



Marie Skłodowska-Curie Actions

- Postdoctoral Fellowships
- Doctoral Networks
- Staff Exchanges

10 September 2026

14:00 - 16:00

B106, LDF MENDELU



Views and opinions expressed are those of the author only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

Presenters:

- Lucie Stewart, Ludmila Tysjačna, National Contact Points for Horizon Europe
- Marina Royer-Toupitsyna, Project Officer, European Research Executive Agency - online
- Douglas Godbold, coordinator, MSCA SE EuAsiaN-ROOT
- Petr Maděra, coordinator, Jana Tulková, project manager, MSCA SE FRAGILE



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Faculty of Forestry and Wood Technology

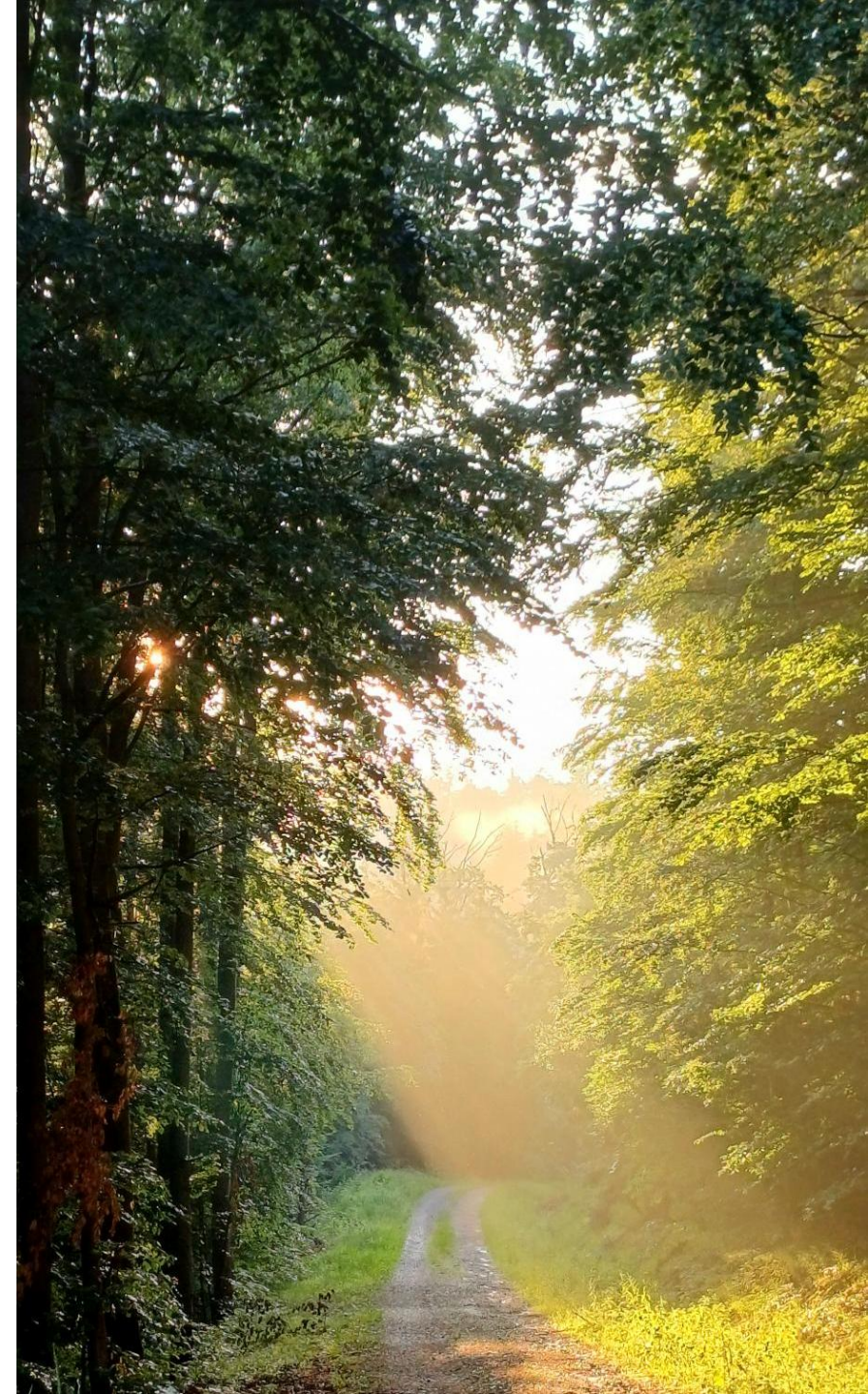
Mendel University in Brno

- MENDELU
- Faculty of Forestry
- and Wood
- Technology

Faculty of Forestry and Wood Technology

Forests are a source of unique raw materials and essential elements of the landscape.

- **Core expertise: forest ecosystems, wood processing, sustainable materials.**
- **Joint development of climate-resilient forest management and sustainable wood supply chains.**
- **Strong applied research and industry collaboration.**
- <https://ldf.mendelu.cz/en/>



Raw Material Production

**Climate-resilient,
sustainable biomass supply**

Science-based management and monitoring of forest ecosystems to secure sustainable, climate-resilient and high-quality biomass supply for the wood-based and bio-economy sectors.

Biosecurity

**Protection of assets and
supply chains from pests &
pathogens**

Integrated research and technology development for early detection, risk assessment, and management of invasive pests, pathogens, and soil-borne threats under global change and trade.

Wood Processing

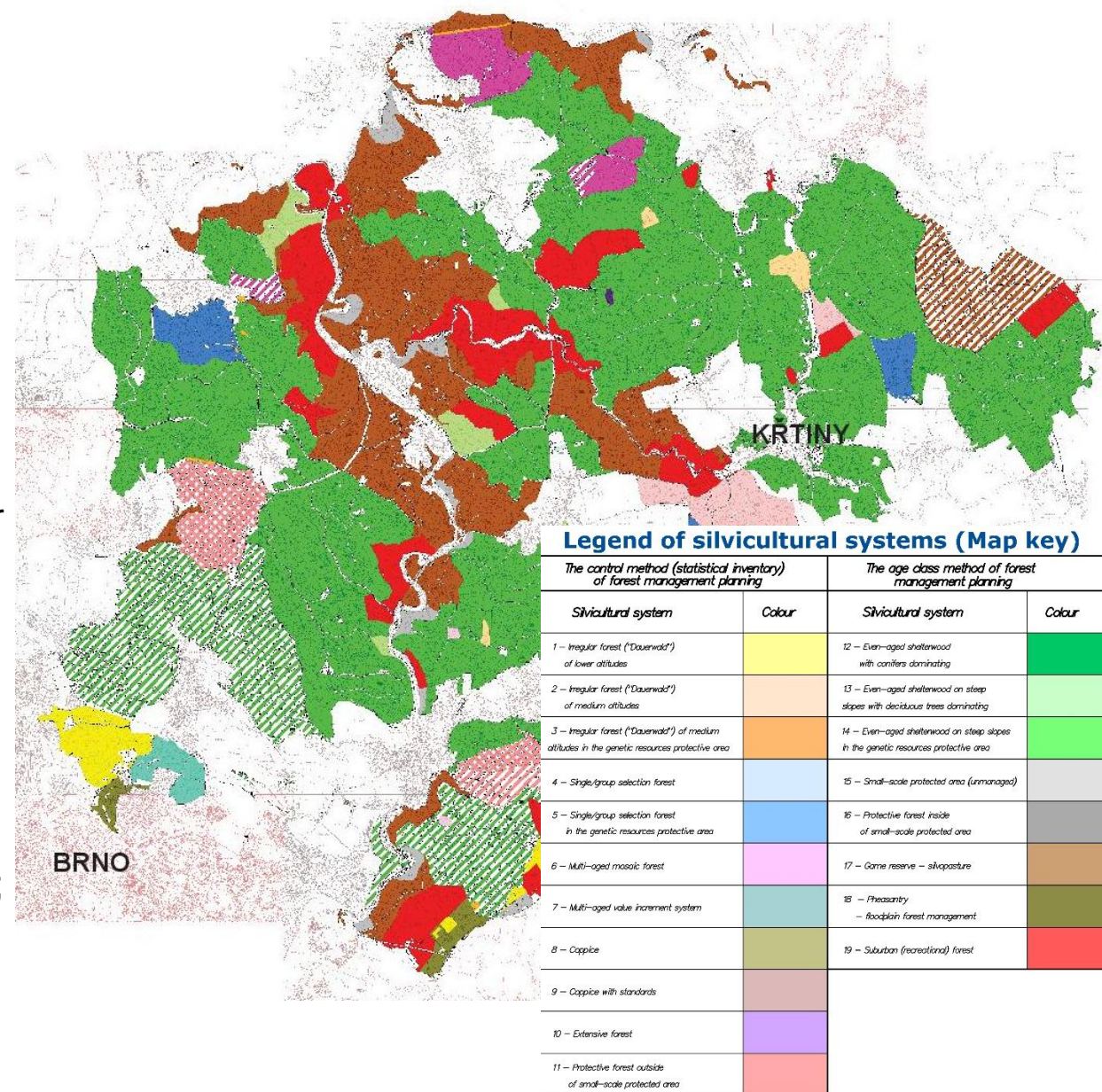
**High-performance, low-
carbon materials and
products**

Integrated research covering wood modification, machining, construction systems, and circular bio-based materials for advanced industrial applications.



University Enterprise Masaryk Forest in Křtiny

- **23 Silvicultural models in total**
- **13 models – higher production intensity**
- 2x Dauerwald; 2x selection forest; 3x value increment silviculture; 2x even-aged silviculture; mosaic forest;
- coppice; coppice with standards; alluvial floodplain forestry;
- **6 models – lower (0) production intensity**
- Park forest in-game closure; extensive forestry (stronger than ecological forestry); high rotation period
- experiment; protective forests out of forest reserves; recreational forest (on the contact with urban area);
- **20 strict forest reserves;**
- **4 models – non-obvious forestry**
- arboretum; agroforestry + edible forest; Christmas trees; seed orchards;



Raw Material Production: Ecosystem Resilience & Regeneration Capacity

- **EXCELLENTIA – ERA–Chair: Striving for Excellence in Forest Ecosystem Research**
 - Large-scale experiments on regeneration, soil functioning, and disturbance recovery
 - Role of soil microbiome and root–pathogen interactions in tree growth and health
 - Mechanisms driving long-term productivity and stability of forest stands
- R&D & Sustainability angle:
 - Strengthening resilience of production forests against wind, drought, and biotic stress
 - Ensuring continuous, high-quality biomass production for the forest-based bioeconomy
- <https://excellentia.lfd.mendelu.cz/>; <https://cordis.europa.eu/project/id/101087262>
- Contact: Douglas Godbold douglas.godbold@mendelu.cz, Libor Jankovský jankov@mendelu.cz



Funded by
the European Union

Biosecurity: Forest and Plant Pathogen Threats

- **Phytophthora Research Centre**

- Diversity, adaptation, hybridisation and pathogenicity of Phytophthora and other high-risk invasive pathogens
- Advanced detection and risk analysis using genomics, bioinformatics, ecophysiology, and climate-based modelling
- Contract research and diagnostic services supporting quarantine, nurseries, and forest protection authorities
- Direct relevance for asset protection, trade continuity, and regulatory compliance.

- R&D & Sustainability angle:

- Development of early-warning and surveillance systems for emerging diseases under climate change and global trade
- Science-based support for national and international biosecurity and phytosanitary policies

- <http://www.phytophthora.org/>

- Contact: Thomas Jung thomas.jung@mendelu.cz



Biosecurity: Early Detection & Monitoring Technologies

- **PURPEST - Plant pest prevention through technology-guided monitoring and site-specific control**
 - Sensor-based detection (electronic noses, VOC analysis) for rapid identification of pests and pathogens
 - Field and border-control deployment for import inspection and outbreak prevention
 - Integration of digital tools and decision-support systems for targeted intervention
- R&D & Sustainability angle:
 - Joint development of scalable monitoring platforms for ports, nurseries, forests, and supply chains
 - Reduction of economic and ecological risks from invasive species through proactive surveillance
- <https://www.purpest.eu/>; <https://cordis.europa.eu/project/id/101060634>
- Contact: Thomas Jung thomas.jung@mendelu.cz



Digital Forest Intelligence for Raw Material Security

- **DendroNetwork: Real-time monitoring of forest vitality**
 - Real-time monitoring of tree growth, stress, and productivity at the landscape scale
 - Climate, vitality, and site condition indicators supporting yield forecasting and resource planning
 - Early-warning systems for drought, heat, and disturbance impacts on timber supply
- R&D & Sustainability angle:
 - Data-driven planning of sustainable harvesting and long-term raw material availability
 - Support for climate-resilient sourcing strategies and risk management in wood supply chains
- <https://dendronet.cz/>
- Contact: Jan Světlík, jan.svetlik@mendelu.cz



Wood Processing & Material Engineering

- **Josef Ressel Research Centre**
 - Physical and chemical modification of wood to enhance durability, strength, and service life
 - Development of bio-based composites and engineered boards from renewable and residual resources
 - Heat and moisture transport modelling for optimised processing and performance in buildings
- R&D & Sustainability angle:
 - Development of high-performance, low-carbon wood products for construction and industry
 - Process optimisation for extended lifetime, reduced material losses, and circular material flows
- Contact: Vladimir Gryc vladimir.gryc@mendelu.cz

