughout the world, she said, adding that two prominent alternatives are outright local ownership and co-management by governments and communities.

Discussing security of tenure, she cited trends promoting local tenure. Some of these trends include openness to claims, numerous policy declarations, and the spread of certified wood markets and their tenure requirements (Sustainable Forest Council principles 2 and 3). She provided numerous examples of communities with management and ownership responsibilities – a management plan in Laos, a group title in Scotland, an ancestral domain rights in Philippines, and community concessions in Guatemala.

According to Lynn Ellsworth, communities that secure forest tenure help to promote sustainable management of forests. Examples of this have occurred in Canada, Brazil, and the Philippines, where legal victories have enabled community tenure rights. Other factors favoring community forestry include the growing certified wood market and the potential carbon market.

Both of these markets will require defined property rights in order to be successful. Property rights can include the right to harvest and sell timber, along with all resources provided by forests. There can, however, be restrictions on ownership, by trade agreements.

Problems can occur with community forestry when management plans are inappropriate for a local community—for example, complex plans with poor technical assistance, plans with perverse incentives, and plans that ignore traditional systems. Within community forestry, the role of government can vary significantly by scale and location. Practical issues include recognition of ownership, boundary enforcement, dispute resolution, monitoring, business support, and incentives “for the small guy rather than the corporations.” Lynn Ellsworth concluded by stating that community management of forests is a viable choice that needs specific, targeted government support.

Professor Hyde and **Zheng Baohua** (Center for Community Development Studies) provided comments. **Dr. Hyde** cautioned against using equity as the sole criterion for judging tenure types, due to the difficulty in defining “equity.” He highlighted the relevance and appropriateness of all kinds of rights—community rights, private individual rights, and central government management—on the general principle that those who benefit most from a resource should hold rights to it. He added that community management is likely to succeed when it is the least expensive method of

holding and protecting rights, but it often breaks down when the costs of protection outweigh perceived local benefits. **Zheng Baohua** described forest tenure in China and gave specific data for Yunnan Province. He characterized the key issues surrounding the issue in China as recognizing that tenure rights are not full rights; acknowledging that the tenure system is related to policies and their implementation; and comprehending that the insecurity of the system is due to agencies' behavior.

"IKEA and Forests"

Magnus Löfmark

IKEA

Magnus Löfmark gave an overview of IKEA operations and the company's interaction with the forestry industry, highlighting purchases from 2000 different suppliers in 56 countries. IKEA has prioritized its environmental programs for 2000 – 2003 under the following headings: forestry, environmental work among suppliers, goods transport, environmental adaptation of the range and material production, and meeting the customer. He stressed that wood is an important raw material for his company, adding that IKEA should know the source of its wood and the tree species in use. The company should not contribute to loss of intact natural forests, he said, adding that IKEA will promote more sustainable forestry, increase use of certified wood, and communicate its practices. IKEA's long-term goal is to acquire all of its wood from well-managed and verified forests.

IKEA has an Action Plan with six components. The first component is the staircase model for wooden merchandise. He described the four levels of requirements in the staircase model, with the highest level (level four) being official certification by FSC standards. He stressed that IKEA does not use wood from high conservation value forests. Magnus Löfmark also discussed other components of the action plan. He provided details of IKEA's forest tracing system and outlined the elements of the IKEA Way on Purchasing Home Furnishing Products (IWAY). These purchasing standards include forest tracing, working environment, outside environment, quality, and child labor practices.

Finally, Magnus Löfmark said that IKEA will continue to distribute maps produced by Global Forest Watch and carry out audits of suppliers and their wood supply chains. Additionally, IKEA will promote certification and sustainable forestry. IKEA intends to encourage certification processes, to set up projects to develop more sustainable forestry methods, and to finance grants for graduate students from Russia, the Baltic states, and Poland to study sustainable forestry in Sweden.

Saturday, 12 May

"Markets for Environmental Services: New Strategies for Rural Development"

Bob Smith

Chief Executive, State Forests of New South Wales, Australia

Bob Smith outlined his department's program for changing the way state-run forests are valued in his province. His presentation revolved around the following questions: What are the environmental services of forests? Why is there interest in markets for the environmental services of forests? How does this work in practice?

Bob Smith said forests' environmental services usually are regarded as "free goods" that go uncounted or undercounted in the traditional market economy. These services include carbon storage, clean water, habitat for flora and fauna, and erosion protection, among others. Interest in creating markets for the environmental services of forests stems from several factors: 1) that markets and payment streams recognize economic value in the services and reward owners, 2) that markets increase the value of forests versus alternative land uses, and 3) markets create new incentives for forest conservation and establishment. Developing a market for these environmental services requires the following process: 1) identify the service, 2) quantify the service, 3) define the products, 4) define the interaction between the products, and 5) separate and repackage services to

meet market requirements.

Bob Smith explained how the State Forests of New South Wales have been developed and how they are working in practice. He provided examples involving carbon sequestration, soil desalinization, and biodiversity protection. He listed issues with accounting in a carbon market. Finally, he predicted a future for the development of services characterized by reforestation on cleared lands, energy production from wood, improved water quality, species diversity in trees planted, salinity amelioration, a biodiversity focus, and potential payments.

Wang Xuan (Chinese State Forestry Administration) and **Liu Can** (FEDRC) commented on the importance of environmental services from forests for China. They assessed the relevance and applicability of markets for environmental services in China in the context of existing efforts.

“Market-Based Instruments for Watershed Protection: Lessons from Around the World”

Marlou Church

Nature Conservancy

On the subject of watershed protection, Marlou Church delivered a few key messages: water is an economic good; human activities that use water should also guarantee the protection of the source; water sources are usually in natural areas with some protection, water source conservation should be financed for the long term; and this long-term protection relies on user participation and market-based incentives. Her presentation covered the value of direct watershed use, including human consumption, agriculture, electricity generation, manufacturing, mining, and recreation. She also highlighted the value of indirect watershed use, including flood control, retention of sedimentation, nutrient transport, transportation, flow regulation, fish production, and climate stabilization. Marlou Church called for determining the value of forests' watershed services provided by forests and commented on methodologies for economic calculation.

Marlou Church then discussed a variety of incentives and financial mechanisms for watershed protection: payments (user fees, taxes); trades (credits, mitigation, easements); and other voluntary payments. She provided examples from around the world, describing easements and payments used for water supply protection in New York City and Lago Yajoa, Honduras; watershed protection in Quito, Ecuador; and salinization credits in New South Wales. She also mentioned France's bottled mineral water company, Perrier, which has sought to protect infiltration zones by paying farmers to modify their practices.

In his comments, **Zhou Guomo** (Vice President, Zhejiang Forestry College) stressed the importance of water rights. He noted that disputes and court cases over water rights are common, but other deals are successful. For example, Yiwu city in Zhejiang Province, which was short of water, signed a contract with the nearby Doyang city to purchase a portion of its excess water supply. Doyang reserved two-thirds of its redundant water for its own later use and traded one-third, at 0.1 Yuan per cubic meter. Yiwu also paid construction expenses for transportation of the water. Both cities benefited, as Doyang received payment for water that would have been unused and Yiwu spent much less than what it would have cost to establish its own reservoir. Zhou Guomo also stated that the contract has legal force and Yiwu's rights are secure. **Liu Guangquan** (Research Fellow, Water Resource Institute) provided an overview of China's water position, describing base distribution of water across ecological and economic uses, as well as the large-scale transfer of water across watersheds as a strategy to optimize water use. **Bob Smith** commented that payments for some ecological services has led to improved revenue and the internal rate of return (IRR) for forestry projects has improved to 11 or 12 percent with the inclusion of carbon.

“Market-Based Innovations for Environment Conservation in Brazil”

Mario Monzoni

Friends of the Earth –
Brazilian Amazonia

Mario Monzoni described the physical features of the Amazon, outlining the importance of its protection as a natural system of worldwide importance. He posited that the key problem in maintaining the Amazon is the “command and control” approach of conservation and development, which has resulted in widespread deforestation. The approximate rate is 1.7 million ha/yr—or half the size of Belgium annually. He proposed several approaches, stating that the key goal is changing incentives that drive micro-level behaviors, typically through incentive based regulation and participatory instruments.

Mario Monzoni described market-based initiatives in Brazil. He discussed the Private Natural Heritage Reserve (RPPN), which is designed to tap personal desires and motivate ecological protection on private land. Its advantages for landholders are exemption from the Rural Territory Tax, priority in the analysis for resources at the National Environmental Fund, and preference in credit analysis for agriculture activities. The program has resulted in the creation of 100 Natural Heritage Reserves throughout Brazil, with a total of 250,000 hectares of protected area.

Mario Monzoni also described the Ecological Value-Added Tax, which acts as a fiscal compensation mechanism. It makes use of the “protector receives” principle, encouraging municipalities to create conservation areas, to adopt sustainable development policies, and to provide financial rewards for municipalities with protected areas in their territory. The program has increased the number and size of protected areas, encouraged recuperation of degraded forestlands; improved the quality of conservation, built public debate, inspired a municipal environmental agenda, improved environmental regulation; promoted fiscal justice, and encouraged rural and eco-tourism. State-level variations and impacts from Parana, Sao Paulo, and Minas Geras were highlighted.

An assessment of tradable rights for legal reserves also was presented. The rights allow landowners with high conservation value areas to trade their forestation requirements with other landowners who can purchase their requirements at a lower opportunity cost. This achieves high productivity and conserves valuable lands.

Mario Monzoni also mentioned the Certified Forest Products Group, a Friends of the Earth initiative that encourages domestic companies to demand certified forest products from their suppliers. Started in April 2000 with 33 companies, it now includes 62 companies, two state governments (Acre and Amapa), and one municipality (Guaruja). This group is the first of its kind in a developing country, and one of seventeen buyers’ groups globally at the time of the conference.

Mafa Chipeta (Deputy Director, Centre for International Forestry Research) outlined some important aspects of the relationship of the Amazon with the rest of Brazil. He reviewed various forest protection incentive programs, including the Ecological Value-Added Tax, certification for domestic markets, Private Natural Heritage Reserves, and the role of civil society in the Amazon. He highlighted the importance of incentives for Amazonians. Finally, he drew distinctions and parallels between China’s situation and Brazil’s experience with the Amazon.

“The Use of Market Instruments for Environmental Services in Costa Rica”

Luis Gamez compared Costa Rica’s export values from key natural resource sectors, demonstrating the economic gains from different industries—especially the high value of tourism and ecotourism. The Costa Rican government has developed estimates for the economic value of services provided by forests in that country. Specifically, Luis Gamez described Costa Rica’s program for valuing carbon and other environmental services of forests.

Luis Gamez

Ministry of the Environment
of Costa Rica

The Costa Rican government is working toward Joint Implementation of the Kyoto Protocol, which he described as “voluntary action between the Annex I Parties and the Non-Annex Parties by means of which the corresponding measures to mitigate climate change through the limitation and reduction of anthropogenic emissions of greenhouse gases and the protection and improvement of sinks and reservoirs of greenhouse gases can be carried out jointly in the territory of the Non-Annex Parties in order to make an overall contribution to attainment of the objectives of the Convention on Climate Change.” He presented some details of Costa Rica's program for implementing and experimenting in carbon sequestration offset crediting. He also described Costa Rica's recommendations for Kyoto Protocol implementation of trading carbon among Parties.

Luiz Gamez discussed market-based instruments in other sectors. For example, the environmentally-adjusted water fee assessed in 1999, the scheme requiring agricultural firms to make payments for a variety of environmental services, such as natural pest control, organic waste disposal, and bio-prospecting arrangements with pharmaceutical firms.

Finally, Mr. Gamez outlined a national conservation agenda to develop leadership in different social sectors, stating: “The best way to conserve biodiversity is to make it an instrument for sustainable human development.” He concluded with an updated forest cover map and emphasized the dramatic improvements in forest cover between 1987 and 1997.

Natasha Landell-Mills (International Institute for Environment and Development) noted Costa Rica's atypical situation among countries facing similar circumstances. She emphasized the Costa Rican government's involvement in driving market development, and in clearly defining property rights. She discussed some of the key market development features and achievements in Costa Rica that might be relevant for China. **Uma Lele** (World Bank) discussed agricultural goals that conflict with forest conservation. She described the decline of farm commodity prices such as beef. Despite this climate, she described Costa Rica as a leader in developing markets for the environmental services of forests.

“Company-Community Partnerships: From Raw Deals to Mutual Benefit?”

James Mayers

International Institute for
Environment and
Development

James Mayers described IIED's study of partnerships between companies and communities. The study examined the impact of partnerships in two main ways. Under the organizational/company analysis, evaluation was based on company market standing, innovation, productivity, physical and financial resources, profitability, manager performance, worker performance, and public responsibility. Under the livelihoods analysis, criteria included local livelihood assets, capabilities, activities, policies and institutions, and vulnerabilities. The study considered 56 partnership examples in 22 countries.

James Mayers reported on the reasons that companies and communities form partnerships, including the potential for higher returns from land and labor and reduced risks, over alternatives. James Mayers described partnerships in South Africa, social responsibility agreements in Ghana, taungya systems in Indonesia, forest business-First Nation partnerships in Canada, and land leasing in the American state of Georgia.

Principles for better partnerships resulted from the study. These included mutual respect, a fair negotiation process, and cultivating a learning approach to making deals. According to James Mayers, partnership brokers are key to company-community partnerships. In addition, partnerships should empower community partners to benefit the poorest populations and to share downstream benefits.

Runsheng Yin (Michigan State University) gave suggestions for improving the research while offering some data on the American experience in company – community partnerships. He said, “From society’s perspective, industry ownership can make a great contribution to forestry. However, the impact on communities may not be always positive, and what is good to communities may not [be] good to industry.” **Bill Hyde** (Goteborg University and the Center for International Forestry Research) stated that the scope of such deals probably would be limited to capital-intensive industries. For example, an industry such as paper manufacturing—where the cost of the raw material is a small proportion of the cost of the final product—would be interested in ensuring a steady supply of its raw material, so as to avoid the higher opportunity cost of idling. Similarly, in circumstances where its supply is not certain, e.g. resource competition in the region of operation, industry would be likely willing to pay a premium and be more interested in pursuing a collaborative agreement.

“Community Forestry in India: People, Markets and Livelihoods”

N.C. Saxena

Secretary
Planning Commission,
Government of India

N.C. Saxena gave numerous examples of successful partnerships involving forest lands in India. Some partnerships exist between the government and communities, while some exist between industry and farmers on private farm lands. He described key geographical and biological features as they relate to forests in India, as well as the current reality of the situation facing India's farmers and landowners.

N.C. Saxena outlined changes made to India’s forest land-use policy in 1988. Forest lands are mainly designated for environmental use and the production of fuel wood and subsistence goods. Private lands are used to produce timber and industrial raw material. Clear-felling is banned in all areas, green-felling is banned in some areas, and elsewhere logging is permitted with sustainable Working Plans. He presented data on the market demand for India's wood products and re-forestation efforts and on the relative stability in fuelwood prices in the 1990s, and the emerging stability in forest cover

In terms of communities participating in forestry through Joint Forest Management, he stated that participation is uneven. The government is usually the dominant partner, and N.C. Saxena predicted empowerment of communities, with total transfer of control over decisions and resources, will take time. With more than 10 million hectares under Joint Forest Management in 2001, he said about half would be satisfactory and sustainable.

N.C. Saxena also focused on the role of India's farmers in tree planting. He characterized the post-1990 phase in farm forestry as “more diversified and integrated with local market and industrial demand,” as compared to ‘the eucalyptus craze’ of the 1980s. He listed several myths about farmer participation, stating that in reality all kinds of farmers—big and small—plant and protect trees with little subsidy, even long gestation species such as teak. He said, “Farmers are quick learners, but need vibrant markets, credit, and freedom from government controls on movement and sale.” He gave examples of partnerships that worked, of problems and suggested future directions.

Mafa Chipeta pointed to some lessons from the Indian experience for China, including Joint Forestry Management initiatives, increasing efficiency in wood use, and the employment of community-industry partnerships. **Li Weichang** provided examples from Yunnan province where minority groups have developed rules to manage forest resource extraction and provide appropriate incentives. For example, if a person logs a tree illegally, all villagers will go to the transgressor’s family and demand a feast—which might cost a small fortune. He reported that mushrooms are a big export item from Yunnan; the growing export market has led to dangers of overharvesting. Under new rules developed locally, only one person per family can harvest mushrooms. This limits the harvest and helps avoid clashes. Li Weichang also noted that both India and China have instituted bans on overlogging and both are trying to protect their endangered species, in the face of large human populations. There were questions on the relevance

of people-oriented protected areas, and tenurial security in Joint Forestry Management.

Summary Session

The Summary Session was chaired by **Huang Jikun** (Director, Center for Chinese Agricultural Policy). The two co-chairs of the China Council for International Cooperation on Environment and Development (CCICED) Task Force on Forests and Grasslands, **Shen Guofang** and **Uma Lele**, gave summary presentations.

“Speech at the Summary Session of the Global Forest Trends Symposium”

Shen Guofang

China Council of
International Cooperation
on Environment and
Development

Shen Guofang briefly described the activities of the CCICED and the task force. He also presented his new book, *Chinese Forest Resources and Sustainable Development*. He stressed that China is facing enormous environmental challenges, adding that policy changes will be necessary. He then listed some of the key problems of China’s forestry development and posed a series of questions concerning that development. Finally, he commented on China’s difficult situation regarding timber supply, given the equally important need to protect natural forests and their ecological benefits.

“Summing Up: Key Issues and Challenges to Improve Forestry’s Contribution to Rural Development in China.”

Uma Lele

The World Bank

China Council of
International Cooperation
on Environment and
Development

Uma Lele charted the range of public and private goods provided by forests on local and global scales. She underlined the need to differentiate between different kinds of forestry goods and services at different scales, in order to develop effective markets. Drawing from the deliberations and presentations, she identified and emphasized emerging trends in forest management, the dramatic evolution of China’s forest policies, and the role of community forestry. She posed questions about the meaning of global forest management trends for China; she stated that policy and strategy are necessary but not sufficient and called for practical operational considerations.

Despite global disenchantment with government, she noted that, “In China the State has, and will likely continue to play, a crucial role in forest management.” She posed several questions about the nature of state interventions in light of the examples presented from across the world. She also acknowledged the importance of the private sector, saying it will “likely play a growing demonstration effect in environmentally and socially responsible forest stewardship - à la IKEA.” Finally, she reiterated China’s worldwide importance: “Sound stewardship of forests in China has both positive global impacts—through carbon sequestration, biodiversity, and existence values—and negative impacts through trade.”

Annex 1. Background: China's Changing Forest Sector

China's forests are a major source of rural employment, a major contributor to Gross National Product (GNP), and a major provider of rural energy. These forests also provide important environmental services, including watershed protection, biodiversity conservation, and carbon sequestration. Major flooding in 1998 led the government of China to impose selective logging bans and establish a comprehensive forestry program - the Natural Forest Protection Program (NFPP). The NFPP also set new targets for plantations and foreign direct investment in plantations.

In the short-run, these initiatives have reduced timber supply, putting at risk the livelihoods of the populations directly and indirectly reliant on harvests from those forests. In addition, these measures are adding to the already growing pressure on China's plantations and boosting the demand for imports, thus affecting the status of forests regionally.

Partially in response to these issues and partially in response to the growing disparity in household incomes between the western and eastern regions of the country, the government of China also recently initiated a large-scale development project, the Great Western Development Strategy (GWDS), and created a Task Force on Forests and Grasslands under the auspices of the China Council for International Cooperation on Environment and Development (CCICED). The purpose of the GWDS is to promote natural resources-based economic development in the western provinces. The purpose of the Task Force is to advise on the government on the implementation of the NFPP and the GWDS, and to provide advice on forestry development generally.

While there has been a significant shift in control from the public to private sector in forestry in the last several decades, forestry has lagged behind other sectors in liberalization. The current pricing, marketing, and regulatory framework does not adequately encourage private sector participation in forestry, whether domestic or foreign. Reform of the state-owned enterprises are incomplete, and forest owners are not compensated for the many environmental services generated from their forests. The government recognizes the need for additional policy reform and is increasingly open to market-based approaches to forest conservation and development, as well as forestry-based poverty alleviation.

In sum, the government's key concerns related to forestry include: increasing incomes of the rural poor in western provinces; pursuing that goal in an environmentally and socially appropriate manner; and promoting alternative sources of employment for those displaced by the new forestry policies. Additional goals include meeting the domestic demand for forest products by increasing plantations and the productivity of natural forests, completing the liberalization of the policy framework, and modernizing the forest industry—in part by encouraging international investments.

The government's success in addressing these concerns and ensuring that forestry is a strong contributor to economic development and poverty alleviation in China will require a sound grasp of a number issues, including the following:

- the domestic impacts of forest policies;
- the policy reforms warranted to promote sustainable forestry, modernize forest industry, attract additional investments, and increase employment and incomes;
- innovative institutional experiences, whether from China or from around the world, that have demonstrated effective approaches;
- regional trends in forest products;
- the social, environmental and economic tradeoffs of domestic production versus imports;
- the potential of markets to add value to forests and rural incomes, and the steps necessary to promote those markets;
- the potential for additional foreign investment in forest production and industry; and
- the criteria and interests of foreign investors.

The International Institute for Environment and Development (IIED) is currently conducting research with Chinese government ministries on a range of critical policy issues, including forest tenure and contracting, forest taxation and fees, company-community partnerships, markets for environmental services, and forest certification. This work is scheduled for completion by May 2001. The Center for International Forestry Research (CIFOR) has been conducting research on the Chinese forest policy experience and plans an international conference in June 2001. The World Bank is providing technical assistance to the CCIED Task Force on Forests and Grasslands and plans to launch a new set of fieldwork on policy issues in western China in early 2001. The preliminary findings from this fieldwork will be available in early May, and an interim report for policy makers will be available by October 2001.

While this ongoing work is extensive, none of these efforts introduce Chinese policymakers to international experiences with market-based approaches to forest conservation and development.

Annex 2. Participant List - International

Market-based Approaches to Sustainable Forestry Development and Forestry-based Poverty Alleviation: *Global Trends and Implications for China*

An International Conference on Sustainable
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11 – 12 May 2001 Huangshan (Yellow Mountain), China

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