

*Bamboo and Rattan — Nature-based Solutions
for Sustainable Development*

*Promote the Action of Substituting Bamboo for Plastics
to Build a Clean and Beautiful World*



Celebration of INBAR's 25th Anniversary The Second Global Bamboo and Rattan Congress

7-8 November 2022
Beijing, China


CONGRESS HANDBOOK

Hosts

National Forestry and Grassland Administration, China
International Bamboo and Rattan Organization

Organizers

International Bamboo and Rattan Organization Secretariat
International Centre for Bamboo and Rattan



In order to promote green economic development using bamboo and rattan as well as contribute to achieving the United Nations Sustainable Development Goals, the celebration of the 25th anniversary of the establishment of the International Bamboo and Rattan Organization (INBAR) and the Second Global Bamboo and Rattan Congress (BARC 2022) will be held in Beijing, China from 7–8 November 2022.

Co-hosted by the National Forestry and Grassland Administration of China (NFGA) and INBAR, the theme of BARC 2022 is “Bamboo and Rattan — Nature-based Solutions for Sustainable Development.” BARC 2022 will explore new opportunities and create new platforms for bamboo and rattan to support the sound development of the bamboo and rattan sectors and contribute to achieving carbon neutrality.

BARC 2022 is an international and popular bamboo and rattan event which will be held in hybrid mode. BARC 2022 will include opening and closing ceremonies, an Ambassadors’ Dialogue, a keynote plenary session, parallel sessions and an important new initiative on Bamboo as a Substitute for Plastics will be jointly launched by China and INBAR at the opening ceremony.

Venue: Kuntai Hotel Beijing

Address: No.2 Qiyang Road, Wangjing Area, Chaoyang District, Beijing, China





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Welcome Address



At the time when the whole country are energetically studying, implementing and promoting the spirit of the 20th National Congress of the Communist Party of China, the 25th anniversary of the International Bamboo and Rattan Organization (INBAR) and the Second Global Bamboo and Rattan Congress is being held. On behalf of the National Forestry and Grassland Administration of China (NFGA) and from myself personally, I would like to extend a warm welcome to representatives from INBAR Member States, Chinese and foreign experts and scholars, entrepreneurs and media friends in attendance at this Congress, and express my heartfelt thanks to all those who have been long concerned about and supported the development of the global bamboo and rattan industries.

China is the country with the richest bamboo resources, featuring the longest history of bamboo cultivation and bamboo culture in the world. The Chinese government has always attached great importance to the development of bamboo industry. Through policy and financial support, project promotion and technical support, bamboo resources are constantly growing and the bamboo industry is booming. At present, the bamboo forest area in China has reached 7.01 million hectares, accounting for one fifth of the world's total. In 2020, the output value of bamboo industry in China reached more than 320 billion yuan, and the total value of import and export trade of bamboo products exceeded 2.2 billion US dollars. The bamboo industry has become a green and people-benefit industry vigorously promoted by the government and actively participated by enterprises and the general public. Especially in 1997, China joined hands with relevant countries to establish INBAR, which provided a new cooperation platform and opportunities for the better and faster development of the world bamboo and rattan industry. Since its establishment 25 years ago, INBAR has made positive contributions to addressing climate change, bolstering poverty alleviation efforts in bamboo- and rattan-producing areas, boosting international trade in bamboo and rattan products, and promoting sustainable economic and social development by coordinating with all its Member States closely around the development and utilization of bamboo and rattan resources, leading to increasing international recognition and influence, and has become an observer of the United Nations General Assembly.

This Congress, with the theme of “Bamboo and Rattan — Nature-based Solutions for Sustainable Development”, will also focus on the implementation of the Deliverables of the High-level Dialogue on Global Development. The Bamboo as a Substitute for Plastics Initiative to be jointly launched by China and INBAR provides nature-based solutions to reduce plastic pollution, combat climate change and champion sustainable development, which are of great significance for advancing the construction of a global ecological civilization, promoting harmonious coexistence between humankind and nature, and building a clean and beautiful world. NFGA will continue to work with INBAR to develop a global action plan for using bamboo as a substitute for plastics. It is hoped that the guests and representatives attending the Congress will take this Congress as a platform and opportunity to conduct in-depth discussions and extensive exchanges, so as to jointly make suggestions and build consensus for the implementation of the initiative and the high-quality development of bamboo and rattan industries.

I wish the Congress a complete success!

Guan Zhiou
Administrator



The crisp winds of autumn are upon us, bringing merriment across the land. Four years ago, the First Global Bamboo and Rattan Congress (BARC 2018), co-hosted by the International Bamboo and Rattan Organization (INBAR) and China's National Forestry and Grassland Administration (NFGA), achieved a series of significant outcomes with far-reaching implications.

Four years later, as we arrive at the august occasion of INBAR's 25th anniversary since its founding, INBAR and NFGA yet again join hands to host the Second Global Bamboo and Rattan Congress (BARC 2022). On behalf of the INBAR Board of Trustees, I would like to extend a warm welcome and sincere thanks to all guests attending this conference.

Under the theme "Bamboo and Rattan — Nature-based Solutions for Sustainable Development," BARC 2022 will explore new opportunities and create novel platforms for bamboo and rattan to support the healthy growth of the bamboo and rattan sectors and contribute to achieving carbon neutrality. In recent years, bamboo and rattan have become important parts of the conversation for international sustainable development, as key tools for promoting South-South cooperation, implementing China's Belt and Road Initiative (BRI) and Global Development Initiative (GDI), and advancing the United Nations 2030 Sustainable Development Goals.

Recently, another promising bamboo shoot has emerged from its sheath. On 24 June 2022, China released a series of deliverables under the framework of the GDI. Included in the deliverables was the Bamboo as a Substitute for Plastic Initiative, poised to launch soon in collaboration with INBAR, which can reduce plastic pollution, address climate change and contribute to global sustainable development. On 20 September 2022, at the Ministerial Meeting of the Group of Friends of the GDI held in New York City and chaired by State Councilor and Foreign Minister Wang Yi, China announced it was ready to begin jointly launching the Bamboo as a Substitute for Plastic Global Action Plan with INBAR to effectively treat plastic pollution and leave a clean and beautiful planet for future generations. This not only recognizes the important role of bamboo in plastic reduction and substitution but will also greatly mobilize all INBAR Member States and the international community to harness the huge potential of bamboo as a substitute for plastics.

I hope, and I believe, that all participants will make new friends and have rewarding experiences through the exchange and dialogue fostered at BARC 2022.

I wish all our guests and friends good health and happiness during the conference!

江泽慧

Prof. Jiang Zehui

**Co-Chair of the Board of Trustees
International Bamboo and Rattan Organization**



On behalf of the International Bamboo and Rattan Organization (INBAR), it is my great pleasure to welcome you to the Second Global Bamboo and Rattan Congress (BARC 2022) with the theme “Bamboo and Rattan — Nature-based Solutions for Sustainable Development.”

The First Global Bamboo and Rattan Congress (BARC 2018) was launched in 2018 to increase awareness of the potential of bamboo and rattan for sustainable development and for resolving environmental challenges. BARC 2018 was a platform to prove beyond doubt that bamboo and rattan are critical tools for the future and should no longer be considered as “poor man’s timber.” Henceforth, bamboo and rattan, among other topics, have been integrated into important international debates on sustainable development as key tools for promoting South-South cooperation and contributing to the United Nations 2030 Sustainable Development Goals.

Four years later, BARC 2022 is now being co-hosted by the National Forestry and Grassland Administration of China and INBAR, in order to promote green economic development using these two abundant and natural resources. BARC 2022 explores new opportunities and creates new platforms for the cross-fertilization of ideas expected to foster global cooperation. The Congress will also address some of the emerging debates surrounding climate change mitigation and adaptation as well as contribute to achieving carbon neutrality.

The two-day agenda will feature exciting programs, including an Ambassadors’ Dialogue, a plenary session for keynote statements and presentations, as well as parallel sessions exploring four thematic areas: The Road to Carbon Neutrality; Green Industry and Economic Recovery; Innovative Materials and Market Development; and Working Together for Inclusive and Green Development. In particular, the Congress will highlight the China-INBAR joint launch of the Bamboo as a Substitute for Plastic Initiative, the roadmap and action plan of which will be released as several of the major outcomes of this Congress.

In addition, the Congress will include online exhibitions highlighting high-quality bamboo and rattan products, advanced technologies and the latest scientific research achievements in furniture, building materials, handicrafts, daily life necessities, fiber, charcoal and other related products and technologies.

It is indeed through conversations and exchanging experiences at BARC 2022 that we expect to gather significant, substantial and relevant inputs in an effort to provide policy guidance to the Member States that we serve. I look forward to a very productive Congress with concrete decisions and firm commitments that will deepen collaboration with partners in support of our Member States. I have no doubt that the recommendations and outcomes from this Congress will positively impact the world at large!

I do hope you will enjoy your participation in BARC 2022.

A handwritten signature in black ink, appearing to read 'Ali Mchumo', written in a cursive style.

Ali Mchumo
Director General
International Bamboo and Rattan Organization

Program



Program Schedule

Time	Monday, 7 November 2022	Tuesday, 8 November 2022 Online	Time
		Parallel Sessions (9)	08:30-10:10
		Parallel Sessions (9)	10:30-12:10
		Parallel Sessions (9)	13:30-15:10
15:00-16:00	Opening Ceremony of INBAR's 25 th Anniversary and BARC 2022 (Ballroom B, 2 nd Floor)		
16:00-16:15	Tea Break	Parallel Sessions (9)	15:30-17:10
16:15-17:15	Ambassadors' Dialogue (Ballroom B, 2 nd Floor)		
17:15-18:45	Keynote Plenary Session (Ballroom B, 2 nd Floor)	Closing Ceremony of INBAR's 25 th Anniversary and BARC 2022	17:30-18:00
18:45-19:00	Break		
19:00-20:30	Reception (Chinese Guests: Ballroom A, 2 nd Floor; Foreign Guests: The Palace Restaurant VIP3)		

Important Events



Opening Ceremony

Time: 15:00-16:00, Monday, 7 November 2022

Venue: Ballroom B, 2nd Floor

Ambassadors' Dialogue

Time: 16:15-17:15, Monday, 7 November 2022

Venue: Ballroom B, 2nd Floor

Keynote Plenary Session

Time: 17:15-18:45, Monday, 7 November 2022

Venue: Ballroom B, 2nd Floor

Parallel Sessions (Online)

Time: 08:30-17:10, Tuesday, 8 November 2022

Closing Ceremony (Online)

Time: 17:30-18:00, Tuesday, 8 November 2022

Ambassadors' Dialogue

- H.E. Mr. Martin Mpana, Ambassador of Cameroon to China
- H.E. Mr. Carlos Larrea, Ambassador of Ecuador to China
- H.E. Mr. Leonardo Kam, Ambassador of Panama to China
- H.E. Mr. Teshome Toga Chanaka, Ambassador of Ethiopia to China
- H.E. Mr. Carlos Watson, Food and Agriculture Organization (FAO) Representative to China

Keynote Plenary Session

- **Presentation 1:** Acting on the Global Development Initiative and Promoting Bamboo as a Substitute for Plastics
Speaker: Prof. Jiang Zehui, Co-Chair of INBAR Board of Trustees, Chief Scientist of International Centre for Bamboo and Rattan, Academician of International Academy of Wood Science
- **Presentation 2:** Global Overview for Ecosystem Restoration: Opportunities and Challenges in the Context of the United Nations Decade 2021-2030 (Virtual Presentation)
Speaker: Christophe Besacier, Senior Forestry Officer, Coordinator of the Forest and Landscape Restoration Mechanism, FAO
- **Presentation 3:** Green and High Quality Development in the Context of Carbon Neutrality
Speaker: Academician of Chinese Academy of Engineering, Former President of Beijing Forestry University
- **Presentation 4:** Sustainability and Circularity of Engineered Bamboo for Carbon Neutrality (Virtual Presentation)
Speaker: Dr. Pablo van der Lugt, Delft University of Technology, Netherlands

Keynote Speakers



Prof. Jiang Zehui



Jiang Zehui, Fellow of the International Academy of Wood Science (IAWS), Co-Chair of INBAR Board of Trustees and Chief Scientist, Professor and Doctoral Supervisor at the International Centre for Bamboo and Rattan, is a leading scientist in wood (and bamboo and rattan) science and technology. She was the Vice-Chair of the Committee for Population, Resources & Environment of the 9th to 12th CPPCC National Committee, and currently serves as President of the China Flower Association, Chair of the Technical Steering Council of ISO/TC 296 on bamboo and rattan, China's National Technical Committee on Wood Standardization and China's National Technical Committee on Bamboo and Rattan Standardization, and President of China Bamboo and Rattan Brand Cluster. Prof. Jiang holds honorary doctorates from the University of Alberta, Canada and St. Petersburg State Forest Technical University, Russia.

During her decades-long career in forest utilization, forestry engineering in China, wood science and wood anatomy, Prof. Jiang Zehui has been a lecturer, researcher and manager of scientific R&D projects. She has chaired and participated in a number of major research projects, including national strategic study projects and scientific and technological projects, programs sponsored by the China National Natural Science Fund, and international projects financed by the Global Environment Facility, the International Tropical Timber Organization and the Common Fund for Commodities. Her research has won her one First Prize and three Second Prizes from the National Science and Technology Progress Awards and eight Ministry-level Prizes. Prof. Jiang holds over 110 patents and has authored over 50 monographs, including *Study on the Strategies of Forestry Sustainable Development in China*, *Wood Properties of the Global Important Tree Species* (in Chinese and English), *Forestry Engineering in China*, *Modern Forestry of China*, *Identification and Uses of Wood in Southeast Asia*, *Bamboo and Rattan in the World* (in Chinese and English), *"The Charm of Bamboo"* (in Chinese and English), *Rattan in China* (in Chinese and English), *Narcissus in China*, *Illustrations of Bamboos in China*, *Mainstream Culture in an Era of Ecological Civilization — An Overview of China's Eco-Culture System*, and *Chinese Marine Eco-Culture* (two volumes). In addition, she has published more than 500 journal papers and supervised over 100 postgraduate students and postdoctoral fellows.

Prof. Jiang has been a recipient of the State Council's Special Allowance since 1992. The other honors she has received include Meritorious Female Role Model in 1995, Global Environment Leader in June 2002, Distinguished Service Award of IAWS in November 2013, AIPH Gold Medal in 2014, and a medal for distinguished contribution and an honorary doctorate from St. Petersburg State Forest Technical University in 2015. In 2016, the University of British Columbia, Canada conferred on her an award for her remarkable contributions and in 2018, she was given a Lifetime Achievement Award for Global Bamboo and Rattan Development by the Chair of INBAR Council.

Christophe Besacier



Christophe Besacier is a Senior Forestry Officer at FAO, where he is currently coordinating the Forest and Landscape Restoration Mechanism, which provides technical assistance and support the implementation of restoration projects in more than twenty countries. He mobilizes resources to scale-up restoration with multiple key financial partners. He is involved in major international restoration initiatives such as the Bonn Challenge, the Global Partnership on Forest and Landscape Restoration and the United Nations Decade on Ecosystem Restoration. From 2009 to 2014 he was in charge of the Committee on Mediterranean Forestry Questions-Silva Mediterranea. From 2000 to 2009, he worked as regional advisor for the French Ministry of Foreign Affairs in the Sahel and the Congo Basin regions.

Prof. Yin Weilun



Professor Yin Weilun, an academican of the Chinese Academy of Engineering (CAE) and PhD supervisor at Beijing Forestry University, is a famous forest scientist, biologist, forestry educator and agricultural and forestry strategic scientist in China. He was the Former President of Beijing Forestry University, Director of the Agriculture Department of CAE, Presidium Member of CAE, Executive Committee Member of the International Poplar Committee, Vice-Chairman of the Chinese Society of Forestry, Member of the 11th and 12th National Committees of the Chinese People's Political Consultative Conference. He is currently the Chairman of the China Poplar Committee, Chairman of National Expert Advisory Committee on Ecological Protection and Construction, Chairman of Beijing Forestry Society, President of Beijing General Association of Old Scientific and Technical Workers, and Editor-in-Chief of Forestry Science, Journal of Beijing Forestry University, Journal of Forest and Environment, Forest Ecosystems, etc.

Prof. Yin has long been engaged in research on tree physiology, regulation of the growth and development of trees and flowers, physiological and molecular mechanisms of plant tolerance, and selection and breeding of rapid growth and tolerance strains. He has published more than 300 papers and compiled more than 10 textbooks and works. His achievements have won 6 National Science and Technology Progress Awards and National Invention Awards, 2 National Teaching Achievement Awards, and 25 Provincial and Ministerial Science and Technology and Teaching Awards. He has been awarded the honorary titles of National Outstanding Science and Technology Worker, National Model Teacher, National Young and Middle-aged Experts with Outstanding Contributions, Capital Labor Medal, "2010 Green China" Annual Focus Person Special Contribution Award, 2022 China Agriculture and Forestry University Scholar with the Most Contribution Ability and so on.

Dr. Pablo van der Lugt



World Bamboo Ambassador and architectural engineer Dr. Pablo van der Lugt obtained his PhD at Technical University Delft in 2008 for his research into the environmental impact of engineered bamboo. Since then he has been active in the building industry as a senior consultant on the themes of sustainability, circularity and biobased building, continuously maintaining a connection with academia through the TU Delft - AMS Institute and with bamboo as Head of Sustainability at MOSO International.

He is the author of several books on biobased building, including *Tomorrow's Timber* (2020) and *Booming Bamboo* (2017), and regularly publishes his research findings in popular magazines, scientific journals and conference proceedings.

Dr. Pablo van der Lugt is a highly demanded speaker in several formats, ranging from TED and Pecha Kucha Talks, to keynote presentations at high-level international conferences, including the International Climate Conferences in Paris (COP 21), Katowice (COP 24) and Glasgow (COP 26).

Parallel Sessions



The 36 parallel sessions of BARC 2022 will bring together representatives from governments, research institutes, international and non-governmental organizations, the private sector and media to discuss the four thematic areas, and to discuss the development and cooperation of bamboo and rattan in a rapidly changing 21st century.

Thematic Areas

Thematic Area 1. The Road to Carbon Neutrality

Bamboo can contribute to mitigating climate change and reaching carbon neutrality targets by storing carbon and creating low-carbon products. This thematic area will focus on bamboo's contributions to storing carbon — either through ambitious reforestation projects, preventing deforestation or as a source of low-carbon products — and helping vulnerable communities adapt to climate change. This theme will also include bamboo and rattan's role in ecosystem and biodiversity restoration as well as forest conservation.

Thematic Area 2. Green Industry and Economic Recovery

This thematic area will showcase bamboo and rattan's potential for creating sustainable livelihoods, reducing poverty, revitalizing rural areas and building a green economy. Topics may include the sustainable management of bamboo and rattan resources, bamboo and rattan in agroforestry, livelihoods for smallholder farmers, small- and medium-sized enterprise development, as well as case studies of successful job creation and green supply chains, eco-tourism and cultural sectoral development using bamboo and rattan.

Thematic Area 3. Innovative Materials and Market Development

With the increasing global demand for bio-based and low-carbon products, bamboo and rattan can play a central role in helping develop a circular economy. This thematic area will showcase bamboo and rattan's more innovative applications, including bamboo alternatives to plastics, timber, steel, concrete, cotton and others, their performance compared to more emissions-intensive materials and sources of biomass energy, as well as advances in food products, bio-chemical applications, products standards and certification, market access, industrial upscaling and cluster development, and future trends.

Thematic Area 4. Working Together for Inclusive and Green Development

This thematic area looks at the significance of international cooperation and exchanges as a way to support sustainable development with bamboo and rattan. Topics may include best practices of bamboo and rattan research projects, successful cases of South-South and triangular cooperation, capacity building, technology transfer, women and community engagement, public-private partnerships and other multilateral initiatives which share technologies, knowledge and lessons learned, and which have demonstrably helped to replicate and scale up investment and engagement and facilitate international trade.

8 November 08:30 - 10:10 (GMT+8)		8 November 10:30 - 12:10 (GMT+8)	
S4.1 Forum on Innovation and High Quality Development of Bamboo Industry	P19	S2.4 Equipment R&D and Intelligent Manufacture	P29
S1.3 Ecosystem Services and Value Accounting	P20	S4.5 Bamboo for Carbon Neutrality and Green Growth	P30
S4.3 Bamboo: A Resource for Generating Partnerships and Addressing Climate Change	P21	S2.2 International Seminar on Nature Based Solutions for Rural Revitalization	P31
S3.3 Promoting the Global Initiative and Action Plan to Replace Plastic with Bamboo	P22	S1.5 Development of Bamboo Energy to Help Carbon Neutrality	P32
S1.1 Bamboo Forests Management for Decreasing Carbon Emission and Increasing Carbon Sequestration	P23	S1.1 Bamboo Forests Management for Decreasing Carbon Emission and Increasing Carbon Sequestration	P23
S3.7 Green and Sustainable Development of Bamboo Fiber Industry	P24	S2.5 Bamboo Under-Forest Economy and Forest Recreation Industry Development Forum	P33
S4.4 Strengthening Resource Mobilization for Sustainable Forest Management and Forest Restoration	P25	S1.6 Bamboo for Carbon Neutrality in Rural Areas: New Pathways for Carbon Reduction and Low Carbon Development in World Heritage Sites	P34
S1.4 Bamboo Forest Biodiversity Conservation, Ecosystem Adaptive Management and Sustainable Development Under the Vision of Carbon Neutrality	P26	S3.4 Replacing Plastics with Bamboo: Innovation in Science and Technology of Engineering Bamboo	P35
S3.1 2022 International Conference - Bamboo: A Very Sustainable Construction Material & the Third World Symposium on Sustainable Bio-Composite Materials and Structures	P27	S3.1 2022 International Conference - Bamboo: A Very Sustainable Construction Material & the Third World Symposium on Sustainable Bio-Composite Materials and Structures	P27

8 November 13:30 - 15:10 (GMT+8)		8 November 15:30 - 17:10 (GMT+8)	
S4.6 International Seminar on Bamboo and Rattan Clusters for Regional Development and Green Transition	P36	S4.6 International Seminar on Bamboo and Rattan Clusters for Regional Development and Green Transition	P36
S3.5 Advances in Chemical Utilization and Application of Bamboo	P38	S3.8 Development and Internationalization of Bamboo and Rattan Standards	P46
S3.6 Replacing Plastics with Bamboo: Policy, Roadmap and Actions	P39	S2.7 Ecological Culture Leads to the Substitution of Bamboo for Plastic	P47
S4.7 Facilitating International Trade of Bamboo and Rattan Commodities	P40	S2.8 Key Challenges and Solutions of Sustainable Bamboo Forest Management	P48
S1.7 Bamboo Developmental Biology and Its Sustainable Management Techniques for Bamboo Plantation	P41	S1.8 RE-Think Buildings	P49
S2.3 Forum on the Development of Medium and Small Sized Bamboo Shoots Industry	P42	S4.8 Bamboo Value Chains for Inclusive and Sustainable Industrial Development in Africa	P50
S1.2 Assessment of Bamboo Resources and Ecosystems Services	P43	S2.1 The Ecological and Socio-economic Contribution of Rattan to People Within the Context of Global Deforestation and Climate Change	P51
S2.6 Efficient Cultivation and Sustainable Development of Bamboo and Rattan Resources	P44	S1.9 Basic Research on Bamboo and Rattan Genetics and Breeding	P52
S4.2 Bamboo Industry Development Forum of Local Governments and Leading Enterprises	P45	S3.2 Advances in Bamboo Shoot Based Functional Foods Development and Its Health Benefits	P53

Session 4.1

Forum on Innovation and High Quality Development of Bamboo Industry

Zoom Meeting ID	933 6665 4754	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8), 8 Nov, 2022		
Organizer	Chinese Society of Forestry (CSF)		
Co-Organizers	<ul style="list-style-type: none"> • Bamboo Branch, Chinese Society of Forestry • Research Institute of Subtropical Forestry, Chinese Academy of Forestry (CAF-RISF) • International Centre for Bamboo and Rattan (ICBR) • Nanjing Forestry University (NJFU) • Zhejiang Bamboo Industry Association, China • Bamboo Industry Association of Anji County, Zhejiang Province, China • Zhejiang International Science and Technology Cooperation Base for Bamboo Cultivation and Utilization • Yong'an Institute of Bamboo Industry 		
Chair(s)	Haojie Wang, Professor, Research Institute of Subtropical Forestry, Chinese Academy of Forestry		
Introduction	<p>To better implement Xi Jinping's thought on ecological civilization and follow what he said when visiting Sichuan province and other areas where bamboo grows, this session is themed with "Innovations in Bamboo Industry" when COVID-19 prevention regularity is taking place and the demand for "carbon neutrality and carbon dioxide emission peaking" has become a national strategy in China. This session focus on "cohesion, change and future" in bamboo industry, with the aim of promoting the communications on R&D activities and exploring potential values in bamboo industry, to eventually help bamboo products manufacturers upgrade their products. Pathways for technologies innovations and products upgrade in bamboo industry will be proposed for the coming era, to fortify the poverty-ending fruits and make contributions to the rural revitalization and common prosperity.</p>		
Agenda	Welcome Speech	Xingliang Chen, Professor, Vice-President and Secretary General of Chinese Society of Forestry	
	Integration of "Three bamboo" for Better Substitution of Plastics with Bamboo	Xiaoguang Lan, President, Bamboo Branch, Chinese Society of Forestry	
	<i>Chimonobambusa quadrangularis</i> (Fenzi) Makino Bamboo Industry and Rural Revitalization in Southwest Mountainous Areas	Yulong Ding, Professor, NJFU	
	Research and Development of Bamboo Lignin Based Dispersants	Minghua Li, Professor, Fuzhou University	
	Demonstration of a Whole Set of Technology and Equipment for Bamboo Fiber Industrialization	Wenbin Yao, Professor, Zhejiang A&F University	
	Research and Demonstration of Prefabricated Bamboo Architecture	Haitao Li, Professor, NJFU	
	High Quality Development of Bamboo Products and Bamboo Industry via Applying Creative Economy	Tiejun Wang, Professor, China Director of Sino-European International Creative Economy Research Center	
	Industrial Chain Theory Based Research on Quality Development of Bamboo Industry in Guizhou Plateau Region in China	Xi Zhang, Professor, Guizhou Academy of Forestry	


Session 1.3

Ecosystem Services and Value Accounting

Zoom Meeting ID	989 2086 5684	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8), 8 Nov, 2022		
Organizer	Nanjing Forestry University (NJFU)		
Co-Organizers	<ul style="list-style-type: none"> • Ecological Society of Jiangsu Province • Systems Engineering Society of Jiangsu • Jiangsu Agricultural Green Development Research Association 		
Chair(s)	Lingfeng Mao, Professor, Biology & Environmental College, NJFU		
Introduction	<p>Facing the more challenging environmental crisis, clear water and green mountains are as good as mountains of gold and silver. Establishing an ecosystem value realization mechanism to transform invisible and intangible ecological benefits into economic and social benefits is not only an important measure to implement the concept “green water and green mountains are mountains of gold and silver”, but also a useful exploration for perfecting ecological civilization system.</p> <p>The session will focus on three topics, i.e. “Current situation and trend of forestry carbon sequestration in China”, “Estimation of ecosystem service value”, and “Biodiversity protection and ecological protection in the context of carbon neutrality”. The session meeting is expected to reach an agreement on estimation method and index for ecosystem service value, and use the ecosystem value estimation to realize the value of ecological products. This session will also clarify China’s forestry economic management policies and future directions under the background of “carbon neutrality and carbon dioxide emission peaking”, to eventually promote the application research of ecosystem service value estimation and the biodiversity protection.</p>		
Agenda	Farmers’ Value Systems on Ecosystem Services and the Impacts on Conservation Behaviors	Guang Han, Associate Professor, College of Humanities and Social Development, Nanjing Agricultural University	
	Unraveling Impacts of Climate Change on Ecosystem Carbon Sequestration of Bamboo Forest	Junwei Luan, PhD, Professor, ICBR	
	Life-cycle Analysis on Carbon Budget in Agricultural and Pastoral Areas	Changliang Shao, Professor, Institute of Agriculture Resources and Regional Planning, Chinese Academy of Agricultural Sciences	
	Ecological Value Realization in Panda National Park Community	Yubo Zhang, CEO, Maoxiong Valley Farm of Pingwu County, Sichuan Province, China	
	Exploration for the Value Transformation Path of Forestry Ecological Products	Zhiwei Ge, Associate Professor, Biology & Environmental College, Nanjing Forestry University	


Session 4.3

Bamboo: A Resource for Generating Partnerships and Addressing Climate Change

Zoom Meeting ID	928 1506 4455	Live Stream Platform		
Time and Date	08:30-10:10 (GMT+8), 8 Nov, 2022			
Organizer	Agencia Española de Cooperación Internacional para el Desarrollo (AECID)			
Co-Organizers	<ul style="list-style-type: none"> • Ministry of Urban Development and Housing, Ecuador • National Forest and Wildlife Service, Peru • Latin America and the Caribbean Office, International Bamboo and Rattan Organization (INBAR-LACO) • Bambusa ES (company), Spain • Ibero-American Bamboo Association, Spain / Portugal 			
Chair(s)	<ul style="list-style-type: none"> • Pablo Jácome Estrella, Regional Director for Latin America and the Caribbean, INBAR • Pablo Ferreiro, Program Officer, Spanish Cooperation in Costa Rica 			
Introduction	<p>Bamboo is a fast-growing giant grass with 1642 species worldwide and 10,000 years of use in Latin America and the Caribbean region. This resource can play an important role as a nature-based solution by providing a range of ecosystem services to address pressing global challenges, such as climate change.</p> <p>Through the collaboration among public, private, academic and civil society entities, bamboo can be a strategic resource in national policies and actions, as well as international initiatives. It contributes directly to reducing the negative effects of climate change on millions of rural communities. Integrating bamboo into the rural communities will help to enhance people's livelihood, while bamboo has not been efficiently utilized due to limited knowledge about bamboo.</p>			
Agenda	Keynote Speakers			
	The Role of the Spanish Cooperation In the Fight Against Climate Change	Antón Leis, Director General of AECID		
	Bamboo as a Strategic and Integral Resource to Contribute to the SDGs and Other International Agendas	Gabriela Aguilera, Minister, Ministry of Urban Development and Housing of Ecuador		
	AsIB, Referral link Between Europe and Ibero-America	Eva Samalea and Luis Gama, Directors, Iberian Bamboo Association		
	Case Studies			
	Peru: Bamboo, a Resource for Water Basin Restoration and Soil Recovery	Raphael Paucar, Coordinator, INBAR Peru		
	Ecuador: Inclusion, Partnerships and Economic Reactivation through Sustainable Construction with Bamboo	Esteban Torres, Ministerial Adviser, Ministry of Urban Development and Housing of Ecuador		
	Latin America and the Caribbean: Experiences within EUROCLIMA+ Program.	Pilar Román, Resilient Food Production and Forests, Biodiversity and Ecosystems Coordinator EUROCLIMA+ Program		
Spain: Bambusa Estudio Company and its Bamboo Purchasing Experience in Latin America.	Isaac González, CEO, Bambusa Estudio			

Session 3.3

Promoting the Global Initiative and Action Plan to Replace Plastic with Bamboo

Zoom Meeting ID	940 4441 4598	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8), 8 Nov, 2022		
Organizer	International Bamboo and Rattan Organization		
Co-Organizers	<ul style="list-style-type: none"> International Centre for Bamboo and Rattan China Bamboo Industry Association (CBIA) 		
Chair(s)	Jinhe Fu, Director of Host Country Affairs, INBAR		
Introduction	<p>With the stronger demand for minimizing plastic pollution, bamboo is used as a fast-growing, green, renewable, low-carbon and degradable biomass material. From disposable tableware, to durable household products, packaging, building materials and auto parts, bamboo products can replace plastic products in many fields and provide a nature-based sustainable solution for reducing plastic use and carbon emission. To this end, the International Bamboo and Rattan Organization actively advocates “replacing plastics with bamboo” to meet the demand for global plastic restriction, plastic bans, low carbon and green development.</p> <p>In this session, government officials, representatives from international organizations, research institutes and industries related to banning plastic and replacing plastics with bamboo are invited, and they will focus on three topics: (1) global initiative to replace plastics with bamboo; (2) R&D activities for replacing plastics with bamboo; (3) Production and market analysis of disposable bamboo based dining ware.</p>		
Agenda	The Global Initiative and Action Plan to Replace Plastics with Bamboo	Jinhe Fu, Director of Host Country Affairs, INBAR	
	Current Status of Product Development and Technology Application of Bamboo Alternatives to Plastics	Xinxin Ma, Associate Professor, ICBR	
	R&D and Manufacture of Automatic Intelligent Equipment of Bamboo Alternatives to Plastics	Kunfeng Liu, Founder, Shenzhen Shanfeng Intelligent & Technology Co., Ltd	
	Development of Bamboo Drinking Straws	Changhua Fang, Professor, ICBR	
	Application Characteristics and Prospect of Bamboo Fiber in Pulp Molding Industry	Zhengmao Dong, Founder, Packing Blue	
	Replace Plastics with Bamboo to Cultivate New Industry, Empower Rural Revitalization	Chaoyang Lin, President, Jianou Chaoyang Bamboo Weaving Hat Industry Co., Ltd.	


Session 1.1

Bamboo Forests Management for Decreasing Carbon Emission and Increasing Carbon Sequestration

Zoom Meeting ID	950 0242 3197		Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8) & 10:30-12:10 (GMT+8), 8 Nov, 2022			
Organizer	Zhejiang A&F University (ZAFU)			
Co-Organizers	<ul style="list-style-type: none"> • Engineering Research Centre of Bamboo Carbon Sequestration, National Forestry and Grassland Administration • State Key Laboratory of Subtropical Silviculture Co-founded by Zhejiang Provincial Government and Ministry of Education • Institute of Bamboo, ZAFU 			
Chair(s)	<ul style="list-style-type: none"> • Session 1: Tingting Mei, Assistant Professor, ZAFU • Session 2: Xinzhang Song, Professor, ZAFU 			
Introduction	<p>Bamboo is one of the most productive plants in the world, which makes it a promising way to mitigate climate change. Such productive growth characteristics of bamboo could be attributed to the rhizomes structure that promotes water and nutrients transferring among different ages of the culm. However, mechanisms for the extremely fast growth of bamboo is still to be elucidated.</p> <p>In addition to the fast growth of bamboo, high carbon sequestration of bamboo forest mainly relies on the high stability of carbon storage in the soil. However, effect of forest management/climate change on carbon storage in soil are not completely clarified since lots of other factors exist.</p> <p>Carbon sequestration projects are essential to strengthen the role of bamboo forests in climate change mitigation, which should be better known to the public, such as stakeholders, forest community managers, and foresters.</p> <p>These two sessions will enlarge our knowledge about bamboo carbon sequestration from both professional and public aspects.</p>			
Agenda	Session 1			
	Effects of Simulated N Deposition on Soil GHG Fluxes in Moso Bamboo Forest	Xinzhang Song, Professor, ZAFU		
	Biochar-root Interaction Drive Soil Carbon Sequestration Enhancement and Emission reduction of Moso bamboo Associated with the C Source Sensibility	Xiaogai Ge, Associate Professor, Research Institute of Subtropical Forestry, Chinese Academy of Forestry		
	Study on Ecological Low Carbon Management of Moso Bamboo Forest	Lin Xu, Associate Professor, ZAFU		
	Soil Carbon Component and its Stabilization in Moso Bamboo Forest	Benzhi Zhou, Professor, Research Institute of Subtropical Forestry Chinese Academy of Forestry		
	Effect of Stump Reservation on Soil Respiration and its Response to Nitrogen Addition in Moso Bamboo Plantations	Quan Li, Associate Professor, ZAFU		
	Session 2			
	Product Carbon Label Event	Guomo Zhou, Professor, ZAFU		
	Blockchain Technology Enhance Bamboo Carbon Trading	Yuyang Lin, CEO, QYH investment		
	Developing Bamboo Forest Carbon Project: Potential, Key Challenges, and Future	Guangyu Wang, Associate Professor, Associate Dean of The Faculty of Forestry, University of British Columbia, Canada		
	Bamboo Forest Carbon Sink Management and Project Development	Yongjun Shi, Professor, ZAFU		
	Round Table Discussion			
	Zhiheng Zhang, Manager, Shenzhen Wanqian Industrial Development Co., Ltd. Chunyu Pan, University of British Columbia, Canada, Ph.D. student			

Session 3.7

Green and Sustainable Development of Bamboo Fiber Industry

Zoom Meeting ID	986 4781 4002	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8) 8 Nov, 2022		
Organizers	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> ● Research Institute of Bamboo and Rattan Biomass and New Materials, ICBR ● China Tanboocel Union (CTBU) ● Institute of Chemical Industry of Forest Products, CAF ● Engineering Research Centre of Bamboo-based Advanced Materials of Jiangxi Province, Gannan Normal University 		
Chair(s)	Haitao Cheng, Professor, ICBR		
Introduction	<p>As results of more common awareness of environmental protection, R&D and industrialization of bamboo fiber products have developed rapidly. According to the preparation technology and chemical composition, bamboo fiber can be divided into natural bamboo fiber and bamboo viscose fiber. Based on the fiber length, bamboo fiber can be divided into short fiber, long fiber and continuous fiber. According to the purpose, bamboo fiber can be divided into textile bamboo fiber and non-textile bamboo fiber. At present, bamboo fiber has been developed and applied in the textile industry, pulping and papermaking, household products, automobile transportation, building panels and other composite materials. Through this session, we hope to make a detailed interpretation of bamboo fiber characteristics including its abundance, excellent performance, health and sustainability.</p>		
Agenda	Review on Bamboo Pulp and Paper Making	Guigan Fang, Professor, Institute of Chemical Industry of Forest Products, CAF	
	Prospect of Bamboo Pulp (Tanboocel) Fiber	Zhenfeng Li, General Engineer, CTBU	
	Molding Technology and Product Application of Bamboo Fiber	Jianzhong Wang, Board Chairman, Chongqing Ruizhu Plant Fiber Products Co., Ltd.	
	Development and Application of Green Bamboo Fiber Materials	Xingxing Li, Associate Professor, Gannan Normal University	
	Spinning Technology and Product Development of Bamboo Fiber	Minan Li, Board Chairman, Guangdong Minang Material Technology Co., Ltd.	
	Bamboo Fiber Composites and its Applications	Haitao Cheng, Professor, ICBR	

Session 4.4

Strengthening Resource Mobilization for Sustainable Forest Management and Forest Restoration

Zoom Meeting ID	945 9685 5046	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8), 8 Nov, 2022		
Organizers	United Nations Forum on Forests (UNFF) Secretariat		
Chair(s)	Peter Gondo, Inter-regional Adviser, UNFF Secretariat		
Introduction	<p>The United Nations Strategic Plan for Forests 2017-2030 (UNSPF) states that, among the objectives of the International Arrangement on Forests is the fostering of international cooperation, including North-South, South-South, North-North, and triangular cooperation, as well as public-private partnerships and cross-sectoral cooperation, at all levels and that “(...) The individual and collective actions and commitments of members of the United Nations Forum on Forests (UNFF) are decisive for the successful implementation of the strategic plan and achievement of its global forest goals and targets”. The same is true for the Forum’s partners. The International Bamboo and Rattan Organization – INBAR is a valuable partner of the United Nations Forum on Forests - UNFF and its Secretariat. This partnership between entities can also be seen in the complementarity that exists between forests and the cultivation of bamboo and rattan, which are mutually beneficial and can contribute to a green economy that conserves nature and promotes the health of animals, the planet, and human beings.</p> <p>One of the main objectives of the International Arrangement on Forests is to promote sustainable management of all types of forests and trees outside forests. As the world tries to move on from a pandemic that started over two years ago, lessons are learned that should be immediately applied. Our planet needs healing and contributing to its health assures mankind’s future. In this respect, the sustainable management of forests and the cultivation of bamboo and rattan will continue to help improve our planet’s health, which is directly related to the health of animals and human beings. Contributing to the achievement of the Sustainable Development Goals and the Global Forest Goals is, therefore, very important and timely.</p> <p>The United Nations Forest Instrument (UNFI) and the UNSPF have been contributing to raising awareness of the importance of sustainable forest management, which improves the quality of life and health of the people who depend on it. To promote concrete actions on the ground and mobilize financing to that end, the United Nations Forum on Forests established the Global Forest Financing Facilitation Network (GFFFN) in 2015 to assist countries in mobilizing financing for sustainable forest management and to contribute to advancing the implementation of the UNSPF. Since its establishment, the GFFFN has assisted 34 countries and two sub-regions to design national/regional forest financing strategies or mobilizing financing for UNSPF. More than 1000 forestry professionals around the world have benefited from the training on mobilizing forest financing provided by the GFFFN. The GFFFN’s Clearing House also provides up-to-date information on forest financing opportunities, learning materials, and good practices. Yet the gap in financing for forests remains significant. To that end, more actions must be taken, and more forces should be rallied.</p>		
Agenda	Opening Statement	Juliette Biao, Director, UNFF Secretariat	
	Introductory Remarks	Wenming Lu, Deputy Director-General, INBAR	
	Introducing the Global Forest Financing Facilitation Network	Yan Lang, Program Management Officer UNFF Secretariat	
	UNFI Implementation and Forest Financing in China	Yufu Guo, Director, Division for UNFF Affairs, National Forestry and Grassland Administration of China	
	Resource Mobilization and Status of Bamboo in Malawi Patricia Evidence	Masupayi, UNFF Focal Point in Malawi Department of Forestry, Malawi	
	Investments in Sustainable Management and Landscape Restoration of Bamboo Forests	Borja De La Peña Escardó, Global Policy Officer, INBAR	

Session 1.4

Bamboo Forest Biodiversity Conservation, Ecosystem Adaptive Management and Sustainable Development Under the Vision of Carbon Neutrality

Zoom Meeting ID	939 0210 1729		Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8) , 8 Nov, 2022			
Organizers	<ul style="list-style-type: none"> International Centre for Bamboo and Rattan University of British Columbia (UBC), Canada 			
Co-Organizers	<ul style="list-style-type: none"> Sanya Research Base, ICBR Research Institute of Bamboo and Rattan Resources and Environment, ICBR Research Institute of Garden flower and Landscape, ICBR National Ecological Research Station of Sanya Bamboo and Rattan Associated Forest Ecosystem China-Canada Joint Laboratory for Bamboo & Rattan Science and Technology 			
Chair(s)	<ul style="list-style-type: none"> Hongming Peng, Chief Specialist, Research Institute of Ornamental Plants and Landscapes, ICBR Junwei Luan, Professor, ICBR 			
Introduction	Bamboo has been utilized to a great extent as substitutes for wood, plastics, steel bars and other materials. Bamboo is like a huge carbon sink for carbon dioxide emission reduction. It plays a positive role in promoting global green and sustainable development. Therefore, the bamboo industry is a green, low-carbon and sustainable industry with great potential.			
Agenda	The Important Role of Plant Carbon Sink Capacity in Sustainable Development	Yonghong Hu, President and CEO, Shanghai Chenshan Botanical Garden		
	Role Played by Bamboo Roots in Substrate Growth and Life Enhancement for Aquatic Life	Danson Waruiru, Forester Department of Water, Irrigation, Environment and Climate Change, Nyeri County Government of Nyeri		
	Coupling of Human Settlement and Biological Diversity	Xiaowei Huo, Vice-President, Beijing Tsinghua Tongheng Urban Planning & Design Institute		
	Implication of Rhizome Systems of Bamboos for Growth Mode, Clonal Structure and Evolution of Flowering Behavior	Makita Akifumi, Professor, Akita Prefectural University, Japan		
	Distribution Patterns and Aboveground net Primary Productivity of Bamboos in Northern Laos	Singkone Xayalath, Deputy Director, Forestry Research Center, National Agriculture and Forestry Research Institute, Laos		
	Physiological Integration of Carbon and Its Dynamic Response to Drought Stress on Moso Bamboo Plantation	Xiaogai Ge, Associate Professor, Research Institute of Subtropical Forestry, Chinese Academy of Forestry		
	Conclusion Remarks	Guangyu Wang, Associate Dean, Faculty of Forestry, UBC, Canada		


Session 3.1

2022 International Conference - Bamboo: A Very Sustainable Construction Material & the Third World Symposium on Sustainable Bio-Composite Materials and Structures

Zoom Meeting ID	961 7631 0060	Live Stream Platform	
Time and Date	08:30-10:10 (GMT+8) & 10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	<ul style="list-style-type: none"> ● International Bamboo and Rattan Organization ● INBAR Bamboo Construction Task Force 		
Co-Organizers	<ul style="list-style-type: none"> ● School of Civil Engineering, Tsinghua University ● School of Architecture, Tsinghua University ● Architectural Design and Research Institute, Tsinghua University ● Nanjing Forestry University (NJFU) ● National Engineering Research Center for Biomass Materials, NJFU ● School of Landscape Architecture, Beijing Forestry University ● International Centre for Bamboo and Rattan ● Akenten Appiah-Menka University, Ghana ● Addis Ababa University, Ethiopia ● College of Civil Engineering and Architecture, Zhejiang University ● College of Civil Engineering, Nanjing Tech University ● China Southwest Architecture Design and Research Institute Corp. Ltd ● Coventry University, the UK ● Deakin University, Australia ● ETH Zürich, Switzerland ● Institut Teknologi Bandung, Indonesia ● Faculty of Architecture, the University of Hong Kong ● Journal of Building Structure ● Journal of Landscape Architecture ● Journal of Sustainable Structures ● Journal of World Bamboo and Rattan ● Research Institute of Wood Industry, Chinese Academy of Forestry ● School of Architecture and Urban Planning, Chongqing University ● School of Civil Engineering, Southeast University ● School of Design, Virginia Tech, the USA ● Shanghai Research Institute of Building Sciences Co., Ltd. ● The Hong Kong Institute of Architects ● Tongji University ● University of Pittsburgh, the USA ● University of the West of England, the UK ● Zhejiang University - University of Illinois at Urbana-Champaign Institute, Bio-based Zero-CO2 R&D Center, Ninghai ● Hongya Bamboo Era Tech Co., Ltd. ● Anji Zhujing Bamboo Industry Technology Co., Ltd. ● Ganzhou Sentai Bamboo & Wood Co., Ltd. ● Hangzhou Bamboo Technology Company ● Hunan Taohuajiang Bamboo Science and Technology Co., Ltd. ● Jiangsu Jianzhu Green Bamboo Construction Technology Co., Ltd. 		

Chair(s)	<ul style="list-style-type: none"> Opening Ceremony: Kewei Liu, Coordinator of Global Bamboo Construction Program, Coordinator of INBAR Bamboo Construction Task Force INBAR Session 1: Jianguo Nie, Professor of School of Civil Engineering of Tsinghua University, Fellow of Chinese Academy of Engineering; Yehao Song, Professor of School of Architecture of Tsinghua University, Vice Principal of Architecture Design and Research Institute of Tsinghua University Session 2: Yongjiu Shi, Professor of School of Civil Engineering of Tsinghua University, Vice President of China Steel Construction Society 																		
Introduction	<p>Bamboo has been conventionally used as a construction material. Due to the technology development and innovations in past decades, bamboo and other bio-based materials can be a nature-based solution to global housing shortages, climate change mitigation, and contribution to achieving carbon neutrality. Moreover, bamboo has demonstrated its role in contributing to livelihood, economy and environmental development.</p> <p>There have been considerable efforts from different stakeholders particularly engineers, architects, landscape architecture designers, researchers, standard agencies, government, non-government and private sector to advance bamboo as a conventional material. The proposed conference (2022 International Conference - Bamboo: A Very Sustainable Construction material & the Third World Symposium on Sustainable Bio-Composite Materials and Structures) includes eight sessions, and particularly two sessions will be organized during BARC 2022 to present the potential uses and suitability of bamboo and other biomaterials as conventional construction materials.</p>																		
Agenda	<p>Opening Ceremony</p> <ul style="list-style-type: none"> Ali Mchumo, Director General, INBAR Shuren Liu, Director of Department of Forestry and Grassland Reform and Development National Forestry and Grassland Administration of China Wei Wang, Deputy Director General of Department of Standards and Norms Ministry of Housing and Urban-Rural Development of China Dongping Fang, Professor, Dean of School of Civil Engineering Tsinghua University David Trujillo, INBAR Bamboo Construction Task Force Chair, Associate Professor of Coventry University, United Kingdom Daijun Zhou, Secretary of Party Committee Hongya County, Sichuan Province, China <p>New Book Release: Contemporary Bamboo Architecture in China</p> <p>Session 1: Exemplary Architectural Design of Bio-based Materials</p> <table border="1" data-bbox="339 1211 1439 1442"> <tr> <td data-bbox="339 1211 852 1301">Carbon Peak & Neutrality Goal Calls for More Timber Architecture</td> <td data-bbox="852 1211 1439 1301">Kai Cui, Chief Architect of China Architecture and Research Group, Fellow of Chinese Academy of Engineering</td> </tr> <tr> <td data-bbox="339 1301 852 1391">Hybrid Bamboo: A Sustainable Chinese Architectural Material</td> <td data-bbox="852 1301 1439 1391">Pekka Salminen, Founding Partner of PES-Architects Ltd., Professor, Fellow of Academy of Finnish Academy of Technology</td> </tr> <tr> <td data-bbox="339 1391 852 1442">Nature-led Design</td> <td data-bbox="852 1391 1439 1442">Elora Hardy, Founder and Creative Director of IBUKU</td> </tr> </table> <p>Session 2: Bio-Composite Materials for Contemporary Construction Sector: Current Scenario and Future Prospects</p> <table border="1" data-bbox="339 1509 1439 2042"> <tr> <td data-bbox="339 1509 852 1576">Innovation and Application of Structural Engineered Bamboo Materials</td> <td data-bbox="852 1509 1439 1576">Benhua Fei, Director of ICBR, President of China Bamboo Industry Association</td> </tr> <tr> <td data-bbox="339 1576 852 1666">Technology Road Mapping for the Development of Bamboo Structure in China: Based on Bibliometric Analysis and Experts Survey</td> <td data-bbox="852 1576 1439 1666">Jun Yang, Professor, Tsinghua University</td> </tr> <tr> <td data-bbox="339 1666 852 1823">Introduction to Chinese Standards and Engineering Practices on Timber and Bamboo Structures</td> <td data-bbox="852 1666 1439 1823">Weiguo Long, Director of China Southwest Architecture Design and Research Institute Corp. Ltd; Chair of Committee of Timber & Composite Structures, China Association for Engineering Construction Standardization</td> </tr> <tr> <td data-bbox="339 1823 852 1890">Engineered Bamboo Composite (EBC) and EBC Structures</td> <td data-bbox="852 1823 1439 1890">Dongsheng Huang, Professor, Nanjing Forestry University</td> </tr> <tr> <td data-bbox="339 1890 852 1980">Bamboo and Gardens: Applications and Development of Bamboo Materials in Landscape Architecture</td> <td data-bbox="852 1890 1439 1980">Xi Zheng, Professor and Dean of School of Landscape Architecture, Beijing Forestry University</td> </tr> <tr> <td data-bbox="339 1980 852 2042">Paradigm Shift from Conventional to Green and Sustainable Materials</td> <td data-bbox="852 1980 1439 2042">Shuwei Chen, CEO of Hongya Bamboo Era Tech Co., Ltd.</td> </tr> </table>	Carbon Peak & Neutrality Goal Calls for More Timber Architecture	Kai Cui, Chief Architect of China Architecture and Research Group, Fellow of Chinese Academy of Engineering	Hybrid Bamboo: A Sustainable Chinese Architectural Material	Pekka Salminen, Founding Partner of PES-Architects Ltd., Professor, Fellow of Academy of Finnish Academy of Technology	Nature-led Design	Elora Hardy, Founder and Creative Director of IBUKU	Innovation and Application of Structural Engineered Bamboo Materials	Benhua Fei, Director of ICBR, President of China Bamboo Industry Association	Technology Road Mapping for the Development of Bamboo Structure in China: Based on Bibliometric Analysis and Experts Survey	Jun Yang, Professor, Tsinghua University	Introduction to Chinese Standards and Engineering Practices on Timber and Bamboo Structures	Weiguo Long, Director of China Southwest Architecture Design and Research Institute Corp. Ltd; Chair of Committee of Timber & Composite Structures, China Association for Engineering Construction Standardization	Engineered Bamboo Composite (EBC) and EBC Structures	Dongsheng Huang, Professor, Nanjing Forestry University	Bamboo and Gardens: Applications and Development of Bamboo Materials in Landscape Architecture	Xi Zheng, Professor and Dean of School of Landscape Architecture, Beijing Forestry University	Paradigm Shift from Conventional to Green and Sustainable Materials	Shuwei Chen, CEO of Hongya Bamboo Era Tech Co., Ltd.
Carbon Peak & Neutrality Goal Calls for More Timber Architecture	Kai Cui, Chief Architect of China Architecture and Research Group, Fellow of Chinese Academy of Engineering																		
Hybrid Bamboo: A Sustainable Chinese Architectural Material	Pekka Salminen, Founding Partner of PES-Architects Ltd., Professor, Fellow of Academy of Finnish Academy of Technology																		
Nature-led Design	Elora Hardy, Founder and Creative Director of IBUKU																		
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Bamboo and Gardens: Applications and Development of Bamboo Materials in Landscape Architecture	Xi Zheng, Professor and Dean of School of Landscape Architecture, Beijing Forestry University																		
Paradigm Shift from Conventional to Green and Sustainable Materials	Shuwei Chen, CEO of Hongya Bamboo Era Tech Co., Ltd.																		

Session 2.4 Equipment R&D and Intelligent Manufacture

Zoom Meeting ID	933 6665 4754	Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	Bamboo Industrial Equipment Branch, China Bamboo Industry Association		
Co-Organizers	<ul style="list-style-type: none"> • International Centre for Bamboo and Rattan • Research Institute of Bamboo and Rattan Biomass and New Materials, ICBR • Research Institute of Wood Industry, Chinese Academy of Forestry • National Innovation Park for Forestry and Grass Equipment • Zhejiang Academy of Forestry • Fujian Academy of Forestry • Dongguan Koham Company Ltd., China 		
Chair(s)	<ul style="list-style-type: none"> • Xiaohuan Wang, Secretary General, Bamboo Industrial Equipment Branch, China Bamboo Industry Association • Wei Zhang, Professor, Research Institute of Wood Industry, Chinese Academy of Forestry 		
Introduction	<p>Advanced machinery equipment is an important symbol of modern bamboo industry development, which is the basic way to improve the labor productivity and emancipate the productive forces. Accelerate the development of bamboo products equipment in raw and deep processing, improve production continuity, automation and intelligence are of great significance to the modern bamboo industry innovation development.</p> <p>This session invites well-known experts in the fields of bamboo industry equipment and intelligent manufacturing from International Centre for Bamboo and Rattan, China Academy of Forestry, Beijing Forestry University, Nanjing Forestry University, Northeast Forestry University, Zhejiang Agriculture and Forestry University, etc. Three topics namely (1) global development of bamboo industry machinery equipment, (2) construction of bamboo Industry and National Innovation Park for Forest and Grass Equipment in Zhejiang Province, (3) innovation and development of bamboo industrial machinery equipment manufacturers will be discussed in this session. It is expected to build a cooperation platform, reach consensus on industrial development, prioritize industrial development and promote greater breakthroughs in equipment research and development.</p>		
Agenda	Welcome Speech	Bin Lv, Professor, Research Institute of Wood Industry, Chinese Academy of Forestry	
	Innovation and Development of Bamboo Industrial Machinery and Technology	Wei Zhang, Professor, Research Institute of Wood Industry, Chinese Academy of Forestry	
	Development and Discussion of Bamboo Forestry and Primary Processing Mechanization in Zhejiang Province	Wenfu Zhang, Associate Professor, Zhejiang Academy of Forestry	
	Development and Application of Bamboo Transportation Machinery in Mountainous Areas of Fujian Province	Lingling Wang, Vice General Manager, Fujian Zhichen Intelligent Agricultural Equipment Co., Ltd.	
	Annual Work Report 2022 of Bamboo Industrial Equipment Branch, China Bamboo Industry Association	Xiaohuan Wang, Secretary General, Bamboo Industrial Equipment Branch, China Bamboo Industry Association	
	Topic Discussion	Discussion on the Development Mode of Bamboo Industrial Machinery in China and Workplan for 2023	
	Summary Speech	Wei Zhang, President, Bamboo Industry Equipment Branch Association	

Session 4.5

Bamboo for Carbon Neutrality and Green Growth

Zoom Meeting ID	989 2086 5684	Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	International Bamboo and Rattan Organization		
Chair(s)	<ul style="list-style-type: none"> Jayaraman Durai, Director of Global Programme, INBAR Renfei Wang, Programme Officer, INBAR 		
Introduction	<p>Climate change has already been impacting every parts of the world, with extreme weather events: droughts, floods, heat waves, heavy rain and other weather induced disasters.</p> <p>Over 110 countries have committed to achieve net zero emissions or carbon neutrality by middle of this century (2050). Few other important countries such as USA and China have pledged to achieve carbon neutrality by 2060 and India has announced that it will achieve carbon neutrality by 2070.</p> <p>To achieve carbon neutrality, greenhouse gas emission needs to be counterbalanced by carbon sequestration. Bamboo is one of the fastest growing plants in the world. A large range of bamboo products that can substitute for wood / timber, plastics, steel, PVC products and other energy intensive materials are available. Various researches indicate that carbon storage in bamboo forest ecosystems range from 94 – 392 tC/ ha and moreover bamboo forests have a high rate of carbon sequestration (up to 25 tC/ ha/year). LCA studies indicate that many bamboo products are low carbon intensity and even carbon negative if end life disposal is used for biomass energy production.</p> <p>Overall, bamboo can significantly support in climate change mitigation and adaptation. Bamboo with its known resource coverage of over 35 million hectares across the tropical and sub-tropical regions can specifically help in achieving carbon neutrality through storing carbon in bamboo ecosystems, in bamboo products, reducing pressure on forests and substituting for high carbon intensity products.</p>		
Agenda	Bamboo Bioenergy - an Alternative to Fossil Fuels/how Bamboo Bioenergy can Contribute to Mitigating Climate Change	Jaya Wahono, Founder and CEO, Clean Power Indonesia	
	Carbon Forestry: Bamboo Carbon Sequestration, Carbon Certification and Trade	Trinh Thang Long, Senior Forestry Expert, Face the Future, the Netherlands	
	Potential Biogenic Carbon Storage on Bamboo Based Buildings. A Life Cycle Assessment (LCA) Perspective	Edwin Zea Escamilla, Chair for Sustainable Construction ETH, Zürich, Switzerland	
	Efficient Supply Chain and Valuable Products for full Utilization of the Bamboo Biomass in China	Lei Wang, Professor, Zhejiang A&F University	
	The Role of Micro Enterprises and SME in Achieving Carbon Neutrality	Selim Reza, Program Manager, INBAR	
	Life Cycle Assessment of Bamboo Briquette Production in Iloilo, Philippines	Jasmine May De Leon, Graduate Student, University of the Philippines Diliman	


Session 2.2

International Seminar on Nature Based Solutions for Rural Revitalization

Zoom Meeting ID	928 1506 4455	Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	<ul style="list-style-type: none"> International Bamboo and Rattan Organization Xishuangbanna Tropical Botanical Garden, Chinese Academy of Sciences (CAS-XTBG) Southeast Asia Biodiversity Research Institute, Chinese Academy of Sciences (CAS-SABR) International Centre for Integrated Mountain Development (ICIMOD) Centre for Mountain Futures (CMF) 		
Chair(s)	<ul style="list-style-type: none"> Shaoliang Yi, Programme Coordinator, ICIMOD Wei Jin, Capacity Building Manager, INBAR 		
Introduction	<p>In February 2022, the “Regional Cooperation Seminar on Biodiversity Conservation and Sustainable Development” co-organized by INBAR and other organizations proposed three key words for nature-based solutions: “systematization”, “innovation” and “partnership”. In-depth biodiversity assessment, best practice research and capacity-building for young scholars are recommended as priorities for joint action.</p> <p>The symposium will invite scientists and professional experts especially young researchers and students in the fields of biodiversity conservation, ecology, environmental protection, rural development, regional cooperation and development. Representatives from the fields of green finance, trade and carbon neutrality institutions and projects, local authorities, land and resources planning agencies, investment institutions, international aid agencies, entrepreneurs and green technology conversion agencies, non-governmental organizations and concerned communities are invited to this seminar. The session focus on (1) in-depth biodiversity assessment, (2) best patterns of human and nature interaction, models and practices, (3) capacity building and public awareness raising for cross-border biodiversity conservation and sustainable development actions.</p>		
Agenda	Nature Based Solutions for Greener and Climate Resilient World: An Interdisciplinary and Scale Perspectives from Mountain Ecosystem	Nakul Chettri, Regional Program Manager, International Centre for Integrated Mountain Development	
	Biodiversity and Food System Transition Outlook	Chunquan Zhu, Head of the Nature Initiatives, China World Economic Forum Beijing Representative Office	
	Close-to-Nature Agroforestry System for Conservation and Development in a Globalized Mountain Region	Jianchu Xu, Director, Centre for Mountain Futures	
	Biodiversity, Biogeography, Conservation of Bamboos and Sustainable Development in Southeast Asia	Dezhu Li, Director, The Germplasm Bank of Wild Species in Southwest China, Chinese Academy of Sciences	
	The Implementation Path of Green Finance to Meet Carbon Goals	Mengmeng Guo, Professor, Southwestern University of Finance and Economics	
	Q&A and Closing Ceremony	Shaoliang Yi, Programme Coordinator, International Centre for Integrated Mountain Development	


Session 1.5

Development of Bamboo Energy to Help Carbon Neutrality

Zoom Meeting ID	940 4441 4598	Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	<ul style="list-style-type: none"> Bamboo and Rattan Resources and Utilization Branch, Chinese Society of Forestry Bamboo Charcoal Branch, China Bamboo Industry Association Research Institute of Green Economy, ICBR 		
Co-Organizers	<ul style="list-style-type: none"> International Centre for Bamboo and Rattan China Bamboo Industry Association (CBIA) Chinese Society of Forestry (CSF) 		
Chair(s)	Zhijia Liu, Professor, Research Institute of Green Economy, ICBR		
Introduction	<p>Bamboo has some special characteristics including fast growth, high lignification, high percentage of processing leftovers. It is a potential resource for developing biomass energy and it is a powerful starting point for China to implement national strategies such as “One Belt, One Road”, “Poverty Alleviation”, and “Rural Revitalization”. The development of bamboo energy is of great significance to the goal of reaching a carbon dioxide emission peak in China by 2030 and achieving carbon neutrality by 2060.</p> <p>This session will focus on four topics (1) research status and development prospect of bamboo solid fuel, (2) clean production of bamboo charcoal, heat- electricity-gas-carbon and fertilizer, (3) poly-generation technology of bamboo, (4) bamboo activation carbon, to promote the research, development and industrialization of bamboo based energy.</p>		
Agenda	Innovation and Development of Bamboo Charcoal under Double Carbon Background	Wenbiao Zhang, Professor, Zhejiang A&F University	
	Clean Production of Bamboo Briquetting Charcoal and its Utilization as Solid Fuel With High Added Value	Kuichuan Sheng, Professor, College of Biosystems Engineering and Food Science, Zhejiang University	
	Polygeneration Technology of Bamboo will Help China Achieve its Carbon Peaking and Carbon Neutrality Goals	Jianbin Zhou, Professor, Nanjing Forestry University	
	Fluidized Clean & Low Carbon Pyrolysis of Bamboo and Diversified Utilization of Pyrolytic Products	Xueyong Ren, Associate Professor, College of Materials Science and Technology, Beijing Forestry University	
	Bamboo Solid Fuel in China	Zhijia Liu, Professor, Research Institute of Green Economy, ICBR	


Session 2.5

Bamboo Under-Forest Economy and Forest Recreation Industry Development Forum

Zoom Meeting ID	986 4781 4002		Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022			
Organizers	Bamboo Branch, Chinese Society of Forestry			
Co-Organizers	<ul style="list-style-type: none"> • Sichuan Agricultural University (SAU) • Research Institute of Subtropical Forestry, Chinese Academy of Forestry (CAF-RISF) • International Centre for Bamboo and Rattan • Nanjing Forestry University (NJFU) • Southwest Forestry University (SWFU) • Zhejiang A&F University (ZAFU) • Zhejiang International Science and Technology Cooperation Base for Bamboo Cultivation and Utilization 			
Chair(s)	Qibin Chen, Professor, Sichuan Agricultural University, Secretary General of Garden Branch, Chinese Society of Forestry, Deputy Director of Bamboo Branch, Chinese Society of Forestry			
Introduction	<p>In order to implement Xi Jinping's spirit of "developing bamboo industry in accordance with local conditions" during his visit to Sichuan and other bamboo growing areas, this session will be held with the theme "the innovative development of under-bamboo forest economy and health care industry with bamboo", in the context of COVID-19 prevention regularity and proposed national strategy of "carbon neutrality and carbon dioxide emission peaking". Focusing on the development trend of under-bamboo forest economy and bamboo health care industry, this session will discuss the high-quality development of bamboo economy and its high-efficient and innovative cultivation mode, the high-quality and diversified utilization of economic bamboo forest products and its innovative development, evaluation of bamboo health care and construction technology of multifunctional health care base, market development for under-bamboo forest economy product. This session will propose a path for the high-quality and healthy development of China's under-bamboo forest economy and health care industry with bamboo forest, which provides technical support for rural revitalization and common prosperity.</p>			
Agenda	Welcome Speech	Xiangwei Zeng, Director of Academic Department of Chinese Society of Forestry, Secretary General of Understorey Economy Branch of Chinese Society of Forestry, Professor-level Senior Engineer		
	Application of Bamboo Biomass for Ecological Cultivation of Edible Fungi in Bamboo Forest	Jinzhong Xie, Director of Bamboo Collaborative Innovation and International Cooperation Center, Institute of Subtropical Forestry, Chinese Academy of Forestry		
	Exploration and Efficient Cultivation of Medical Resources in Bamboo Forest	Chunju Cai, Professor, ICBR		
	Rhizosphere Promotion and Application of Bamboo Fiber and Symbiotic Bacteria	Yaojun Yang, Professor, Leshan Normal University, Executive Director of Bamboo Branch of Chinese Society of Forestry, Executive Director of Bamboo and Rattan Resources Utilization Branch		
	Research Progress of Bamboo Nutrition of Giant Panda	Mingxi Li, Head of Dujiangyan Wild Breeding Research Center, Chengdu Research Base of Giant Panda Breeding		
	Study on Key Technologies for Bamboo Cultivation and Tourism Health	Qibin Chen, Professor, Sichuan Agricultural University, Secretary General of Garden Branch, Chinese Society of Forestry, Deputy Director of Bamboo Branch, Chinese Society of Forestry		


Session 1.6

Bamboo for Carbon Neutrality in Rural Areas: New Pathways for Carbon Reduction and Low Carbon Development in World Heritage Sites

Zoom Meeting ID	945 9685 5046		Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022			
Organizers	United Nations Educational, Scientific and Cultural Organization (UNESCO) Beijing Office			
Co-Organizers	International Bamboo and Rattan Organization			
Chair(s)	<ul style="list-style-type: none"> • Duong Bich Hanh, Programme Specialist for Culture UNESCO Beijing Office • Chaozhi Zhang, Professor School of Tourism Management, Sun Yat-sen University 			
Introduction	<p>On the occasion of the 50th anniversary of the Convention Concerning the World Cultural and Natural Heritage, UNESCO is leading “The Next 50” global initiative to discuss World Heritage as a source of resilience, humanity and innovation in the next 50 years. Climate change is becoming one of the most significant threats to World Heritage; World Heritage also harbor options for society to mitigate and adapt to climate change. As part of UNESCO’s “New Horizons of Heritage Conservation” webinar series, this session fosters dialogue on efforts and good practices on Bamboo for Carbon Neutrality in Rural Areas which showcase Carbon Reduction and Low Carbon Development in World Heritage Sites.</p>			
Agenda	Opening Remarks	Shahbaz Khan, Director and Representative UNESCO Beijing Office		
		Wenming Lu, Deputy Director General, INBAR		
	Current Status and Development Trends of Protected Areas in China	Yan Xie, Associate Research Professor Institute of Zoology, Chinese Academy of Sciences		
	Climate Change, World Heritage, and Sustainable Livelihood	Ye Lu, Project Officer for Culture UNESCO Beijing Office		
	Archiving the Double Carbon Targets through Bamboo at World Heritage sites	Yanxia Li, Senior Program Officer, INBAR		
	Round Table Discussion			
	Natural Education in Giant Panda National Park from a Low Carbon Perspective	Liming Zhang, Director, Division of Research and Education, Sichuan Forestry and Grassland Administration (Giant Panda National Park Sichuan Province Administration)		
	Creating a Low-carbon and Sustainable Environment at World Heritage Site	Yanfei Liao, CPC Group Secretary and Director, Chishui Forestry Administration (Chishui Forest Carbon Sink Administration), Guizhou Province		
	Conservation and Value Communication of World Heritage site	Kaiheng Gao, CPC Committee Secretary Jiuzhaigou Administration		
Innovation and Practices in Low-carbon Cultural Tourism at World Heritage site	Yuan Fang, Director, World Heritage Management Office (Huangshan Mixed World Heritage Monitoring Centre) Huangshan Scenic Area Management Committee			


Session 3.4

Replacing Plastics with Bamboo: Innovation in Science and Technology of Engineering Bamboo

Zoom Meeting ID	939 0210 1729	Live Stream Platform	
Time and Date	10:30-12:10 (GMT+8), 8 Nov, 2022		
Organizers	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> • Research Institute of Bamboo and Rattan Biomass and New Materials, ICBR • China Bamboo Industry Association • Zhejiang Academy of Forestry 		
Chair(s)	Benhua Fei, Director of ICBR, President of China Bamboo Industry Association		
Introduction	<p>In 2021, National Forestry and Grassland Administration coordinated with other 10 National Ministries and jointly published a critical document “Guideline for Innovative Development of Bamboo Industry”, to support the development of bamboo based construction materials.</p> <p>Bamboo is widely used in furniture, architecture, bridge, etc. To further advance the development and applications of bamboo products, the material innovation and high-quality development have been recommended.</p> <p>This session will focus on the innovation of engineered bamboo materials, communicate on the advances of engineered bamboo materials and clarify the existing problems in technology upgrade and industrialization, to eventually promote systematical development of engineered bamboo products.</p>		
Agenda	Fabrication and Application of Structural Bamboo Scrimber	Yanglun Yu, Professor, Research Institute of Wood Industry, Chinese Academy of Forestry	
	Research Progress in Supramolecular Science of Wood and Bamboo	Yun Lu, Professor, Research Institute of Wood Industry, Chinese Academy of Forestry	
	Engineered Bamboo Research and Application	Haitao Li, Professor, Nanjing Forestry University	
	Research and Practice on Modern Bamboo Structure	Changzhan Shao, PhD, the Chinese University of Hongkong	
	Constructing Strong, Safe, Lightweight and Sustainable River and Coastal Boats From Bamboo Mat Board Laminates	Ravi Jyoti Deka, Akvotransiro Tech Pvt Ltd.	
	A Novel Bamboo Engineering Material Processed by Flattening and Densification	Yu Luan, PhD, ICBR	

Session 4.6

International Seminar on Bamboo and Rattan Clusters for Regional Development and Green Transition

Zoom Meeting ID	933 6665 4754		Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8) & 15:30-17:10 (GMT+8), 8 Nov, 2022			
Organizers	<ul style="list-style-type: none"> National Forestry and Grassland Innovation Alliance on Bamboo and Rattan Industry China Bamboo and Rattan Brand Cluster 			
Co-Organizers	<ul style="list-style-type: none"> International Centre for Bamboo and Rattan International Bamboo and Rattan Organization 			
Chair(s)	<ul style="list-style-type: none"> Session 1: Borja de la Peña, Global Policy Officer, Focal Point for America and Europe, INBAR Session 2: Olivier Clement Gatwaza, Programme Officer, INBAR 			
Introduction	<p>Coordinated actions and strategic partnerships of key actors on the whole supply chain of the bamboo and rattan sectors are advocated by experts and participants from multi-fields of INBAR former webinars. Clustering development concept is introduced for regional cooperation and development.</p> <p>This session will invite key stakeholders from the sectors of bamboo and rattan industry, green financing, trade and carbon neutralization institutes, and representatives from related inter-governmental and non-governmental organizations. The topic will be on (1) business, industry and trade innovation by strategic cooperation of key actors in bamboo and rattan supply chain; (2) bridging gaps in technology, talents, market and trade; (3) capacity building – to cultivate professional staff for bamboo and rattan industry planning and development.</p>			
Agenda	Session 1 Bamboo and Rattan Entrepreneurs Forum: Bamboo and Rattan Sectoral Clustering and Green Transition- Cooperation, Innovation and Sharing Benefits			
	Ensuring Monetary, Human Capital and Natural Capital Returns in Bamboo for Biomass Production	Jaya Wahono, Founder & CEO, Clean Power Indonesia		
	The Bamboo and Guadua Paradise: An Integral Model of Ecotourism, Agriculture and Innovation with Bamboo for Colombia	Ximena Londoño, President, Colombian Bamboo Society		
	Innovation Originating from Ingenuity - Replacing Plastics with Bamboo, Accelerating Green and Low-Carbon Transformation	Jiping Lu, General Manager, Hengda Bamboo Filler Co., Ltd.		
	The Integrated Development of the Bamboo Sector in Qingshen County	Jinzhao Liu, Party Secretary, Qingshen County Committee of the CPC		
	Round Table Discussion			
	Panelists <ul style="list-style-type: none"> Rachid Amui, Commodities Officer of the Commodities Branch, Division on International Trade and Commodities, United Nations Conference of Trade and Development Jinjiang Yan, Industrial Development Officer, Division of Agribusiness and Infrastructure Development, Department of Agri-business, United Nations Industrial Development Organization Faqsang Huang, Deputy Director General, Department of Science and Technology, National Forestry and Grassland Administration Shuyan Yang, Secretary General, China Society of Bamboo Industry Kanliang Wang, Professor of Renmin Business School at the Renmin University of China, Director of the Centre for Metaverse Research 			

Session 2 Multi-Actor Capacity Building-Bridging Key Gaps in Bamboo and Rattan Technology, Trade and Project Investment	
Current Situation of China's Bamboo Sector and the Construction and Development of Industry-University-Research Platforms	Lan Li, Director of Industrial Development, ICBR
Biodiversity and Food System Transition Outlook	Chunquan Zhu, Head of the Nature Initiatives, China World Economic Forum Beijing Representative Office
Understandings of Forest Carbon Sink Promoting Carbon Neutrality	Wenfa Xiao, Vice President, Chinese Academy of Forestry
Round Table Discussion	
<p>Panelists</p> <ul style="list-style-type: none"> ● Zuyun Su, Deputy Director General, Department of Development and Reform, National Forestry and Grassland Administration (China) ● Yongjun Chen, Distinguished Professor and President of the Institute of Greater Bay Area Dual Circulation Development, Guangdong University of Finance and Economics ● Yi Xie, Professor, School of Economics and Management, Beijing Forestry University ● Hong Fan, Professor of the School of Journalism and Communication, Tsinghua University ● Tiejun Wang, China Director of Sino-European International Creative Economy Research Center ● Jingyan Jiang, Director of Yong'an Institute of Bamboo Industry (YIBI) 	
Closing Ceremony	Gangqiang Yin, Deputy Director General, ICBR

Session 3.5

Advances in Chemical Utilization and Application of Bamboo

Zoom Meeting ID	989 2086 5684	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> • Research Institute for Chemical Utilization of Bamboo and Rattan Resources, ICBR • Bamboo Food and Commodity Branch, China Bamboo Industry Association • Shenzhen Gold Basin Ltd., China 		
Chair(s)	Tang Feng, Professor, ICBR		
Introduction	<p>Bamboo is one of important medicinal plants, which has a long history for both medicinal and food use in China, East Asia and Southeast Asia. In recent years, phytochemical research methods and advanced analytical and detection instruments have been widely used in chemical characterizations of bamboo. Modern extraction and processing equipment and advanced technology have been also widely applied in value added production from bamboo. The isolation, identification and distribution of secondary metabolites in bamboo, structural modification and biotransformation of important secondary metabolites, evaluation and utilization of bioactivity of bamboo extracts and other basic and applied researches have advanced to a great extent, which has strongly promoted the high-value utilization of bamboo resources and the transformation and upgrading of bamboo industry.</p> <p>At present, bamboo-derived health food, beverage, food additives, daily chemical products and other products have a certain market among the consumers in China. However, the development of such products is still relatively weak and the market share is limited. There is still huge room for improvement in standardization and standardized production of bamboo derived food and chemicals.</p> <p>Today, due to the development of the health industry and proposed goal of “carbon neutrality and carbon dioxide emission peaking” and “replacing plastics with bamboo”, chemical utilization of bamboo resources is becoming a hit. This session focus on the chemical utilization of bamboo resources, communicate the latest progress in chemical utilization of bamboo resources, explore new development fields, to clarify the key direction of future research and development and promote the construction of the whole bamboo utilization system.</p>		
Agenda	Biopreparation and Structural Modification of Characteristic C-glycosylated Flavones from Bamboo Leaves	Linguo Zhao, Professor, Nanjing Forestry University	
	Chemical Utilization and Active Compounds of Bamboo Leaves	Jin Wang, Professor, ICBR	
	Applications of Bamboo Extract in Food and Medicine	XueTao Li, CEO, Shenzhen Golden Basin Ltd.	
	Chemical Preparation of Bamboo Derived Biodegradable Plastics	Zhiqiang Li, Professor, ICBR	


Session 3.6

Replacing Plastics with Bamboo: Policy, Roadmap and Actions

Zoom Meeting ID	928 1506 4455	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	International Bamboo and Rattan Organization		
Co-Organizers	UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)		
Chair(s)	<ul style="list-style-type: none"> Jayaraman Durai, Director of Global Programme, INBAR Renfei Wang, Programme Officer, INBAR 		
Introduction	<p>According to UNEP, more than 9 billion metric tons of plastics are produced since the early of 1950's. Less than 10 percent of plastics are recycled, and about 80 percent of plastics ends up in landfills, natural environment and the oceans creating plastic pollution in terrestrial and aquatic ecosystem. Moreover, majority of plastics are produced from chemicals derived from fossil fuels, which are unsustainable and contribute to climate change.</p> <p>To mitigate the negative impacts of plastics and plastic pollution, more than 140 countries have relevant plastic bans and/or restriction including many international conventions, such as the Basel Convention, the Rotterdam Convention and the Stockholm Convention focusing on plastic pollution control.</p> <p>Bamboo can be a proven plastics substitute. With technological innovation, a number of modern industrial products were innovated, that include disposable bamboo fiber tableware products (plate, bowl, tray and cup), single use plastics substitutes (straws), other daily use products, packaging materials, bamboo packing in cooling towers, bamboo winding pipes, etc. The advantage of bamboo is that it is biodegradable, fast growing and a renewable biomass material, bamboo fit the development of circular economy, has low carbon foot print, and a resource that is found in most topical and sub-tropical regions of the world. In addition to the livelihood development benefits, it also provides a number of intangible ecosystem services and benefits.</p>		
Agenda	Keynote: Global Agenda of Plastic Issues: How Bamboo Can be a Viable Plastics Substitute With Triple Bottom Line Benefits	Jyoti Mathur-Filipp, Executive Secretary, Intergovernmental Negotiating Committee on Plastic Pollution, UNEP-WCMC Meng Han, China Officer, UNEP-WCMC	
	Carbon Footprint of Plastics Substitute	Lei Gu, Professor, Zhejiang A&F University	
	Reduce Plastic Waste With Innovative Bamboo Products	Yogesh Shinde, Founder of Bamboo India	
	Bamboo Based Utility Poles	Ahmad Fazli, CTO, EcoPole	
	International Market Potential of Bamboo Products as Alternative to Plastics	Yanxia Li, Senior Program Officer, INBAR	
	Developments of Bamboo Products as Substitutes for Plastic Products	Changhua Fang, PhD, Professor, ICBR	

Session 4.7

Facilitating International Trade of Bamboo and Rattan Commodities

Zoom Meeting ID	940 4441 4598		Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022			
Organizers	<ul style="list-style-type: none"> International Bamboo and Rattan Organization Research Institute of Green Economy, ICBR 			
Co-Organizers	<ul style="list-style-type: none"> Department of Duty Collection, General Administration of Customs of China Permanent Mission of the People's Republic of China to the World Trade Organization Long Bamboo Technology Group Co., Ltd Bamboo and Rattan Resources and Utilization Branch of Chinese Society of Forestry China Bamboo Industry Association (CBIA) 			
Chair(s)	Junqi Wu, Director of Communications, INBAR			
Introduction	<p>As strategic natural resources, bamboo and rattan are increasingly valued by the international community under the promotion of the INBAR. Green, low-carbon and varied bamboo and rattan commodities are now being gradually recognized and favored by global consumers. It is estimated that the total output value of the global bamboo and rattan industry exceeds USD 70 billion, and the total international trade of bamboo and rattan commodities exceeds USD 3 billion. More than 100 countries and regions participate in the international trade of bamboo and rattan commodities. The development of bamboo and rattan industry and commodities trade play important roles in promoting regional economic cooperation and sustainable development in developing countries. There are still some problems in coding, tariff policy, and technology, which requires improvement for better trade of bamboo and rattan commodities.</p> <p>Representatives of relevant international organizations, research institutes, enterprises for trading bamboo products are invited to this session. This session aims at communicating current situation and problems in international trade of bamboo and rattan products, explore opportunities and challenges in the global international market of bamboo and rattan, interpreting relevant trade policies, and putting forward feasible policy, recommendations and measures to promote the international trade of bamboo and rattan products.</p>			
Agenda	Promotion for the Optimization of the Classification System and Trade Facilitation for Bamboo and Rattan Commodities	Wen Wang, Deputy Director General, Department of Duty Collection, General Administration of Customs of China		
	An Overview of ISO Standards of Bamboo and Rattan	Changhua Fang, Professor, ICBR		
	Potential Areas of Cooperation on Trade Policy Development Between INBAR and WTO	Xiaohui Zhang, First Secretary, Permanent Mission of China to the World Trade Organization		
	Deal with Export Barriers, Promote the International Trade of Bamboo as a Substitute for Plastics Initiative	Jianchang Lian, Chair of the Board, Long Bamboo Technology Group Co., Ltd		
	Global Trade and Development of HS Codes of Bamboo and Rattan Commodities	Junqi Wu, PhD, Director of Communications, INBAR		
	Current Situation, Problems and Prospects of China's Bamboo and Rattan Commodities Trade	Jiaojiao Chen, PhD, Assistant Professor, ICBR		


Session 1.7

Bamboo Developmental Biology and Its Sustainable Management Techniques for Bamboo Plantation

Zoom Meeting ID	950 0242 3197	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	Nanjing Forestry University (NJFU)		
Co-Organizers	<ul style="list-style-type: none"> International Centre for Bamboo and Rattan Southwest Forestry University (SWFU) Jiangxi Agricultural University (JXAU) 		
Chair(s)	Guohua Liu, Director, Bamboo Research Institute of NJFU		
Introduction	Bamboo is one of the fastest growing plants in the world. It can be utilized sustainably by scientific management. This session will invite researchers and professors who had the experiences of investigating the growth and development of bamboo plants, and bamboo forest cultivation to discuss the core topic of “molecular mechanism and theoretical basis for bamboo growth”.		
Agenda	Welcome Speech	Tongming Yin, Professor, Deputy President of NJFU	
	Comprehensive Analysis of the Growth and Development of Bamboo Clums	Qiang Wei, Professor, Bamboo Research Institute of NJFU	
	Molecular Mechanism of Lignification in Shoots Based on the Population Characteristics Information of Moso Bamboo	Zhiming Gao, Professor, ICBR	
	Research Progress on <i>Fargesia yunnanensis</i> (Yunnan arrow bamboo)	Shuguang Wang, Professor, SWFU	
	Comprehensive Analysis of the Floral Transition in Ma Bamboo (<i>Dendrocalamus latiflorus</i>) Reveals the Roles of DIFTs Involved in Flowering	Guirong Qiao, Associate Professor, Research Institute of Subtropical Forestry, CAF	
	Bamboo Site-Species Suitability Matching in the Kenyan Agro-Climatic Environment	Gordon Sigu Onduru, Principal Scientist, Kenya Forestry Research Institute	
	Morphological Characteristics and Transcriptome Comparisons of the Shoot Buds from Flowering and Non-Flowering <i>Pleioblastus pygmaeus</i>	Wenjing Yao, Bamboo Research Institute, NJFU	
	Physiological Changes of Bamboo (<i>Fargesia yunnanensis</i>) shoots during Storage and the Related Cold Storage Mechanisms	Lixia Yu, SWFU	
	Starch Granules Changes in Bamboo Shoots During the Elongation Growth of <i>Phyllostachys edulis</i> ‘Pachyloen’	Tianyi Hu, Bamboo Research Institute, NJFU	
	Research on Stand Structure and Rhizome Characteristics of <i>Phyllostachys edulis</i> in Different Expansion Stages	Yikun Wang, Lecturer, Zhejiang Lishui College.	

Session 2.3

Forum on the Development of Medium and Small Sized Bamboo Shoots Industry

Zoom Meeting ID	986 4781 4002	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	Bamboo Branch, Chinese Society of Forestry		
Co-Organizers	<ul style="list-style-type: none"> Bamboo Industry Association of Yuhang District, Hangzhou (National Small Path Bamboo Shoot Industry Service Station) Research Institute of Subtropical Forestry, Chinese Academy of Forestry (CAF) Nanjing Forestry University (NJFU) International Centre for Bamboo and Rattan Zhejiang Academy of Forestry Science (National Innovation Alliance for Bamboo Shoot and Bamboo Industry) China National Bamboo Research Centre Zhejiang International Science and Technology Cooperation Base for Bamboo Cultivation and Utilization 		
Chair(s)	Qin Li, Vice President of Bamboo Branch of Chinese Society of Forestry, Chairman of Bamboo Professional Committee of Zhejiang Forestry Society, Director of the Bamboo Research Institute in Zhejiang Academy of Forestry		
Introduction	<p>In order to implement Xi Jinping's speech spirit of "developing bamboo industry in accordance with local conditions" during his visit to Sichuan and other bamboo growing areas, this session will be held under the theme of "Innovations in bamboo shoot industry" in the context of COVID-19 prevention regularity and the national strategy of "carbon neutrality and carbon dioxide emission peaking". Focusing on the future development of bamboo shoot industry worldwide, this session will discuss the exploration and efficient cultivation of high-quality bamboo shoot resources, technological innovation in diversified utilization of bamboo shoot with high value, as well as the construction of supply chain. The session is expecting to propose a path for the high-quality and healthy development of China's medium-small sized bamboo shoot industry. This will provide technical support for rural revitalization and common prosperity.</p>		
Agenda	Carbon and Nitrogen Limitation Mechanisms of Bamboo Yield Formation	Shuanglin Chen, Researcher, Research Institute of Subtropical Forestry, CAF	
	Strategies and Suggestions for Processing and Utilizing Medium and Small Diameter Bamboo Shoots	Liangru Wu, Researcher, China National Bamboo Research Center	
	Advances in Bamboo Breeding Science	Xinchun Lin, Professor, Bamboo Research Institute of Zhejiang A&F University	
	Southwest Native Bamboo Species Resources for Bamboo Shoots and Their Development and Utilization	Bin Li, Senior Engineer and Deputy Director (Chair), Bamboo Research Institute, Chongqing Academy of Forestry	
	Small Diameter Bamboo Shoots Processing Method and New Product Development	Xiaopin Ye, CEO, Hangzhou Hangfu Canned Food Co., Ltd.	

Session 1.2

Assessment of Bamboo Resources and Ecosystems Services

Zoom Meeting ID	945 9685 5046	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	Food and Agriculture Organization of the United Nations (FAO)		
Co-Organizers	International Bamboo and Rattan Organization		
Chair(s)	Tefera Belay, Program Development Officer, INBAR		
Introduction	<p>Despite the recognized range of benefits and potential, in many countries bamboo has often not been managed sustainably or used effectively. The main reasons are related to the lack information about countries' bamboo resources, insufficient knowledge about bamboo uses, as well as about its ecosystem service values, particularly regarding climate change.</p> <p>Bamboo has an estimated area of 35 million ha (FAO's FRA 2020) and more than 1600 species recorded (INBAR 2017); however, FAO's Forest Resource Assessment in 2020 showed that only 23 countries reported information on bamboo resources, despite methodologies and technical tools are available for the assessment of bamboo forest cover, stock and carbon storage.</p> <p>Knowledge of the status and extent of bamboo resource is crucial for sustainable management and harvesting of bamboo forests and to properly capitalize on their potential.</p>		
Agenda	Overview of Advances in Bamboo Resource Assessment	Marco Piazza, Forestry Officer, FAO	
	Harnessing Remote Sensing & Model-based Inference for Predicting Bamboo Forest Area in Fujian Province China	Qing Xu, Associate Professor, ICBR	
	Mobile App based Bamboo Resource Assessment	Viet Anh Hoang, Lead Consultant, Green Field Consulting Ltd.	
	Bamboo-based Socio-ecological Systems for Mining Land Degradation Neutrality	Kamesh Salam, Executive Director, South Asia Bamboo Foundation	
	Bamboo based Ecosystem Services and Climate Adaptation	Shyam Paudel, Chief Technical Advisor, Ecosystem Based Adaptation, UNEP/GCF	
	Use of SEPAL for Land Cover Classification	Remi Dannunzio, Forestry Officer, FAO	


Session 2.6

Efficient Cultivation and Sustainable Development of Bamboo and Rattan

Zoom Meeting ID	939 0210 1729	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> • Research Institute of Bamboo and Rattan Resources and Environment, ICBR • National Innovation Alliance for the Protection and Utilization of Bamboo Species Resources • National Centre for Forestry Genetic Resources of Bamboo and Flowers, ICBR • Yong'an National Positioning and Monitoring Station for Bamboo Forest Ecosystem 		
Chair(s)	Shaohui Fan, Director/Professor, Research Institute of Bamboo and Rattan Resource and Environment, ICBR		
Introduction	<p>Since the beginning of 21st century, the core of global forestry development has transferred from wood to ecological construction in modern forestry. Cultivation of bamboo and rattan resources has also transferred from simple “economic benefits” to “ecological benefits and economic benefits”. After decades of research, technologies for the utilization and cultivation of bamboo and rattan resources have made great progress worldwide, but a series of challenges such as lack of high-quality germplasm and the fact that cultivation technology cannot meet the needs for social and economic development still exist. How to further promote the sustainable development of bamboo and rattan cultivation through technology innovation has become an urgent problem that needs to be solved. This session aims at strengthening the communication among experts and scholars in bamboo and rattan resource conservation, promote the innovation and reform in the development and utilization of germplasm resources, seedling breeding and efficient management, to eventually support the healthy and sustainable development of bamboo and rattan industry.</p>		
Agenda	Key Technologies for Efficient Management of Bamboo	Shaohui Fan, Director/Professor Research Institute of Bamboo and Rattan Resource and Environment, ICBR	
	Study on the Introduction of Bamboo in Coastal Sandy Sites	Yushan Zheng, Professor, Fujian Agriculture and Forestry University	
	Theory and Practice of Remediation of Contaminated Soil in Shoot Bamboo Forests	Shuanglin Chen, Professor, Research Institute of Subtropical Forestry, CAF	
	Study on Assisted Generation Growth of Rattan in Secondary Rain Forest in Ganzhaling of Hainan, China	Guanglu Liu, Associate Director/Professor, Research Institute of Bamboo and Rattan Resource and Environment, ICBR	
	Economic Analysis of Sustainable Bamboo Cultivation Strategy for <i>Dendrocalamus Stocksii</i> Across Different Treatment Regimes in Semiarid Regions of India	Sruthi Subbanna, Secretary and Treasurer, Bamboo Society of India; Lubina PA, Global Fellow, World Bamboo Foundation	
	Efficient Cultivation and Industrialization of <i>Indocalamus</i> spp. for Dumpling Leaves	Chao Peng, Associate Professor, Hu'nan Academy of Forestry	

Session 4.2

Bamboo Industry Development Forum of Local Governments and Leading Enterprises

Zoom Meeting ID	961 7631 0060	Live Stream Platform	
Time and Date	13:30-15:10 (GMT+8), 8 Nov, 2022		
Organizers	International Bamboo and Rattan Organization		
Co-Organizers	<ul style="list-style-type: none"> • International Centre for Bamboo and Rattan • International Finance Corporation • Meishan Municipal People's Government, Sichuan • Qionglai Municipal People's Government, Sichuan Province • Taojiang County People's Government, Hunan Province • Ningbo Shilin Handicrafts Co. Ltd., Zhejiang Province 		
Chair(s)	Jinhe Fu, Director of Host Country Affairs Department, INBAR		
Introduction	<p>Bamboo industry has become essentially important source for increasing family income in bamboo growing areas, which is also significantly critical for rural revitalization in China. Leading bamboo companies are greatly influential to other enterprises in bamboo industry, and make outstanding contributions to the local area. The session will invite local government officials from bamboo growing areas, leading bamboo companies and experts in green finance, etc. to discuss the role of bamboo in economic development, share their experiences in technologies innovations and how green finance serves bamboo industry.</p>		
Agenda	Bamboo Plays Key Role Dealing with Climate Change	Yao Li, Chief Investment Officer, East Asia and Pacific Department of IFC, World Bank Group	
	Bamboo Industry and Green Finance	Hongtao Zheng, Professor, Beijing National Accounting Institute	
	Comprehensive Utilization and High-quality Development of Bamboo	Jianqin Wang, Chairman Ningbo Shilin Arts & Crafts Co., Ltd.	
	Bamboo Resource Cultivation and Utilization of Innovative Technologies to Lead the High-Quality Development of Bamboo Industry-- Introduction of Typical Scientific and Technological Achievements of National Key R&D Projects during the 13 th Five-Year Plan	Ge Wang, PhD, Professor, ICBR	
	Meishan's Practice of "Promoting Bamboo Culture and Developing Bamboo Industry"	Liangyong Song, Deputy Mayor of Meishan Municipal People's Government, Sichuan Province	
	Promote the Green and High-Quality Development of Qionglai Bamboo, and Create a Beautiful Bamboo Forest Landscape in Sichuan	Dezhang Wang, Mayor of Qionglai Municipal People's Government, Sichuan Province	
	Bamboo Tourism, Culture and Sports, Recreation Re-vitalise Bamboo Homeland of Taojiang	Denggao Zhou, Mayor of Taojiang County People's Government, Hunan Province	

Session 3.8

Development and Internationalization of Bamboo and Rattan Standards

Zoom Meeting ID	989 2086 5684	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizers	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> International Organization for Standardization Technical Committee 296 on Bamboo and Rattan (ISO/TC 296) International Union of Forest Research Organizations (IUFRO) Division 5.11.05 - Bamboo and Rattan 		
Chair(s)	Changhua Fang, Professor, Manager of ISO/TC 296, ICBR		
Introduction	<p>In 2019, the total value of international trade in bamboo and rattan products exceeded USD 3.417 billion. However, corresponding to the increasing trend of international trade of bamboo and rattan products, the number and scope of existing international standards related to bamboo and rattan are very limited, far from covering each segment category of bamboo and rattan products, and cannot meet the market demand. This leads to the uneven quality of bamboo and rattan products, which is easy to cause trade disputes, greatly limiting the healthy development of the bamboo and rattan industry and the international trade of bamboo and rattan products. In order to better regulate the quality of bamboo and rattan products and promote the global trade of bamboo and rattan products, it is necessary to establish a globally recognized international standard for bamboo and rattan.</p> <p>This meeting invites experts from International Organization for Standardization and related countries to discuss the development status, existing problems, development trend and internationalization of bamboo and rattan standards in different countries in Asia and Africa, in order to further promote the development of bamboo and rattan related international standards.</p>		
Agenda	Development of Bamboo Standards in Colombia	Julian Hurtado, Leading Manager for Standardization L'Instituto Colombiano de Normas Técnicas y Certificación (ICONTEC)	
	Overview of Bamboo and Rattan Standards Development in China	Xianmiao Liu, Professor, ICBR	
	Bamboo Based Composites: Properties & Indian Standards	Anand Nandanwar, Scientist, Indian Plywood Industries Research and Training Institute	
	Status of the Bamboo and Rattan Standards in Africa, potential and outlook	Rene Kaam, Regional Director, Central Africa Regional Office of INBAR	
	International Standardization for Structural Uses of Bamboo	Kewei Liu, Coordinator of Global Bamboo Construction Programme of INBAR, Convener of ISO/TC165 WG12, PhD Candidate of Tsinghua University	
	Status of Development of International bamboo and Rattan Standards Under ISO/TC 296	Changhua Fang, Professor, Manager of ISO/TC 296, ICBR	


Session 2.7

Ecological Culture Leads to the Substitution of Bamboo for Plastics

Zoom Meeting ID	928 1506 4455	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov, 2022		
Organizers	China Eco-Culture Association (CECA)		
Co-Organizers	<ul style="list-style-type: none"> • China Flower Association (CFA) • China Bamboo Industry Association (CBIA) • International Centre for Bamboo and Rattan 		
Chair(s)	Hong Liu, President, China Ecological Culture Association		
Introduction	<p>Bamboo has many functions from the perspectives of economy, ecology and culture. Cultivating bamboo culture and developing bamboo industry are important pathways to implement the Xi Jinping's thought on ecological civilization, the rural revitalization strategy and green and low-carbon development. Ecological culture related to bamboo will definitely play an important role in replacing plastics with bamboo.</p> <p>This session will update the important academic progress in ecological culture of bamboo and replacing plastics with bamboo, discuss the opportunities and challenges, and make contributions to ecological civilization and a beautiful China.</p>		
Agenda	Welcome Speech	Shuyan Yang, Secretary General, CBIA	
	Marine Pollution and Substitution of Bamboo for Plastics	Hang Li, Publicity and Education Center of Ministry of Natural Resources Secretary of the Party Committee	
	Ecological Culture Leads the Way to the Realization of Substitution of Bamboo for Plastics	Zhong Ren, Professor, Zhejiang A&F University	
	Green Product Development With Substitution of Bamboo for Plastics	Wen Yu, Senior Engineer, Zhejiang Hengfeng Top Leisure Co., Ltd.	
	Status of Substitution of Bamboo for Plastics in Europe	Ren Wang, Director, Beijing Shichai Environmental Consulting Co., Ltd.	
	Remarks and Conclusions	Xuan Wang, China Ecological Culture Association Member of the Expert Steering Committee	


Session 2.8

Key Challenges and Solutions of Sustainable Bamboo Forest Management

Zoom Meeting ID	940 4441 4598	Live Stream Platform		
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022			
Organizers	World Wildlife Fund for Nature (WWF) Beijing Office			
Co-Organizers	International Bamboo and Rattan Organization			
Chair(s)	<ul style="list-style-type: none"> Yejing Li, Senior Program Officer, WWF Yanxia Li, Senior Program Officer, INBAR 			
Introduction	<p>Bamboo forest management somehow affects local economic development, supply chain stability, and ecological stability in rural areas, China. Due to the increased demands for economic development, urbanization, as well as continued impact of the global pandemic, traditional way for bamboo forest management is facing challenges: aging labor population, outdated regulating policy, decreasing profit, which results in a declining trend of bamboo industry. How to improve bamboo forest management is a key question to answer for more sustainable development of bamboo industry.</p> <p>This session invites representatives from the fields of industry, forest management, technological departments, research institutions, universities, etc., to discuss the key issues in sustainable bamboo forest management, analyze present situation, and explore corresponding innovative solutions.</p>			
Agenda	Effects of Land-use Transfer on Sustainable Bamboo Forest Management and Industry	Lanying Li, Professor, Zhejiang A&F University		
	Current Situation and Sustainable Development Suggestions for Moso Bamboo Management	Hongliang Zhang, Professor, Anji Bamboo Industry Development Department, Zhejiang University		
	IKEA Requirements on Bamboo and the Expectations on Bamboo Forest Sustainable Management	Lieyan (Carrie) He, Senior Wood Supply & Forestry Specialist, IKEA		
	Current Situation of Bamboo Forest Management in China	Shihui Zheng, Student, ICBR		
	Round Table Discussion			
	<ul style="list-style-type: none"> Min Liu, Professor, Forestry R&D Department, National Forestry and Grassland Administration Wenhui Chen, Professor, Beijing Forestry University Lieyan (Carrie) He, Senior Wood Supply & Forestry Specialist, IKEA Hongliang Zhang, Professor, Anji Bamboo Industry Development Department, Zhejiang University 			


Session 1.8

RE-Think Buildings

Zoom Meeting ID	950 0242 3197	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizers	United Nations Human Settlements Programme (UN-HABITAT)		
Chair(s)	Jesús Salcedo, Programme Management Officer RE-Think Buildings, UN-Habitat		
Introduction	<p>This session presents the latest projects and breakthroughs in resource circularity and utilization efficiency in building, as well as the within the built environment. Likewise, it will have a sub-focus on socio-economic sustainability within the housing sector.</p> <p>The session will include achievements and new tools aimed at strengthening the capacity of national stakeholders in building the path towards a more sustainable buildings sector and housing. Themes that this side event will address include circularity, resource and energy efficiency, innovation, and affordability.</p> <p>This session was initiated by UN-Habitat and brings as partners; the One Planet Network Sustainable Buildings and Constructions Programme, UNEP, UNOPS, HILTI Foundation. These agencies have developed a set of tools to raise awareness of national stakeholders in sustainable consumption and production within the construction sector, have built a roadmap towards the decarbonization, resiliency and sustainability of two countries (Burkina Faso and Sri Lanka) with a focus on materials and housing programmes, and have created a housing Value Assessment Methodology to strengthen the capacity of national stakeholders in evaluating and improving their housing programmes towards resource efficiency, circularity and sustainability. The set of tools have been piloted in Sri Lanka and Burkina Faso, the tools and lessons learnt from the countries will be presented during the event.</p>		
Agenda	<p>Opening Jesús Salcedo, Programme Management Officer RE-Think Buildings, UN-Habitat</p> <p>Panel discussion on Building roadmaps for carbon zero emissions and tools for high efficient utilization and circularity of resources:</p> <ul style="list-style-type: none"> • RE-Think Buildings Toolkit: Alicia Regodón, Sustainable Housing Expert, Land, Housing and Shelter Section, UN-Habitat • RE-CCAT Tool: Geoffrey Morgan, Senior Infrastructure Sustainability, Resilience and Inclusion Specialist, UNOPS • CiCoSA Good Practices Booklet: Nele Kapp, Associate Officer, Urban Basic Services UN-Habitat 		

Session 4.8

Bamboo Value Chains for Inclusive and Sustainable Industrial Development in Africa

Zoom Meeting ID	986 4781 4002	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizers	United Nations Industrial Development Organization (UNIDO)		
Co-Organizers	African Union Commission / African Union Development Agency – New Partnerships for African Development (AUC/AUDA-NEPAD)		
Chair(s)	Niels Schulz, Industrial Development Officer, UNIDO		
Introduction	<p>Bio-based industries can bring considerable industrial development opportunities to Africa, since they utilize highly regenerative resources.</p> <p>Bamboo provides particular opportunities in this regard thanks to the fast growth rate, resilience and versatility, which enables its applications ranging from construction material and furniture, to food-, fiber-, and energy sector use.</p> <p>This session will highlight examples of bamboo value chain development and their contribution to inclusive and sustainable industrial development.</p> <p>Challenges and critical success factors will be discussed. Successful experiences in various regions and political systems will be shared and introduced, to help some countries to transfer their economy into circular bio-economy.</p>		
Agenda	Bamboo Value Chains for Inclusive and Sustainable Industrialization	The African Union Development Agency (AU-DA NEPAD)	
	Low Carbon Climate Resilient Project Development, and Environmental / Climate Financing	Grant Ballard Treemer, Chief Executive Officer, Ecolt Group	
	On the Potential of Bamboo for the Regenerative Circular Bioeconomy (tentative)	Fortunate Muyambi, Acting Executive Secretary/Principal Officer of Innovation, Technology Development and Acquisition, East African Science and Technology Commission (EASTECO)	
	Introduction About Chinese Bamboo Project Experience in Africa, and Provide Some Suggestions and Cooperation Ideas to the African Governments From Perspective of An Enterprise	Yong Li, Manager of International affairs, China Bamboo International Holdings(Zhejiang) Co., Ltd.	
	Bamboo Value Chain Development in Ethiopia	Michael Gebru, Founder, Bamboo Star Agroforestry plc	
	Bamboo Value Chain Development in Ethiopia	Adane Berhe, General Manager, Adal Industrial Plc	


Session 2.1

The Ecological and Socio-economic Contribution of Rattan to People Within the Context of Global Deforestation and Climate Change

Zoom Meeting ID	945 9685 5046	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizer	International Bamboo and Rattan Organization		
Co-Organizers	<ul style="list-style-type: none"> University of British Columbia, Canada (UBC) Forestry Research Institute of Ghana (CSIR) 		
Chair(s)	Rene Kaam, INBAR		
Introduction	<p>Rattans are climbing palms belonging to the Palm family (<i>Palmae</i> or <i>Arecaceae</i>). There are around 650 different species of rattan in 13 genera, which are widely distributed in the tropic areas in Africa and Asia. The world trade of rattan raw materials and woven rattan alone amounted to USD 0.38 billion (INBAR, 2019). It is estimated that more than 700 million people worldwide work on rattan processing, trade and use rattan in their daily life. The annual trade (domestic and export) and the relevant value from rattan exceeds USD 7000 million.</p> <p>It is estimated that approximately 20% of rattan species are used commercially for furniture, matting and basketry. During the 1970s, Indonesia fulfilled about 90% of the world's rattan requirements. Globally, the furniture and handicraft industry mainly depend on resources from the secondary and virgin forests for rattan supply. Deforestation, overexploitation and habitat modification have caused short supply of raw rattans for the furniture, and most rattan industries are experiencing recession. Due to the unsustainable forest harvesting, most of the rattan resource are facing threat, leading to the resource loss or even extinction.</p> <p>For sustainable utilization of rattan resources, rational rattan resources management and proper harvesting should be applied in the rattan growing areas.</p>		
Agenda	Keynote: The Ecological and Socio-Economic Contribution of Rattan to People Within the Context of Global Deforestation and Climate Change	Terry Sunderland, Professor, UBC	
	Relationship between Water and Rattan	RongSheng Li, PhD, Associate Professor, Research Institute of Tropical Forestry, CAF	
	Rattan in Africa: Greening the Value Chain for Inclusive Industrial Development towards Global Trade	Beatrice Darko, PhD, CSIR-Ghana	
	Graded Variations in Ultrastructure and Topochemistry of Rattan Cane (<i>Calamus simplicifolius</i>)	Jianfeng Ma, Professor, ICBR	
	The Use of Rattan Wood for the Production of Biomimetic Bone Substitutes	Alberto Ballardini, PhD, Greenbone Ortho R&D Member, Italy	
	Rattan Cane as the Environmentally Appropriate Material for Making Household Products, a Sustainable Replacement of Plastic Pollution	Wan Tarmeze, PhD, FRIM Malaysia	


Session 1.9

Basic Research on Bamboo and Rattan Genetics and Breeding

Zoom Meeting ID	939 0210 1729	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizer	International Centre for Bamboo and Rattan		
Co-Organizers	<ul style="list-style-type: none"> • Research Institute of Gene Science and Gene Industrialization, ICBR • Nanjing Forestry University (NJFU) • Zhejiang A& F University (ZAFU) • Research Institute of Subtropical Forestry, CAF 		
Chair(s)	Zhimin Gao, Professor, Deputy Director, ICBR		
Introduction	<p>Bamboo and rattan resources are important forest resources that already demonstrated great potential for securing wooden materials supply in China. Due to the increasing demand for specialty bamboo and rattan products, bamboo and rattan breeding needs to advance. The nutrition growth and special reproductive biological characteristics of bamboo and rattan hinders the conventional breeding process of bamboo and rattan. Modern biotechnology technologies created great opportunities to clarify genetic information of bamboo and rattan from which some economic benefits should be explored. To obtain some key genetic information and genetically modify bamboo and rattan will be not only scientifically significant, but will also support the genetic breeding technology. Meanwhile, by applying modern biotechnologies, technological bottleneck for genetic breeding of bamboo and rattan can be addressed, which is of significance for accelerating the progress of bamboo and rattan breeding.</p>		
Agenda	Innovation Rattan Cane Identification Throughout Next-generation DNA Barcoding	Benedikt G. Kuhnhäuser, Postdoc Researcher, Royal Botanic Gardens	
	Development of Gene Manipulation Tools for Ma Bamboo (<i>Dendrocalamus latiflorus Munro</i>) Genetic Improvement	Qiang Zhu, Professor, Fujian Agriculture and Forestry University	
	A Bamboo Violaxanthin De-epoxidase gene, PeVDE, Confers Photoprotection Ability Under High Light	Huayu Sun, Postdoc, University of Connecticut, US	
	The miRNA-mRNA Network Regulates Tissue Differentiation in <i>Moso</i> Bamboo	Ying Li, Research Associate, ICBR	
	Function of SOC1 in Bamboo Flowering	Xinchun Lin, Professor, ZAFU	
	Advance in Space Mutation Breeding of Bamboo, Rattan and Flowers	Tao Hu, Deputy Director, ICBR	
	Homo- and Hetero- Dimers of CAD Enzymes Regulates Lignification and Abiotic Stress Response in <i>Moso</i> Bamboo	Naresh Vasupalli, Postdoc, ZAFU	
	Physiological Process Determination and Transcriptome Analysis during Seed Germination of <i>Moso</i> Bamboo	Juan Li, Associate Professor, ICBR	

Session 3.2

Advances in Bamboo Shoot Based Functional Foods Development and Its Health Benefits

Zoom Meeting ID	961 7631 0060	Live Stream Platform	
Time and Date	15:30-17:10 (GMT+8), 8 Nov , 2022		
Organizers	<ul style="list-style-type: none"> China National Bamboo Research Center Bamboo Food and Commodity Branch, China Bamboo Industry Association (CBIA-BFCB) Innovation Institute Bamboo Industry (Jian'ou) Branch 		
Co-Organizers	<ul style="list-style-type: none"> Fujian Mingliang Food Co., Ltd., China Chongqing Tezhen Food Co., Ltd., China Zhejiang Shengshi Biological Technology Co., Ltd., China 		
Chair(s)	Liangru Wu, Professor, China National Bamboo Research Center		
Introduction	<p>Bamboo shoots are edible parts developed from the lateral bud of bamboo rhizome or base. Owing to the richness in dietary fiber, protein, polysaccharide, minerals, and low content in fat, bamboo shoots have been considered as natural green vegetables and food materials across Asia, Africa and Latin America. As results of modern technologies development, functional foods developed from bamboo shoots has been paid more attention. Each year, the global yield of fresh bamboo shoots reaches over 55 million tons per year. Food industry relevant to bamboo shoots are fast growing and it will provide healthy nutrients for human beings.</p> <p>This session focus on 4 topics: (1) history of bamboo shoot for food, (2) nutrition, bioactive compounds and pharmacological mechanism of bamboo shoots, (3) R&D in bamboo shoot based food, and (4) bamboo shoot based food and human health. The latest advances in bamboo shoot nutrients compounds, as well as the bioactive compounds will be introduced in this session. Innovations and research progress in bamboo shoot products and their utilization over the past decades will be also presented. Meanwhile, challenges for bamboo shoots as future food will be also discussed.</p>		
Agenda	Tell Good Bamboo Shoot Story to Promote Bamboo Shoot Industry	Xiaoguang Lan, President, Chinese Bamboo Society	
	Bamboo Shoots Food Creation - from Chinese Traditional Mountain Treasures to the World's Future Food	Liangru Wu, Professor, China National Bamboo Research Center	
	Fabrication of Bamboo Shoot Cellulose Composite Aerogels	Hui Zhang, Professor, Zhejiang University	
	Bamboo (Shoot and Young Culm Flour) in the Extrusion Process	Maria Teresa P.S. Clerici, Professor, University of Campinas, Brazil	
	Research Progress on Bamboo Shoot Dietary Fiber	Jiong Zheng, Associate Professor, Southwest University	
	Bamboo- The Potential Source for Livelihood Enhancement and Hunger Eradication	Vidya R. Sankar, Postdoc Fellow, Kerala Agricultural University (India), INBAR Taskforce Member	

General Information



On-site Service



Nucleic Acid Test Site

The Congress Organizing Committee will set up a nucleic acid test site. Participants can conduct nucleic acid testing with their name badges and ID/passport if needed. Please observe the safety distance requirements and protect yourself.

Time: 14:00-16:00, 7 November, 2022

Venue: Meeting Room 3, 2nd Floor, Kuntai Hotel Beijing



Medical Service

The Congress Organizing Committee will provide emergency medical service in Meeting Room 3, 2nd Floor, Kuntai Hotel Beijing.

Notice on Epidemic Prevention and Control

- 7-day epidemiologic history self-examination and screening. You may be deemed exposed should one or more of the following cases apply:
 1. Persons coming from counties with one or more incidence of COVID-19 within 7 days prior to participation, counties where land ports are located, and mid- to high-risk counties, persons who return from Hong Kong, Macao, Taiwan and foreign countries, and persons with a history of contact with COVID-infected persons.
 2. Confirmed cases who have been cured and discharged from hospitals or asymptomatic infected persons who have been released from centralized isolation for medical observation but are still subject to follow-up visits or medical observation.
 3. Persons who deemed to be close contacts, secondary close contacts or from high-risk groups for whom the control status has not been lifted.
 4. Persons who have received a call from the authorities within 7 days prior to participating in the event regarding the risk of epidemic prevention and control, requiring them to be isolated or put under home medical observation or health surveillance, or persons who have abnormal health codes or travel codes.
- When entering the Congress venue, please cooperate with staff guidance and comply with body temperature checking, Beijing Health Kit registration, providing a negative nucleic acid test within 24 hours before the event and waiting for admittance.
- Please wear a disposable medical surgical mask throughout the Congress, wash your hands and disinfect in a timely manner, observe the safety distance requirements and protect yourself.

Contact Us

For more questions, please contact:

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