

## Summary of the Global Bamboo and Rattan Congress 2018

The Global Bamboo and Rattan Congress 2018 (BARC 2018) took place in Beijing, China, from Monday, 25 June, to Wednesday, 27 June 2018, on the theme of ‘Enhancing South-South Cooperation for Green Development through Bamboo and Rattan’s Contributions to the Sustainable Development Goals.’ The conference, organized by the International Bamboo and Rattan Organisation (INBAR) and China’s National Forestry and Grassland Administration (NFGA), welcomed around 1,200 participants, including 500 visitors from 68 other countries. A ministerial summit and three high-level dialogues took place during the conference, as well as around 80 parallel sessions. Discussions over the three days of the Congress focused in turn on sustainable development and South-South cooperation, climate change and green growth, and technology innovation and industry development.

Speakers drew attention to the contribution of bamboo and rattan to achieving the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change. Many participants highlighted the market potential of bamboo in a variety of applications, including hi-tech and niche products in healthcare, sporting goods, and building materials.

INBAR announced outcomes of BARC 2018 at the end of the conference, including several project agreements and upcoming meetings. The conference adopted in principle the Beijing Declaration, which affirms INBAR Member States’ support for developing the global bamboo and rattan industry through assessment of stocks, market and technology research, innovation, and standard setting.

The China Green Carbon Foundation (CGCF) offered to offset the carbon emissions generated by the Congress within the next 10 years through a bamboo-planting project in Yunnan province, China, thus making the Congress a carbon-neutral event.

This report provides an account of the ministerial summit, high-level dialogues, and selected sessions from each day of the conference.

### A Brief History of International Activities on Bamboo and Rattan

INBAR was established in 1997 as a multilateral development organization to promote South-South cooperation on the use of bamboo and rattan for green growth and ecologically sustainable development. The organization evolved from the Bamboo and

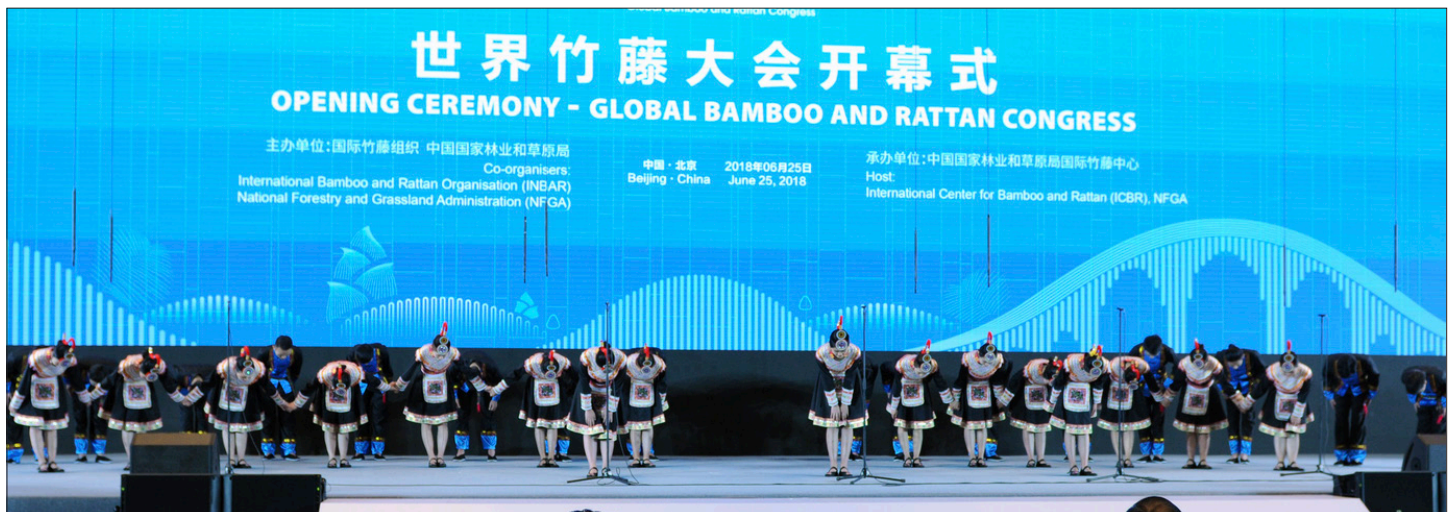


Rattan Research Network in Asia, which began in 1984 as a project supported by the International Development Research Centre (IDRC) of Canada.

While INBAR initially focused on technical and research support for countries, the organization now also provides leadership in policy development and advocacy relating to the cultivation and use of bamboo and rattan, focusing on four areas: affordable, sustainable and reliable modern energy services for all; coordination of Member States’ inputs on bamboo and rattan and representation in the global policy arena; knowledge sharing, training and awareness raising of the relevance of bamboo and rattan as strategic resources and commodities; and action research and country support to promote on-the-ground innovation.

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Melodious a capella chorus by Miao and She singers from the cultural heritage bamboo forest areas of Yong'an and Yibin, China

INBAR and its members have highlighted the value of bamboo and rattan in contributing to the achievement of international policy objectives, including the Paris Agreement on climate change, the Aichi Biodiversity Targets, and the Sustainable Development Goals (SDGs), especially those relating to poverty eradication (SDG 1), clean energy (SDG 7), sustainable housing (SDG 11 on cities), efficient resource use (SDG 12 on sustainable consumption and production), climate action (SDG 13), life on land (SDG 15), and partnerships for implementation (SDG 17).

Within the UN Common Fund for Commodities, an intergovernmental financial institution, INBAR serves as the International Commodity Body on bamboo. INBAR also led the development of relevant International Organization for Standardization (ISO) standards and of custom codes for bamboo products under the Harmonized Commodity Description and Coding System.

China, the world's largest producer of bamboo products, is INBAR's host country and major supporter in terms of funding, administration and political support. Most of INBAR's 44 Member States are from countries of the Global South. The secretariat is based in Beijing, and regional offices are located in Ecuador, Ethiopia, Ghana and India. The organization is governed by a Council made up of representatives of Member States, and a Board of Trustees that includes senior officials from government, business and UN organizations.

INBAR often conducts activities together with its sister organization, the International Centre for Bamboo and Rattan (ICBR), including regular awareness-raising events and training courses. Since their beginnings, up to 25,000 people have received such training, and most training has been conducted with financial support from China's Ministry of Commerce.

INBAR also supports comprehensive assessment of the availability and economic potential of bamboo and rattan worldwide through its Global Assessment of Bamboo and Rattan (GABAR). GABAR was launched in 2015 at the World Forestry Congress in Durban, South Africa. The assessment is planned

as a multi-million initiative over several years, and is supported by Member States and development organizations, including the International Fund for Agricultural Development (IFAD).

Several international organizations and processes have also highlighted the role of bamboo and rattan in forestry, land restoration, housing, mitigation of climate change, and sustainable development.

**International Conferences on Bamboo and Rattan:** The first International Bamboo Workshop was organized in 1980 by IDRC in Singapore. Subsequent workshops took place in 1985 in China, 1988 in India, and 1991 in Thailand. From 1995 onwards, the International Bamboo Workshop and the International Bamboo Congress (independently organized by the International Bamboo Association, a trade body) were merged into a single event, and the Fifth International Bamboo Workshop & Congress was jointly organized in Bali, Indonesia in 1995. After the establishment of INBAR in 1998, the Sixth Workshop & Congress, also jointly organized, took place that same year in Costa Rica, attended by nearly 550 people from 47 countries. The Seventh World Bamboo Congress, organized by the World Bamboo Organization (WBO), the new name of the International Bamboo Association, took place in New Delhi, India in 2003. Subsequent events have taken place in Thailand, the Republic of Korea and Mexico. In 2010, INBAR organized another combined bamboo and rattan conference.

**Other Global Processes:** INBAR is a Permanent Observer to the UN Convention to Combat Desertification (UNCCD), the UN Framework Convention on Climate Change (UNFCCC), and the UN Convention on Biological Diversity (CBD). INBAR was made an Observer to the UN General Assembly in December 2017. INBAR is also engaged in other United Nations global initiatives, and is a partner of the Food and Agriculture Organization of the UN (FAO), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). It also works closely with the United Nations Office for South-South Cooperation and is a member of United Nations Economic



Jiang Zehui, Chair, BARC Organizing Committee

and Social Council (ECOSOC). Outside of the UN, INBAR is a founding member of the Association of International Research and Development Centres for Agriculture, and works closely with several CGIAR Centres. In China, INBAR's Director-General is a member of the China Council for International Cooperation on Environment and Development. Below are some examples of sectoral collaboration on bamboo and rattan.

**Poverty alleviation:** INBAR has conducted projects and training for tens of thousands of people across the bamboo and rattan value chain, to improve the management, production and income potential from commodities and to spread new technologies, including bamboo charcoal kilns and new machines for processing bamboo and rattan. INBAR-led projects funded by IFAD alone have generated an estimated 250,000 jobs in INBAR Member states around the world. In Tripura, India, a small investment of \$10,000 to support women self-help groups to organize and produce value-added incense stick products has since gone on to create 150,000 jobs, and has led to a seventeen-fold increase in revenue between 2005 and 2008.

In 2015, INBAR helped create a new ISO Technical Committee on bamboo and rattan (TC 296), which aims to standardize bamboo, rattan, and derived materials, including terminology, classification, specifications, test methods and quality requirements.

**Land restoration:** INBAR continues to work on a number of projects to restore degraded land in its Member States. Between 1997 and 2007 INBAR supported a project led by the Utthan Centre to restore tens of thousands of hectares of degraded lands by growing bamboo in Allahabad, India. This was internationally audited and won the \$1 million Alcan Prize for Sustainability in 2007. This approach is now being replicated through partnerships in Ethiopia, Madagascar and the United Republic of Tanzania. In particular, since 2016, INBAR has led a large World Bank-funded project to restore degraded land in Ethiopia. INBAR has also supported the government of China in its long-term ongoing project that has rehabilitated over three million hectares of degraded land with bamboo since the 1980s.

At INBAR's Ninth Council Session in November 2014 in Addis Ababa, Ethiopia, INBAR's Council of 40 Member states agreed to work towards a plan to restore at least five million hectares of degraded land using bamboo, as part of a commitment to the Bonn Challenge to restore degraded land.

**Climate change:** With financial support from the EU, INBAR undertook a project in 2009 on 'Bamboo as Sustainable Biomass Energy' in Ethiopia and Ghana to develop bamboo firewood and charcoal as alternatives to traditional fuelwood from trees. By 2013, more than 600 hectares of new bamboo had been planted in Ethiopia and Ghana, and 10,000 hectares of existing stands had been placed under sustainable management. The project also trained 4,000 individuals in bamboo cultivation, carbonization, and briquette production and use, resulting in the production of 550 tonnes of bamboo charcoal and allowing more than 10,000 households to start using bamboo for fuel.

Currently, INBAR is also working on a pilot project to set up a 25 kWh bamboo gasifier in India and Madagascar, with an aim to transfer the technology to Ethiopia and Tanzania as part of the South-South Knowledge Transfer Strategies project funded by the European Union and IFAD.

INBAR produces regular publications on bamboo's carbon storage potential, and in 2015 worked with the Gold Standard, one of the world's most innovative and well-recognised global voluntary carbon standards, to develop an innovative carbon accounting methodology for afforestation with bamboo in China.

**Housing:** INBAR was a founding member of the Global Network for Sustainable Housing, in partnership with the UN Human Settlements Programme (UN-Habitat). INBAR has also established a Construction Taskforce that coordinates the activities of international research institutes and commercial companies interested in the structural uses of bamboo. INBAR has worked across its Member States to spread bamboo construction techniques and technologies in countries including Bhutan, Colombia, Ecuador, Nepal and Peru, and to promote the inclusion of bamboo in national construction standards.

In 2004, INBAR created three ISO codes as part of the Technical Committee on 'Timber Structures' (TC 165). These codes have since been adopted as the National Standards in Colombia, Peru, Ecuador, Jamaica, Viet Nam, the Philippines and the Netherlands. In addition, Colombia, Ecuador, India, Nepal and Peru have national standards relating specifically to bamboo – based at least in part on awareness raising by INBAR.

**SDGs:** In August 2015, in preparation for the UN Summit for the Adoption of the Post-2015 Development Agenda, INBAR issued a position paper on 'Bamboo, Rattan and the SDGs,' which discussed how the bamboo and rattan sector could contribute to the green economy and add value to national action plans for sustainable development. The paper especially highlighted the role of bamboo and rattan with regard to six of the 17 SDGs that were being debated prior to adoption, on: poverty reduction; energy; housing and urban development; sustainable production and consumption; climate change and land degradation; and partnerships for implementation. The paper also highlighted that bamboo and rattan could contribute to the achievement of policy objectives on food security, women's empowerment, economic growth, and technology.

In 2017, INBAR and the UN Office for South-South Cooperation (UNOSSC) published a report on 'Inspiring Sustainable Development with Bamboo.' The report is part of a series of UNOSSC flagship reports, for sharing of South-South and triangular cooperation activities by intergovernmental organizations and civil society. Global trade in bamboo and rattan is valued at US\$60 billion a year, and the report highlights

ways in which this resource, indigenous to many countries of the Global South, can contribute to a better and more inclusive future for all.

## Report of the Global Bamboo and Rattan Congress 2018

### Opening Ceremony

The conference opened with an *a capella* chorus by ethnic minority Miao and She singers from the bamboo forest areas of Yong'an and Yibin, China, and the screening of a promotional video about BARC. Zhang Jianlong, Administrator, National Forestry and Grassland Administration (NFGA), made opening remarks, stating the importance of bamboo and rattan in promoting South-South and South-North cooperation. Zhang then conveyed a welcome message from Chinese Premier Li Keqiang, who highlighted that bamboo is embedded in China's history and culture, and emphasized China's willingness to promote sustainable development.

Conference participants heard video messages from Lenín Moreno, President, Ecuador, and Juan Manuel Santos, President, Colombia. Both spoke of their countries' long-standing history of using bamboo for rural and sustainable development, and underlined their commitment to the objectives of BARC 2018.

Shitaye Minale, Deputy Speaker of the House, Ethiopia, highlighted ongoing cooperation efforts between China and Ethiopia on bamboo for sustainable development, including the construction of a center on this theme in Addis Ababa.

Hans Friederich, Director-General, INBAR, welcomed all to BARC 2018, thanking the Government of China for its role in organizing the conference. He announced that the Central African Republic will join INBAR as its 44th member on 1 July 2018.



**Hao Mingjin**, Standing Committee, China National People's Congress

Hao Mingjin, Standing Committee, China National People's Congress, highlighted the value of China's bamboo and rattan industry and its readiness to promote and deepen South-South cooperation, support INBAR's work, and cooperate with the international community to implement the 2030 Agenda for Sustainable Development.



**Zhang Jianlong**, Administrator, China's National Forestry and Grassland Administration (NFGA)

Rubén Flores, Chair, INBAR Council (Ecuador), and Minister of Agriculture and Livestock, presented Jiang Zehui, Co-Chair, BARC Board of Trustees, with a lifetime achievement award, highlighting her work in forest science, developing global standards for bamboo engineering, and enabling China's support for INBAR and its establishment as an international organization. Jiang expressed heartfelt thanks, stating that the honor belongs to all who have been involved in developing and advancing the bamboo and rattan industry.

### Ministerial Summit

**Opening:** Flores chaired the opening session, emphasizing the need for better public policies and more investment, research and development of South-South cooperation. He underscored Ecuador's strong support for INBAR.

Zhang emphasized the role of bamboo and rattan in sustainable development, environmental protection and poverty reduction, noting that China had seven million hectares under bamboo cultivation in 2017, employing over eight million farmers, and that it plans to employ over 10 million by 2020. He affirmed INBAR's role in facilitating capacity building in member countries, promoting bamboo as a means of carbon sequestration, and acting as a cooperation platform.

William J.C. Hutchinson, Minister Without Portfolio, Ministry of Industry, Commerce, Agriculture and Fisheries, Jamaica, gave examples of products made in Jamaica, in recognition of bamboo's market potential, including bamboo charcoal, water filters, herbal soap, and biodegradable packaging. He announced that Jamaica will host an international symposium on bamboo for the Caribbean region in Kingston from 27-29 November 2018.

Shakti Bahadur Basnet, Minister of Forestry, Nepal, described China as a global leader in the bamboo industry with whom Nepal wishes to expand cooperation.

Jiang reviewed INBAR's successes since its establishment in 1997, including: integrating bamboo and rattan resources in regional and global development frameworks; promoting bamboo and rattan industries among its members; enhancing capacity building; and encouraging innovation.

Nicolas Rossellini, United Nations Development Programme (UNDP) Resident Representative in China, said the UN's 2030 Agenda has sustainability at its core, and stressed the role of bamboo and rattan in achieving its goals. He then introduced video messages from UNDP and the FAO. Achim Steiner, Administrator, UNDP, stressed the essential role of INBAR in developing the global bamboo and rattan market, valued at US\$60 billion a year. Graziano da Silva, Director-General, FAO, drew attention to several FAO partnerships in the area of bamboo and land restoration.

**Panel Discussion:** Friederich moderated the panel discussion. Benito Owusu-Bio, Ministry of Land and Natural Resources, Ghana, discussed his country's bamboo plantation development programme to restore degraded areas, highlighting its value in reforestation as a faster-growing resource than traditional forest species. Ibrahim Jibril, Minister of State, Federal Ministry of Environment, Nigeria, related how his country is reforesting landscapes and managing watersheds through a bamboo-planting

programme. Nonita Caguioa, Department of Environment and Natural Resources, the Philippines, said bamboo constitutes 20% of her country's national greening program, and described how, with government support, bamboo has been used to build durable disaster shelters. Yamil Sanchez, Ministry of the Environment, Panama, highlighted the use of bamboo to combat the impacts of climate change and hurricanes. Mary Goretti Kitutu Kimono, Minister of State, Ministry of Water and Environment, Uganda, reported that her country is in the process of developing a dedicated program for bamboo to restore degraded areas and combat poverty.

Discussion with participants from the floor highlighted business opportunities, including in marketing bamboo as a food product, using bamboo in arts and crafts, and providing construction materials. Friederich concluded that planting bamboo for environmental purposes provides spillover benefits for trade and industry.

**Signing Ceremony:** The INBAR Secretariat signed several agreements with partners on: a joint laboratory; a genome atlas; the Alliance of Innovation-driven Development of Bamboo and Rattan Industries; the Qingdao International Bamboo and Rattan Research Institute of Innovation; and a grant agreement for the Intra-African Bamboo Smallholder Livelihood Development Programme. INBAR also signed a memorandum of understanding (MoU) with ITTO.

Charlotte Salford, IFAD, highlighted the relevance of INBAR's work in rural poverty reduction through scaling up and diversifying the bamboo value chain, restoring degraded areas, promoting bamboo in country plans to address climate change, and fostering South-South cooperation. Flores announced Cameroon's decision to host INBAR's new regional office in Central Africa.

In closing remarks, Friederich introduced INBAR's 2018 Bamboo and Rattan Yellow Pages of China, affirming its value as a means of contacting Chinese bamboo-related companies. He advised that a proposed conference outcome document, the Beijing Declaration, had been distributed to all participants, and invited comments on the draft.

### High-Level Dialogues

#### South-South Cooperation and the Belt and Road Initiative:

On Monday, Salford presented IFAD's cooperation with China and INBAR to reforest degraded mountain areas, and the inter-Africa project co-financed by IFAD and INBAR, which has provided US\$2.5 million over three years for knowledge sharing between Ghana, Cameroon, Madagascar and Ethiopia on 're-greening' initiatives.

Jiang Xiandong, Party Secretary of Yong'an city, China, reported that bamboo-related industries in his city generated more than 6.6 billion yuan (US\$1.01 billion) in 2017, and that the city has received more than 80 government officials from other countries and has dispatched professionals from China to other countries of the Global South for capacity building.

Friederich highlighted emerging areas of work, including recognizing and promoting bamboo and rattan in women's livelihoods and empowerment, and supporting companies to



**Hans Friederich**,  
Director-General, INBAR

market their products internationally. Noting the importance of bamboo as a wildlife habitat, he drew attention to discussions that will take place at the Congress between the NFGA, the UN Educational, Scientific and Cultural Organization (UNESCO), and other international organizations to create a large nature reserve for China's giant pandas.

**Panel Discussion:** Gunter Pauli, the Club of Rome, called for the creation of mass markets for bamboo, for example, by promoting bamboo fiber in preference to eucalyptus as disposable diaper

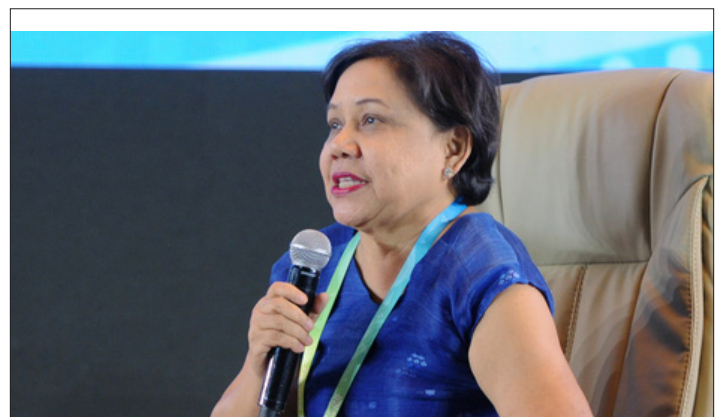
filling. He called for political leadership by producer countries such as China, India and the Philippines.

Cynthia Villar, Chair, Senate Committee on Agriculture, the Philippines, highlighted bamboo's suitability for urban environments, citing, as an example, the planting of bamboo along the river in Manila.

Jenny Kim, Global Green Growth Institute (GGGI), mentioned a GGGI project that is using bamboo in business models for green, low-cost housing, and called for opportunities to share success stories and hard evidence. Pauli said that antiquated concepts, such as the classification of bamboo as a tree rather than a plant in South America, as well as barriers to the uptake of bamboo created by vested interests, are hurdles to be overcome.

Dessima Williams, former UN Special Advisor for implementation of the SDGs, stressed the role of women and small producers, communities and island states in developing the sector. Paul van de Logt, Ministry of Foreign Affairs, Netherlands, proposed connecting growers with knowledge centers and the private sector, and demonstrating the relevance of bamboo and rattan to the SDGs and the circular economy.

On changing existing mindsets, van de Logt emphasized creating the right market conditions, François Martel, Secretary-General of the Pacific Island Development Forum, Fiji, suggested promoting more peer-to-peer learning, and Williams stressed the importance of promoting sustainable lifestyles. Salford



**Cynthia Villar**, Senator and Chair of the Senate Committee on Agriculture, the Philippines

highlighted the role IFAD can play in policy dialogue, and urged more public-private partnerships. Villar discussed how her government is establishing ‘farm schools’ in every village, which will include classes on bamboo.

Pauli called for international financiers to be included in future Congress meetings. Kim acknowledged the Congress as a successful first step for cooperation, and proposed holding regional conferences to share regional knowledge and experiences.

#### **Bamboo and Rattan for Climate Change and Green**

**Growth:** Martin Frick, UNFCCC Secretariat, opened the dialogue with a video message by Patricia Espinosa, Executive Secretary, UNFCCC, who emphasized the central role bamboo and rattan can have in achieving the 2015 Paris Agreement on climate change, and the 2030 Agenda. In a keynote speech, Jovrine Kaliisa Kyomukama, Uganda, welcomed the Netherlands’ possible extension of the Dutch-Sino-East Africa Bamboo Development Programme, emphasizing that bamboo is essential to fulfilling the vision of the Uganda Forum on Climate Change, of which she is a member.

In a TED-style talk, Pablo van der Lugt, Delft University of Technology, the Netherlands, drew attention to the potential of bamboo in terms of its speed of growth and its effectiveness for carbon sequestration and climate mitigation, and called for integrating bamboo in national action plans on climate. He described bamboo as an ideal material for building construction compared to non-renewable materials such as concrete, aluminium or PVC, showing images of luxury villas made of bamboo in Bali, Indonesia.

**Panel Discussion:** Frick moderated the discussion. Patricia Appiagyei, Ghana, said her country recognized the use of bamboo in strategies for climate change mitigation and adaptation, and thanked the Chinese government for providing training opportunities in bamboo usage and processing.

Saibal Dasgupta, Ministry of Environment, Forestry and Climate Change, India, explained the importance of recent policy changes to the Indian Forest Act, which now no longer classifies bamboo as a tree, and outlined possible paths for India to use bamboo to combat climate change.

Han Meng, China Representative, UN Environment (UNEP) World Conservation Monitoring Centre (WCMC), noted that, to harness the full potential of bamboo, it is essential to understand how natural capital, biodiversity and ecosystems are interlinked, and how these links might be changing along with the climate.

Participants from the floor raised concerns about the dwindling market price of bamboo, financing for small farmers, and how to calculate carbon offsets that may be achieved through planting bamboo. Monga drew attention to the LDN Fund for promoting private-sector land restoration efforts, noting that bamboo plantations adopting a value-chain approach may qualify for support.

**Technology Innovations and Industry Development:** Veerle Vandeweerd, Global Sustainable Technology and Innovation Conference (G-STIC), chaired the plenary, highlighting the potential role of bamboo-related innovations in achieving the SDGs and China’s conception of ‘the ecological civilization.’

Jiang advocated setting up an international technology innovation coalition, and described efforts toward establishing international standards for the bamboo industry. She noted that bamboo products generated US\$35.9 billion for China in 2017, with exports of US\$1.96 billion. She highlighted that the ISO has approved the secretariat for the Technology Committee on Bamboo and Rattan, TC 296, to be headquartered in China.

Robert Nasi, Director-General, CIFOR, noted that China is a world leader on incremental innovation in bamboo-related technology, but that innovation is also about organizational structures and forms of awareness. He noted examples of ‘disruptive’ technologies that can potentially transform forestry, for example, the use of drones combined with affordable data storage can greatly reduce the costs of surveying forests for environmental damage, and the application of blockchain technology, initially developed for the financial industry, can potentially increase the transparency of forest governance. He cautioned, however, that innovation is often not applied on a meaningful scale.

John Hardy, founder of The Green School in Bali, Indonesia, highlighted the use of long lengths of bamboo at the school and related buildings. He proposed that, although local regulations stipulated cutting it into six-meter lengths, bamboo “deserves to be big, beautiful buildings.”

**Panel Discussion:** Yang Huanming, Beijing Genomics Institute (BGI), China, stressed the importance of mapping the genome of bamboo species, and of sharing the results freely with all researchers, saying this could help develop higher quality bamboo for more applications. He noted China’s active participation in the international Earth BioGenome Project, which seeks to sequence all known eukaryotic species.

Ye Ling, President and General Manager, Zhejiang Xinzhou Bamboo-based Composites Technology Co. Ltd., introduced bamboo winding technology and its wide application, saying it will benefit the social development of local communities in South-South cooperation. He anticipated that bamboo winding



**Han Meng**, UN Environment World Conservation Monitoring Centre (UNEP-WCMC)



**Patricia Appiagyei**, Vice-Minister for Environment, Science, Technology and Innovation, Ghana



**L-R: Wang Binbin**, UN Office for South-South Cooperation; **Ponika Chan**, Ministry of Agriculture, Forestry, and Fisheries, Cambodia; **Xie Chen**, National Forestry and Grassland Administration, China; **Zhang Yang**, China-ASEAN Environmental Cooperation Center/China Center for SCO Environmental Cooperation; **Agena Anjulo**, Ethiopian Environment and Forest Research Institute; and **Winston Chow**, GGGI

composites will eventually compete with materials such as steel, cement, metal, plastic, and timber, and that the promotion of this technology will contribute to sustainable development.

Einar Haveland, CEO, Ecopole, Norway, presented his company's work in replacing the wooden poles used for energy lines in Africa with bamboo-composite poles. He argued that these utility poles, which combine old and new technologies, are not only sustainable but also reduce deforestation and benefit local economies.

Jan van Dam, Wageningen University, the Netherlands, spoke about the trilateral Dutch-Sino-East Africa bamboo project, and its goal of developing bamboo-related technologies. He described possible applications, including in textiles and food products.

### Parallel Sessions

**'B&R4B&R': Bamboo and Rattan for Belt and Road:** On Monday, Winston Chow, GGGI China, moderated the session. Keynote speakers from the China Council for International Cooperation on Environment and Development (CICCED), FAO and WCMC discussed the aims of the Belt and Road Initiative (BRI) and the possibilities for greening its activities. CICCED anticipated that INBAR could cooperate with the BRI through financing and infrastructure construction. FAO announced the release of its report on good practices in using bamboo for land restoration. WCMC warned that BRI investments could 'lock in' infrastructure that increases environmental impacts and have unintended consequences such as wildlife poaching, land degradation, and land grabbing. WCMC reminded participants that President Xi Jinping, China, had announced in May 2017 a coalition coordinated by UNEP and China's Ministry of Ecology and Environment that will work on greening the BRI, and will hold a biennial high-level roundtable, provide a platform for green technology exchanges, and develop thematic partnerships in areas such as cities and transportation.

Panelists acknowledged China's positive achievements in combating climate change, and proposed adopting its experiences in greening the BRI. They encouraged Western countries to adopt similar measures in fulfilling their commitment to the Paris Agreement.

**Evaluating Africa's Natural Capital:** Ruud Jansen, Executive Secretary, Gaborone Declaration for Sustainability in Africa (GDSA), opened the session. Keynote speeches were delivered by an INBAR representative, ministers from Ghana,

Uganda, and Nigeria, and the Deputy Speaker of the House, Ethiopia. Speakers identified several channels to promote the widespread use of bamboo in Africa, including enlisting the support of politicians across the political system; improving research and development; and greatly increasing collaboration with the private sector, particularly in research. Questions from the floor raised, among others, the issue of fast turnover of politicians in the African region, which prevents long-term commitments to bamboo, as well as a lack of training at university level on the importance of bamboo. The session also saw the signing of an INBAR-GDSA MoU.

### Exploring *Guadua*'s Potential in the Andean Region:

Pablo Jácome, INBAR, moderated the session. In their keynotes, Friederich and Salford emphasized the great potential of bamboo development in Colombia, Ecuador and Peru, and revealed that IFAD and INBAR were working on a possible bamboo project together involving those three countries. Flores detailed Ecuador's National Bamboo Strategy 2018-2022, the need for new legislation and his desire that IFAD and INBAR provide project funding and other forms of support. Gustavo Mostajo, Minister of Agriculture and Irrigation, Peru, outlined his government's initiatives to promote bamboo, including creating a 'technology dialogue space,' an online platform, a national registry of plantations, and developing a Bamboo Action Plan. Jorge Augusto Montoya, President, *Guadua* Federation of Colombia, discussed hopes for using *guadua* development to further the implementation of his country's peace agreement and plans for legislation on *guadua* development.

**Protecting the Panda Habitat:** On Tuesday, Hans Friederich, Director-General, INBAR, moderated the discussion on China's conservation of bamboo forests as habitat for panda conservation, and its recent successes in reintroducing captive-bred pandas to the wild, boosting the vulnerable population that currently numbers fewer than 2,000. Zhang Zhiyong, NFGA, China, briefed participants on plans to establish a large-scale protected area across different provinces in which panda habitat protection will also promote conservation of other species. Speakers from the International Union for the Conservation of Nature (IUCN), WWF, The Nature Conservancy, the World Conservation Society, and Conservation International highlighted that the cycle of

bamboo growth, flowering and die-off determines panda survival rates, warning that climate impacts could affect the cycle and should be scientifically monitored so that predictions of pandas' food availability can be made. Participants proposed organizing a focused technical workshop and supporting knowledge exchange among China and other countries.

**Research, Development and Capacity Building in the Bamboo Sector in India:** T. Imkonglemba Ao, Government of Nagaland, India, moderated the session. B.N. Mohanty, Director, Indian Plywood Industries Research and Training Institute (IPIRTI), outlined the use of various bamboo species in sustainable housing, and concluded that bamboo may be a game changer for socio-economically challenged areas. Vipin Chawla, IPIRTI, discussed best practices in building sustainable housing using bamboo in India, including species selection, treatment of materials, and construction techniques. Neelam Manjunath, Center for Green Building Materials and Technology, India, reminded the audience of current limitations to the use of bamboo in India, which should be overcome, including some related to inadequate research or



Moderator **Eduardo Mansur**, Food and Agriculture Organization of the UN (FAO)

execution. She presented several building projects demonstrating the versatility of bamboo.

**Bamboo for Land Restoration and the Bonn Challenge:** Eduardo Mansur, FAO, moderated the session. John Liu, Commonland Foundation, presented ecological principles for land restoration, followed by case studies from China, Colombia, India and Tanzania. Trinh Thang Long, INBAR, presented progress by 15 INBAR Member States toward meeting their commitment to restore 5.8 million hectares using bamboo, and the results of a member state survey on perceived constraints. Panelists from UNCCD, WCMC, IUCN and Commonland Foundation discussed: promoting financing for land restoration using bamboo; scaling up sufficiently to fulfill the Bonn Challenge commitment; engaging small farmers; creating incentives; and changing mindsets and expanding awareness regarding the potential and benefits of using bamboo for land restoration.

**Trilateral Cooperation in East Africa:** Moderated by Jayaraman Durai, INBAR, panelists from Ethiopia, Kenya, and Uganda presented their respective experiences of bamboo industry development and affirmed the Dutch-Sino-East Africa Bamboo Project as an effective trilateral cooperation model for promoting use of the material. Gong Peng, Tsinghua University, China, introduced a GIS-based assessment of bamboo stocks in the three countries. Caroline Wangui Kariuki, Green Pot Enterprise, Kenya, listed the main challenges in promoting bamboo markets, including: policy gaps, lack of knowledge and technological expertise, cost of seedlings, and socio-economic barriers. Participants from the floor reflected on their personal experiences of planting bamboo and acknowledged the rapid development of bamboo-based industries in recent years, citing, for example, the production of bamboo charcoal.

**The Role of Bamboo in Emergency Shelters and Social Housing:** Sivanka Dhanapala, UN Refugee Agency (UNHCR), gave a keynote speech on UNHCR's efforts on providing emergency shelters, including the 'Nobody Left Outside' campaign and the Global Shelter Coalition. Hector Archilla, CEO, Amphibia group, UK, facilitated speakers' presentations on topics including: techniques to make resilient housing out of bamboo; bamboo for emergency shelters and permanent housing in countries affected by earthquakes, such as Nepal and Mexico; India's recent efforts to build low-cost toilets out of bamboo; and adapting bamboo-based earthquake-proof housing technology from Colombia to the Philippines. In a panel discussion, speakers addressed challenges of scaling up the use of bamboo, which, they noted, may be political, legal or environmental, and stressed the need for further development of international standards in bamboo housing construction.

**Global Assessment of Bamboo and Rattan for Green Growth:** Trinh Thang Long, INBAR, introduced the work of GABAR in developing methodologies for assessing bamboo and rattan stocks, noting its value in providing reliable information and science-based evidence, and in highlighting investment opportunities. Speakers from INBAR, the Forest Survey of India, the Academy of Green Development in Kunming, and Tsinghua University presented their use of assessment methodologies including GIS, on-ground assessment, and assessment of on-farm and beyond-forest stocks with the use of a smartphone application to capture data, covering assessment activities to date in China, Ethiopia, India, Jamaica, Kenya, Madagascar, Uganda and Vietnam.

Speakers noted that combining assessment of bamboo and rattan with forestry assessment could be cost-effective, and clarified that the smartphone application cost US\$5,000, and a manual and training could be provided separately, so that countries can conduct their own assessments.

**Sustainable Tropical Forest Management:** Dieterle moderated the session. Sheam Satkuru, ITTO, made the case for: sustainably managed forests as necessary to reverse forest loss and land degradation; a holistic approach that includes non-timber forest products; and creating green supply chains. Rene Boot, Director, Tropenbos International, discussed how



Trinh Thang Long, INBAR

the costs of current forest certification schemes limit their reach. He suggested combining certification, REDD+ and Forest Law Enforcement, Governance and Trade (FLEGT) regimes. Desy Ekawati, Ministry of Environment and Forestry, Indonesia discussed lessons learned from an ITTO project to develop a community-based bamboo industry. Camille Rebelo, EcoPlanet Bamboo, explained her company's approach to sustainable bamboo plantation management. Robert Nasi, Director-General, CIFOR, urged using a holistic, mixed-model approach combining bamboo and rattan with other types of forest to maximize land-use value.

#### **Capacity Building and Training for Sustainable**

**Development:** Philippe Pypaert, UNESCO, moderated a panel on effective capacity building. Gloria Asare Adu, CEO, Global Bamboo Products Ltd., Ghana, discussed what she had learned from visiting Chinese factories and workshops. David Ganz, Executive Director, The Center for People and Forests, Thailand, said training should be adapted to the local context. Berhane Kidane, Ethiopian Environment and Forest Research Institute, spoke of the upcoming China-Africa Bamboo Center in Addis Ababa. Robert

Parua, Programme Specialist, UNESCO, outlined the organization's work in areas including capacity development in the education system, and knowledge sharing. Eduard Mueller, Rector, University for International Cooperation, Costa Rica, stressed the importance of hiring passionate, hands-on trainers. After a question-and-answer session, Pypaert read out a Statement of Intent on 'Establishing a Global System of Bamboo and Rattan Training Facilities' on behalf of session participants.



**Robert Parua**, Programme Specialist, UNESCO Beijing Office

#### **Bamboo Carbon Sequestration: Forest Ecology and**

**Management:** Tingting Mei, Zhejiang A&F University (ZAFU), China, moderated this session. Frank Berninger, ZAFU, presented the results of atmospheric studies using eddy covariance techniques. Lei Wang, ZAFU, explored the application of systems thinking to the use of bamboo for climate change mitigation, green development and sustainable communities. Yongjun Shi, ZAFU, discussed the technical aspects of measuring and monitoring carbon sequestration of managed projects. Nuyun Li, China Green Carbon Fund, explained the role of forest carbon in the Chinese Certified Emissions Reduction (CCER) voluntary trading scheme, discussing methodologies used as well as China's first CCER forest carbon trade and its impact on farmers. A panel discussion addressed: how China assesses additionality in its forest carbon projects; how to factor in additional benefits, such as wildlife protection; methodologies used to assess benefits to

farmers; how to motivate smallholder farmers to participate in carbon sequestration; how to assess whether products containing bamboo are carbon-neutral; and monitoring tools needed when dealing with fragmented landscapes.

#### **Bamboo Winding Forum - Innovative Green Technology for South-South Cooperation:**

During the first half of the session moderated by Xie Ji, former Director General, Department of Climate Change, National Development and Reform Commission, China, Ling Ye, Director, Engineering Research Center for Bamboo Winding Composites (ERCBWC) introduced 'bamboo winding' technology, which produces a strong composite material. He demonstrated potential applications, including in the construction of urban utility tunnels and houses that are resistant to fires, land subsidence and seismic movements. Dai Chunping, FP Innovations, presented scientific evidence on the strength and durability of bamboo winding composites. Agi Veres, UNDP, praised China's role in bringing technology innovation into South-South cooperation. Wang Zhibao, former Minister, NFGA, emphasized the importance of intellectual property rights to such technologies.

The second half of the session was moderated by Xiang Yu, Hubei Normal University. Zhu Min, President, Cybertech Investment Group, discussed promoting bamboo winding technology from an investment perspective. Three local government officials from different regions of China outlined their regional development plans to apply bamboo winding technology in bamboo-producing areas. Shakti Bahadur Basnet, Minister, Ministry of Forestry and Environment, Nepal, called for more countries to partner with China in promoting the new technology. At the close of the session, MoUs were signed between: the China National Forest Products Industry Association and the Ministry of Forestry and Environment of Nepal; ERCBWC and the Embassy of Myanmar in Beijing; and ERCBWC with five local governments in China.

#### **Bamboo Composite Material**

**– The Way Forward:** Session host Mohanty opened the discussion, stating that bamboo has gone from being 'poor man's timber' to being used in high-end products, and compares favorably on price with other construction materials. Speakers highlighted current research into the beneficial properties of bio-based materials such as bamboo fiber, rice husk, jute, curaua and sisal, and the building and fire safety aspects of bamboo construction. Felix Bock, CEO, ChopValue Manufacturing Ltd, Canada, presented his 'urban harvesting' of disposable chopsticks to make compressed material used in floor tiles and home décor items.

David Knight, CEO, Resource Fiber, US, chaired the panel discussion. Panelists proposed that new terminology would promote acceptability of high-performance bamboo composites among consumers. They suggested bamboo composites and fibers could be used to make sporting equipment, 'green' lightweight



**Shakti Bahadur Basnet**, Minister of Forestry, Nepal



David Knight, Resource Fiber

construction blocks, and organic vineyard posts that replace arsenic-treated pine. On whether bamboo demand would outstrip supply, they proposed that efforts should focus on improving the technology to optimize bamboo fiber extraction, and increase the use and performance of bamboo-composite materials, based on research.

**Women, Bamboo and Rattan:** Moderator Hannah Ryder, China Africa Advisory, introduced keynote speaker Julie Broussard, UN Women. Broussard said the SDGs are all interlinked, and that bamboo and rattan, by contributing to women's livelihoods and empowerment, can help achieve them. Janette Poku Akom, Director, Kwamoka Farms and Processing, and Gloria Asare Adu, CEO, Global Bamboo Products Ltd., spoke of the challenges of setting up bamboo-related businesses in Ghana, as well as the pivotal role of bamboo in changing women's lives. Dancilla Mukakamari, Africa Women's Network for Sustainable Development, cited best practices from Rwanda, where gender equality has progressed. Markus Ihalainen, CIFOR, highlighted research findings on gender inequalities in the forestry sector. Durai Jayaraman, INBAR, explained how INBAR scales up traditional bamboo and rattan value chains without disrupting the traditional cultural practices of women. Participants from the floor then discussed how women can mobilize South-South cooperation, access credit at good interest rates, and negotiate the multiple roles they often juggle at home and at work.

#### **Green Transportation:**

##### **Bamboo Bicycles and Beyond:**

Michael Kwaku, INBAR, chaired the session. Speakers from Ghana, China and Philippines introduced their respective bamboo bike production programmes. Michael Abadie, President, World Bamboo Organisation and co-developer of the 'Flyboo' bamboo plane prototype, reviewed the history of its development. Bernice Dapaah, Ghana Bamboo Bikes, reported that her project has begun to develop new products from



Hannah Ryder, China Representative, China Africa Advisory

bamboo, including wheelchairs and litter pickers. Charlie Du, Tus Holdings, China, cited scientific research on the strength and stiffness of bamboo used in bicycle construction, showing it compares well to stainless steel, aluminum, and birch. Bryan McClelland, Bambike, the Philippines, shared his story of setting up a social enterprise to make bamboo bikes, while improving the livelihoods of local communities. Addressing participants' questions on the challenges ahead for the bamboo bike industry, speakers responded that improvements in bamboo engineering can only be achieved through continued scientific testing.

#### **Internationalization of Bamboo and Rattan Standards:**

This session was chaired by Changhua Fang, ICBR. Jingyi Zhao, ISO/TC 296 Secretariat, outlined the status of TC 296 work on three international standards for bamboo and two for rattan, all at a working draft stage. Karnita Yuniarti, Center for Forest Products Research and Development, Indonesia, reviewed Indonesia's six national standards for bamboo and 11 for rattan, and the handful of existing standards in Malaysia, the Philippines and Thailand. Noting China is the world leader in setting technical standards on bamboo and rattan, Xianmiao Liu, ICBR, China, reviewed China's 35 national standards, 133 industry standards and 19 provincial standards, all of which have been collected by ICBR and INBAR, translated into English and set up as an accessible database. Abel Olajide Olorunnisola, University of Ibadan, Nigeria, noted challenges for standardizing bamboo and rattan products in Africa as: incomplete taxonomic identification; absence of modern silvicultural practices; uncontrolled harvesting; and lack of standard procedures and design codes for furniture production.

#### **The Ecosystem Services and Economic Benefits of Rattan:**

Terry Sunderland, University of British Columbia, argued that calls for increased cultivation of bamboo and rattan should consider issues such as rural communities' lack of land tenure and the role of women in economic activities. He anticipated that rattan will become a high-value niche product, citing its current use in bone implants and ethically produced furniture. William Baker, Kew Gardens, explained that rattan species are climbing palms, and described their unique biological properties, also highlighting their economic value.

**Panel Discussion:** E.M. Muralidharan, Kerala Forest Research Institute, India, hosted the discussion. Panelists from Vietnam, India, Nepal, China, the Philippines, Bangladesh and Nigeria discussed the management of rattan stocks in their respective countries, covering its multiple uses, quality control, embedded cultural connotations, and recent scientific research on its biological structure. They highlighted the importance of participatory community management of rattan resources, and cautioned that rattan production overall is dwindling.

At the close of the session, Wan Tarmeze Wan Ariffin, Forest Research Institute Malaysia, launched the publication 'Rattan Terminologies' on behalf of the INBAR task force on rattan, stating that the use of common terminology is the first step in promoting and developing rattan.

**Business Leaders Forum: Challenges and Opportunities for the Private Sector:** Moderator Mark Halle, INBAR Board of Trustees, asked speakers to focus on challenges in the bamboo and rattan industry, considering opportunities were already well understood. In a keynote speech, Maria Emilia Caro, Eldorado Bambu, said the setbacks her bamboo business faced taught her no one business model can be transposed everywhere. In a

second keynote speech, Zhao Liang, United Nations Industrial Development Organization (UNIDO), expressed UNIDO's commitment to assist bamboo and rattan industry leaders. Janette Poku Akom, Director, Kwamoka Farms and Processing, Ghana, underlined it is difficult to find credit with low interest rates in some parts of the world. Vikida Yu, Fujian HEQICHANG Bamboo Product Co, said challenges to the bamboo industry in China have changed from convincing businesses of its value to improving the material. Knight expressed concern that demand for bamboo will eventually outstrip supply. Gifaar Safaverdi, IKEA, identified the lack of a global supply chain and affordability of the treatment process as the main hurdles to scale up the bamboo industry. Other panelists raised the importance of a favorable regulatory framework, and noted the difficulties of harvesting bamboo in areas torn by conflict. The audience then had the opportunity to ask questions, and focused primarily on the need for a system of global standards and affordable certification, which INBAR could support.



Janette Poku Akom, Kwamoka Farms and Processing

#### International Perspectives

**and Applications of Bamboo for Renewable Energy:** Claudia Daza Montaña, Chair, INBAR Task Force on Bamboo for Renewable Energy (TFB4RE), provided an overview of the challenges facing B4RE, including lack of: chain development; technical and economic viability assessments; and information on the current status of renewable energy generated from bamboo. Jaya Wahono, CEO, Clean Power Indonesia, described his organization's work to bring electricity to rural communities in the archipelago with small power plants powered by bamboo grown by the local community. Nambi Barathi, Director, Grow More Biotech Ltd., India, made the case for bamboo 'captive energy plantations' that can be burned, gasified, or used to make ethanol or bio-compressed natural gas (CNG). Allert van den Ham, SNV, argued for substituting regular charcoal with bamboo charcoal in cookstoves. Ximena Londoño, President, Colombia Bamboo Association, discussed studies on the viability of bamboo as a bioenergy source in Colombia. Rocio Diaz-Chavez, Stockholm Environmental Institute Africa Centre, outlined challenges in the biomass sector and called for more data generation and sharing, and greater accountability, reporting and monitoring. Gloria Asare Adu, CEO, Global Bamboo Products Ltd., discussed her company's challenges in making and marketing bamboo charcoal briquettes in Ghana.



Ximena Londoño, President, Colombia Bamboo Association

#### Closing Ceremony

Hutchinson welcomed participants to the ceremony, stressing its historical significance as the first global congress to take place on bamboo and rattan. Friederich announced some of the outcomes of BARC 2018, which included:

- a new project funded by IFAD in several countries across Africa;
- a commitment by the Netherlands to support a new phase of the Dutch-Sino-East Africa project;
- a new China-Africa training centre in Ethiopia;
- an INBAR-Gabarone Declaration for Sustainable Development collaboration on the valuation of the eco-tourism potential of Uganda's bamboo forests;
- a workshop on the new Giant Panda National Park, based in China, with UNESCO, NFGA and five conservation organizations; and
- several agreements between INBAR and international organizations, including FAO, UNESCO and ITTO.

Friederich said that the Beijing Declaration had in principle been agreed upon by all INBAR Member States, and that the INBAR Secretariat will circulate an updated version in coming weeks after considering more recent comments on the document. He reminded the audience that a GABAR workshop had been running alongside BARC. He announced that INBAR will open a new Regional Office for Central Africa in Yaoundé, Cameroon.

Li Nuyun, CGCF, read 'A Letter Calling for Carbon Offsetting and Zero Emission' promising that carbon emissions generated by the Congress will be offset within the next 10 years through the planting of bamboo in Yunnan Province, China. Friederich presented an award to a young volunteer representative to express the Congress's gratitude for volunteers' contributions to the smooth running of the conference.

Co-Chair Jiang stated that the Congress had been a success, reporting that it had attracted ministerial-level speakers from more than 30 countries, and included diverse topics, exhibitions, and releases of research publications. She concluded her remark by quoting an ancient Chinese verse, "long distance separates no bosom friends," indicating that INBAR expects to hold another such event in the future.

Peng Youdong, NFGA, congratulated participants on a successful Congress and thanked all guests, speakers, staff and volunteers for their contributions to that success. He expressed confidence that the Congress discussions would contribute to the achievement of the SDGs by 2030. He pledged China's ongoing support for INBAR and for bilateral cooperation in pursuit of a better tomorrow for bamboo and rattan.

Thanking INBAR for an excellent Congress and saying that participants can be confident they have contributed to promoting sustainability in the bamboo and rattan sector, Hutchinson declared the congress closed at 5 pm.

#### Beijing Declaration

The Declaration was drafted during consultations prior to BARC 2018, and the full text was distributed on the first day of the Congress for comment.

The Beijing Declaration calls upon national governments and other relevant parties to implement several recommendations, including, *inter alia*: carrying out inventories and assessments; establishing value chains accessing local, regional, and international markets by way of appropriate standards setting and quality control; encouraging bamboo and rattan technology innovation and research, as well as exchange of know-how. The Declaration also calls for investment from bilateral and multilateral financing mechanisms to support bamboo and rattan programmes and initiatives.

#### Upcoming Meetings

**CBD SBSTTA-22:** The 22nd meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the CBD will address, *inter alia*: protected areas, marine and coastal biodiversity, biodiversity and climate change, and digital



**Li Nuyun**, CGCF, presents a donation to a project partner for planting bamboo in Yunnan province, China, which will offset the carbon emissions generated by Congress travel.

sequence information on genetic resources. **dates:** 2-7 July 2018 **location:** Montreal, Canada **contact:** CBD Secretariat **phone:** +1-514-288-2220 **fax:** +1-514-288-6588 **email:** secretariat@cbd.int **www:** <https://www.cbd.int/meetings/SBSTTA-22>

**1st Global LDN Forum:** Organized by the Government of the Republic of Korea, in partnership with the UNCCD, the Forum will provide an opportunity to explore and discuss insights and experiences on how the global community can strengthen partnerships to support achieving LDN. The outcome of the Forum will be delivered to other global fora to forge decision making in the UNCCD. **dates:** 4-5 July 2018 **location:** Seoul, Republic of Korea **contact:** Shin Hyun Yoo Korean Forest Service **email:** oioi74@korea.kr **www:** <https://www.unccd.int/news-events/first-global-land-degradation-neutrality-forum>

**CBD SBI-2:** The CBD Subsidiary Body on Implementation will address: review of progress in the implementation of the Convention and the Strategic Plan; biodiversity mainstreaming; resource mobilization; cooperation with other conventions; mechanisms for review of implementation; enhancing integration of Article 8(j) under the Convention and its Protocols; review of effectiveness of the processes under the CBD and its Protocols; and preparation for follow up to the Strategic Plan. **dates:** 9-13 July 2018 **location:** Montreal, Canada **contact:** CBD Secretariat **phone:** +1-514-288-2220 **fax:** +1-514-288-6588 **email:** secretariat@cbd.int **www:** <https://www.cbd.int/meetings/SBI-02>

**High-Level Political Forum (HLPF) 2018:** HLPF 2018 will convene under the theme 'Transformation towards sustainable and resilient societies.' The set of SDGs to be reviewed in depth are SDG 6 (water and sanitation), 7 (energy), 11 (sustainable cities), 12 (sustainable consumption and production patterns), 15 (life on land), and 17 (partnerships). Forty-seven countries are expected to present their Voluntary National Reviews, and a three-day ministerial meeting will convene from 16-18 July. **dates:** 9-18 July 2018 **location:** New York City, US **www:** <https://sustainabledevelopment.un.org/hlpf/2018>

**24th Session of the FAO Committee on Forestry (COFO 24) and World Forest Week:** The Committee on Forestry (COFO) is the highest FAO forestry statutory body. The biennial

sessions of COFO bring together heads of forest services and other senior government officials to identify emerging policy and technical issues, to seek solutions and to advise FAO and others on appropriate action. **dates:** 16-20 July 2018 **location:** Rome, Italy **contact:** FAO **email:** COFO-2018@fao.org **www:** <http://www.fao.org/about/meetings/cofo/en/>

**11th World Bamboo Congress:** The aim of the 11th Congress is to demonstrate the vast potential of bamboo in the Americas, as well as showcase what's happening around the world in bamboo development. A special symposium within the Congress will focus on technological advances in earthquake-resistant structural solutions with bamboo. **dates:** 14-18 August 2018 **location:** Xalapa, Veracruz, Mexico **email:** 11wbc.info@gmail.com **www:** <http://worldbamboocongress.org/home/en/>

**Latin American & Caribbean Climate Week (LACCW2018):** LACCW2018 aims to advance regional climate actions and support implementation of countries' Nationally Determined Contributions (NDCs) and climate action to deliver on the SDGs. **dates:** 20-23 August 2018 **location:** Montevideo, Uruguay **www:** <https://nfpartnership.org/latin-american-caribbean-climate-week/>

**ISO/TC 296:** Technical Committee 296 (TC 296) of the ISO is working on the standardization of bamboo, rattan and derived materials, including terminology, classification, specifications, test methods and quality requirements. Current work is on three standards for bamboo, two for rattan. **dates:** 3-7 September 2018 **location:** Addis Adaba, Ethiopia **contact:** Yan Yu, TC 296 secretary **phone:** +86-10-84789812 **email:** yuyan9812@icbr.ac.cn **www:** <https://www.iso.org/committee/5819148.html>

**Bangkok Climate Change Conference 2018:** In order to facilitate the timely completion of the Paris Agreement Work Programme (PAWP) at the 24th session of the Conference of the Parties (COP 24) to the UNFCCC, an additional negotiating session will convene between the 48th session of the UNFCCC Subsidiary Bodies (SBs 48) and COP 24. The conference will

include sessions of the Subsidiary Body for Implementation (SBI), the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the *Ad Hoc* Working Group on the Paris Agreement (APA). **dates:** 4-9 September 2018 **location:** Bangkok, Thailand **www:** <https://unfccc.int/sites/default/files/resource/Information%20Note%20to%20Parties%20on%20an%20additional%20negotiating%20session.pdf>

**International Panel on Climate Change:** IPCC-48 is expected to approve the Special Report on Global Warming of 1.5°C (SR15). **dates:** 1-5 October 2018 **location:** Incheon, Republic of Korea **contact:** IPCC Secretariat **www:** [http://www.ipcc.ch/scripts/\\_calendar\\_template.php?wg=8](http://www.ipcc.ch/scripts/_calendar_template.php?wg=8)

**IUFRO 2018 Posadas:** The International Union of Forest Research Organization's (IUFRO) 2018 Posadas Conference on 'Adaptive Management for Forested Landscapes in Transformation' will address issues arising from the transformation of forests in response to the pressures of globalization, population growth, resource scarcity and ecological degradation. It will also discuss how biodiversity is essential to human well-being, the loss of species and degradation of ecosystems, as well as the status of the achievement of global goals on biodiversity. The conference will also consider the ecological, economic, and functional values of landscapes, with a view to improving planning and decision-making, and operational solutions that can reconcile biodiversity conservation in the light of increasing demands on natural resources and land. **dates:** 1-5 October 2018 **location:** Posadas, Argentina **contact:** Analía Pugener, IUFRO **email:** [iufro2018@gmail.com](mailto:iufro2018@gmail.com) **www:** <http://iufro2018posadas.com/>

**54th Session of the International Tropical Timber Council (ITTC-54) and Sessions of the Associated Committees:** ITTC-54 will consider, among other things: proposals for improving ITTO's financing infrastructure and fundraising strategies and progress in implementing the ITTO Policy Guidelines on Gender Equality and Empowering Women. **dates:** 5-10 November 2018 **location:** Yokohama, Japan **contact:** ITTO Secretariat **phone:** +81-45-223-1110 **fax:** +81-45-223-1111 **email:** [itto@itto.int](mailto:itto@itto.int) **www:** [http://www.itto.int/workshop\\_detail/id=5427](http://www.itto.int/workshop_detail/id=5427)

**2018 UN Biodiversity Conference:** The 14th meeting of the Conference of the Parties to the CBD, the 9th Meeting of the Parties (MOP) to the Cartagena Protocol on Biosafety and the 3rd Meeting of the Parties to the Nagoya Protocol on Access and Benefit-sharing (CBD COP 14, Cartagena Protocol COP/MOP 9, and Nagoya Protocol COP/MOP 3) are expected to address a series of issues related to implementation of the Convention and its Protocols. **dates:** 14-29 November 2018 **location:** Sharm el-Sheikh, Egypt **contact:** CBD Secretariat **phone:** +1-514-288-2220 **e-mail:** [secretariat@cbd.int](mailto:secretariat@cbd.int) **www:** <https://www.cbd.int/conferences/2018/cop-14/documents>

**Caribbean Bamboo Conference (CBIC):** Co-sponsored by INBAR, this event seeks to bring together policy makers from the English-speaking Caribbean with experts from INBAR member countries to discuss challenges and opportunities for bamboo in the region. **dates:** 27-29 November 2018 **location:** Kingston, Jamaica **email:** [gladstone28@hotmail.com](mailto:gladstone28@hotmail.com)

**UNFCCC COP 24:** The Katowice Climate Change Conference is expected to adopt the Paris Agreement Work Programme. **dates:** 3-14 December 2018 **location:** Katowice, Poland **contact:** UNFCCC Secretariat **www:** <https://unfccc.int/calendar>

**UNCCD CRIC 17:** The Committee for the Review of the Implementation of the Convention (CRIC) assists the UNCCD COP and is an integral part of the Performance Review and Assessment of Implementation System (PRAIS). **dates:** 25-30 January 2019 [tentative] **location:** Georgetown, Guyana **contact:** UNCCD Secretariat **phone:** +49-228 / 815-2800 **email:** [secretariat@unccd.int](mailto:secretariat@unccd.int) **www:** <https://www2.unccd.int/convention/committee-review-implementation-convention-cric>

**International Panel on Biodiversity and Ecosystem Services:** IPBES-7 is expected to approve the global assessment on biodiversity and ecosystem services. **dates:** 29 April - 4 May 2019 **location:** Paris, France **contact:** IPBES Secretariat **www:** <https://www.ipbes.net/event/ipbes-7>

## GLOSSARY

BARC	Bamboo and Rattan Congress
BRI	Belt and Road Initiative
CBD	Convention on Biological Diversity
CIFOR	Center for International Forestry Research
FAO	Food and Agriculture Organization of the UN
GABAR	Global Assessment of Bamboo and Rattan
GGGI	Global Green Growth Institute
ICBR	International Centre for Bamboo and Rattan
IFAD	International Fund for Agricultural Development
INBAR	International Network for Bamboo and Rattan
ISO	International Organization for Standardization
ITTO	International Tropical Timber Organization
LDN	Land degradation neutrality
MoU	Memorandum of Understanding
NFGA	National Forestry and Grassland Administration
SDG	Sustainable Development Goal
UNCCD	UN Convention to Combat Desertification
UNDP	UN Development Programme
UNEP	UN Environment
UNESCO	UN Educational Scientific and Cultural Organization
UNFCCC	UN Framework Convention on Climate Change
WCMC	World Conservation Monitoring Centre