



Memories of the 25th IUFRO World Congress

 **iufro2019**
Curitiba • Brazil
SEPT 29 - OCT 5


BRAZILIAN FOREST
SERVICE


Embrapa



**Empresa Brasileira de Pesquisa Agropecuária
Embrapa Florestas
Brazilian Forest Service**

Ministério da Agricultura, Pecuária e Abastecimento

MEMORIES OF THE 25TH IUFRO WORLD CONGRESS

CURITIBA, PARANA, BRAZIL

SEPTEMBER 29 TO OCTOBER 5, 2019

*Joberto Veloso de Freitas
Yeda Maria Malheiros de Oliveira
Maristela Avila Abrantes
Patricia Povoá de Mattos
Erich Gomes Schaitza
Kátia Regina Pichelli
Sandra Regina Afonso*

Embrapa
Brasília, DF
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Embrapa Florestas

Estrada da Ribeira, km 111, Guaraituba,
Caixa Postal 319
83411-000, Colombo, PR, Brasil
Fone: (41) 3675-5600
www.embrapa.br/florestas
www.embrapa.br/fale-conosco/sac

Unidade responsável pelo conteúdo e pela edição
Embrapa Florestas

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AUTHORS

Joberto Veloso de Freitas

Forest Engineer, D.Phil. in Forest Sciences, Professor at the Federal University of Amazonas, Manaus, AM, Brazil

Yeda Maria Malheiros de Oliveira

Forest Engineer, D.Phil. in Forest Sciences, Researcher with Embrapa Florestas, Colombo, PR, Brazil

Maristela Avila Abrantes

Psychologist, Specialist in School/Educational Psychology and Workplace Psychology, Analyst with Embrapa Florestas, Colombo, PR, Brazil

Patricia Pova de Mattos

Agronomist Engineer, PhD in Forest Sciences, Researcher with Embrapa Florestas, Colombo, PR, Brazil

Erich Gomes Schaitza

Forest Engineer, MSc in Renewable Energy Systems Technology, Researcher with and Head of Embrapa Florestas, Colombo, PR, Brazil

Kátia Regina Pichelli

Social Communication Bachelor, MA in Social Communication, Analyst with Embrapa Florestas, Colombo, PR, Brazil

Sandra Regina Afonso

Agronomist Engineer, PhD in Forest Sciences, Researcher with the Brazilian Forest Service, Brasilia, DF, Brazil





FOREWORD

IUFRO2019 was organized through a joint effort involving the SFB and Embrapa, both of which are linked to MAPA, and presented impressive numbers for an international event held for the first time in Latin America: 2,725 people from 96 different countries, 195 technical sessions, 1,648 oral sessions and 964 poster sessions, in addition to more than 31 side events.

The exchange of knowledge, research, and information at IUFRO2019 was invaluable to all the researchers who had the honor of participating, including the 35 professionals representing SFB.

In the Brazil Space, an area to raise awareness about national public policy, we introduced the forest concession program, the Rural Environmental Register, the National Forest Inventory, and the Forest Products Laboratory. In the Sociobiodiversity Products Exhibition and Fair we highlighted the bioeconomy, a pathway to income for the 20 million people who live in the forests of the Amazon region.

An event of this magnitude cannot take place without hard work on the part of many partners, sponsors, suppliers, and staff.

With the satisfaction of a job well done, we are pleased to share the text commemorating this successful event with Brazilian as well as international readers. We hope it reminds you of new learning and good times, and that you share this information with the forest community.

Valdir Colatto

General Director
Brazilian Forest Service





Embrapa

Florestas

PREFACE

The world congresses of the International Union of Forest Research Organizations (IUFRO), which were first held in 1893, are dedicated to disseminating the results of forest research and recognized for their importance to the various segments of the forest community. “Interconnecting Forests, Science, and People” is the philosophy that guides IUFRO.

SFB and Embrapa have worked successfully on various national projects, combining their different profiles and institutional missions to promote and achieve sustainable forest management in Brazil. In 2013, these partners took on a new challenge together when Curitiba was selected to host the XXV IUFRO World Congress in 2019 – IUFRO2019, the first edition held in Latin America. The two institutions – SFB and Embrapa – were named as responsible for the IUFRO2019 Congress Organizing Committee. Other institutions, including UFPR, UFV, ESALQ, UFG, and Conab were added to the team, contributing to the success of the Congress.

The planning, organization, and implementation of this event were inspired by the Congress theme: “Forest Research and Cooperation for Sustainable Development”.

There were many hurdles to overcome before the Congress to make sure that it would be an exceptional event. IUFRO2019 was a great success, and represented a significant step for the country in building partnerships, expanding connections with researchers from all over the world, and especially providing a major stimulus for forest research.

We hope that by diving into these Memories you will feel inspired to participate in initiatives that, like this, bring people together, bring new knowledge, move the host cities and, above all, demonstrate the strength of forest research. Enjoy good memories, enjoy good times! The effort to document each session, every detail of the IUFRO2019 Congress was made with you in mind!

Erich Gomes Schaitza

Head
Embrapa Forestry



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LIST OF ACRONYMS

The list of acronyms can be found in **Appendix 1.**





1 INSTITUTIONAL ARRANGEMENT FOR THE CONGRESS ORGANIZATION



1

INSTITUTIONAL ARRANGEMENT FOR THE CONGRESS ORGANIZATION

The protocol for organizing world congresses under the aegis of the International Union of Forest Research Organizations (IUFRO) defines two committees responsible for planning, technical organization, logistics, and management: the Congress Organizing Committee (COC), and the Congress Scientific Committee (CSC). At IUFRO2019, the COC was led by Chair Joberto Veloso de Freitas and co-Chair Yeda Malheiros de Oliveira. The COC also included a secretariat for management of the project, an assistant, and the vice-presidents of eight subcommittees, which had their own teams and assignments. The model adopted was partnership with universities that offer forest engineering courses and are affiliated with IUFRO.

The COC also had an advisory council composed of persons with notable knowledge and experience in organizing congresses on a large scale. The CSC was led by Jerry Vanclay.

Both the Board and the IUFRO Management Committee participated in organizing the Congress with recommendations, suggestions, and guidelines for complying with the rules and procedures relating to the organization.

A relationship of collaboration and dialog was constructed between the COC and CSC; the executive secretariat of the COC was a member of the CSC. There was also close communication between the components of the CSC, which included 17 members from various countries, and a the Special Programme for Development of Capacities (SPDC) that supports young scientists.

Financial and administrative management was done by the Eliseu Alves Foundation (FEA), which signed a technical cooperation agreement with the Brazilian Agricultural Research Corporation (Embrapa) and the Brazilian Forest Service (SFB). Subsequently, after a hiring process led by the COC, FEA hired MCI-Brazil, a company specialized in organizing congresses, to carry out the operational activities of this event.



The COC and FEA established operational relationships with the main actors in the city of Curitiba, Expo Unimed Curitiba (event venue), and the Curitiba and Region Convention & Visitors Bureau (CCVB), a nonprofit institution linked to the Curitiba Municipal Tourism Institute.

The institutional arrangement for the Congress organization is depicted in Figure 1.

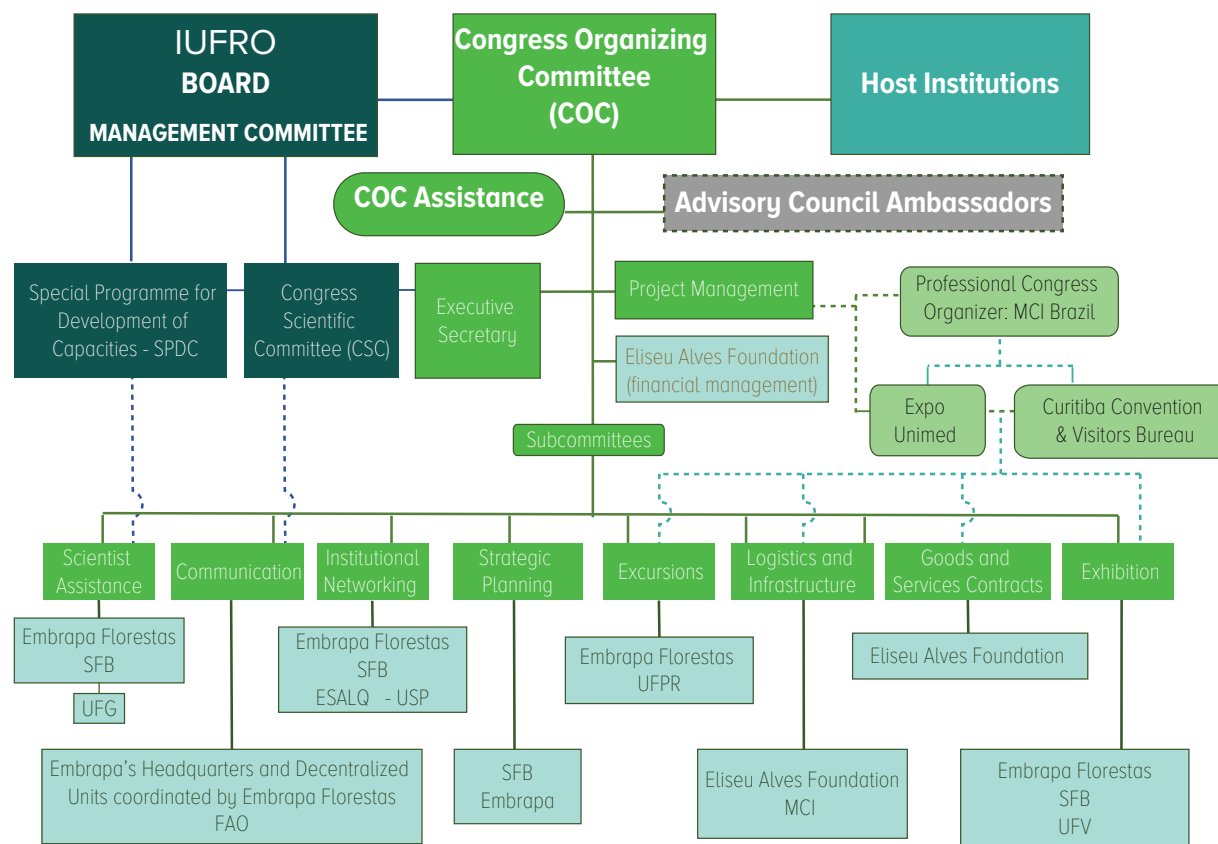


Figure 1. IUFRO2019 organization chart.

Illustration: Yeda Maria Matheiros de Oliveira



The structure of IUFRO during the period 2014-2019 was as follows:

Leaders of the IUFRO Management Committee, 2014–2019

Mike Wingfield, President (South Africa)

Björn Hånell, Vice-President of the Divisions (Sweden)

John Parrotta, Vice-President for Task Forces, Special Programs, Projects and Initiatives Led by IUFRO (USA)

Niels Elers Koch, President 2009–2014 (Denmark)

Alexander Buck, Executive Director (Austria)

Michael Kleine, Coordinator of the Special Programme for Development of Capacities - SPDC/SAP (Austria)

Daniela Kleinschmit, Representative for the Divisions to the Management Committee (Germany)

Jung-Hwan Park, Representative for the President's Nominees to the Management Committee (Republic of Korea)

The IUFRO Team

Andre Purret, Astrid Toppel, Brigitte Burger, Christoph Wildburger, Daniel Boehnke, Eero Mikkola, Eva Schimpf, Gerda Wolfrum, Heimo Schaffer, Janice Burns, Judith Stoeger-Goiser, Juha Hautakangas, Margareta Khorchidi, Pia Katila, Renate Pruessler, and Sylvia Fiege.

At the time of the event, the directors of SFB and Embrapa, the organizing institutions of IUFRO2019, were:

Valdir Colatto, Director-General of the Brazilian Forest Service - SFB (Brasilia, DF, Brazil)

Edson Tadeu Iede, Head of Embrapa Forestry from 2013 to 2019 (Colombo, PR, Brazil)



The COC was composed of the following:

COC Chairs

Joberto Veloso de Freitas, Chair (SFB from 2006 to 2020, Brasilia, DF, Brazil)

Yeda Maria Malheiros de Oliveira, co-Chair (Embrapa Florestas, Colombo, PR, Brazil)

Coordination Group

Joberto Veloso de Freitas, COC Chair (SFB from 2006 to 2020, Brasilia, DF, Brazil); Yeda Maria Malheiros de Oliveira, COC co-Chair; Patricia Pova de Mattos, COC Executive Secretary; Erich Gomes Schaitza, COC Project Manager; Maristela Avila Abrantes, COC Assistant (Embrapa Forestry, Colombo, PR, Brazil); and Sandra Regina Afonso, Sociobiodiversity Products Fair Coordinator (SFB, Brasilia, DF, Brazil).

Communication Subcommittee

Katia Regina Pichelli, Luciane Cristine Jaques, Paula Geron Saiz, and Erich Gomes Schaitza (Embrapa Forestry, Colombo, PR, Brazil); Julia Tavares Borges, Juliana Gomes (SFB, Brasilia, DF, Brazil); Sybelle Barreira e Francine Calil (UFG, Goiania, GO, Brazil); and Martin Sanchez Acosta (INTA, Argentina).

Excursions Subcommittee

Umberto Klock, Ana Paula Dalla Corte, Alan Sulato de Andrade, Alexandre Behling, Christel Lingnau, Dimas Agostinho Silva, Dornelles Vissotto Junior, Mauricio Balensiefer, Nelson Yoshihiro Nakajima, Ricardo Jorge Klitzke, and Vitor Afonso Hoeflich (UFPR, Curitiba, PR, Brazil).

Institutional Networking Subcommittee

Luiz Carlos Estraviz Rodriguez, Teresa Cristina Magro Lindenkamp, Edson Jose Vidal da Silva, Katia Maria Paschoaletto Micchi de Barros Ferraz, Pedro Henrique Santin Brancalion, Silvio Frosini de Barros Ferraz, and Weber Antonio Neves do Amaral (ESALQ, Piracicaba, SP, Brazil).

Exhibition Subcommittee

Fabiano de Melo, Carlos Moreira Miquelino Elete Torres, Amaury Paulo de Souza, Carlos Machado, Cibele Amaral, Gleison Augusto dos Santos, Marcos Oliveira de Paula, and Sebastião Valverde (UFV, Viçosa, MG, Brazil).



Strategic Planning Subcommittee

Joberto Veloso de Freitas, Celso Salatino Schenkel, Flavia Rejane Ricco, Luciano Barbosa de Lima, and Sandra Regina Afonso (SFB, Brasilia, DF, Brazil); Yeda Maria Malheiros de Oliveira, Patricia Povoa de Mattos, Erich Gomes Schaitza, Jairo Dolvim Dantas, and Maristela Avila Abrantes (Embrapa Forestry, Colombo, PR, Brazil), and Elisio Contini (FEA, Brasilia, DF, Brazil).

Logistics and Infrastructure Subcommittee and Goods and Services Contracts Subcommittee

Erich Gomes Schaitza (Embrapa Forestry, Colombo/PR-Brazil), Claudio Amancio (FEA, Brasilia, DF, Brazil), Lyris Goncalves, and the team at the Professional Congress Organizer (MCI-Brazil, São Paulo, SP, Brazil).

Eliseu Alves Foundation (FEA) Staff

Elisio Contini, President and CEO of FEA from 2018 to 2019, Claudio Humberto Amancio, Suelma Cardoso Martins, Clebia Sobrinho, Jackeline Campos, and Marilene Paz (Brasilia, DF, Brazil).

Advisory Council

Alan Bojanic (FAO Brazil, Brasilia, DF, FAO Colombia, Bogota, Colombia)

Rafael Zavala (FAO Brazil, Brasilia, DF)

Richard Guldin, COC Chair for IUFRO2014 (Washington D.C., USA)

For IUFRO2019, the composition of the CSC was as follows:

CSC Chair

Jerry Vanclay (Southern Cross University, Australia)

CSC Members

Alexia Stokes, Division 8 (French National Institute for Agricultural Research, INRA, France)

Björn Hånell, Vice-President for Divisions (Swedish University of Agricultural Sciences, Sweden)

Cecil C. Konijnendijk van den Bosch, Division 6 (University of British Columbia, Canada)



Daniela Kleinschmit, Division 9 (University of Freiburg, Germany)

Dolores Pavlovic, Student Representative (International Forestry Students' Association, IFSA)

Donald Hodges, Division 4 (University of Tennessee, USA)

Eckehard Brockerhoff, Division 7 (Scion Crown Research Institute - CRI, New Zealand)

John Parrotta, Vice-President for Task Forces, Special Programs, Projects and Initiatives Led by IUFRO (US Forest Service, USA)

Joseph Cobbinah, President's Nominee for Africa (University of Ghana, Ghana)

Manuel Guariguata, President's Nominee for Latin America (Center for International Forestry Research, CIFOR, Peru)

Patricia Povoa de Mattos, Representative for the COC (Embrapa Forestry, Brazil)

Pekka Saranpää, Division 5 (Natural Resources Institute Finland/Luonnonvarakeskus - Luke, Finland)

Pil Sun Park, Division 1 (Seoul National University, Korea)

Sandra Luque, Division 8 (National Research Institute of Science and Technology for Environment and Agriculture, IRSTEA, France)

Santiago C. González-Martínez, Division 2 (French National Institute for Agricultural Research, INRA, France)

Woodam Chung, Division 3 (Oregon State University, USA)

This work would not be complete without the acknowledgment of those who, in one way or another, helped the organization of IUFRO2019 ([Appendix 2](#)).



Professional Congress Organizer

Eleven companies specializing in event organization were invited to participate in the selection process for IUFRO2019. From the six that presented bids according to the criteria in the call, the three best bids were selected.

The second phase of the process consisted of individual interviews with the representatives of these three companies. This step was implemented to ensure that the IUFRO2019 COC would better understand the work and the strategies to be used to capture resources for the event as well as sponsorships. The goal of this phase was to better understand how companies would view the initiatives for innovation, registration management, project submissions, payments, etc., as well as information on potential social and environmental activities before, during, and after the event that these companies would be able to propose and/or manage. During the interviews, the financial proposal to provide services was also discussed in greater detail.

After analyzing the results for the entire process, the team in charge of selection (comprised of representatives from the SFB, Embrapa Forestry, and FEA) chose MCI-Brazil to organize IUFRO2019.



Communications during the Congress

Large-scale communications work was carried out to support all the activities in IUFRO2019. For this reason, the strategy involved reaching audiences in different languages, namely:

- Portuguese, the language of the host country
- English, as the official language of the event and of IUFRO
- Spanish, since this was the first time this event was held in Latin America.

The COC and CSC's choice to use three official languages certainly provided a challenge for the communications team in creating materials (with regard to content as well as meanings of messages).

This communication work involved numerous activities before, during, and after the event: support for the other committees, visual identity, creating and maintenance of the IUFRO2019 website, planning and developing strategies for dissemination, managing social media, press coverage, Congress coverage, producing the newsletter, producing videos during the event, providing support during ceremonies, photography, as well as other activities. All of this was only possible thanks to support from the IUFRO communications team.

During IUFRO2019, a team of Embrapa's communications specialists was responsible for supporting coverage of the event, with daily production of reports and a newsletter sent to the press. The team's work resulted in the production of: 51 reports, 9 newsletters, 23 videos produced and posted on social media and in newsletters, 65 social media posts and 147 stories on Instagram, 67 communications pieces created, transmission of the opening and closing ceremonies, as well as dealing with the domestic and international press.

During the Congress, there was also support and interaction with communications teams from institutions present at IUFRO2019, such as IFSA.



2

CONGRESS PROGRAMMING



The program schedule, summarized in the large-scale sessions, is depicted in Figure 2.

| | | PROGRAM SCHEDULE | | | | | | | | | | | |
|--------|-------|--|--|---|---|-------------------------|---|---|---|-------------------------|--|-----------------|--|
| Time | | Sunday 29 Sep | Monday 30 Sep | Tuesday 01 Oct | Wednesday 02 Oct | Thursday 03 Oct | Friday 04 Oct | Saturday 05 Oct | | | | | |
| 07h30 | 08h00 | | | | | Congress Field Tours | | | | | | | |
| 08h00 | 08h30 | | | | | | | | | | | | |
| 08h30 | 09h00 | | Opening Ceremony | Concurrent Technical Sessions | Concurrent Technical Sessions | | Concurrent Technical Sessions | Concurrent Technical Sessions | | | | | |
| 09h00 | 09h30 | | | | | | | | | | | | |
| 09h30 | 10h00 | | | | | | | | | | | | |
| 10h00 | 10h30 | Tree Planting Ceremony (Botanical Garden) | Coffee break | | | | Coffee break | | | | | | |
| 10h30 | 11h00 | | Plenary Session | Plenary Session | Plenary Session | | Plenary Session | Plenary Session | | | | | |
| 11h00 | 11h30 | | | | | | | | | | | | |
| 11h30 | 12h00 | | Lunch Poster Session Side events | Lunch Poster Session Side events Administrative Meetings | Lunch Poster Session Side events Administrative Meetings | | Lunch Poster Session Side events Administrative Meetings | Lunch Poster Session Side events Administrative Meetings | | | | | |
| 12h00 | 12h30 | | | | | | | | | | | | |
| 12h30 | 13h00 | | | | | | | | | | | | |
| 13h00 | 13h30 | | Concurrent Sub-plenary Sessions | Concurrent Sub-plenary Sessions | Concurrent Sub-plenary Sessions | | Concurrent Sub-plenary Sessions | Concurrent Sub-plenary Sessions | | | | | |
| 13h30 | 14h00 | Registration Open | | | | | | | Coffee break | | | Coffee break | |
| 14h00 | 14h30 | | | | | | | | | | | | |
| 14h30 | 15h00 | | | | | | | | | | | | |
| 15h00 | 15h30 | | Concurrent Technical Sessions | Concurrent Technical Sessions | Concurrent Technical Sessions | | Concurrent Technical Sessions | Concurrent Technical Sessions | | | | | |
| 15h30 | 16h00 | Making the most of The Congress | | | | | | | | | | | |
| 16h00 | 16h30 | | | | | | | | | | | | |
| 16h30 | 17h00 | | | | | | | | | | | | |
| 17h00 | 17h30 | | Wangari Maathai Award | Side Events | Side Events | | Side Events | Side Events | | | | | |
| 17h30 | 18h00 | Exhibit Fair Hall Opening and Welcome Ceremony | | | | | | | Cooperation for sustainability – statements by key partners of IUFRO | | | IUFRO Divisions | |
| 18h00 | 18h30 | | | | | Administrative Meetings | | | Administrative Meetings | Administrative Meetings | | | |
| 18h30 | 19h00 | | | | | | | | | | | | |
| 19h00 | 19h30 | | IUFRO Welcome Reception | | | | Administrative Meetings | | | | | | |
| 19h30 | 20h00 | | | | | | Gala Dinner | | | | | | |
| 20h00 | 20h30 | | | | | | | | | | | | |
| 20h30 | 21h00 | | | | | | | | | | | | |
| 21h:00 | 21h30 | | | | | | | | | | | | |

Figure 2. IUFRO2019 program schedule.

Illustration: Patricia Pova de Mattos



3

CONGRESS VENUE



3

CONGRESS VENUE

The location chosen for IUFRO2019 was the Expo Unimed Curitiba convention center, located in the Campo Comprido district of Curitiba within the Positivo University campus. This venue has accessible infrastructure throughout all of its areas in order to host an event of this magnitude, along with pleasant nooks for use during breaks in the Congress or for networking with other participants. This arrangement also allowed the university halls to be used for technical sessions, side events, and administrative meetings, which significantly expanded the usage potential of Expo Unimed Curitiba.

Organization at the venue

The distribution of the technical sessions across the space reserved for IUFRO2019 (Figure 3) was planned according to the demand identified for each topic. The plenary sessions took place in the main auditorium (the Positivo Theater), located very near the Expo Unimed Curitiba Convention Center within the campus of Positivo University (capacity: 2,400). The subplenary sessions were held in Wings 2 and 3 located within Expo Unimed Curitiba, as well as in the small auditorium in one of Positivo University's buildings; each space had the capacity to hold at least 600 people. The oral presentations occupied all the available rooms in Wings 2 and 3, along with 10 meeting rooms in the building that houses Positivo University's graduate programs. The smaller rooms can hold 50 people, while the others ranged from 120 to 750 seats. The scientific events at the Congress were organized with one plenary session held each day to total five sessions over the course of the Congress, and four subplenary sessions held every day except on the last day, when only three were held, totaling 19 sessions. The technical sessions took place in the morning and afternoon, except for the first and last days of the event, when only one session was held, totaling 189 simultaneous technical sessions. Poster sessions were held every day in kiosks that created 26 environments with simultaneous presentations, totaling 128 presentation points.



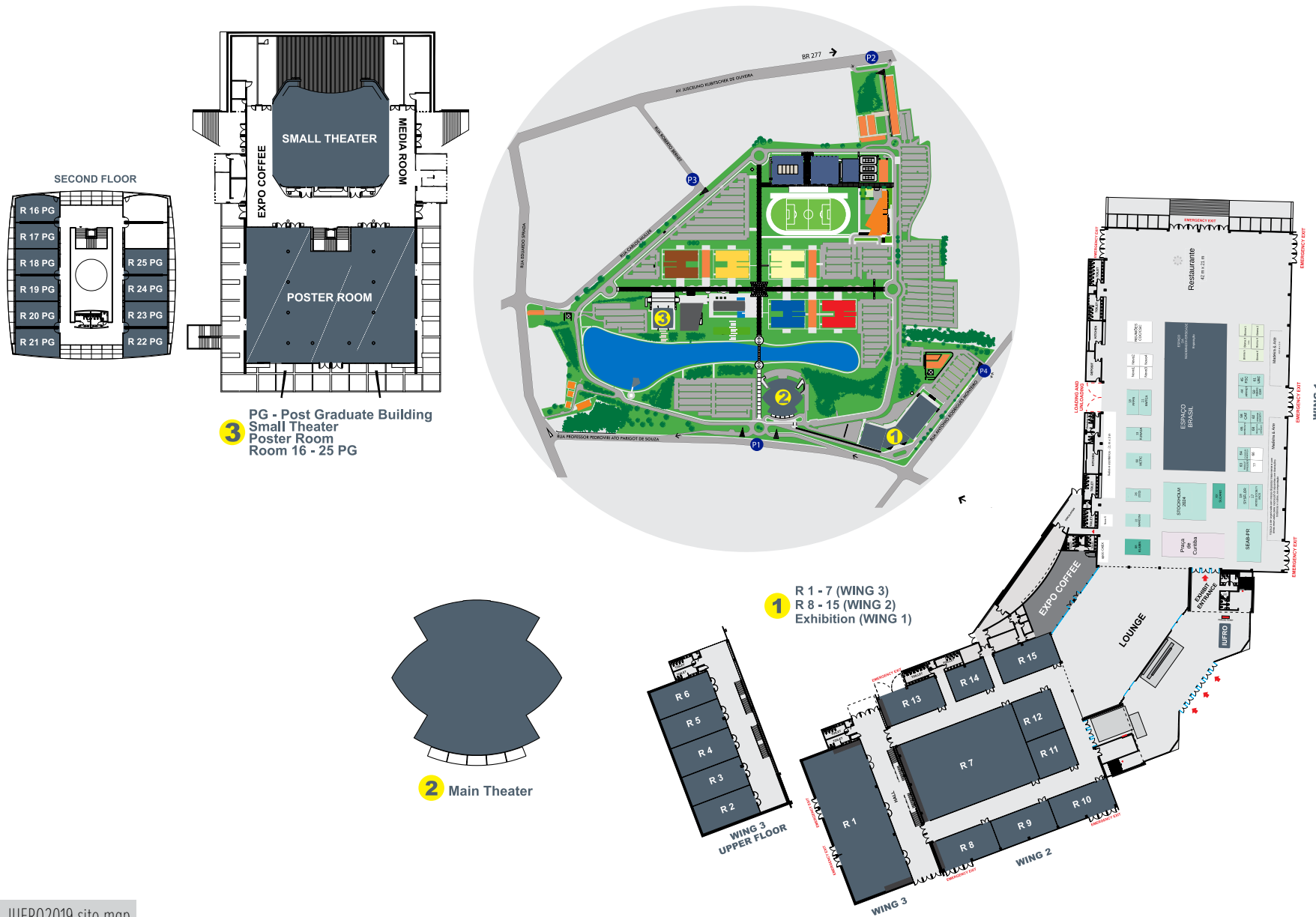


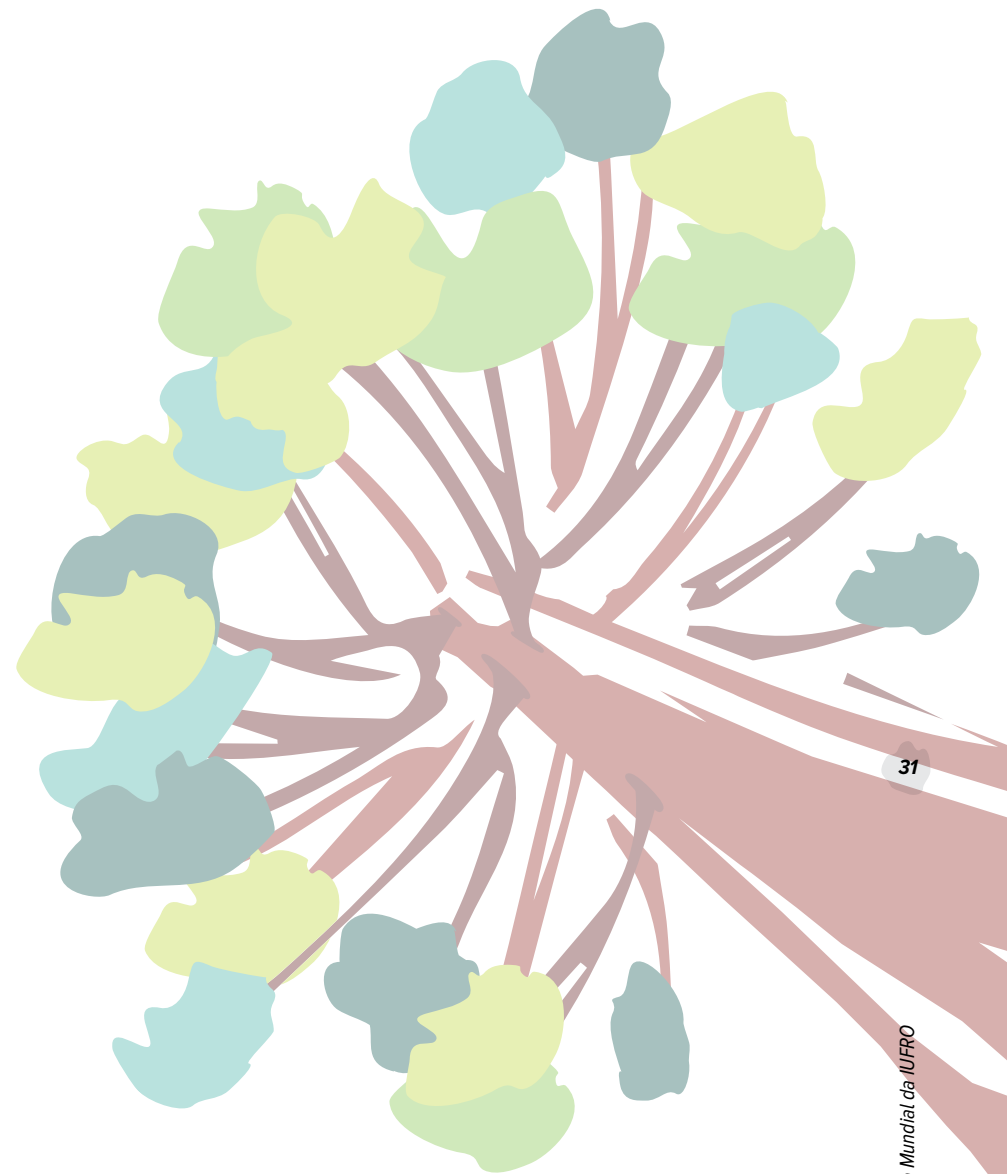
Figure 3. IUFRO2019 site map

Illustration: MKT interno/Grupo Positivo



Transportation during the Congress

IUFRO2019 offered transport to all participants for the entire duration of the Congress. Fifty buses with capacity for 40 passengers connected the center of the city and Expo Unimed Curitiba. Depending on the hotel where the participants were staying, this route took from 30 to 45 minutes. This shuttle service made an estimated 18,000 passenger trips during the Congress period, with an average of 12 km for each trip. Bus service was also offered so that participants could take part in the Gala Dinner.





4 CONGRESS PARTICIPATION

4

CONGRESS PARTICIPATION

Congress figures

- Participants: 2,725
- Countries: 96
- Session organizers: 195
- Sessions: 189
- Oral Presentations: 1,648
- Poster sessions: 964
- Destinations for technical visits: 15
- Student volunteers: 103
- Side events: 31
- Exhibitor spaces: 37

Profile of participants

The majority of participants came from Latin America and the Caribbean, followed by Europe and Central Asia, Southeast Asia and the Pacific region, North America, Sub-Saharan Africa, Southern Asia, and the Middle East and Northern Africa (Figure 4).

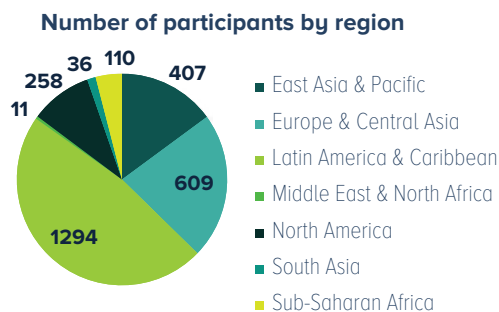


Figure 4. Number of Congress participants by region of origin.

Most Brazilian participants came from the Southeast region, followed by the South, Center-West, North, and Northeast (Figure 5).

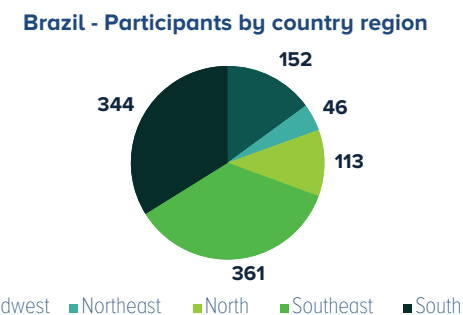


Figure 5. Number of Congress participants by region of Brazil.

Table 1 depicts the number of participants according to the registration categories.

Table 1. Number of participants by IUFRO category.

| CATEGORY | N | % |
|---------------------------------|--------------|---------------|
| IUFRO Member (Professional) | 1,079 | 39,60 |
| IUFRO Non-Member (Professional) | 676 | 24,81 |
| Student | 603 | 22,13 |
| Senior (70+ years) | 30 | 1,10 |
| Companion | 27 | 0,99 |
| SPDC | 115 | 4,22 |
| One-day | 133 | 4,88 |
| Press | 48 | 1,76 |
| Sponsored | 8 | 0,29 |
| Exhibitor | 6 | 0,22 |
| TOTAL | 2.725 | 100,00 |



Participation by Brazilian state is depicted in Figure 6, in descending order.

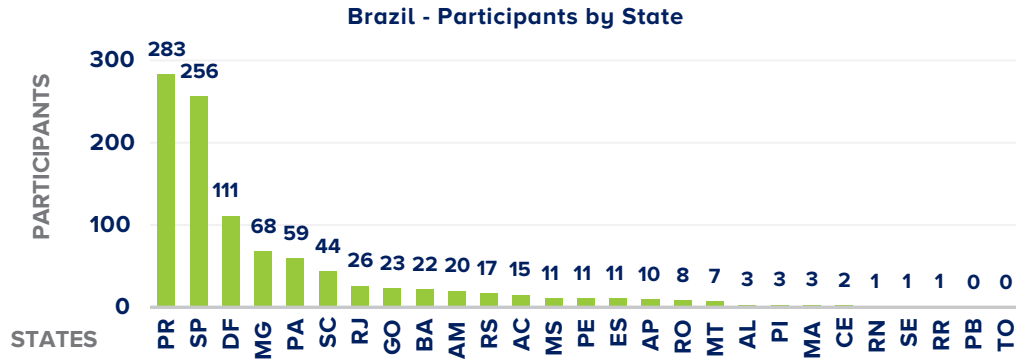


Figure 6. Number of Congress participants by Brazilian state..

By gender, 61% of participants were men and 39% women (Figure 7A). Age groups are shown in the bar graph (Figure 7B); the most representative age group was 50–60, followed by 30–40 and 40–50.

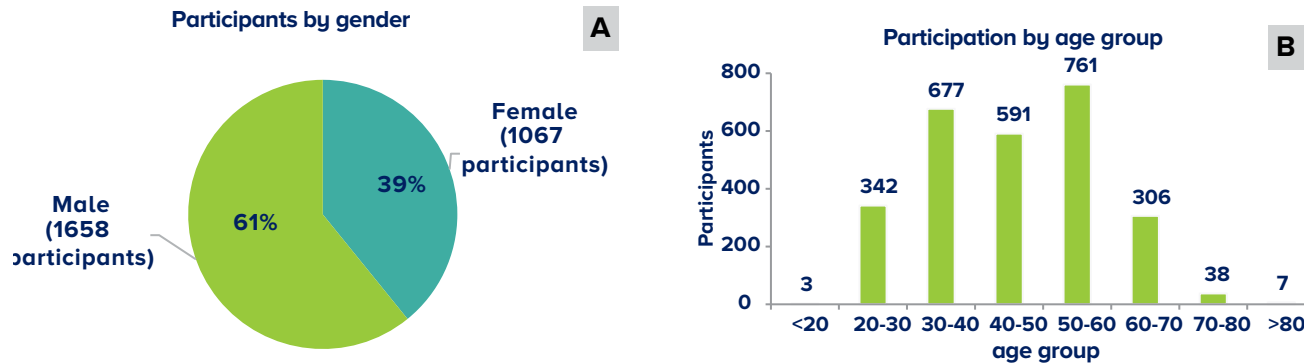


Figure 7. Overall Congress participation by gender (A) and age group (B).



5

CONGRESS CEREMONIES



5

CONGRESS CEREMONIES

Over the 127 years of its existence, IUFRO has worked to improve the format of its world congresses. In IUFRO2019, the ceremonies followed IUFRO protocol, with some adaptations and additions included by the COC with the approval of the CSC and the IUFRO directorship.

Tree planting ceremony

The beginning of IUFRO2019 was marked by the traditional tree planting ceremony, with species typical of the region where the event is held. In 2019, the *Araucaria*, the symbol of Paraná state, was highlighted; this genus was chosen to commemorate the IUFRO Congress in Brazil, and was also part of the visual identity of this event.

The ceremony was held on September 29 at the Botanical Garden of Curitiba, Paraná, and was attended by over 300 participants and the following officials: IUFRO President Mike Wingfield; Director-General of the Brazilian Forest Service Valdir Colatto; Head of Embrapa Forestry Edson Tadeu Iede; the Chair and co-Chair of the IUFRO2019 Organizing Committee, respectively, Joberto Veloso de Freitas and Yeda Maria Malheiros de Oliveira; and Vice Dean of UFPR Graciela Bolzón de Muniz. Their speeches for the most part welcomed participants to the Congress and mentioned the need for measures related to the conservation and sustainable use of *Araucaria angustifolia*.

Seedlings of *Araucaria* species from different regions of the world were planted: *Araucaria montana* (New Caledonia, Oceania); *Araucaria heterophylla* (Norfolk Island, Oceania), provided by José Tadeu Weidlich Motta, a researcher at the Curitiba Municipal Botanical Museum; *Araucaria araucana* (Chile, South America) grafted onto an *Araucaria angustifolia* (Brazil, South America); *Araucaria angustifolia* with a graft of an Australian *Araucaria bidwillii*; and a highly productive clone of *Araucaria angustifolia* from the region of Caçador, Santa Catarina, Brazil, provided by UFPR professor Flávio Zanetti.



The trees were planted in a prominent area of the Botanical Garden called the Araucaria Park (Figure 8A), where a commemorative plaque was unveiled (Figures 8B and 8C).



Figure 8. The IUFRO2019 tree planting ceremony, showing the planting of one of five Araucaria trees with participation by (from left to right) UFPR Professor Flávio Zanetti, IUFRO President Mike Wingfield, and SFB Director-General Valdir Colatto (A); unveiling of the plaque commemorating the IUFRO2019 World Congress in the Araucaria Park section of the Botanical Garden (B), with a speech by Curitiba's Secretary of the Environment Marilza do Carmo Oliveira Dias (C).



As part of the tree planting ceremony, a visit was organized to the Curitiba Municipal Botanical Museum (Figure 9A), which since 1992 has been part of the city's Botanical Garden. The museum is home to a botanical information center and an herbarium with approximately 400,000 exsiccatae from Brazil and abroad, and is intended to be a resource for scientific research and the dissemination of Brazilian flora. Here, samples collected in the state of Paraná as part of the National Forestry Inventory were displayed, and were of great interest to Congress participants (Figure 9B). The visit was organized by Marcelo Brotto, a researcher at the museum, and was attended by other local and state officials. After this visit, participants visited the Sensory Garden area, which highlights plants in terms of touch and smell. This was followed by the tree planting ceremony.



Photos: Renata Kelly da Silva

Figure 9. Congress participants and public figures visit the Municipal Botanical Museum (A) and (B).



Opening ceremony

The opening ceremony for the 25th IUFRO World Congress was held on Monday, September 30, at the Positivo Theater (Figure 10A), and was led by a master of ceremonies. The event included IUFRO President Mike Wingfield (Figure 10B), SFB Director-General Valdir Colatto, Head of Embrapa Forestry Edson Tadeu Iede, Paraná Governor Carlos Roberto Massa “Ratinho” Júnior; Curitiba Mayor Rafael Greca, IUFRO2019 Congress Organizing Committee Chair Joberto Veloso de Freitas and co-Chair Yeda Maria Malheiros de Oliveira, Congress Scientific Committee CSC Chair Jerry Vanclay (Figure 10C), CONAB President Newton Araújo Silva Júnior, Assistant Director-General for FAO’s Forestry Department Hiroto Mitsugi, and President of the International Forestry Students’ Association Amos Amanubo.



Figure 10. Opening ceremony of IUFRO2019 at the Positivo Theater (A), welcome address by IUFRO President Mike Wingfield (B), and participation by COC co-Chair Yeda Maria Malheiros de Oliveira, COC Chair Joberto Veloso de Freitas, and CSC Chair Jerry Vanclay (C).



Table 2. List of awards granted during the opening ceremony of the Congress and the respective winners.

| AWARD | WINNERS |
|---|---|
| Host Country Scientific Achievement Award | Celso Edmundo Bochetti Foelkel; José Natalino Macedo Silva; Maria José Zakia; and Sebastião do Amaral Machado. |
| Scientific Achievement Award – SAA | Daowei Zhang (USA); David J. Nowak (USA); Elena Paoletti (Italy); Ellen Macdonald (Canada); José L. de Moraes Gonçalves (Brazil); Junyong Zhu (USA); Margarida Tomé (Portugal); Maria Nijnik (UK); Marielos Peña-Claros (Netherlands); and Terry C. H. Sunderland (Canada). |



Photos: La Imagem

Figure 11. Winners of the Host Country Scientific Achievement Award (A) and Scientific Achievement Award (SAA) (B).

During the ceremony, prizes traditionally presented during a IUFRO Congress were awarded to outstanding professionals in the world of forest (Table 2). The awardees are depicted in Figures 11A and 11B.

A highlight of the opening ceremony was a film about the forests of Brazil and their importance to the economy, along with a presentation of Brazilian popular music and dance. In his speech, Paraná Governor Carlos Roberto Massa “Ratinho” Júnior greeted the attendees and mentioned how important it was for Paraná to host the largest congress on global forest research, considering that the state has a tradition related to forest research since it is home to the headquarters of large and well-known companies that operate in various positions along the forest production chain. Curitiba Mayor Rafael Greca also spoke; he thanked everyone for attending, emphasizing the importance of holding the Congress in Brazil and especially in the city of



Curitiba, and described the city, the origin of its name, and its traditions in terms of environmental conservation in public and private areas. He mentioned its 206 million square meters of green areas, woods, squares, environmental preservation areas, and urban refuges, which all result in 60 square meters of these areas per capita, almost twice the amount considered by the UN to be the goal for environmentally correct cities.

Closing ceremony

The closing ceremony for IUFRO2019 was held in the afternoon of Saturday, October 5, 2019, and was also conducted by a master of ceremonies.

After Joberto Veloso de Freitas and Yeda Maria Malheiros de Oliveira (representing the COC) expressed their thanks to those who helped organize IUFRO2019, and the showing of a video depicting various moments during the Congress, a number of partners and authorities that supported the event also spoke:

UFPR's Vice Dean Graciela Bolzón de Muniz, Head of Embrapa Forestry Edson Tadeu Iede, and the SFB's Director-General Valdir Colatto.

CSC Chair Jerry Vanclay thanked the other 16 members of the committee and the 195 session organizers, and also summarized what the participants experienced, professionally and personally, during IUFRO2019. Jerry also presented the IUFRO Forest Science Pledge, which expressed collective concern with the environment, and emphasized the role of partnership with IUFRO, the sharing of scientific knowledge, and the need to wisely direct forest management.

Three types of awards were presented during the closing ceremony (Table 3). IUFRO President Mike Wingfield described the background of the IUFRO Distinguished Service Award, and John Innes, Chairman of the Committee on Honors and Awards, announced the winners of this award as well as of the Best Poster Awards. Niels Elers Koch, IUFRO President from 2009 to 2014 (Figure 12A), received the Honorary Membership award.

Table 3. List of awards granted during the closing ceremony of the Congress and the respective winners

| CATEGORY | WINNERS |
|-----------------------------------|--|
| IUFRO Distinguished Service Award | Joberto Veloso de Freitas (Brazil); Yeda Maria Malheiros de Oliveira (Brazil); Jerry Vanclay (Australia); John Stanturf (USA); Piotr Paschalis Jakubowicz, (Poland). |
| Honorary Membership | Niels Elers Koch (Denmark). |
| Best Poster Award (announced) | Elizabeth Neire da Silva (Brazil); Angeline Martini (Brazil); Masakazu G. Iwaizumi (Japan); Wouyo Atakpam (Togo); Naohiro Imamura (Japan); Giovanni Mastrolonardo (Italy); Luiz Felipe de Castro Galizia (Spain); and Tchegoun Blaise Tchétan (Benin). |



Next, IUFRO Executive Director Alexander Buck announced the IUFRO Board of Directors for 2019-2024; incoming President John Parrotta will succeed Mike Wingfield (Figure 12B).

The new Vice-Presidents, Daniela Kleinschmit and Shirong Liu, were also announced, as well as the coordinators of IUFRO's nine divisions: Jens P. Skovsgaard (Division 1), Santiago González-Martínez (Division 2), Woodam Chung (Division 3), Donald Hodges (Division 4), Pekka Saranpää (Division 5), Cecil C. Konijnendijk van den Bosch (Division 6), Eckehard Brockerhoff (Division 7), Sandra Luque (Division 8), and Monica Gabay (Division 9), and the seven new regional representatives nominated by the new President of IUFRO: Elena Paoletti, Erich Gomes Schaitza, Hubert Hasenauer, Kugbo Shim, Olga Shaytarova, Wubalem Tadesse Wondifra, and Xia Wenfa.



Figure 12. Speech by Niels Elers Koch, IUFRO President (2009–2014) (A) and official handing over of the presidency: Mike Wingfield (2014–2019) (left) greeting incoming President John Parrotta (right), (2019–2024) (B).

In his last speech as IUFRO President, Mike Wingfield highlighted the main concerns observed in the work presented at IUFRO2019, namely deforestation, forest degradation, and especially climate change, as well as the commitment evidenced in the IUFRO Forest Science Pledge.

Finally, John Parrotta addressed the audience for the first time as IUFRO President, emphasizing the role of the organization in integrating different areas of interest related to forests, and consequently its potential as a channel for connecting forests, science, and people for a better world.



After the IUFRO flag was lowered (Figure 13A), John Parrotta, Joberto Veloso de Freitas, and Yeda Maria Malheiros de Oliveira presented it to Johanna Brismar Skoog, Sweden's Ambassador to Brazil, who in turn passed it to Fredrik Ingemarson, COC Chair for the next IUFRO World Congress (Figure 13B), which will be held in Stockholm, Sweden. In her speech, Johanna Brismar Skoog commented on the close relationship Sweden has with Brazil and Curitiba and repeated the invitation to IUFRO2024. Fredrik Ingemarson officially launched the IUFRO2024 event web page, presenting what participants can expect from the Congress.

Mike Wingfield and John Parrotta officially declared IUFRO2019 closed and repeated the invitation to IUFRO2024, in Sweden.



Figure 13. IUFRO2019 chair and co-chair lowering the IUFRO flag (A) and Sweden's Ambassador to Brazil, Johanna Brismar Skoog, handing the IUFRO flag to the COC Chair for IUFRO2024, Fredrik Ingemarson (B).

Photos: Morné Booij-Liewies (A) e La Imagem (B)



Ceremonial signing of the IUFRO Forest Science Pledge of Curitiba

On October 4, the next-to-last day of IUFRO2019, a ceremony was held to sign the IUFRO Forest Science Pledge of Curitiba, entitled “Forest Science for the Future.” The pledge was drafted in the three languages of the Congress (English, Portuguese, and Spanish) (**Annex 1**) and recorded the signatories’ commitment to a sustainable future. It was presented to the public on a large panel exhibiting the text of the pledge, which was signed by hundreds of Congress participants in a global appeal for scientists to be heard and to recognize the fundamental role of science (Figures 14A and 14B).

The pledge, in its English version:

“Forest Science for a Future

XXV IUFRO World Congress, Curitiba, Brazil, October 2019

Over 2.500 scientists from 92 countries assembled at the Congress to discuss the plight of the world’s forests. This first congress in South America allowed a specific focus on this region of the world rich in forest resources. Deforestation and climate change were identified as two of the most pressing problems worldwide.

The IUFRO World Congress offered a unique opportunity to share evidence-based knowledge across disciplines and continents, to discuss the state of the forests, the challenges and consequences, and possible solutions. As a result, we recognise urgent issues and advocate for the knowledge of forests provided by the global IUFRO network to mobilize forest science for a sustainable future.

We commit to accelerate our own efforts to provide knowledge and practical solutions

- to foster good land management for water and wildlife;
- to prevent deforestation and to repair damaged landscapes;
- to supply wood products that have a lower carbon footprint than alternatives; and
- to enable forests to fulfil the physical and spiritual needs of society.



We reiterate the calls by the global youth to “listen to the scientists”, and recognise the need for the science community to speak up in new ways to highlight the fundamental role science and technology must play in finding effective, economically viable solutions.”

Figure 14. IUFRO2019 attendees signing the panel with the IUFRO Forest Science Pledge (“Forest Science for the Future”) (A) and members of IUFRO, the COC, CSC, and Congress participants officially showing their support for the pledge (B).



Photos: Renata Kelly da Silva





6

CONGRESS EXHIBITION AND FAIR AREA

6

CONGRESS EXHIBITION AND FAIR AREA

Area in front of the Exhibition Center

The logo of the 25th IUFRO World Congress was placed in front of the main entrance to the Expo Unimed Curitiba center (Figure 15A) and served as a reference point and a favorite meeting place to take photos of Congress participants, friends, groups, and delegations (Figure 15B).



A

Photos: Maristela Avila Abrantes (A) e Morné Booij-Liewes (B)

Figure 15. IUFRO2019 logo (A) and group of IFSA participants recording their presence (B).



B



Entrance hall and lounge within Expo Unimed Curitiba

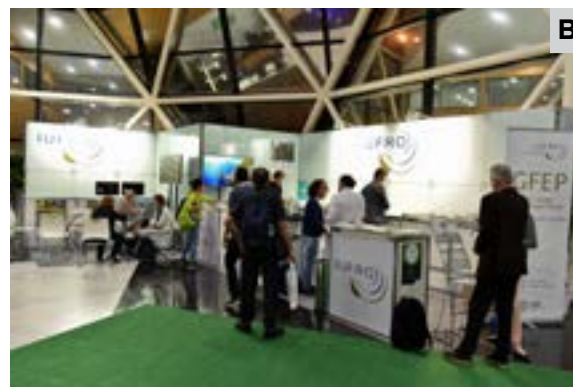
Within the Expo Unimed Curitiba entrance hall, Congress participants were welcomed and were able to register, pick up their credentials and materials (**Appendix 3**), and obtain information or help from the support team (Figure 16A).

IUFRO's booth in the entrance hall was also very prominent, and helped spread awareness of this entity among Congress participants, particularly those from Latin America (Figures 16B and 16C). IUFRO's Secretariat team (among others) used this opportunity to provide information about the organization's work in the world of forest research, distribute printed materials, answer questions, and exchange ideas with a large number of people.

Figure 16. Expo Unimed entrance hall (A), IUFRO booth (B), at the IUFRO booth, from left to right, Alexander Buck (IUFRO), Mike Wingfield (IUFRO), Junyong Zhu (USA), winner of the Scientific Achievement Award (SAA), and Alexander L. Friend (USDA/United States Forest Service) (C).



A
Photos: La Imagem



B



C



In the lounge area of Expo Unimed Curitiba, participants were able to view the only known bonsai *Araucaria angustifolia* tree (Figure 17A). Bonsai enthusiast Renato Hoenig of Curitiba (Figure 17B) was



Figure 17. Bonsai *Araucaria angustifolia* (A) and bonsai enthusiast Renato Hoenig (B).

contacted by the COC and agreed to bring this rarity to the event. Present during the Congress, Hoenig answered questions and stated that it took many attempts to grow this species as a bonsai before being successful with this one, which is already 25 years old. The tree is approximately one meter in height and exhibits the traditional candelabra shape. Because bonsai is a complex and lengthy process, Hoenig intends to cultivate only five more trees of the same size, which will form a small forest with bonsais of other native species from the same ecosystem. Because of the rarity and beauty of the tree, it became a meeting point and subject of memorable photos.



Photos: Maristela Avila Abrantes (A) e Renata Kelly da Silva (B)



Exhibition

In the exhibition area itself, a 3,780 m² space located in Wing 1 of the Expo Unimed Curitiba center, the Congress exhibition and fair spaces were organized, along with the restaurant for IUFRO2019 participants. A total of 40 stands of various sizes were erected, representing Brazilian and international organizations in the public and private sectors, non-governmental organizations, and teaching and research institutions (**Appendix 4**).

The Curitiba Square exhibit was located at the entrance to the exhibition area, welcoming participants to the city. This booth was the site of a visit from the city's mayor and the leaders of the institutions that organized IUFRO2019 (Figure 18).



Photos: La Imagem

Figure 18. Curitiba Mayor Rafael Greca, at the Curitiba Square exhibit, right foreground; SFB Director Valdir Colatto, IUFRO President Mike Wingfield, and Head of Embrapa Forestry Edson Tadeu Iede, in the background.

Also at the entrance of the exhibition, the booth for IUFRO2024 (the next IUFRO World Congress) welcomed many Congress participants and authorities (Figure 19A), and was the site of various ceremonies (Figure 19B).



Photos: La Imagem (A) e Renata Kelly da Silva (B)

Figure 19. IUFRO2024 exhibit: COC Chair for IUFRO2024 Fredrik Ingemarson and Sweden's ambassador to Brazil Johanna Brismar Skoog (A) and invited guests at the IUFRO2024 pre-launch event (B).



Stands for co-businesses and partnering institutions occupied a large portion of the exhibition area (Figures 20A to 20V), and together with the Sociobiodiversity Products Exhibition and Fair provided opportunities for participants to get to know each other and share current experiences and future expectations about forests. It was also an excellent opportunity for business and for new partnerships.

Figure 20 . Some stands for IUFRO2019 co-businesses: Klabin (A), Suzano (B), APFNET (C), CAF (D), FFPRI (E), FIP/World Bank (F), FSC (G), Haglöf (H), INBAR (I), IPEF (J), ITTO (K), Joanneum Research (L), Lim Geomatics (M), Marconi (N), Oficina de Texto (O), Research in Germany - Land of Ideas (P), Silva Fennica (Q), Sysflor (R), UBC (S), XPrize (T), and IWCS/WWD (U and V).



A



B

Photos: La Imagem (A, B, C, D, E, K, L, N, O, R, T e V) e MCI Brasil team (F, G, H, I, J, M, P, Q, S e U)





C



D



E



F



G



H



I



J



K

Figure 20 . Some stands for IUFRO2019 co-businesses: Klabin (A), Suzano (B), APFNET (C), CAF (D), FFPRI (E), FIP/World Bank (F), FSC (G), Haglöf (H), INBAR (I), IPEF (J), ITTO (K), Joanneum Research (L), Lim Geomatics (M), Marconi (N), Oficina de Texto (O), Research in Germany - Land of Ideas (P), Silva Fennica (Q), Sysflor (R), UBC (S), XPrize (T), and IWCS/WWD (U and V).

Photos: La Imagem (A, B, C, D, E, K, L, N, O, R, T, e V) e MCI Brasil team (F, G, H, I, J, M, P, Q, S e U)



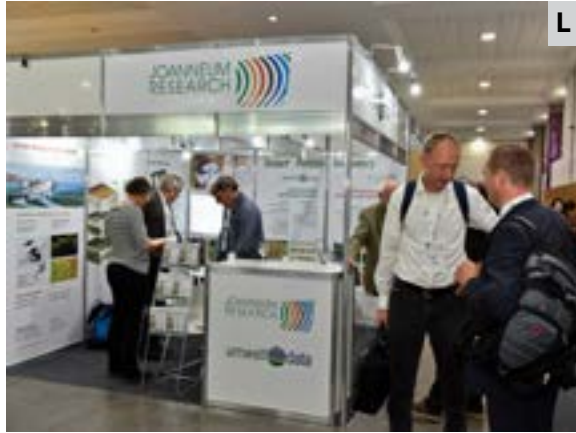


Figure 20. Some stands for IUFRO2019 co-businesses: Klabin (A), Suzano (B), APFNET (C), CAF (D), FFPRI (E), FIP/World Bank (F), FSC (G), Haglöf (H), INBAR (I), IPEF (J), ITTO (K), Joanneum Research (L), Lim Geomatics (M), Marconi (N), Oficina de Texto (O), Research in Germany - Land of Ideas (P), Silva Fennica (Q), Sysflor (R), UBC (S), XPrize (T), and IWCS/WWD (U and V).

Photos: La Imagem (A, B, C, D, E, K, L, N, O, R, T e V) e MCI Brasil team (F, G, H, I, J, M, P, Q, S e U)





Photos: La Imagem (A, B, C, D, E, K, L, N, O, R, T e V)
e MCI Brasil team (F, G, H, I, J, M, P, Q, S e U)



Figure 20 . Some stands for IUFRO2019 co-businesses: Klabin (A), Suzano (B), APFNET (C), CAF (D), FFPRI (E), FIP/World Bank (F), FSC (G), Haglöf (H), INBAR (I), IPEF (J), ITTO (K), Joanneum Research (L), Lim Geomatics (M), Marconi (N), Oficina de Texto (O), Research in Germany - Land of Ideas (P), Silva Fennica (Q), Sysflor (R), UBC (S), XPrize (T), and IWCS/WWD (U and V).



A special attraction at the exhibition hall was the Madeira e Arte/Wood and Art Area (Figures 21A to 21D), where artisans, who work with wood, and small-scale producers from Curitiba showed off Brazilian design in wood - crafts that use wood waste from pruning and cutting of urban trees, transforming them into forest-derived products and an opportunity for revenue. Innovative furniture and objects made from planted forests were also exhibited.



Photos: La Imagem (A, B e C) e Paulo de Souza Cardoso Filho (D)



Figure 21. Visit by the Mayor of Curitiba (A) and booths of the Wood and Art Area (B), (C), and (D).



Besides the traditional and thematic stands, the site also had meeting and business rooms, a press room, and an area for the partnering universities, with the common space coordinated by the students of these universities who volunteered during the Congress as well as students from IFSA (Figure 22).

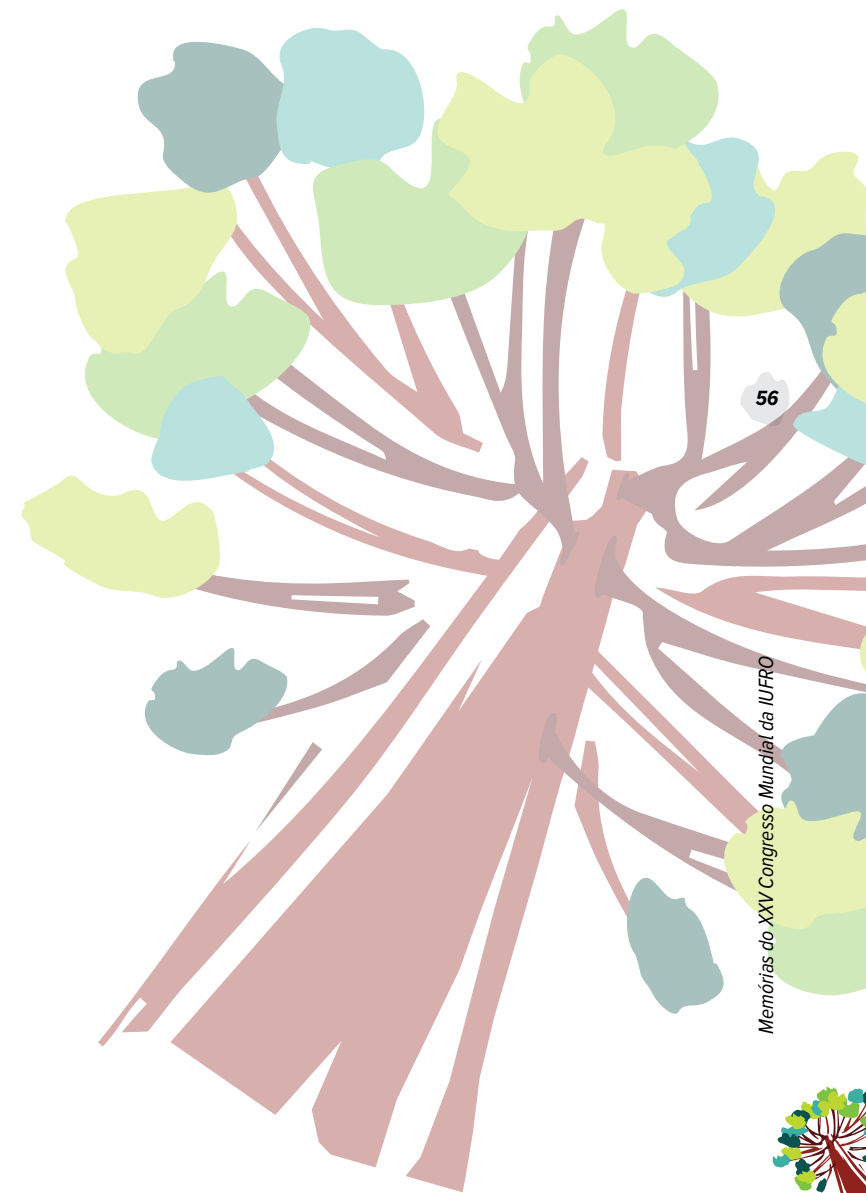


Photo: Maximilian Schubert

Figure 22. IFSA students in the exhibition space.

To encourage visits to the exhibition stands and also promote interaction between participants, the coffee breaks were held in the corridors of the exhibition area.

The restaurant for the Congress participants was set up in the exhibition and fair area and, with capacity to serve 400 people on a rotating basis. Besides this dining option, attendees were also able to eat in the two food courts at Positivo University, the café in the convention center, and an outdoor food court near the event venue.



Brazil Area

The Brazil Area (coordinated by the SFB and Embrapa) was one of the most popular stands (Figures 23A to 23D). Here exhibits depicted national initiatives, projects, and public policies with the participation of various institutions including Embrapa, the Brazilian Forest Service, IBAMA/Ministry of the Environment, the Ministry of Science, Technology and Innovation, and institutional partners of these agencies such as the Crop-Livestock-Forest Integration Network (Rede ILPF), GIZ, KFW, and CNA.

The Brazil Area included panels, video presentations, distribution of materials on the main programs managed and developed by the participating institutions, as well as a virtual reality tunnel depicting integrated crop-livestock-forest management. Congress participants and visitors were able to meet researchers and technicians to obtain specific information and ask questions.



Figure 23. Some moments in the Brazil Area: Congress participants and visitors (A), the Biome Area (B), Crop-Livestock-Forest Integration Network – Rede ILPF (C), and the entrance to the virtual reality tunnel depicting the crop, livestock, and forest integration (D).



In the Brazil Area, a special place was also organized for mini-talks (**Appendix 5**). Some of them are depicted in Figures 24A to 24C.



A

Photos: Renata Kelly da Silva (A), Morné Booij-Liewes (B) e Natália Lordello de Aguiar Vieira Nascimento (C)

Figure 24. Some moments from the mini-talks during IUFRO2019 (A), (B), and (C).



B



C



The place was also the stage for launching the following books: Mogno-africano (*Khaya* spp.): atualidades e perspectivas do cultivo no Brasil; SDG15 - Life on land: contributions of Embrapa; Florestas do Brasil em resumo 2019; its English version titled Brazilian forests at a glance 2019; and Bioeconomia da floresta: a conjuntura da produção florestal não madeireira no Brasil. There was also the pre-launch of Araucária: pesquisa e desenvolvimento no sistema cooperativo e integrado da Embrapa; and O eucalipto e a Embrapa: quatro décadas de pesquisa e desenvolvimento. Figures 25A to 25D depicts some of these moments. More details and the links to the launched books can be found in **Appendix 5**.

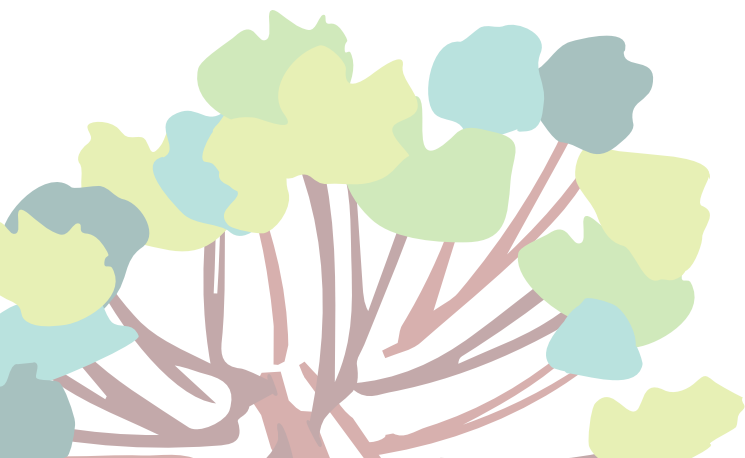


Figure 25. Book launches during IUFRO2019 (A), (B), (C), and (D).

Photos: Marcela Guiotoku (A), Gisele Freitas Vilela (B), Morné Booij-Liewes (C) e Paulo de Souza Cadoso Filho (D)

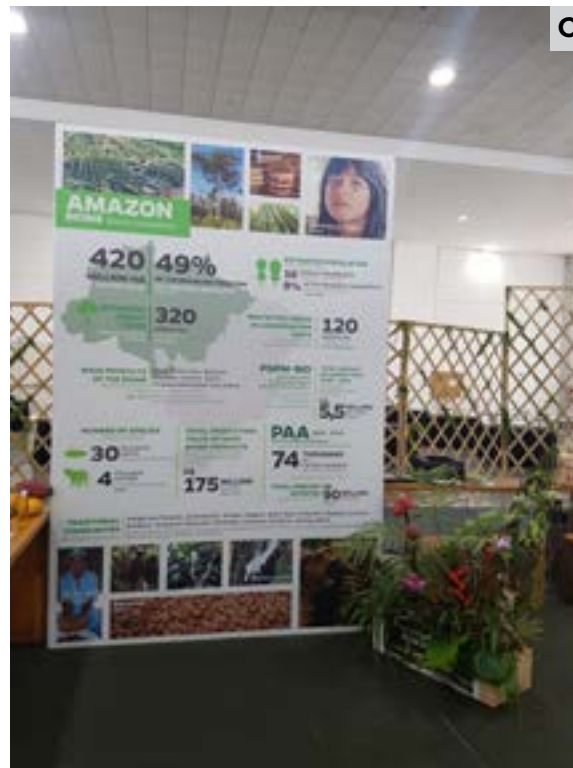


Sociobiodiversity Products Exhibition and Fair

The Sociobiodiversity Products Exhibition and Fair was organized in a prominent location within the exhibition hall by the SFB with the support of Embrapa, CONAB, and the MAPA's Secretary of Family Agriculture.

Non-timber forest products from six Brazilian biomes were presented via exhibit panels (Figures 26A to 26H), and the products were also presented in their raw state (Figures 26I to 26K) so that visitors could see, touch, and try them.

Figure 26. Entryway and panels at the entrance of the Sociobiodiversity Products Exhibition and Fair in the Brazil Area (A) and (B); panels with information about the six biomes in Brazil (C), (D), (E), (F), (G), and (H); non-timber forest products from Brazilian biomes (I), (J), and (K).



Photos: Ana Cláudia Nascimento (A, B e G), Sandra Regina Afonso (C, D, E, F e H), Martin Sanchez Acosta (I, J e K)





Figure 26. Entryway and panels at the entrance of the Sociobiodiversity Products Exhibition and Fair in the Brazil Area (A) and (B); panels with information about the six biomes in Brazil (C), (D), (E), (F), (G), and (H); non-timber forest products from Brazilian biomes (I), (J), and (K).



Photos: Ana Cláudia Nascimento (A, B e G), Sandra Regina Afonso (C, D, E, F e H),
 Martin Sanchez Acosta (I, J e K)



Approximately 200 different types of products were sold in 12 booths occupied by 24 exhibitors, representing around 60 community projects across all of Brazil. The Sociobiodiversity Products Exhibition and Fair (Figures 27A to 27C) was a great success for exposure and marketing, presenting handmade products from Brazilian biomes. These products all came from family agriculture producers whose presence was encouraged by the organizers of the space. The producers themselves answered questions from visitors who wanted to know more about timber and non-timber products from forests in Brazil's biomes. This was a great attraction at the exhibition and fair.



Figure 27. Sociobiodiversity Products Exhibition and Fair: some products from Brazilian biomes and their producers (A), (B), and (C).

Photos: Martin Sanchez Acosta (A), Morné Booji-Liewes (B) e Renata Kelly da Silva (C)



Visits by Curitiba school students

On Thursday, October 3, the day that some Congress participants went on technical visits to locations outside the Expo Unimed Curitiba venue, the fair and exhibition area was opened up to city school students for visitation (Figures 28A to 28C). Elementary and high school students were able to interact with researchers and technicians from the exhibiting institutions and broaden their knowledge about forests and related products.



Photos: La Imagem (A e C) e Renata Kelly da Silva (B)

Figure 28. Students from Curitiba schools visiting the exhibition and fair area (A), (B), and (C).



Women in the Forest photo exhibition

The fair and exhibition area also hosted a photo exhibition entitled “Women in the Forest” (Figures 29A to 29C). This initiative was coordinated by Rede Mulher Florestal, with support from Melhoramentos Papel e Celulose (CMPC) and Embrapa Forestry. Thirty images that focused on women in the forest sector were selected from the photos submitted by IUFRO2019 participants. The goal of the exhibition was to encourage reflection on building a path to gender equality, in line with Sustainable Development Goal 5.



A
Photos: Ana Margarida Castro Euler (A) e La Imagem (B e C)



Figure 29. Women in the Forest photo exhibition (A), (B), and (C).





7

SCIENTIFIC AND SIDE EVENTS AT THE CONGRESS

7

SCIENTIFIC AND SIDE EVENTS AT THE CONGRESS

Over the years during its many world congresses, IUFRO has perfected the structure of its scientific agenda. The current formats are plenary sessions, subplenary sessions, and technical sessions (oral and e-poster). Additionally, IUFRO also allows separately-organized side events to be held alongside the Congress in off hours and provides for what are called administrative sessions, organized by IUFRO's Divisions, Research Groups and Working Parties, offering chances for the members of these groups to meet and discuss their activities.

Plenary sessions

IUFRO2019 offered participants five plenary sessions related to the five themes of the Congress (Table 4). One of these attention-attracting sessions included panelist participation, which further enriched the approach to the topics presented. Some moments during the plenary sessions are depicted in Figures 30A to 30F.

Table 4. Plenary sessions of the XXV IUFRO World Congress Curitiba

| DATE | THEME | KEYNOTE SPEAKER | PANELISTS | SESSION MODERATOR |
|--------------|--|--------------------------------------|--|---------------------|
| September 30 | Forests and Climate Change | Werner Kurz | | Gerald Steindlegger |
| October 1 | Biodiversity, Environmental Services, and Biological Invasions | Suzanne Simard Ivonne Higuero | Andrea Vasquez Fernandez, José Carlos da Fonseca Junior, Pablo Pacheco, Peter Saile and Thais Linhares Juvenal | John Parrotta |
| October 2 | Forests for People | Purabi Bose Maria Chiara Pastore | | Björn Hånell |
| October 4 | Forests and Forest Products for a Greener Future | Vincent Gitz Francisco Razzolini | | Daniela Kleinschmit |
| October 5 | Forest, Soil, and Water Interactions | Meine Van Noordwijk Dipak Gyawali | | Shirong Liu |



**A****B**

Photos: La Imagem

**C****D****E****F**

Subplenary sessions

The subplenary sessions (**Annex 2**) at IUFRO2019 were organized and led by the CSC, which opted to hold one-hour sessions after lunch every day from Monday to Saturday (except on Thursday, the day of the technical visits).

Nineteen subplenary sessions were organized (Table 5) and divided into four daily sessions held simultaneously except for on Saturday, when there were three. Current and relevant topics were selected for each of the Congress themes. The sessions addressed subjects such as public policies, the issue of gender; integrated landscapes; Sustainable Development Goals (SDGS); genetic adaptation and assisted migration; adaptation, mitigation, and sustainable forest management; restoration and remediation of degraded environments; sustainable forest operations; agroforestry systems for ecosystem

Figure 30. Plenary Sessions during IUFRO2019: (A) (B), (C), (D), (E), and (F).



services; challenges to plant health; and sustainable jobs in the area of forest. Some of the supplementary sessions are depicted in Figures 31A to 31F.

Table 5. Number of supplementary sessions for each theme at IUFRO2019.

| SUBPLENARY SESSIONS | | |
|--|-----------|--------------|
| Theme | N | % |
| Forests for People | 4 | 21,0 |
| Forests and Climate Change | 3 | 15,8 |
| Forests and Forest Products for a Greener Future | 2 | 10,6 |
| Biodiversity, Ecosystem Services, and Biological Invasions | 4 | 21,0 |
| Forest, Soil, and Water Interactions | 1 | 5,3 |
| Communicating, Educating, Networking and Publishing | 5 | 26,3 |
| TOTAL | 19 | 100,0 |

During one of the supplementary sessions, the Outstanding Doctoral Research Award (ODRA) and the IUFRO Student Award for Excellence in Forest Sciences (ISA) were presented (Table 6). The awardees are depicted in Figure 31F.

Table 6. List of awards and respective winners.

| AWARD | WINNERS |
|---|--|
| Outstanding Doctoral Research Award (ODRA) | Andrea Hevia Cabal (Spain); Angela L. de Avila (Brazil/Germany); Ida Karin Wallin (Germany); Lichao Jiao (China); René Zamora-Cristales (Guatemala); Rubén Valbuena (Spain); Sarah L. Burns (Argentina); Verónica F. Loewe Muñoz (Chile); and Zhen Yu (USA). |
| IUFRO Student Award for Excellence in Forest Sciences (ISA) | Andrea M. Vasquez-Fernandez (Peru); Ange A. Raharivololoniaina (Madagascar); Katharina Albrich (Austria); Khalil Walji (Canada); Shankar Adhikari (Nepal); and Shourav Dutta (Bangladesh). |



Also within the context of the supplementary sessions, the Directors Forums was held in order to engage leaders of institutions, businesses, and academic institutions with a focus on transfer of knowledge, along with the Communicators Forum, which discussed changes in forest communication.



Figure 31. Some moments from supplementary sessions during IUFRO2019 (A), (B), (C), (D), and (E); the winners of the ODRA and ISA awards (F).



Photos: La Imagem



Technical sessions

In 2018, the COC launched a public call for papers on the IUFRO2019 website for technical sessions related to the five themes of the Congress. By the end of the submission period, the organizing committee received approximately 350 session proposals, which was the first indication that the event would be a success.

The CSC efficiently selected the proposed technical sessions, and considering aspects such as limits on physical space and time available, also proposed the merger of some sessions, resulting in a total of 182 technical sessions. In addition, seven technical sessions took place on a special theme that became a classic in past editions of the Congress: Communicating, Educating, Networking and Publishing. In this way, a total of 189 technical sessions (Table 7) were held at IUFRO2019 (**Annex 3**), with 195 session organizers. Approximately 20 sessions were held simultaneously in both the morning and afternoon, making it possible for the participants to choose the ones to attend according to their interest.

Table 7. Number of technical sessions for each theme at the IUFRO2019 Congress

| TECHNICAL SESSIONS | | |
|--|------------|--------------|
| Theme | N | % |
| Forests for People | 36 | 19,0 |
| Forests and Climate Change | 32 | 16,9 |
| Forests and Forest Products for a Greener Future | 59 | 31,3 |
| Biodiversity, Ecosystem Services, and Biological Invasions | 43 | 22,8 |
| Forest, Soil, and Water Interactions | 12 | 6,3 |
| Communicating, Educating, Networking and Publishing | 7 | 3,7 |
| TOTAL | 189 | 100,0 |

In the same way, after a call for papers the Congress organization received voluntary submissions of work as abstracts. The CSC selected 2,612 abstracts to comprise the scientific corpus of IUFRO2019: 1,648 oral presentations and 964 poster presentations. Some of the oral presentations being given are shown in Figures 32A to 32F.



Figure 32. Some moments from the technical sessions during IUFRO2019 (A), (B), (C), (D), (E), and (F).





Photos: La Imagem

Figure 32. Some moments from the technical sessions during IUFRO2019 (A), (B), (C), (D), (E), and (F).



E-poster sessions

Poster sessions were organized in a digital format – e-posters (Figures 33A to 33C), which was new for the IUFRO World Congress. For these sessions, 26 televisions were connected to a tablet and updated daily with all the presentations in this format.

The hall where the poster presentations took place was planned by an architecture firm that designed the area so that each TV terminal had enough space for its audience. These terminals were available for consultation and discussion throughout the Congress. Presentations were always scheduled from 12:30 to 1:30 pm; each poster presenter had six to eight minutes reserved for their presentation. A total of 964 e-poster sessions were presented over 128 sessions (**Annex 4**) related to one of the Congress' themes (Table 8).



Photos: La Imagem

Figure 33. Some moments from presentations and poster sessions during IUFRO2019 (A), (B), and (C).



Table 8. Number of technical e-poster sessions for each theme at the IUFRO2019 Congress.

| E-POSTER SESSIONS | | |
|--|------------|--------------|
| Theme | N | % |
| Forests for People | 19 | 14,8 |
| Forests and Climate Change | 26 | 20,3 |
| Forests and Forest Products for a Greener Future | 46 | 36,0 |
| Biodiversity, Ecosystem Services, and Biological Invasions | 23 | 18,0 |
| Forest, Soil, and Water Interactions | 11 | 8,6 |
| Communicating, Educating, Networking and Publishing | 3 | 2,3 |
| TOTAL | 128 | 100,0 |

Side events

IUFRO2019 provided the space and infrastructure (rooms with a computer, multimedia projector, and in larger rooms, a sound system) for side events. For additional demands, the COC recommended service providers to the organizers of the 31 side events ([Appendix 6](#)) held during the Congress related to the Congress' themes (Table 9).

Table 9. Number of side events for each theme at the IUFRO2019 Congress

| SIDE EVENT SESSIONS | | |
|--|-----------|--------------|
| Theme | N | % |
| Forests for People | 9 | 29,0 |
| Forests and Climate Change | 2 | 6,4 |
| Forests and Forest Products for a Greener Future | 5 | 16,3 |
| Biodiversity, Ecosystem Services, and Biological Invasions | 8 | 25,8 |
| Forest, Soil, and Water Interactions | 1 | 3,2 |
| Communicating, Educating, Networking and Publishing | 6 | 19,3 |
| TOTAL | 31 | 100,0 |



The side events involved different entities related to forest issues. Other groups were also able to organize discussion panels on specific topics, share research, discuss relevant forest issues, promote projects, programs, new technologies, or services, and also receive criticism and suggestions via interaction between the speakers and audience. The side events were also an excellent opportunity to strengthen networks and professional associations. Two moments of different side events are shown in Figures 34A and 34B.

Figure 34. Presentations at two different side events (A) and (B).



A

Photos: Paulo de Souza Cadoso Filho (A) e Morné Booij-Liewes (B)



B





SPECIAL CONGRESS SESSIONS



CPF

Wangari Maathai Award

Winner 2019

Leonidas Nzigiyimpa

In recognition of outstanding efforts to foster collaborative forest management, create local livelihoods, restore forests and honor the legacy of Wangari Maathai

28 September 2019

Hironi Mitangi
Chair, Collaborative Partnership on Forests



8

SPECIAL CONGRESS SESSIONS

Presentation of the Wangari Maathai award

Léonidas Nzigiyimpa (Burundi) received the Wangari Maathai Forest Champions Award in recognition of his great commitment and contribution to improving forests and the lives of indigenous peoples, women, and young people in his country. He was presented the award by FAO's Assistant Director-General for forests, Hiroto Mitsugi (Figure 35A) and spoke to the audience (Figure 35B).

This award has been offered by the Collaborative Partnership on Forests (CPF) since 2012. Nzigiyimpa has worked for food security and rights among the local populations in his country. One of his main lines of action has been to improve the education of indigenous people, women, and youth in areas such as ecology, forest restoration, and sustainable forest management.

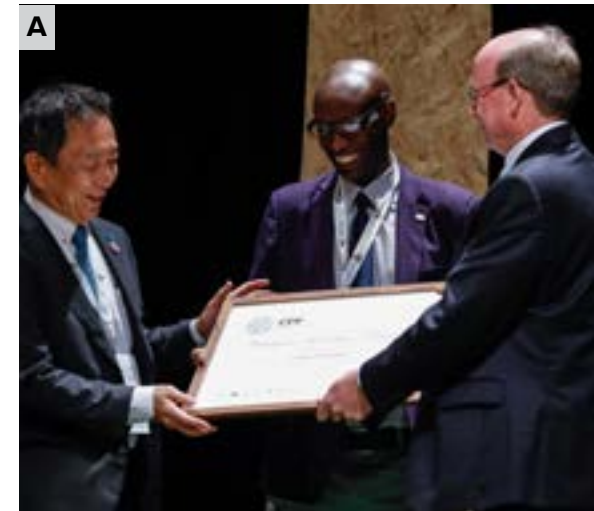


Figure 35. FAO Assistant Director-General Hiroto Mitsugi (left), presenting the 2019 Wangari Maathai Award to Léonidas Nzigiyimpa (center), and IUFRO President Mike Wingfield (right) (A); speech by Léonidas Nzigiyimpa (B).

Photos: La Imagem



Cooperation for sustainability - declarations from IUFRO's partners

During the IUFRO2019 Congress there was a special session aimed at the entity's key international partners (Figure 36A). The session took place following the presentation of the Wangari Maathai Award on Monday, September 30, prior to the welcome ceremony organized by IUFRO. The session was moderated by IUFRO Executive Director Alexander Buck. It also featured presentations by Ingwald Gschwandtl, Director of Forestry Policy and Forest Information at the Austrian Federal Ministry for Sustainability and Tourism, Head of the U.S. Forest Service Vicki Christiansen (Figure 36B), Executive Director of the International Tropical Timber Organization Gerhard Dieterle, and Barbara Tavorá-Jainchill, the representative from the UN Forum on Forests.



Figure 36. Representatives from IUFRO's partner institutions (left to right): Ingwald Gschwandtl (Government of Austria), Vicki Christiansen (United States Forest Service), Alexander Buck (IUFRO), Barbara Tavorá-Jainchill (UNFF), and Gerhard Dieterle (ITTO) (A), and participation by the head of the U.S. Forest Service Vicki Christiansen during the Cooperation for Sustainability session (B).





9

WORKING MEETINGS AT THE CONGRESS

9

WORKING MEETINGS AT THE CONGRESS

IUFRO administrative meetings

The IUFRO administrative meetings were individually or jointly organized by IUFRO's research groups, working parties, task forces, and special programs. It was also a special opportunity for the nine divisions of IUFRO to hold their specific meetings with their usual members, new members, and people interested in each theme. These meetings were open to Congress participants and addressed administrative issues related to the different units of IUFRO. A total of 51 meetings were held during IUFRO2019.

Meeting of the IUFRO International Council

IUFRO's International Council meets during its world congresses. During IUFRO2019 the meeting, which lasted 4 hours, was held on Wednesday, October 2, at the Expo Unimed Curitiba center, following a previously established schedule. The political future and guidance for IUFRO (the

IUFRO strategy after 2019) as well as the location of the 2024 IUFRO World Congress were presented to the members of this council, as well as the new president of IUFRO and its vice-presidents and leadership. Around 50 delegates participated in the meeting as the official representatives of their countries (Figures 37A and 37B).



Figure 37. Meeting of the International Council (A) and (B).



Photos: La Imagem



Meetings of the Management Committee and the IUFRO Enlarged Board prior to the Congress

The COC also organized IUFRO's two main meetings of the 2014–2019 leadership. During each administration, these meetings take place during the week prior to the World Congress.

The meeting of the IUFRO Management Committee (MC) was held on September 25 at the Four Points by Sheraton Curitiba Hotel in Curitiba.

During the meeting of the MC, IUFRO's leaders were informed of the final details of the event and participated in the decision-making process on measures yet to be taken. The biannual report on the institution's administrative activities was given, and preparations were made for the meeting of the Enlarged Board, where more institutional coordinators are present. Issues related to the nine divisions of IUFRO were presented and discussed, along with the results obtained from the task forces, new

proposals and other IUFRO programs, institutional strategies, financial aspects, and international cooperation, among other issues.

Besides the IUFRO president, the vice-presidents, representative for the divisions and for the IUFRO Headquarters, one of the members of the COC for IUFRO2024 (in Stockholm, Sweden), the next World Congress, had and will continue to have a seat at the meetings, which is customary during the four years preceding the event. The Brazilian team participated in all meetings of the MC from 2014 to 2019, as a members of this committee. At the meeting, which took place in September 2020, the COC for IUFRO2019 participated in order to present its report on this event.

The 58th meeting of the IUFRO Enlarged Board took place on September 26 and 27, also at the Four Points by Sheraton Curitiba Hotel in Curitiba, and included members of the Management Committee and the coordinators and deputy coordinators of IUFRO's nine divisions (Figure 38). At this event, the coordinators of the divisions reported on their work over the last four years, and the new coordinators were presented to the other members. The issues discussed and prepared during the meeting of the MC were shared with this group, which suggested improvements and adopted guidelines and proposals. In keeping with tradition, IUFRO held a dinner for the Enlarged Board on September 26 at a restaurant in Curitiba.

Figure 38. Official photo of the IUFRO Enlarged Board during its meeting in Curitiba the week prior to IUFRO2019.



Photo: Maristela Avila Abrantes



10 CONGRESS TECHNICAL VISITS



10

CONGRESS TECHNICAL VISITS

Pre-Congress technical visit

The pre-Congress trip was organized by Embrapa Forestry, with support from the Malinovski Consultoria Florestal company, and included seven foreign researchers.

The trip included visits to Brazil's leading forest companies in terms of technology (Westrock, Scancom, Klabin, and Suzano) and PETAR, the Alto Ribeira State Park, which includes a set of caves amid the Atlantic Forest (Figure 39A to 39C).



Figure 39. Technical visit to forest companies: plantations (A) and internal area (B); visit to the PETAR cave complex (C).

Five other five trips prior to the Congress were organized and offered to the participants, but were canceled due to low demand.

Photos: Edina Regina Moresco



Technical visits during the Congress

On Thursday, October 3 the traditional technical visits of the IUFRO Congress took place. Fourteen excursions were organized offering various opportunities for participants to learn more about forest research conducted in Paraná (Figures 40A and 40B). The technical visits, which were organized with support from the department of forest engineering at UFPR, brought together technical and cultural experiences. The options were varied: areas of scenic interest, forest companies, traditional communities, or research institutions (**Appendix 7**).



Figure 40. Technical visits during the IUFRO Congress (A) and (B).



Furthermore, at the request of a group of Croatian researchers, a technical visit was arranged to a farm located in Quatro Barras (greater Curitiba region) which focuses on planting *Pinus taeda* for commercial purposes. Plantations with individual trees of different ages were shown, as well as trees of the same age to demonstrate the influence of site and climate. The group also visited Embrapa Forestry in Colombo (greater Curitiba region), where they could see plantations of different eucalyptus species which were used to study the adaptation of this species to Brazil. They also visited the arboretum and the Araucaria orchard where techniques are developed to graft *Araucaria angustifolia* and achieve early production of pine nuts from smaller trees.

A group of Chinese researchers interested in soils expressed interest in visiting some wetland areas. A researcher at Embrapa Forestry

specialized in soils accompanied the group to an area in the Curitiba sedimentary basin in Piraquara (greater Curitiba). The group was able to experience the differences between the soil layers in this type of area, using their different senses (Figures 41A to 41C). The impact of human activities and constructions were also visible, not only in the consistency of the soil but also in the vegetation, comparing areas that are closer or farther from the roadbed.

Figure 41. Technical visit to wetland area (A), (B), and (C).



Post-Congress technical visit

Twenty-four participants went on a technical visit to the Amazon biome, organized by Malinovski Consultoria Florestal with support from Embrapa and INPA (Figures 42A and 42B). They were able to see the management and processing of certified tropical timber (Precious Wood Amazon - PWA), visit forest research institutes (INPA and Embrapa), and see research on forest practices (Aruanã Farm) and management. At the end of the technical visit, they also went on a sightseeing tour in Manaus and the surrounding region, sailing on the Amazon River and visiting riverine areas.

Four other post-Congress trips were organized and offered to the participants, but were canceled due to low demand.



A

Photos: Rafael Malinovski

Figure 42. Participants in the forest during the technical visit to the Amazon Biome (A) and the forest industry in the region of Manaus (B).



B





 **iufro 2019**
Curitiba - Brazil
SEPT 29 - OCT 5

11

SOCIAL EVENTS AT THE CONGRESS

11

SOCIAL EVENTS AT THE CONGRESS

Opening cocktail hour for the exhibition and fair

The opening cocktail for the fair and exhibition organized by the COC was held on the first day of the event, September 29, and brought together approximately 1,100 participants a continuous space between the exhibitors and the entrance hall.

The ceremony included speeches by Embrapa researcher and COC co-Chair Yeda Maria Malheiros de Oliveira (Figure 43A); IUFRO President Mike Wingfield; SFB Director-General Valdir Colatto; and researcher Sandra Regina Afonso, coordinator of the Sociobiodiversity Products Exhibition and Fair, one of the highlights of the Congress in Brazil.

After everyone spoke, the ribbon was officially cut by the SFB director-general and IUFRO president (Figure 43B), and then visitors began to explore the exhibits. The cocktail hour featured foods prepared with products from the forest and they were served to the sound of Brazilian music (Figure 43C). This gave Congress participants a chance to explore Expo Unimed Curitiba, register for the event, and pick up their materials, avoiding lines and crowds the following day when the opening ceremony was held and the technical sessions began.



Figure 43. Speech by IUFRO2019 COC co-Chair Yeda Maria Malheiros de Oliveira, during the opening of the fair and exhibition (A); ribbon cut by SFB Director-General Valdir Colatto and IUFRO President Mike Wingfield (B); and opening cocktail for the fair and exhibition (c).



IUFRO welcome reception

The opening cocktail reception offered a time to relax and interact with the other Congress participants as well as with the sponsors of IUFRO2019. This reception was less formal than the other ceremonies and had no speeches; it was meant to provide a chance for participants to meet old friends, mingle, and get to know other Congress participants. The reception was held on September 30, shortly after the presentation of the Wangari Maathai Award and the “Cooperation for Sustainability - declarations from IUFRO’s partners” session, which included statements by important IUFRO partners. It took place in the lounge and fair/exhibition space in the convention center, and had good attendance by Congress participants, who experienced the musical attractions and visited the social areas of this event.

President’s dinner

The President’s dinner was held on Tuesday, October 1, at the Bobardi restaurant for approximately 110 guests, including sponsors and key partners, award winners, lecturers, and directors of the institutions that organized IUFRO2019.

Alexander Buck, IUFRO’s Executive Director, made an introductory presentation (Figura 44A) and was followed by IUFRO’s President at that time, Mike Wingfield, who spoke of IUFRO’s achievements and plans, recognizing the importance of activities by the guests in constructing the history of the organization (Figura 44B).

The IUFRO’s president and WWF’s representative signed a Memorandum of Understanding establishing formal collaboration in order to contribute more strongly to the two organizations’ shared goal of advancing sustainability and nature conservation (Figura 44C).



Figura 44. IUFRO Executive Director Alexander Buck (A); a speech by IUFRO President Mike Wingfield during the dinner (B); Mike Wingfield (IUFRO) and Pablo Pacheco (WWF) shaking hands after signing a Memorandum of Understanding (C).

Photos: La Imagem (A e B) e Morné Booij-Liewes (C)



Gala dinner

About 1,300 people attended the gala dinner held at Madalosso (Figure 45A); this is one of the largest restaurants in the world in terms of capacity, and is located in Curitiba's traditional Italian dining district. The menu offered various options

and traditional Brazilian sweets for dessert. Participants were also able to taste wines produced by one of Embrapa's Decentralized Units (Uva e Vinho – Grape and Wine, in Bento Gonçalves, in the state of Rio Grande do Sul).

The dinner featured live music and Mocidade Azul, a samba school from

Curitiba (Figure 45B). Participants were able to try out dance steps with guidance from the samba dancers; this was followed by live and electronic music that brought everyone onto the dance floor. Two photo booths were provided so that participants could capture and celebrate the moment.

Figure 45. Gala dinner (A) and presentation by one of Curitiba's samba schools following the dinner (B).



Photos: La Imagem



12 INITIATIVES FOR YOUTH AND YOUNG SCIENTISTS TO PARTICIPATE IN THE CONGRESS



12

INITIATIVES FOR YOUTH AND YOUNG SCIENTISTS TO PARTICIPATE IN THE CONGRESS

Volunteer program

The Volunteer Program at the IUFRO2019 Congress was coordinated by Embrapa Forestry and UFG. The IUFRO2019 Congress Volunteer Program was intended to engage students in supporting the event through volunteering, and also provided an opportunity for them to participate actively in the technical discussions.

The selection process was open, and widely publicized. Eligibility was restricted to students enrolled in undergraduate or graduate programs (master's or doctorate) in forest engineering or related fields who spoke at least two languages and were able to volunteer every day during the Congress. Ninety-three participants were selected: 81 Brazilians representing 16 states and 5 regions of Brazil, as well as students from Argentina, Colombia, Cuba, Ethiopia, Ghana, Italy, Mozambique, Peru, and South Africa. The volunteers were exempted from registration fees and received training on September 27 and 28 (Figure 46A to 46C).



Figure 46. Volunteer training course: instructor and organizer, Patricia Povia de Mattos (A); training instructor and organizer Sybelle Barreira and some volunteers (B); from left to right: Sybelle Barreira, COC Chair Joberto Veloso de Freitas, a volunteer from Mozambique, and Patricia Povia de Mattos (C).



The students' activities during the event were divided into shifts for registration, distribution of materials, and support for Congress participants in receiving their work and during the oral and e-poster presentations (Figure 47A). Students were also required to participate in a technical visit. At the end of the event, the volunteers received a certificate of participation in the IUFRO2019 volunteer program (Figure 47B).

**A**

Photos: La Imagem (A) e Pollyni Ricken (B)

**B**

Figure 47. Volunteers (blue shirts) providing support during various activities at the Congress (A) and a group of volunteers in front of the IUFRO2019 logo (C).



IFSA-IUFRO Mentoring Initiative

The IFSA-IUFRO Mentoring Program for the 25th IUFRO World Congress brought together experienced scientists, forest professionals, and academic representatives interested in sharing their knowledge with younger students just starting out in their forest science careers (post-doctorate students and researchers in the first five years of their career). Interacting, learning, and discussing ideas and experiences were ways to bring together people and science, in this case starting from meetings during the week of the event.

Interested parties from both sides expressed their interest through the IUFRO2019 website, and the IFSA staff matched them according to common interests. In meetings during the Congress, the mentors shared their experiences and knowledge and the mentees had an opportunity to ask questions and share their visions, interests, and expectations for the future.

Sixty-nine students and early-career researchers were matched as part of the scientific guidance program, which was organized according to three topics: i) mentoring of scientific content; (ii) mentoring between pairs at the Congress, and (iii) mentoring in the IUFRO divisions (Figure 48).



Figure 48. IUFRO Division Mentoring meet-up session with the participation of 35 students/early-career researchers.



Incubator Initiative (IUFRO)

An initiative by the CSC and IFSA, the IUFRO Incubator offered the opportunity for 21 graduate students and recent graduates to submit an oral summary of their senior project/master's thesis/doctoral dissertation in the "three-minute thesis" format with one slide. Presentations were given in English, Portuguese, and Spanish.

The short presentations dealt with one or more of the five Congress themes, and the sessions were moderated by representatives from IFSA. The presentations were made available electronically on the IUFRO2019 page.

Making the Most of the Congress – Congress Dynamics

This 90-minute session was held in the afternoon of September 29 and was organized by the IUFRO-SPDC for first-time participants in the World Congress. The Making the Most of the Congress session gave participants an overview of what to expect at IUFRO2019, including information about the Expo Unimed Curitiba center, introductions to the scientific program and other events at the Congress, recommendations on networking and exchanging information so that the participants could get the most from this first experience. The participants sponsored by SPDC/SAP were also encouraged to participate in the Making the Most of the Congress session (Figures 49A and 49B).



Photos: Martin Sanchez Acosta



Figure 49. Project manager for IUFRO2019 Erich Gomes Schaitza during Making the Most of the Congress (A) and the audience at the session (B).



IUFRO Special Programme for Development of Capacities (SPDC)

As part of its usual policy, SPCD/SAP (led by Michael Kleine) made every effort to provide travel grants for forest scientists from economically disadvantaged countries in Africa, Asia, Latin America, and Eastern Europe to participate in the Congress. For IUFRO2019, two programs were utilized: (a) support for early-career scientists (SAP) and b) support based on projects for scientists who collaborate on projects in the SPDC's thematic networks. –

Scientists involved in research and education related to forests whose work was approved for presentation at the Congress were encouraged to apply for the grants. There were more than 1,000 requests for financial support.

The ideal candidates were forest scientists working at IUFRO partner institutions at the beginning or

middle of their careers (under 46 years of age), but scientists from other institutions were equally considered for sponsorship under this program. In order to provide balanced opportunities, geographic location and gender were considered. Candidates that had not received financial support to participate in previous congresses were given priority.

A total of 103 forest scientists from economically disadvantaged countries in Africa, Asia, Latin America, and Eastern Europe received support to participate in IUFRO2019 (Figure 50A).

Gender balance was achieved with resources from SPDC/SAP helping 54% women scientists and 46% male scientists (Figure 50B). As for geographic balance, SPCD/SAP provided the most support to scientists from Latin America (around 40%), since this was the first time that a IUFRO World Congress was held in South America. Scientists from Africa and Asia each received approximately

30% of the sponsorship from this program.

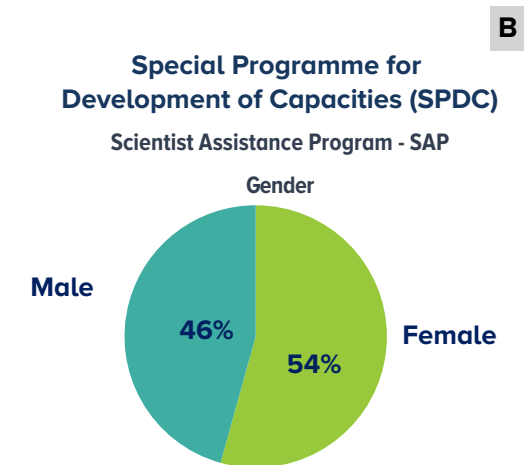
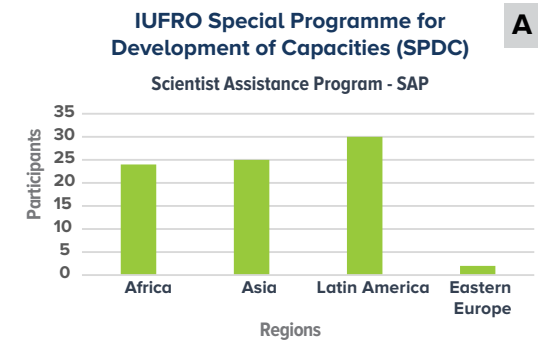


Figure 50. Scientists sponsored by SPDC/SAP, according to region of origin (a) and gender (b).



Support based on projects was provided to 22 scientists in Africa, Asia, and Latin America who are currently involved in a thematic network project by the SPDC and funded by donations from the German Ministry of Environment, Nature Conservation, and Nuclear Safety (BMU) (Figure 51A). Furthermore, SPCD funded the participation of another 13 scientists from various countries at IUFRO2019, who were hired to work with the SPDC as workshop instructors, other specialists, or as consultants in communication and dissemination in forest science. Figure 51B shows the percentage of the different types of sponsorship to support forest scientists from economically disadvantaged countries in Africa, Asia, Latin America, and Eastern Europe through (Special Programme for Development of Capacities) SPDC.

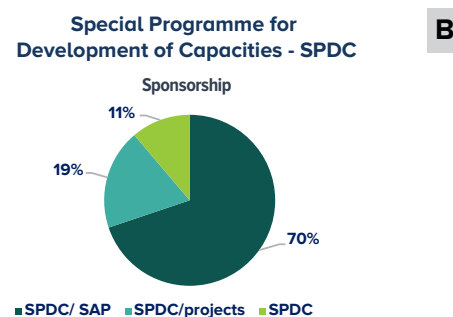
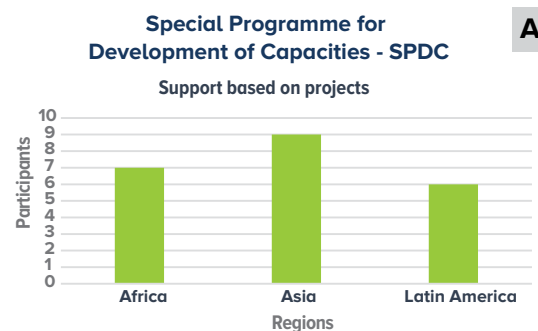


Figure 51. Scientists sponsored by thematic network project (donation from the German BMU) according to region of origin (a) and share of different types of sponsorship (b).



Seventy-five sponsored scientists participated in the SPDC Pre-Congress training workshops (Figures 52A and 52B), which were free of charge, and were able to choose from four options that were held in parallel sessions during September 26, 27, and 28, 2019:

- Scientific methods in forest research (conducted in English);
- Systematic review in forest sciences (conducted in English) (Figure 52C);
- Implementing forest landscape restoration in Africa and Asia (conducted in English);
- Implementing forest landscape restoration from Latin America (conducted in Spanish: *La práctica de la restauración de los paisajes Forestales*) (Figure 52D).



Figure 52. The coordinator of SPDC/SAP, Michael Kleine, opening the training workshops (A); young scientists sponsored by SPDC (B); Gillian Petrokofsky (Oxford University, United Kingdom) with participants at the Systematic Review in Forest Sciences workshop (C); and Róger Villalobos (CATIE, Costa Rica) with participants in the workshop Implementing Forest Landscape Restoration in Latin America (D).

Photos: Eva-Maria Schimpf (A e D); Ivan Lakydo (B) e William Harvey (C)



13 CONGRESS PARTNERS



13

CONGRESS PARTNERS

IUFRO2019 was only successful because of many efforts and contributions, which were classified into different categories of support. Besides the individuals mentioned in the acknowledgments, who donated their time and energy to organizing and putting on the event, the first institution to be highlighted is the international host itself, IUFRO. Leading the organization of world congresses on forest research for nearly 130 years, IUFRO encouraged Brazil in its bid to organize the XXV World Congress. The SFB and Embrapa, the national hosts, worked together on this hosting bid and took on the commitment to organize the Congress when Brazil was selected from among eight other proposals. Initially the SBF was part of the Ministry of the Environment, but in 2019, it moved to the Ministry of Agriculture, Livestock and Food Supply; both ministries were essential in hosting this event. Figure 53 shows the panel displaying the international and national hosts at the Congress venue.



Photo: La Imagem

Figure 53. Logos of international and national organizers.



A scientific congress cannot take place without academic partnerships. UFPR, ESALQ (linked to the University of São Paulo), UFV, all of which offer the oldest forest engineering programs in Brazil, along with the UFG, are associated with IUFRO and were invited to be part of the COC. Professors and researchers were appointed by the departments of forest engineering at these institutions to be part of the COC, and led or participated in the different subcommittees. One of the important international partners in the technical area was the Argentine National Institute of Agricultural Technology (INTA).

Some co-business partners were present at the fair and exhibition, while others contributed resources, products, and gifts for Congress participants, as well as other forms of cooperation. Special sponsors include Berneck Brasil, Klabin S/A, Rede ILPF (the Crop-Livestock-Forest Integration Network), and Suzano S/A. Other key partners, listed in alphabetical order: Asia-Pacific

Network for Sustainable Forest Management and Rehabilitation (APFNet), the Chinese Academy of Forestry (CAF), Melhoramentos Papel e Celulose (CMPC), Oficina de Textos, Elsevier, Federal Ministry of Education and Research (Research in Germany - Land of Ideas), Forestry and Forest Products Research Institute (FFPRI), Forest Stewardship Council (FSC), Haglöf Sweden, Ibema Papelcartão, the Brazilian Tree Industry (IBÁ), Institute for Forest Research and Studies (IPEF), International Bamboo and Rattan Organisation (INBAR), International Centre for Bamboo and Rattan (ICBR), International Council of Forest & Paper Associations (ICFPA), International Paper, International Wood Culture Society (IWCS)/ World Wood Day (WWD), Joanneum Research Forschungsgesellschaft mbH, Lim Geomatics Inc., Marconi Laboratory Equipment, National Institute of Forest Science (NIFos, Republic of Korea), Brazil's Investment Plan for the Forest Investment Program (FIP/World Bank), Remasa Reflorestadora S/A,

Society for Forest Research at the UFV/Sustainable Steelworks Project, STCP Consultoria - Engenharia -Gerenciamento, Syngenta Brazil, Sysflor Forest Certifications, The Finnish Society of Forest Science (Silva Fennica), International Tropical Timber Organization (ITTO), United Nations Development Program (UNDP), University of British Columbia (UBC), and the XPrize Foundation.

In addition, support for the Congress organization was provided in various ways by the following institutions: the Brazilian Center for Technological Research (CNPq), IUFRO2024 Congress Organizing Committee, Curitiba and Region Convention & Visitors Bureau (CCVB), Brazilian Tourist Board (Embratur), Food and Agriculture Organization of the United Nations (FAO), Araucária Foundation, Foundation Eliseu Alves (FEA), Brazilian National Supply Company (CONAB), Government of the State of Paraná/Paraná State Secretariat of Agriculture and Supply, Curitiba Tourism Institute, Botanical



Garden of Curitiba, the Curitiba Municipal Botanical Museum, Curitiba Municipal Government.

IUFRO2019 also received support from the following organizations: Bahia Association of Forest-Based Companies (ABAF), Brazilian Association of the Mechanically Processed Wood Industry (ABIMCI), Santa Catarina Association of Forest Enterprises (ACR), Minas Gerais Association of Forest-Based industry (AMIF), Paraná Association of Forest-Based Companies (APRE), Mato Grosso do Sul Association of Producers and Consumers of Planted Forests (REFLORE MS), Brazilian Federal Council of Biology (CFBio), São Paulo Association of Producers, Suppliers, and Consumers of Planted Forests (FLORESTAR), Rede Mulher Florestal, and the Aroma Park Network.

No event can achieve its goals without communications support. In addition to the Congress organizing institutions' press teams, the following were fundamental for publicizing IUFRO2019: Malinovski/

Viagens Técnicas, Forests/MDPI, Interact - Communication and Press Consulting, Portal Revista Referência, and Mais Floresta/Paulo Cardoso Comunicações.

Figure 54 shows the panel displaying the international and national partners at the Congress venue.



Figure 54. Logos of partnering organizations.

Photo: La Imagem



FAO breakfast

FAO Brazil was a very important partner for the Congress. One successful initiative was a breakfast held by the organization on April 6, 2018 at its headquarters in Brasília. The goal of the meeting and the reason it was held in Brasília was to present the IUFRO2019 Congress to different audiences with a focus on entities within the federal government, the Brazilian Congress, and representatives of corporations linked to the agricultural sector and the Ministry of Agriculture, Livestock, and Food Supply (Figures 55A to 55C). This initiative came from the FAO's representative to Brazil at that time, Alan Bojanic, and was attended by the leaders of the SFB and Embrapa, along with invited officials.



Photos: Palova Souza Brito

A

Figure 55. FAO Brazil representative Alan Bojanic, during his speech at the start of the FAO Breakfast, with Yeda Maria Malheiros de Oliveira and Joberto Veloso de Freitas (IUFRO2019 COC co-Chair and Chair) in the back (A); event participants (B); and, from left to right, members of the SFB team, Alan Bojanic, Joberto Veloso de Freitas, and Yeda Maria Malheiros de Oliveira (C).



B



C



Curitiba and Region Convention & Visitors Bureau and Curitiba Ambassador Prize

The Curitiba and Region Convention & Visitors Bureau (CCVB) is a nonprofit entity supported by private initiative in order to contribute to the integrated development of Curitiba and its metropolitan region. CCVB has been a IUFRO2019 partner from the very beginning, since Curitiba decided to compete in the Congress site selection process. It supported the team from Embrapa and SFB from the first trip to Costa Rica (2013), where Brazil was pre-selected; host status was later confirmed in Salt Lake City at IUFRO2014. CCVB was also important in presenting the project to Embratur, in partnership with the sponsoring institutions, and helped publicize the Congress among domestic and international travel up until the event took place.

The organization conducted a survey in partnership with the Curitiba Municipal Tourism Institute and OBSTUR/UFRP, interviewing 108 people during IUFRO2019. The objective of this survey was to collect data on tourist demand for events in Curitiba.

CCVB also awarded the Curitiba Ambassador Prize to the organizers of IUFRO2019, as contributors to development in the city (Figures 56A and 56B). The award was presented on November 21, 2019.

Figure 56. Curitiba Ambassador Prize presented to the COC members present at the event. From left to right: COC assistant Maristela Avila Abrantes; IUFRO2019 Project Manager Erich Gomes Schaitza; COC co-Chair Yeda Maria Malheiros de Oliveira; Director-Superintendent of SEBRAE-PR Vitor Roberto Tioqueta; and COC Chair Joberto Veloso de Freitas – from mailer depicting the award ceremony, front (A) and back (B).



Congress legacy: from trash to treasure - transforming discarded wood into art in Curitiba

Wood from pruning and fallen trees can be an important asset for the circular bioeconomy. The “Madeira nas Arcadas” is an association of artisans, artists and designers who were united on the occasion of the IUFRO2019. During the event the Mayor of the city, Rafael Greca, launched a challenge to the members of the group, which would be to continue the activities in a space negotiated with the city Institute of Tourism, in a privileged tourist location, the Arcades of San Francisco Gallery. These artisans embraced the opportunity and, working in association since December 2019, have a shop at the gallery, with many visitors and visibility, which tends to expand the association, always focusing on wood: new, laminated, recycled, or waste, and its by-products, such as paper and cardboard.

Due to its originality, the organizers of the 13 International Seminar NUTAU 2020, invited Dr Yeda Maria Malheiros de Oliveira, researcher at Embrapa Forestry for a presentation at the event. The main focus of the seminar was “Urban forest waste valuing and potential for research and projects on urbanism, architecture and design”. The talk and abstracts “Madeira nas Arcadas: from forest science to sustainable design” was presented at the “Axes of approach 2 – Projects and experiences in urban trees waste valuing available at: (<https://www.proceedings.blucher.com.br/article-list/nutau2020-350/list#articles>). As this one, new opportunities have emerged, with the network of contacts widening. (Photos by Vera Lúcia Eifler e Yara Malheiros de Oliveira).



APPENDIX



Appendix 1: List of Acronyms

| Institutions | |
|-------------------|---|
| APFNet | Asia-Pacific Network for Sustainable Forest Management and Rehabilitation |
| BMU | Ministry of Environment, Nature Conservation and Nuclear Safety |
| CATIE | Centro Agronómico Tropical de Investigación y Enseñanza |
| CCVB | Curitiba e Região Convention & Visitors Bureau |
| CNA | Brazilian Confederation of Agriculture and Livestock |
| CNPq | National Council for Scientific and Technological Development |
| Conab | Brazilian National Supply Company |
| SIRE/Embrapa | Brazilian Agricultural Research Corporation |
| Embratur | Brazilian Tourist Board |
| ESALQ | Luiz de Queiroz Superior School of Agriculture |
| FABI | Forestry & Agricultural Biotechnology Institute |
| FEA | Eliseu Alves Foundation |
| FFPRI | Forest and Forest Products Research Institute |
| FIP/Banco Mundial | Forest Investment Program/World Bank |
| FUPEF | Forest Research Foundation of Paraná |
| FSC | Forest Stewardship Council |
| GIZ | Gesellschaft für Internationale Zusammenarbeit |
| IBAMA | Brazilian Institute of Renewable Natural Resources |
| IFSA | International Forestry Students' Association |
| INBAR | International Bamboo and Rattan Organisation |
| INPA | Brazilian National Institute on Amazon Research |
| INTA | Argentine National Institute of Agricultural Technology |
| IPEF | Institute of Forest Research and Studies |
| ITTO | International Tropical Timber Organization |
| IUFRO | International Union of Forest Research Organizations |
| IWCS/WWD | International Wood Culture Society/World Wood Day Foundation |
| KfW | Kreditanstalt für Wiederaufbau |
| MAPA | Ministry of Agriculture, Livestock, and Food Supply (Brazil) |
| MCTI | Ministry of Science, Technology and Innovation (Brazil) |

| | |
|---------------|---|
| MMA | Ministry of the Environment (Brazil) |
| OBSTUR/UFPR | Tourism Observatory of Paraná/UFPR |
| NUBiP | National University of Life and Environmental Sciences of Ukraine |
| Rede ILPF | Crop-Livestock-Forest Integration Network |
| SFB | Brazilian Forest Service |
| SIF | Forest Research Society |
| SIRE/Embrapa | Secretariat of Intelligence and Strategic Relations |
| Silva Fennica | The Finnish Society of Forest Science |
| UBC | University of British Columbia |
| UDESC | Santa Catarina State University |
| UFG | Federal University of Goiás |
| UFPR | Federal University of Paraná |
| UFV | Federal University of Viçosa |
| UN | United Nations |
| USDA | U.S. Department of Agriculture |
| USP | University of São Paulo |
| WWF | World Wide Fund for Nature |

| IUFRO | |
|-------|---|
| COC | Congress Organizing Committee |
| CSC | Congress Scientific Committee |
| EB | Enlarged Board |
| GFEP | Global Forest Expert Panels |
| GFIS | Global Forest Information Service |
| MC | Management Committee |
| SAP | Scientist Assistance Programme |
| SPDC | Special Programme for Development of Capacities |
| WFSE | World Forests, Society and Environment |



Appendix 2: Acknowledgment of the Persons Who Helped Organize IUFRO2019

Many people contributed to the organization of IUFRO2019, so many that it is practically impossible to thank every single one. If anyone has been left out, we apologize in advance!

We thank the following officials for their support: Minister of Agriculture, Livestock, and Food Supply Tereza Cristina Corrêa da Costa Dias; Embrapa President Celso Luiz Moretti; SFB Director-General Valdir Colatto; Paraná State Governor Carlos Roberto Massa Júnior (Ratinho Júnior); Curitiba Mayor Rafael Greca; and UFPR vice-rector, Graciela Inez Bolsón de Muniz.

Special thanks to the IUFRO Enlarged Board, the IUFRO Management Committee; other members of the nine IUFRO Divisions, the IUFRO Secretariat, the coordinators and members of the IUFRO programs: SPDC-SAP, SilvaVoc Terminology, GFEP, WFSE, and GFIS. Also thanks to the following for their hard work: the COC members, CSC Chair and other members, leaders and members of the COC subcommittees, those connected to our partner institutions (UFG, UFPR, USP, and UFV), the director-president and other members of FEA, and the MCI-Brazil team.

We also cannot fail to acknowledge invaluable help from the directors-general of the SFB Antonio Carlos Hummel (2009–2013), Marcus Vinícius da Silva Alves (2014-2015), and Raimundo Deusdará Filho (2015–2019); Embrapa president Mauricio Antonio Lopes (2012-2018); head of Embrapa Forestry Edson Tadeu Iede (2013-2019); the president of IUFRO2014 Richard W. Guldin and the members of his team, Daryl Lederle and Jennifer Hayes; and FAO's representative in Colombia, Alan Bojanic.

Executive Director of Espaços Positivo Marcelo Bueno Franco was especially helpful, along with business consultant Cristine Fabbris.

Deepest thanks to the directors and presidents of FEA: Alexandre Barcellos (2015–2018) and José Manuel Cabral de Sousa Dias (November 2019–); Jorge Antonio Menna Duarte and Maria José Amstalden Sampaio (Embrapa/SIRE); and the communications specialists at the Embrapa units who promptly responded to requests for support: Ana Lúcia Ferreira Gomes (Agrobiology), Gabriel Rezende Faria (Agrosilvopasture), José Heitor Vasconcellos (Corn and Sorghum), Mauricília Pereira da Silva (Agroenergy), Priscilla Viudes (Acre), Renata Kelly da Silva (Rondônia), Sabrina Maria Morais Gaspar (Eastern Amazonia), and Vinicius Kuromoto (Agriculture and Livestock IT).

We are especially grateful to our colleagues at Embrapa Forestry who helped organize the Congress during the years preceding the event, as well as those who went above and beyond to help during IUFRO2019: Adriana Kinoshita Minami



Miyamoto, Alison Luiz Skroch, Ana Maria Cominese, Ana Lúcia Matias Vieira, Ananda Virginia de Aguiar, Aparicio Schileider, Arielly Francillene do Nascimento Nunes, Arnaldo de Oliveira Soares, Betania Busato Watanabe, Carlos Eduardo Sícoli Seoane, Carla Castellano, Carlos Roberto Urio, Claudia Maria Garbuio, Claudiana Eugenio Rogerio, Cristiane Vieira Helm, Daiane Rigoni, Daniele Otto, Dayanne Regina Mendes Andrade, Dayse Aparecida Gonçalves Fernandes, Denise Jeton Cardoso, Edelberto Gebauer, Edilson Batista de Oliveira, Edina Regina Moresco, Elenice Fritzsons, Elisa Serra Negra Vieira, Elisabete Marques Oaida, Emiliano Santarosa, Fabio Cooper, Francisca Rasche, Gerson Rino Prantl Oaida, Guilherme Schnell e Schühli, Ivar Wendling, Ives Clayton Gomes dos Reis Goulart, Jairo Dolvim Dantas, Janaina Cassia Campos, João Francisco Adrien Fernandes, Johann Henri de Cristo Bade, Jonatas Gueller, José Mauro Magalhães Ávila Paz Moreira, Josiléia Acordi Zanatta, Juliana Degenhardt Goldbach, Kristle da Silva, Leonardo Rodrigues Barbosa, Leticia Andréia Nichele, Luciane Cristine Jaques, Lucilia Maria Parron Vargas, Luís Cláudio Maranhão Froufe, Luziane Franciscon, Marcela Guiotoku, Marcelo Francia Arco-Verde, Márcia Toffani Simão Soares, Marcos Fernando Glück Rachwal, Maria Augusta Doetzer Rosot, Maria Sandra Ferreira, Marianne Bernardes, Marilice Cordeiro Garrastazú, Marisa Aparecida Pereira, Marta de Fátima Vencato, Mieceslau Siegesmundo Stefankowski, Namie Takii, Natalia Lordello de Aguiar Vieira, Odacilo Alves Martins, Osmir José Lavoranti, Paula Geron Saiz, Paula Schultz Bittencourt Pucci, Paulo Roberto Valle da Silva Pereira, Rafele Crisostomo Pereira, Regina Lucia Siewert Rodrigues, Régis Alexandre Montibeller, Rejane Stumpf Sberze, Sérgio Gaiad, Sergio Ricardo Martins Guimarães, Simone Santos Soares, Solange Cristina Bergamo, Susete do Rocio Chiarello Penteadó, Tiéldy Angelina de Moraes de Lima, Valderês Aparecida de Sousa, Wilson Anderson Holler, Yara Cassiolato Varela, and Youssef Antonio Mazlum.

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Our most sincere and deepest thanks to James Woodson Marion whose unconditional and invaluable help is registered in those who worked on the English version of the text. His contributions will always be remembered.

Of paramount importance was also the financial support provided by projects approved by CNPq and the Araucária Foundation to Support Scientific and Technological Development of Paraná, which made it possible to contract for services and equipment and allowing the participation of guests and honorees in IUFRO2019.



Appendix 3: Materials for Congress participants

Participants received a kit of materials with a backpack and several other items including the Congress schedule.



Photos: Maristela Avila Abrantes (A e B) e MCI Brasil team (C)



Appendix 4: Booths and administrative spaces within the fair and exhibition

| N | NAME | RESPONSIBLE ORGANIZATION | TYPE OF ORGANIZATION | COUNTRY |
|----|--|---|-------------------------------|--------------------|
| 1 | Curitiba Square | Municipal Institute of Tourism - Curitiba Municipal Government | Public | Brazil |
| 2 | Stockholm 2024 | IUFRO2024 Congress Organizing Committee | Public | Sweden |
| 3A | The Brazil Area | Embrapa and SFB | Public | Brazil |
| 3B | Sociobiodiversity Products Fair | SFB and Embrapa | Public | Brazil |
| 4A | Women in the Forest photography exhibition - Mostra fotográfica Mulheres na Floresta | Rede Mulher Florestal and Melhoramentos Papel e Celulose (CMPC) | Non-governmental organization | Brazil |
| 4B | Press room | Embrapa and SFB | Public | Brazil |
| 5 | Forestry and Forest Products Research Institute (FFPRI) | Forestry and Forest Products Research Institute (FFPRI) | Research | Japan |
| 6 | Sysflor Certificações Florestais | Sysflor Certificações Florestais | Private | Brazil |
| 7 | Suzano | Suzano S/A | Private | Brazil |
| 8 | XPrize | XPrize Foundation | Non-governmental organization | US |
| 9 | International Wood Culture Society/World Wood Day Foundation | International Wood Culture Society (IWCS) / World Wood Day Foundation (WWD) | Non-governmental organization | Taiwan and China |
| 10 | Lim Geomatics | Lim Geomatics Inc. | Private | Canada |
| 11 | INBAR | International Bamboo and Rattan Organisation (INBAR) | Non-governmental organization | China |
| 12 | Silva Fennica | The Finnish Society of Forest Science | Non-governmental organization | Finland |
| 13 | The University of British Columbia | University of British Columbia (UBC) | Education and Research | Canada |
| 14 | Oficina de Textos | Oficina de Textos (publisher) | Private | Brazil |
| 15 | FSC | Forest Stewardship Council (FSC) | Non-governmental organization | Germany and Brazil |
| 16 | Biome 1 – Amazon | SFB and Embrapa | Public | Brazil |
| 17 | Biome 2 – Caatinga | SFB and Embrapa | Public | Brazil |
| 18 | Biome 3 – Cerrado | SFB and Embrapa | Public | Brazil |
| 19 | Biome 4 -- Atlantic Forest | SFB and Embrapa | Public | Brazil |
| 20 | Biome 5 -- Pantanal | SFB and Embrapa | Public | Brazil |
| 21 | Biome 6 -- Pampa | SFB and Embrapa | Public | Brazil |



| N | NAME | RESPONSIBLE ORGANIZATION | TYPE OF ORGANIZATION | COUNTRY |
|----|--|--|-------------------------------|---------|
| 22 | Wood and Art - Madeira e Arte | Municipal Institute of Tourism - Curitiba Municipal Government | Public | Brazil |
| 23 | Partner universities of the Congress and IFSA, IUFRO partner | SFB and Embrapa | Public | Brazil |
| 24 | Klabin | Klabin S/A | Private | Brazil |
| 25 | ITTO | International Tropical Timber Organization (ITTO) | Non-governmental organization | Japan |
| 26 | Marconi | Marconi - Laboratory equipment | Private | Brazil |
| 27 | APFNet | Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet) | Non-governmental organization | China |
| 28 | Federal Ministry of Education and Research - Research in Germany - Land of ideas | Federal Ministry of Education and Research | Non-governmental organization | Germany |
| 29 | Joanneum Research | Joanneum Research Forschungsgesellschaft mbH | Research | Austria |
| 30 | Chinese Academy of Forestry (CAF) | Chinese Academy of Forestry (CAF) | Research | China |
| 31 | Haglölf | Haglölf Sweden | Private | Sweden |
| 32 | Brazil's investment plan for the FIP | Forest Investment Program (FIP) - World Bank | Non-governmental organization | US |
| 33 | Meeting room (COC/CSC) | Embrapa and SFB | Public | Brazil |
| 34 | United Nations Development Program (UNDP) | United Nations (UN) | Non-governmental organization | US |
| 35 | IPEF | Instituto de Pesquisas e Estudos Florestais | Non-governmental organization | Brazil |
| 36 | Meeting room - Congress participants and guests | Embrapa and SFB | Public | Brazil |
| 37 | CCVB e Parque dos Aromas | Curitiba e Região Convention & Visitors Bureau e Rede Parque dos Aromas | Non-governmental organization | Brazil |
| 38 | IUFRO | IUFRO | Non-governmental organization | Austria |



Appendix 5: Mini-talks and book launches

| MINI-TALKS | | | |
|----------------------------|--|---|--------|
| Topic | Title | Speaker | Number |
| Forests for People | A brief presentation of the national program that addresses policies and actions to include and increase the participation of family farmers and traditional communities on bioeconomy arrangements, especially those involving economic use of biodiversity and traditional knowledge in Brazil | MARCO AURÉLIO PAVARINO (coordinator-general for Extractivism, MAPA) | 8 |
| | Coalizão Brasil Clima, Florestas e Agricultura: propostas para produzir e conservar | LAURA LAMONICA (Brazilian Coalition) | |
| | Brazilian National Forest Inventory Socio-environmental Survey | RAQUEL ÁLVARES LEÃO (environmental analyst/Board of Forest Research and Information, SFB/MAPA)) | |
| | Sistemas Agroflorestais: experiências brasileiras | MARCELO ARCO-VERDE (Embrapa Forestry) | |
| | Bosque Modelo e Estação Experimental da Embrapa em Caçador: experiências com pequenos produtores | ANDRÉ BISCAIA (Embrapa Forestry) | |
| | Produção de castanha-do-brasil na Amazônia | FERNANDA/LUCIA (Embrapa Acre) | |
| | Cadastro Ambiental Rural em Territórios de Povos e Comunidades Tradicionais | GABRIELA BERBIGIER GONÇALVES (environmental analyst/Board of Forest Registration and Promotion, SFB/MAPA) | |
| | Novas diretrizes do Serviço Florestal Brasileiro para a implementação do Código Florestal | JAINE CUBAS (director of Forest Register and Incentives, SFB/MAPA) | |
| Forests and Climate Change | Sistema de Monitoramento de Serviços Ecossistêmicos - Conexão Mata Atlântica | SUIÁ KAFURE ROCHA (MCTIC) | 9 |
| | Catálogo de Dados e Metadados - Conexão Mata Atlântica | MARIA LUIZA CORREA BROCHADO (MCTIC) | |
| | Brazilian National Forest Information System | HUMBERTO NAVARRO MESQUITA JUNIOR (executive manager of Forest Information/Board of Forest Research and Information, SFB/MAPA) | |
| | Brazilian National Forest Inventory up-to-date | RAQUEL ÁLVARES LEÃO (environmental analyst/Board of Forest Research and Information, SFB/MAPA) | |
| | Nanotecnologia: fronteiras de inovação no setor florestal | WASHINGTON LUIZ ESTEVES MAGALHÃES (Embrapa Forestry) | |
| | Erva-mate: mercado internacional de olho em seu potencial – o que a pesquisa tem trabalhado? | IVAR WENDLING (Embrapa Forestry) | |



| MINI-TALKS | | | |
|--|---|---|--------|
| Topic | Title | Speaker | Number |
| Forests and Climate Change | Programa Floresta+ | MONIQUE SACARDO FERREIRA (coordinator-general for Forest Management, Department of Forests, MMA) | |
| | Concessão florestal | CRISTINA GALVÃO ALVES (executive manager of Forest Concessions, Board of Forest Concessions and Monitoring, SFB/MAPA) | |
| | Monitoramento das concessões | JOSÉ HUMBERTO CHAVES (executive manager of Forest Monitoring, Board of Forest Concessions and Monitoring, SFB/MAPA) | |
| Forests and Forest Products for a Greener Future | Atlas SiBBr | KEILA ELISABETH JUAREZ (MCTIC) | 9 |
| | Integração de dados no SiBBr | MARIA LUIZA CORREA BROCHADO (MCTIC) | |
| | Concessão florestal | CRISTINA GALVÃO ALVES (executive manager of Forest Concessions, Board of Forest Concessions and Monitoring, SFB/MAPA) | |
| | Monitoramento das concessões | JOSÉ HUMBERTO CHAVES (executive manager of Forest Monitoring, Board of Forest Concessions and Monitoring, SFB/MAPA) | |
| | Perspectiva Futura das Concessões Florestais e do Plano Nacional de Desenvolvimento de Florestas Plantadas | CRISTINA GALVÃO ALVES (executive manager of Forest Concessions, Board of Forest Concessions and Monitoring, DCM/SFB/MAPA) | |
| | Manejo Florestal na Amazônia | MILTON KANASHIRO (Embrapa Amazônia Oriental) | |
| | Florestas na era digital: aplicativos e softwares em apoio à produção florestal | EDILSON BATISTA DE OLIVEIRA (Embrapa Forestry) | |
| | Desenvolvimento florestal aliado à conservação e ao desenvolvimento rural CDFs Arboretum e Sistemas Econômicos Florestais | NATALIA COELHO DE ALBUQUERQUE (Programa Arboretum, SFB/MAPA) | |
| SEG: Fluxo de pesquisas na Embrapa | SERGIO GAIAD (Embrapa Forestry) | | |
| Biodiversity, Ecosystem Services, and Biological Invasions | A brief presentation of the public policy to encourage the use of the biodiversity through price guarantee and the purchase of biodiversity products in Brazil. | ÉNIO CARLOS MOURA DE SOUZA (market analyst, CONAB/MAPA) | 10 |
| | Heveicultura brasileira, uma oportunidade sustentável para o mundo | FERNANDO DO VAL GUERRA (president, Sectoral Chamber for Rubber, MAPA) | |
| | Palma de Óleo, uma alternativa sustentável para as áreas degradadas da Amazônia | ROBERTO YOSHITAMI YOKOYAMA (president, Sectoral Chamber for Oil Palm, MAPA) | |



| MINI-TALKS | | | |
|--|---|--|--------|
| Topic | Title | Speaker | Number |
| Biodiversity, Ecosystem Services, and Biological Invasions | A cacauicultura em sistema agroflorestal sustentável no Brasil | GUILHERME DE CASTRO MOURA (president, Sectoral Chamber for the Cocoa Chain, MAPA) | |
| | Uma alternativa de diversificação para a produção florestal no Brasil | LEANDRO BENINHO GHENO (president, Sectoral Chamber for Erva Mate, MAPA) | |
| | A produção sustentável de produtos florestais no Brasil | WALTER VIEIRA REZENDE (president, Sectoral Chamber for Planted Forests, MAPA) | |
| | 5 anos de execução do Cadastro Ambiental Rural: desafios e lições aprendidas | REJANE MARQUES MENDES (executive manager of Forest Register, Board of Forest Register and Incentives, SFB/MAPA) | |
| | O Cadastro Ambiental Rural, Cota de Reserva Ambiental e Programa de Regularização Ambiental como ferramentas de desenvolvimento florestal | FERNANDO CASTANHEIRA NETO (executive manager of Forestry Promotion and Inclusion, Board of Forest Register and Incentives, SFB/MAPA) | |
| | Pagamento de serviços ambientais: casos de sucesso | EDILSON BATISTA DE OLIVEIRA (Embrapa Forestry) | |
| | Controle biológico de pragas florestais: casos de sucesso no Brasil | SUSETE DO ROCIO CHIARELLO PENTEADO (Embrapa Forestry) | |
| Forest, Soil, and Water Interactions | Brazilian National Forest Information System | HUMBERTO NAVARRO MESQUITA JUNIOR (executive manager of Forest Information, Board of Forest Research and Information, SFB/MAPA) | 7 |
| | CNFP e CAR - A evolução das informações de áreas públicas e sua abordagem perante os imóveis rurais particulares | BERNARDO DE ARAUJO MORAES TROVÃO (environmental analyst, Board of Forest Registration and Promotion, SFB/MAPA) | |
| | Genômica de eucalipto | DÁRIO GATAPAGLIA (Embrapa Recursos Genéticos) | |
| | Projeto Bem Diverso | LUCIA WADT (Embrapa Acre) | |
| | Desafios e oportunidades para a produção de açaí nativo em floresta | ANDREA ALECHANDRE (Embrapa Acre) | |
| | A pesquisa de pinus no Brasil | ANANDA AGUIAR (Embrapa Forestry) | |
| | Laboratório de Produtos Florestais: a pesquisa a serviço do desenvolvimento florestal brasileiro. | FERNANDO GUEIVA | |
| TOTAL | | | 43 |



BOOK LAUNCHES

| Title | Speaker |
|---|---|
| Mogno-africano (<i>Khaya</i> spp.): atualidades e perspectivas do cultivo no Brasil http://www.alice.cnptia.embrapa.br/alice/handle/doc/1112698 | Edilson Batista de Oliveira (Embrapa Forestry) |
| SDG15 - Life on land: contributions of Embrapa http://www.alice.cnptia.embrapa.br/alice/handle/doc/1112481 | Gisele Freitas Vilela (Embrapa Territorial) |
| Florestas do Brasil em resumo 2019 http://www.florestal.gov.br/publicacoes/1737-florestas-do-brasil-em-resumo-2019 | Humberto Navarro Mesquita Junior (SFB/MAPA) |
| Brazilian forests at a glance 2019 http://www.florestal.gov.br/publicacoes/1737-florestas-do-brasil-em-resumo-2019 | Humberto Navarro Mesquita Junior (SFB/MAPA) |
| Bioeconomia da floresta: a conjuntura da produção florestal não madeireira no Brasil http://www.florestal.gov.br/publicacoes/1727-bioeconomia-da-floresta-conjuntura-da-producao-florestal-nao-madeireira-no-brasil | Sandra Regina Afonso (SFB/MAPA) e Marco Aurélio Pavarino (MAPA) |

BOOK PRE-LAUNCHES

| Title | Speaker |
|---|--|
| Araucária: pesquisa e desenvolvimento no sistema cooperativo e integrado da Embrapa | Valderês Aparecida de Sousa (Embrapa Forestry) |
| O eucalipto e a Embrapa: quatro décadas de pesquisa e desenvolvimento | Edilson Batista de Oliveira (Embrapa Forestry) |



Appendix 6: Side events

| SIDE EVENTS | | |
|--|---|--------|
| Day | Title (Organizing Institutions) | Number |
| Monday | The Land Use Dialogue: Planning Sustainable Landscapes (Brazilian Forests Dialogue and The Forests Dialogue) | 6 |
| | Brazilian Forest Code (German Technical Cooperation – GIZ) | |
| | Interinstitutional Partnerships for Achieving the 2030 Agenda for Sustainable Development (The Brazilian Tree Industry - Ibrá, Brazilian Ministry of Agriculture, Brazilian Forest Service and Embrapa) | |
| | University of Freiburg Alumni Meeting (Freiburg University) | |
| | Wangari Maathai Award (Collaborative Partnership on Forests - CPF) | |
| | Cooperation for sustainability - statements by key partners of IUFRO (IUFRO) | |
| Tuesday | ALTERFOR - Alternative models and robust decision-making for future forest management (Swedish University of Agricultural Sciences (SLU) | 8 |
| | Biomes (National Confederation of Agriculture - CNA) | |
| | Forest Adaptation and Restoration under Global Climate Change (National Institute of Forest Science - NIFoS, Korea and IUFRO) | |
| | Forland landscape Restoration project in the Brazilian Amazon: From pledge to implementation (Forests & Societies research unit CIRAD and ONFi) | |
| | FIP in Brazil - Creating Partnerships to Improve the Cerrado Biome (The World Bank) | |
| | Workshop on publishing in international journals (British Ecological Society) | |
| | Integrated Crop-Livestock-Forest in Brazil (Embrapa Florestas) | |
| Forest Landscape Restoration Implementation - Progress on the Ground (IUFRO Special Programme for Development of Capacities - SPDC and BMU/ Germany) | | |
| Wednesday | Forest and SDGs: Experience and Perspectives (Forest Women Network) | 11 |
| | Working together: what can the Regional Forest Communicators Networks do for you? (IUFRO/ RECOFALC/ FAO-EU Forest Communicators Network/ FAO/Embrapa) | |
| | Research and funding opportunities in Germany (Deutsche Forschungsgemeinschaft - DFG, Office Latin America c/o German Centre for Research and Innovation São Paulo) | |
| | Forests and Society Towards 2050 - a Dilemma for the Nordic Model (Nordic Forest Research - SNS) | |
| | Research on forests, trees and agroforestry in the CGIAR: What priorities for the future? (CIFOR - CGIAR FTA program) | |
| | Biomes (National Confederation of Agriculture) | |



| SIDE EVENTS | | |
|--------------|---|-----------|
| Day | Title (Organizing Institutions) | Number |
| Wednesday | Forest tenure, sustainability performance and innovative governance: Connecting the dots from a smallholder and governance perspective (The World Bank) | |
| | Young Scientists Initiative (IUFRO Special Programme for Development of Capacities - SPDC) | |
| | Tropical restoration – can we have it all? Trade-offs between production, climate change mitigation and biodiversity (RESTORE+ Project; Center for Landscape Resilience & Management - CLR; Ecosystems Services and Management Program - ESM; International Institute for Applied Systems Analysis - IIASA) | |
| | Resilient Future Forest Development Platform (IUFRO Task Force Adaptation and Restoration under Global Change; 1.01.00 Temperate and Boreal forests silviculture; 1.06.00 Restoration of degraded sites; InNovaSilva, Denmark) | |
| | New Generation Plantations (WWF and IUFRO) | |
| Friday | Global Forest Expert Panels - Science Supporting Informed Decision-Making (IUFRO Special Programme Global Forest Expert Panels - GFEP) | 4 |
| | Sustainable Production of Charcoal: Best Practices (UNDP) | |
| | Asia Pacific Forestry Education Mechanism (Asia Pacific Forestry Education Coordination Mechanism - AP-FECM; Asia Forest Research Center, Faculty of Forestry, University of British Columbia) | |
| | Araucaria, management and conservation panel (Unicentro and Embrapa Florestas) | |
| Saturday | Forestry Research Network of Sub-Saharan Africa (Fornessa) | 2 |
| | Araucaria, management and conservation round table - planning for the future (Unicentro and Embrapa Florestas) | |
| TOTAL | | 31 |



Appendix 7: Congress technical visits

| | CATEGORY | DESCRIPTION |
|----|---------------------------|--|
| 1 | Planted Forests | Forestry operations in nurseries and pine and eucalyptus plantations at Klabin, Brazil's largest producer and exporter of paper. |
| 10 | Forests/Native Vegetation | Payment for environmental services: a success story. |
| 11 | | Curitiba's historic water reservoirs and trails in native forests. |
| 12 | | Sandstone formations, craters with native vegetation, and water reservoirs, with a focus on endangered species. |
| 13 | | Integration of productive areas and environmental protection area in rural properties. |
| 14 | Parks and Urban Areas | Curitiba's Botanical Garden and urban forests in Capão do Tigre and Airumã Parks |
| 15 | | Parks in Curitiba: the Botanical Garden, Passeio Público, the Pope's Woods, the German Woods, São Lourenço, Tanguá, Tingui, and Barigui Parks. |
| 16 | Forest Research | Control of forest pests and the introduction and improvement of Eucalyptus in Brazil. |
| 17 | | Dendrochronology applied to forest management and the conservation and genetic improvement of conifer species. |
| 18 | | Integrated silvopastoral systems and ecological agroforestry systems |
| 19 | Education | An overview of forest measurements, forest inventory, and forest management in Brazil. Presentation of SIS software for forest management. |
| 20 | | The forest-based sector, government planning, and business representations of the productive chain of timber, as well as consulting companies and forest management. |
| 21 | Production Systems | Agroforestry systems in different organizational structures, reforestation with rapid-growing species and environmental protection areas. |
| 22 | | Palm heart plantations and the Graciosa Highway to observe the natural forest. |



Appendix 8: Documents and other Congress-related information

Congress website

The Congress website (www.iufro2019.com) will be maintained at least until 2024.



IUFRO
Explicando a IUFRO
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Congress program

The complete Congress program is available in PDF format at <https://pfb.cnpf.embrapa.br/pfb/index.php/pfb/article/view/2043>

or

<https://doi.org/10.4336/2019.pfb.39e201902043>



Congress proceedings

The Congress proceedings (Forest Research and Cooperation for Sustainable Development: 25th IUFRO World Congress, 29 Sept - 5 October 2019, Curitiba, PR, Brazil, Abstracts, 768 p.) contain the abstracts of the 1,648 oral presentations and 964 poster sessions, and were published and printed a month after the Congress as a special edition of the journal Pesquisa Florestal Brasileira, a publication by Embrapa, edited by Embrapa Florestas. The digital version in PDF format can be found at the Congress website and/or accessed at:

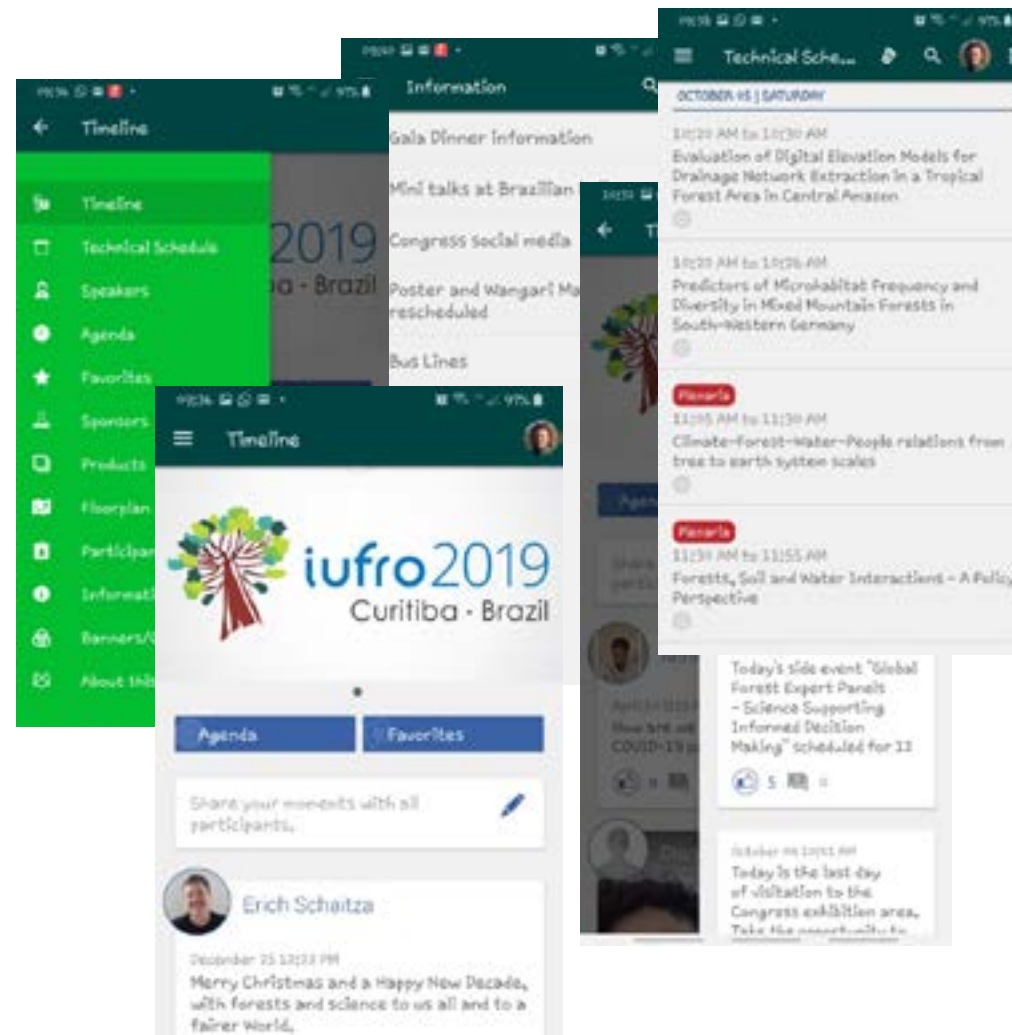
http://iufro2019.com/wp-content/uploads/2019/10/Anais_Iufro_Final_reduzido-1.pdf



IUFRO2019 App

An app compatible with Android and IOS devices was created for the IUFRO2019 Congress.

In addition to the basic functionality (access to the entire event program), the app successfully facilitated communication between participants and also functioned as a social network, which is still active and can be used by the Congress participants to exchange messages and information.



Videos presented and produced about the Congress

The complete playlist can be accessed at:

https://www.youtube.com/results?search_query=IUFRO2019

Reporting about the Congress

Announcement of the XXV IUFRO World Congress - IUFRO2019:

<https://www.youtube.com/watch?v=l13BgmCDJvQ>

Announcement of the XXV IUFRO World Congress - IUFRO2019 on the Embrapa program, Conexão Ciência:

<https://www.youtube.com/watch?v=wTjDLmpQH4A>

https://www.embrapa.br/florestas/busca-de-noticias?p_p_id=buscanoticia_WAR_pcebusca6_1portlet&p_p_lifecycle=1&p_p_state=normal&p_p_mode=view&p_p_col_id=column-1&p_p_col_pos=1&p_p_col_count=2&_buscanoticia_WAR_pcebusca6_1portlet_javax.portlet.action=buscarNoticias&_buscanoticia_WAR_pcebusca6_1portlet_delta=10

Other news:

<https://www.embrapa.br/busca-de-noticias/-/noticia/46963936/sessao-tecnica-da-iufro-abordou-conquistas-e-expectativas-de-diversos-paises-para-levar-mais-natureza-as-cidades>

<https://www.embrapa.br/busca-de-noticias/-/noticia/46975498/estudantes-de-curitiba-visitam-exposicao-do-maior-congresso-de-pesquisa-florestal-do-mundo>

<https://www.embrapa.br/florestas/busca-de-noticias/-/noticia/46983802/prefeito-de-curitiba-pretende-utilizar-aplicativo-da-embrapa-nas-escolas>

<https://www.embrapa.br/busca-de-noticias/-/noticia/46971575/embrapa-lanca-e-book-sobre-ilpf-e-mostra-tecnologia-sustentavel-brasileira-em-congresso-mundial>

Relevant Links

<https://www.iufro.org/>

<https://www.iufro.org/events/congresses/2019/>

<https://www.iufro.org/science/special/spdc/sap/>

<https://www.embrapa.br/>

<http://www.florestal.gov.br/>



ANNEX

iufro 2019
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ANNEX

Annex 1: IUFRO Forest Science Pledge (versions in Portuguese and in Spanish)

Portuguese version

“Ciência Florestal para o Futuro

XXV Congresso Mundial da IUFRO, Curitiba, Brasil, outubro de 2019.

Mais de 2.500 cientistas de 96 países se reuniram no Congresso para discutir a situação das florestas do mundo. Este primeiro congresso na América do Sul permitiu um foco específico nessa região do mundo, rica em recursos florestais. O desmatamento e as mudanças climáticas foram identificados como dois dos problemas mais prementes do mundo.

O Congresso Mundial da IUFRO ofereceu uma oportunidade única de compartilhar conhecimentos baseados em evidências, entre disciplinas e continentes, para discutir o estado das florestas, os desafios e as consequências, assim como as possíveis soluções. Como resultado, reconhecemos questões urgentes e defendemos o conhecimento das florestas fornecido pela rede global da IUFRO para mobilizar a ciência florestal para um futuro sustentável.

Comprometemo-nos a acelerar nossos próprios esforços para fornecer conhecimento e soluções práticas para

- Promover uma boa gestão da terra para a água e a vida selvagem;
- Prevenir o desmatamento e reparar paisagens danificadas;
- Fornecer produtos de madeira com menor pegada de carbono que as alternativas; e



- Permitir que as florestas atendam às necessidades físicas e espirituais da sociedade.

Reiteramos os apelos da juventude global para “ouvir os cientistas” e reconhecemos a necessidade de a comunidade científica se manifestar de novas maneiras para destacar o papel fundamental que a ciência e a tecnologia devem desempenhar na busca de soluções eficazes e economicamente viáveis.”

Spanish version

“Ciencia Forestal para el Futuro

XXV Congreso Mundial de IUFRO, Curitiba, Brasil, octubre de 2019.

Más de 2.500 científicos de 92 países se reunieron en el Congreso para discutir la difícil situación de los bosques del mundo. Este primer congreso en Sudamérica permitió un enfoque específico en esta región del mundo rica en recursos forestales. La deforestación y el cambio climático fueron identificados como dos de los problemas más apremiantes a nivel mundial.

El Congreso Mundial de IUFRO ofreció una oportunidad única para compartir conocimientos basados en la evidencia a través de disciplinas y continentes, para discutir el estado de los bosques, los desafíos y consecuencias, y las posibles soluciones. Como resultado, reconocemos los temas urgentes y abogamos por el conocimiento de los bosques proporcionado por la red global de IUFRO para movilizar la ciencia forestal en aras de un futuro sostenible.

Nos comprometemos a acelerar nuestros propios esfuerzos para proporcionar conocimientos y soluciones prácticas

- fomentar una buena gestión de la tierra para el agua y la vida silvestre;
- para prevenir la deforestación y reparar los paisajes dañados;
- suministrar productos de madera que tengan una huella de carbono más baja que las alternativas; y

- hacer posible que los bosques satisfagan las necesidades físicas y espirituales de la sociedad.

Reiteramos los llamamientos de la juventud mundial a “escuchar a los científicos” y reconocemos la necesidad de que la comunidad científica se pronuncie de nuevas maneras para poner de relieve el papel fundamental que deben desempeñar la ciencia y la tecnología en la búsqueda de soluciones eficaces y económicamente viables.”

Source: IUFRO, COC, CSC, and approved in a plenary session.



Annex 2: Subplenary sessions

| SUBPLENARY SESSIONS | | |
|--|---|-----------|
| Theme | Title | Number |
| Forests for People | A6a: Women and Forests: promoting gender equality connecting research, public policies and forest management in the tropics A9a: Political ecology and integrated landscape approaches: complementarity or unhappy marriage? A9b: Solving Wicked Forest Policy Problems: Lessons from Practice A9c: Sustainable Development Goals: Their Impacts on Forests and People | 4 |
| Forests and Climate Change | B2a: Trees on the move: range shifts, potential for genetic adaptation and assisted migration B4a: Climate smart forest or how to integrate adaptation, mitigation and sustainable forest management B8a: Forest Adaptation and Restoration under Global Change | 3 |
| Forests and Forest Products for a Greener Future | C1a: Managing forest ecosystem resilience and biological and social diversity for future forest products C3a: Moving towards sustainable forest operation for a greener future | 2 |
| Biodiversity, Ecosystem Services, and Biological Invasions | D1a: Agroforestry for Ecosystem Services D1b: Close-to-nature Silviculture: For people, products and natural processes D7a: Forest health challenges from globalisation and climate change D8a: Forest Biodiversity in the framework of global change and the role of Landscape | 4 |
| Forest, Soil, and Water Interactions | E4a: Tropical wetlands, climate, and land-use change: Challenges and opportunities | 1 |
| Communicating, Educating, Networking and Publishing | F8a: Wood and Forest Culture: Addressing a Sustainable Future Director's Forum: Knowledge transfer in forest science as a management strategy Forest Communicator's Forum: The Big Bang in Forest Communication Green Jobs and the Future of Forest Employment Innovation and excellence in emerging research - IUFRO student awards | 5 |
| TOTAL | | 19 |

Source: CSC



Annex 3: Technical sessions

| TECHNICAL SESSIONS | | |
|---|---|--------|
| Theme | Title | Number |
| Forests for People | A1e: Rising issues in mountain forests and mountain forest management | 36 |
| | A1f: Assessing the cultural ecosystem services from forests: current challenges and future scopes – 2 | |
| | A1g: Agroforestry and production of Non-wood Forest Products – 2 | |
| | A2a: Sustaining iconic and high-value species in natural forests and plantations | |
| | A3a: Forest Operations: A Tool for Forest Management | |
| | A3b: The implementation of economics, forest policy, forest law and governance in Latin America forestry | |
| | A4a: Artificial Intelligence, machine learning and knowledge sharing: combining old and new skills to improve decision-making in forestry | |
| | A4b: Forests without borders: multi-national forest inventory cooperation and harmonization to enhance sustainable development | |
| | A4c: Monitoring and Assessing Urban Forest Services and Values at the National to Local Scale | |
| | A5a: Governing innovation for sustainability in the forest sector – I | |
| | A5b: Governing innovation for sustainability in the forest sector – II | |
| | A6b: Balancing environmental, productive and social needs to meet sustainable goals in the forest industry: experiences of cross-sectorial cooperation in South America | |
| | A6c: Challenges to sustainable forest management to enhance traditional communities and smallholders' livelihoods in the Amazon basin | |
| | A6d: Community and family forest management in Latin America: guaranteeing rights and citizenship with sustainability | |
| | A6e: Forests and Human Wellbeing: Life Satisfaction and Behavioral Approaches | |
| | A6f: Gender, forestry and rural communities: shaping power and agencies in an era of globalization | |
| | A6g: Indigenous and traditional peoples and their forests: Knowledge, management and governance towards sustainable development goals | |
| | A6h: Pathways towards sustainable resource use from African Sudanian and Zambebian woodlands: Resolving conflicting points of view | |
| | A6i: Social and economic benefits in Protected Areas: partnerships and concessions for local development | |
| | A6j: Strengthening Community and Smallholder Forestry for SDGs and other Forest-Related Goals | |
| | A6k: The bioeconomy: A sustainable way forward? | |
| | A6l: Indigenous and traditional peoples and their forests: Knowledge, management and governance towards sustainable development goals – 2 | |
| | A6m: Women and Forests: promoting gender equality connecting research, public policies and forest management in the tropics | |
| | A8a: Ecology, silviculture and management of tropical dry forests | |
| | A8b: Forecasting the effects of land-use on wildlife communities and conflict at human-wildlife interface | |
| | A9d: Committed and held accountable? Exploring accountability relations of state, business and civil society organizations in multi-level forest governance | |
| A9e: Forestry in transition? Forest policies in changing societies. Part 1: Europe | | |
| A9f: Governing farm-forest interfaces: Lessons from practice and methodological advances to improve policy | | |
| A9g: Innovative forest laws and environmental legislation for enhanced forest ecosystem services in local communities | | |
| A9h: Nature's contribution to people in transitioning forest landscapes | | |
| A9i: Policy and practice for sustainable forest-based tourism and recreation | | |
| A9j: Politics of international Forest Regimes | | |
| A9k: Status and current developments in South-South cooperation in forestry | | |
| A9l: Sustainable Development Goals: Their Impacts on Forests and People | | |
| A9m: Political ecology and integrated landscape approaches: complementarity or unhappy marriage? | | |
| A9o: Forestry in transition? Forest policies in changing societies. Part 2: Global examples | | |



TECHNICAL SESSIONS

| Theme | Title | Number |
|--|--|-----------|
| <p>Forests and Climate Change</p> | <p>B1a: Initiatives for restoration and monitoring of degraded areas in Latin America B1b: Management options to increase the drought-tolerance of forests B1c: Managing for adaptation: increasing resistance, resilience, and transformative capacity B1d: Resilience of Managed Tropical Forests - It is time for silviculture B1e: Trees on the move: seed sourcing, germination, genetic adaptation and assisted migration in a changing climate B1f: Silviculture and Management of Tropical Natural Forests in Amazon region: rescuing classic solutions to attend new demands - Climate change, biodiversity and bioeconomy B2b: Abiotic stressors and their interactive impacts on forests B2c: Novel advances in genomics and tree breeding for sustainable forests B2d: Wood and tree-ring studies of forest adaptation to climate change; implications for wood production B2f: Wood and tree-ring studies of forest adaptation to climate change; implications for wood production – 1 B4b: Data Fusion for Improved Forest Inventories and Planning B4c: Estimation of status and change in forest carbon pools based on inventory data going beyond tree carbon B4d: Global monitoring network of tree mortality patterns and trends B4e: Forest tree and stand growth processes under differing environments Concepts, methods and evidence B4f: Legacies of disturbances on forest functions B4g: Long-Term Forest Monitoring Networks for Evaluating Responses to Environmental Change – I B4h: Novel remote sensing approaches to quantify carbon stocks, structure and functional diversity of forests – 1 B4i: Long-Term Forest Monitoring Networks for Evaluating Responses to Environmental Change – II B4j: Novel remote sensing approaches to quantify carbon stocks, structure and functional diversity of forests 2 B4k: Novel remote sensing approaches to quantify carbon stocks, structure and functional diversity of forests 3 B4l: Climate smart forestry or how to integrate adaptation, mitigation and sustainable forest management B4m: Forest tree and stand growth processes under differing environments Concepts, methods and evidence – 2 B5a: Climate change, environment and conservation: challenges from the analysis of tree rings B5b: Innovative wood protection and durability strategies to mitigate climate change in the tropics and warm temperate climes B6a: Achieving REDD+: From local actions to national commitments B7a: Monitoring and modelling of forest health in a changing world B7b: Physiological and biogeochemical response of forest ecosystems to climate change and air pollution B8b: Cool Forests and Climate Change: Challenges of Transition to Sustainable Forest Management B8c: Forests and Climate Change in Southwestern Amazon B8d: Response of forest ecosystems to climate change: Learning from experimental manipulations and natural gradients B8e: Forest Adaptation and Restoration under Global Change - from global to regional perspective B9a: The role of forest based industry in meeting NDCs worldwide under Paris Agreement</p> | <p>32</p> |
| <p>Forests and Forest Products for a Greener Future</p> | <p>C1b: Advances in management and science for the high-value Meliaceae C1c: Improving high-value Meliaceae yields in plantations C1d: Mixed-species forests and plantations: Knowledge gaps and research priorities C1f: Silviculture and forest management of deciduous broadleaved forests C1g: Silvopastoral Systems: contributions to Livestock and to the Sustainable Development Objective C1i: Traditional coppices: ecology, economy and ecosystem services</p> | |



TECHNICAL SESSIONS

| Theme | Title | Number |
|---|--|-----------|
| <p>Forests and Forest Products for a Greener Future</p> | <p>C2a: Technical innovations in forest regeneration and restoration C2b: Tolerance of Eucalyptus clones to abiotic and biotic stresses: Building the foundation for the future plantations C2c: Towards Sustainable Development of the Global Teak Sector in a Changing World C2d: Tree Genomics and Biotechnology C3b: Digital transformation in wood industry C3c: Forest Operations Engineering and Management – Innovations for the Future C3d: Global green supply chains as a driver for sustainable forest management in the tropics C3e: Precision Forestry C3f: Promoting the environmental, social and economic benefits by monitoring the performance of forest machines: new approaches in precision forest operations C3g: The Forest and Fire Operations Nexus: Syntheses and Perspectives on Integrating Fire Risk Management with Forest Engineering and Management C3h: The role of forest ergonomics in Sustainable Forest Management in tropical regions C3i: LPF/SFB - IAWA Panel Discussion: New Methods and Applications of Tropical Timber Identification to Promote Legal Logging C3j: Methods and Models for Fire Occurrence and Detection C3k: Forest Operations Engineering and Management – Innovations for the Future – 2 C4a: Advancements in digital technologies for dendrometry and qualitative indicators of forests C4b: Advances in Remote Sensing of Vegetation: Sensors, Methodologies and Applications C4c: Benchmarking in forestry – Challenges and solutions for establishing benchmarking systems C4d: Crown structure and dynamics as cause and effect in modelling tree growth, form, and wood quality C4e: Decision Support Approaches for Forestry of the 21th Century C4f: Forest Assessment, Modelling and Management for Non-wood Forest Products C4g: Forest Inventory and Modeling: Past Successes, Current Challenges and Future Prospects C4h: From long-term monitoring and time series to foresight analyses and projections C4i: Innovative Applications of Unmanned Aerial Vehicles (UAVs) in Forest Science and Management C4j: Regional Forest Observations for Sustainable Forest Management C4k: Remote Sensing and Geographic Information System for Forest Monitoring and Management C4l: Forest Inventory and Modeling: Past Successes, Current Challenges and Future Prospects – 2 C4m: Decision Support Approaches for Forestry of the 21th Century – 2 C4n: Innovative Applications of Unmanned Aerial Vehicles (UAVs) in Forest Science and Management – 2 C4o: Regional Forest Observations for Sustainable Forest Management – II C5a: Characterizing Properties of Plantation Wood for Optimal Value C5c: Innovative Utilization of Bamboo and Rattan Resources C5f: Quality requirements of forest biomass for biorefinery C5g: Quantifying and forecasting market specific forest products in the forestry wood chain C5h: Research and industrial use of wood bio-based (formaldehyde free) adhesives: raw material and introduction to the wood-based industry C5i: Sustainable Use of Non-timber Products and Conservation of Semi-arid and Savanna C5j: The use of forest and mill residues for advanced bioenergy/biofuels production C6a: The role of forests and trees in the nature-based solutions discourse C7a: Developing successful biological control programs in forest plantations C7b: Needle and shoot diseases of pine</p> | <p>59</p> |



| TECHNICAL SESSIONS | | |
|--|--|--------|
| Theme | Title | Number |
| Forests and Forest Products for a Greener Future | C7c: Sustainable biomass for a greener future | |
| | C7d: Will active restoration of Secondary and Degraded Forests (SDFs) help to address sustainably the gap between wood demand and supply? | |
| | C8a: Intensification within limits: increasing productivity without compromising ecosystem services | |
| | C8b: Sustainable management of forest soils for timber and bioenergy production | |
| | C8c: The Bioeconomy and Non-Wood Forest Products | |
| | C8d: Intensification within limits: increasing productivity without compromising ecosystem services | |
| | C8e: The Bioeconomy and Non-Wood Forest Products – 2 | |
| | C9a: Discovery, curation, and uses of legacy tropical forest data sets | |
| | C9b: Planted Forests for a Greener Future and achieving Sustainable Development Goals (SDGs) | |
| | C9c: Resource efficiency of wood-based products and manufacturing | |
| | C9d: Societal perceptions, new products, markets, and business models of the circular forest bioeconomy | |
| | C9e: Traditional, emerging and new forest products in a bioeconomy – advances and applications in modelling the market potentials and sectoral impacts | |
| | C9f: Forest certification as a tool to improve forest management worldwide | |
| C9g: Forest certification as a tool to improve forest management worldwide | | |
| Biodiversity, Ecosystem Services, and Biological Invasions | D1c: Disturbance, ecosystem memory, risk and forest management in a changing socio-ecological environment' | 43 |
| | D1d: Employing plantations to restore native forests using successional forest management systems | |
| | D1e: Forest Landscape Restoration for Climate change Mitigation and Adaptation: Integrating Research into Policy | |
| | D1f: Agroforestry for Ecosystem Services | |
| | D1g: Close-to-nature silviculture: For people, products and natural processes | |
| | D2a: Applied genetics for forest management and conservation. | |
| | D2b: Conservation, Domestication and breeding of native species | |
| | D2c: Conservation, sustainable management and development of forest genetic resources across their ranges: regional research and collaboration. | |
| | D2d: Genetics, Management and Conservation of Cerrado Forest Species: Their Challenges and Achievements | |
| | D2f: Integrating tree resistance development with deeper understanding of local and long-distance movement of pest populations to improve management of invasive pests | |
| | D4a: Cloud computing and remote sensing to understand 30-year dynamics of Brazilian forests | |
| | D4b: Technological innovations for native forest management in different Brazilian biomes | |
| | D4c: Valuation Issues for Wood and Non-wood Forest Products to Balance Biodiversity and Ecosystem Services in Managed Forests | |
| | D5a: Improving forest management certification: integrating ecosystem services with forest assessments | |
| | D5c: Productive Conservation: more sustainable systems | |
| | D6a: Ethics and values in relation to forest, recreation and wildlife management | |
| | D6b: Forest and ecosystem services in cities: achievements and expectations | |
| | D6c: Forest health defenders: empowering citizens to protect forests through research contributions | |
| | D6e: Forest and ecosystem services in cities: achievements and expectations | |
| | D7b: Biodiversity, biotic interactions and threats to forest ecosystem services associated with tree reproductive structure insects and pathogens in a changing world | |
| D7c: Biological Invasions, Biodiversity and Ecosystem Services – 1 | | |
| D7d: Complex interactions of mistletoe, ecosystems, and people | | |
| D7e: Disease and environment interactions associated with forest decline | | |
| D7f: Forest Microbiome and Forest Health | | |



| TECHNICAL SESSIONS | | |
|--|--|--------|
| Theme | Title | Number |
| Biodiversity, Ecosystem Services, and Biological Invasions | <p>D7g: Forest Pathogen Migration in a Globalized Economy</p> <p>D7h: Improving tree health in urban forests for human well-being</p> <p>D7i: Patterns in forest insect herbivory</p> <p>D7j: Phytophthoras as emergent forest threats in the human-wildland interface D7k: Pine pitch canker - strategies for management of <i>Fusarium circinatum</i> in greenhouses and forests (PINESTRENGTH)</p> <p>D7l: Vanguard for research of myrtle rust, <i>Austropuccinia psidii</i></p> <p>D7m: Forest health challenges from globalization and climate change</p> <p>D7n: Biological Invasions, Biodiversity, and Ecosystem Services – 2</p> <p>D7o: Patterns in forest insect herbivory – 2</p> <p>D8c: The role of tree related microhabitats in forest ecosystems</p> <p>D8d: Harmonized global and national assessments of forest spatial patterns and fragmentation</p> <p>D8e: Improving conservation targets for forest biodiversity: towards operational solutions from remote sensing technology</p> <p>D8f: Invasive species in Forest Ecosystems, Causes, Consequences, Utilization and Management Options</p> <p>D8g: Resilience of tropical forests to multiple drivers of change: contributing to a more sustainable future</p> <p>D8h: Trees outside forests in landscape analysis: importance, definitions and assessment strategies</p> <p>D8i: Tropical forest ecosystem restoration for water related ecosystem services</p> <p>D8k: Forest management and biodiversity conservation</p> <p>D9a: Conservation economics: Prospects and challenges</p> <p>D9b: Integrated approaches to support effective implementation of forest landscape restoration</p> | |
| Forest, Soil, and Water Interactions | <p>E1a: An integrated approach for African Forest Landscape management: Water, Energy and Food (WEF) nexus</p> <p>E1b: Silvicultural challenges under abiotic and biotic stresses and adaptations to climatic abnormalities - Desafios silviculturais sob estresses abióticos e bióticos e adaptações às anormalidades climáticas</p> <p>E4b: Managing industrial plantation forests for multiple objectives</p> <p>E4c: Tropical wetlands, climate, and land-use change: Challenges and opportunities</p> <p>E8a: Forest Management Practices and the Responses of Soil Carbon, Water, Nutrients and Their Interactions</p> <p>E8b: Hydrological and biological responses of aquatic ecosystems to contemporary forest practices around the world</p> <p>E8c: Nexus: forest, water and climate</p> <p>E8d: Plant - soil interactions in forests</p> <p>E8f: Current understanding and future challenges for forest research after the two nuclear accidents of Chernobyl and Fukushima – I</p> <p>E8g: Plant - soil interactions in forests – II</p> <p>E8h: Current understanding and future challenges for forest research after the two nuclear accidents of Chernobyl and Fukushima – II</p> <p>E9a: Forests for Water Payments for Ecosystem Services: Evidence & prospects</p> | 12 |
| Communicating, Educating, Networking and Publishing | <p>F1a: Teaching and training in silviculture, silvics and silvology</p> <p>F6a: Art, science and education: a collaborative intersection as value-added in forest conservation efforts</p> <p>F6b: Effective educational strategies for the next generation of forest professionals</p> <p>F6c: How to Teach Forest Sciences in the Future - Challenges and Opportunities of Changing Ecological, Socio-Economic, and Technological Circumstances</p> <p>F8b: Wood and Forest Culture: Addressing a Sustainable Future</p> <p>F9b: Delivering and communicating forest science for people and a greener future</p> <p>F9c: Forest Science editing in the context of Open Science: what changes are ahead for us?</p> | 7 |
| TOTAL | | 189 |

Source: CSC



Annex 4: E-poster sessions

| POSTER SESSIONS | | |
|----------------------------|---|--------|
| Theme | Title | Number |
| Forests for People | <p>A1p: Ecosystem Services and Agroforestry Systems in South America A1q: Community Involvement in Agroforestry Systems and Ecosystem Services A1r: Agroforestry for Environmental Restoration and Climate Mitigation A2p: Sustaining iconic and high-value species in natural forests and plantations A3p: The implementation of economics, forest policy, forest law and governance in Latin America forestry A3q: The implementation of economics, forest policy, forest law and governance in Latin America forestry A4p: Monitoring and Assessing Urban Forest Services and Values at the National to Local Scale A4q: Monitoring and Assessing Urban Forest Services and Values at the National to Local Scale A4r: Monitoring and Assessing Urban Forest Services and Values at the National to Local Scale A5p: Governing innovation for sustainability in the forest sector - I A6p: Women and Forests: promoting gender equality connecting research, public policies and forest management in the tropics A6q: Social aspects of Forestry A6r: Social Aspects of Forestry A6s: Social Aspects of Forests and Forestry A9p: Policies for Public Forests A9q: Forest Policy and Governance A9r: Forest Ownership and Forest Values A9s: Social issues in Forestry A9t: Forest Policy and Economics - III</p> | 19 |
| Forests and Climate Change | <p>B1p: Monitoring and Restoring Degraded Forests B1q: Forests and Climate Change B1r: Silviculture B1s: Silviculture B2p: Abiotic stressors and their interactive impacts on forests B2q: Abiotic stressors and their interactive impacts on forests B2r: Abiotic stressors and their interactive impacts on forests B2s: Novel advances in genomics and tree breeding for sustainable forests B2t: Novel advances in genomics and tree breeding for sustainable forests B4p: Monitoring Forest Dynamics and Biomass B4q: Forest Models B4r: Assessing Climate Change Impacts on Forests B4s: Climate smart forestry or how to integrate adaptation, mitigation and sustainable forest management B4t: Estimation of status and change in forest carbon pools based on inventory data—going beyond tree carbon B4u: Estimation of status and change in forest carbon pools based on inventory data—going beyond tree carbon</p> | 26 |



| POSTER SESSIONS | | |
|--|---|--------|
| Theme | Title | Number |
| Forests and Climate Change | <p>B4v: Legacies of disturbances on forest functions B4w: Legacies of disturbances on forest functions B4x: Novel remote sensing approaches to quantify carbon stocks, structure and functional diversity of forests - 1 B5p: Climate Change and Forest Products B6p: Achieving REDD+: From local actions to national commitments B6q: Achieving REDD+: From local actions to national commitments B7p: Physiological and biogeochemical response of forest ecosystems to climate change and air pollution B7q: Physiological and biogeochemical response of forest ecosystems to climate change and air pollution B8p: Climate Change and the Forest Environment B8q: Climate Change and the Forest Environment</p> | |
| Forests and Forest Products for a Greener Future | <p>C1p: Production Forestry - II C1q: Production Forestry - I C1r: Production Forestry - III C1s: Broadleaved and Mixed-Species Forests C1t: Plantation forests C1u: Mixed-species forests and plantations: Knowledge gaps and research priorities C1v: Mixed-species forests and plantations: Knowledge gaps and research priorities C1w: Silviculture for Eucalyptus plantations C1x: Germination and Propagation, 1st Oct 2019, 12:30 - 13:30, Location: Poster Room - P26 C1y: Silviculture, Nursery techniques and Fertilizers C1z: Silviculture and Plant Communities C2p: Eucalypt Plantations C2q: Physiology and Genetics in Plantation Species C2r: Physiology and Genetics in Plantations C2s: Physiology and Genetics C2t: Physiology and Genetics C3p: Forest Operations and the Workforce C3q: Moving towards sustainable forest operation for a greener future C3r: LPF/SFB - IAWA Panel Discussion: New Methods and Applications of Tropical Timber Identification to promote legal Logging C3s: Tools and Techniques for Better Wildfire Management and Response C3t: Forest Operations Engineering and Management C4p: Forest Assessment C4q: Forest Assessment C4r: Multi-criteria Decision Analysis for Multifunctional Forests C4s: Assessing and Modelling Non-Timber Forest Products C4t: Forest Inventory and Modeling: Past Successes, Current Challenges and Future Prospects C4u: Forest Inventory and Modeling: Past Successes, Current Challenges and Future Prospects C4v: Remote Sensing and Geographic Information System for Forest Monitoring and Management</p> | 46 |



| POSTER SESSIONS | | |
|--|--|--------|
| Theme | Title | Number |
| Forests and Forest Products for a Greener Future | C4w: Remote Sensing and Geographic Information System for Forest Monitoring and Management | 23 |
| | C4x: Forest Assessment, Modelling and Management | |
| | C4y: Forest Assessment, Modelling and Management | |
| | C4z: Forest Assessment, Modelling and Management | |
| | C5p: Characterizing Properties of Plantation Wood for Optimal Value | |
| | C9q: Forest Policy and Economics – II46 C5q: Characterizing Properties of Plantation Wood for Optimal Value | |
| | C5r: Innovative Utilization of Bamboo and Rattan Resources | |
| | C5s: Forest Products | |
| | C5t: Forest Products | |
| | C5u: Forest Products | |
| | C5v: Forest Products | |
| | C5w: Forest Products | |
| | C7p: Developing successful biological control programs in forest plantations | |
| | C7q: Developing successful biological control programs in forest plantations - 2 | |
| | C7r: Developing successful biological control programs in forest plantations - 3 | |
| | C7s: Will active restoration of Secondary and Degraded Forests (SDFs) help to address sustainably the gap between wood demand and supply | |
| C9p: Forest Policy and Economics – I | | |
| Biodiversity, Ecosystem Services, and Biological Invasions | D1p: Disturbance, ecosystem memory, risk and forest management in a changing socio-ecological environment' | 23 |
| | D1q: Agroforestry for Ecosystem Services | |
| | D1r: Agroforestry for Ecosystem Services | |
| | D2p: Conservation, Domestication and breeding of native species | |
| | D2q: Conservation, Domestication and breeding of native species | |
| | D2r: Conservation, sustainable management and development of forest genetic resources across their ranges: regional research and collaboration | |
| | D4p: Forest Assessment and Ecosystem Services | |
| | D4q: Forest Biomass Estimation | |
| | D4r: Forest Assessment - Height, Volume, Biomass and Carbon Estimation | |
| | D4s: Forest Assessment and Plant Communities | |
| | D6p: Forest and ecosystem services in cities: achievements and expectations | |
| | D6q: Forest and ecosystem services in cities: achievements and expectations | |
| | D7p: Forest Health | |
| | D7q: Mistletoes and Forest Health | |
| | D7r: Forest and urban tree health | |
| | D7s: Fungal pathogens, conservation of fungi, and insect chemical control | |
| | D7t: Forest Health | |
| | D8p: Forest Environment | |
| D8q: Forest Environment | | |
| D8r: Forest Biodiversity in the framework of global change and the role of Landscape | | |
| D8s: Invasive species in Forest Ecosystems, Causes, Consequences, Utilization and Management Options | | |
| D8t: Forest Environment | | |
| D8u: Forest Environment | | |



| POSTER SESSIONS | | |
|---|---|--------|
| Theme | Title | Number |
| Forest, Soil, and Water Interactions | E1p: Silviculture and Health in Plantation Forests E8p: Forest Management Practices and the Responses of Soil Carbon, Water, Nutrients and Their Interactions E8q: Effects of Forest Management Practices on soil properties and ecosystem processes E8r: Forest Management Practices, water supply, water quality and soil erosion E8s: Nexus: forest, water and climate E8t: Plant - soil interactions in forests E8u: Plant - soil interactions in forests E8v: Plant - soil interactions in forests E8w: Current understanding and future challenges for forest research after the two nuclear accidents of Chernobyl and Fukushima E8x: Forest Environment E8y: Forest Policy and Economics - IV | 11 |
| Communicating, Educating, Networking and Publishing | F6p: Communicating, Educating, Networking & Publishing F6q: Forestry Education F9p: Delivering and communicating forest science for people and a greener future | 3 |
| TOTAL | | 128 |

Source: CSC





MINISTRY OF
AGRICULTURE, LIVESTOCK
AND FOOD SUPPLY



**PÁTRIA AMADA
BRASIL**
BRAZILIAN GOVERNMENT

