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United Nations Institute for Training and Research

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CIFAL Surrey - Giant Grass 2025

People

Deadline: 4 Feb 2025

Type:	Workshop
Location:	Sao Paulo, Brazil
Date:	9 Jun 2025 to 6 Jul 2025
Duration:	28 Days
Programme Area:	Decentralize Cooperation Programme
Website:	https://surrey.adv-pub.moveon4.com/report-page-1660/
Price:	\$550.00
Event Focal Point Email:	cifal@surrey.ac.uk
Partnership:	CIFAL Surrey, , CIFAL Surrey, , CIFAL Surrey

BACKGROUND

Between 9 June – 6 July 2025, students from the University of Surrey will be hosted by the São Paulo Polytechnic School and the Faculty of Animal Science and Food Engineering in Pirassununga, Brazil. The Giant Grass 2025 workshop will provide students with insights into the entire life cycle of bamboo as a sustainable construction material. Topics will include plant ecology, diversity,

taxonomy, rainforest management practices, cultivation, harvesting, treatment, and processing into engineered products. The workshop will further address formal design and construction techniques for buildings and engineering structures using both natural and engineered forms of these materials, as well as end-of-life recycling and reuse of biobased building materials and structures.

Following introductory workshops at the Polytechnic School, a two-week hands-on activity in Pirassununga will offer participants direct experience in building and testing bamboo materials. In addition to the technical content, the final week in Belém at the Rural Federal University of the Amazon (UFRA) will give participants the opportunity to join conversations leading up to COP30, to be held in Pará in 2025. Giant Grass 2025 will also include tours of research labs, campus tours, and student-led activities, with opportunities for social events, including architectural tours and hiking trips in the states of São Paulo and Pará.

EVENT OBJECTIVES

Giant Grass 2025 aims to provide students with an integrated understanding of bamboo's full life cycle as a sustainable construction material, from plant ecology and cultivation to engineering applications and end-of-life reuse, while fostering international collaboration and engagement with sustainability agendas linked to COP30.

LEARNING OBJECTIVES

Participants will gain practical knowledge of bamboo taxonomy, cultivation, harvesting, treatment, mechanical characterisation, manufacturing of engineered bamboo, formal design, construction techniques, and recycling strategies, alongside exposure to biodiversity and bioconstruction practices in the Brazilian Amazon.

CONTENT AND STRUCTURE

Week 1

- Study visit to the bamboo farm in Pardinho
- Lectures at ESALQ USP in Piracicaba on wood and bamboo

- Workshop Bruno on building with bamboo
- Visit the Baldin factory to understand biomass processes

Week 2

- Mechanical tests on various bio based and cementitious composites
- Manufacturing workshop of engineered bamboo and composites
- Bambuild Learning how do a bamboo treatment, and strip production

Week 3

- USP Polytechnic School campus tour
- Architectural tour of Sao Paulo (park, buildings, Ibirapuera Park, Niemeyer buildings, Ipiranga)
- DAD workshop - construction of a zonohedron of bamboo bars & UHPC)
- Lab visit 3D printing

Week 4

- Lectures on natural, engineered bamboo and palm in construction applications
- Bamboo in Brazil – biodiversity, multiple uses, and current impacts
- Visit to the taxonomic collection of bamboo at MPEG and Laboratory of Technology of Forest Products at Ufra
- Study visit to Combu island on bamboos and palms available, and bioconstructions

METHODOLOGY

The workshop combines lectures, study visits, hands-on manufacturing and testing activities, architectural and campus tours, collaborative design-build projects, and participation in sustainability dialogues, ensuring experiential and interdisciplinary learning across academic, industrial, and cultural contexts.

TARGETED AUDIENCE

FEPS students and PGR from all cohorts.