

Sustainability at Mendel University in Brno

CHANGING

MINDSET

MENDELU Sustainability Strategy 2025–2030

Our roadmap to a responsible and green future

- MENDELU proudly aligns with the United Nations Sustainable Development Goals (SDGs), integrating sustainability into the core of university decision-making.
- **Five Key Pillars of Action:**
 - **Strategic Management:** Implementing transparent policies and strengthening communication.
 - **Education:** Integrating green skills and sustainability topics into all study curricula.
 - **Research & Innovation:** Focusing on global environmental challenges and transferring sustainable solutions into practice.
 - **Operations & Campus:** Radically reducing the carbon footprint, optimizing water/waste management, and investing in renewable energy.
 - **Social Responsibility:** Acting as a regional hub for sustainability and fostering strategic community partnerships.
- **Our Commitment:** Building a modern, responsible society through concrete, measurable steps across all university activities.

Strategic Management

Sustainability at MENDELU



Governance area

- Establishment of position of Vice-rector for strategy and sustainability (since 2022)
- Sustainability reports since 2022, sustainability strategy 2025–2030
- Participation in global university rankings (UI GreenMetric, QS Sustainability Rankings, THE Impact Ranking)
- Sustainability Manager (from April 2025)

Leading National Sustainability Efforts

MENDELU chairs the CRC Working Group for Sustainability

- MENDELU Rector Jan Mareš serves as the guarantor and Martin Klimánek as the secretary of the Czech Rectors' Conference (CRC) Working Group for Sustainability.
- The first session took place in April 2025 at the **Křtiny Castle**, bringing together representatives from 19 Czech universities (public, state, and private).
- **Key Objectives:**
 - **Knowledge Sharing:** Exchanging best practices in sustainability strategies, reporting, and campus operations.
 - **Joint ESG Framework:** Developing a unified reporting standard for the Czech higher education sector to improve international rankings.
 - **Advocacy:** Representing university interests toward the state and seeking joint funding for "green transformations."
- The group focuses on fostering a cultural shift across institutions, integrating sustainability into teaching, research, and administration.



Sustainability communication & engagement

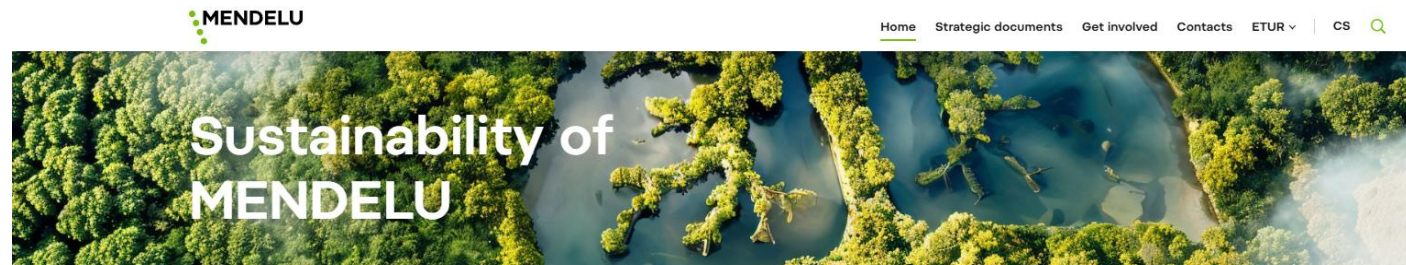
Sustainability webpage

<https://www.udrzitelnost.mendelu.cz/en/>

- Website focused on sustainability topics at MENDELU
- Shares news, events and selected activities
- Serves as a communication tool for sustainability initiatives

Sustainable MENDELU community

- Group of students and staff interested in sustainability
- Supports collaboration and discussion across the university
- Contributes to sustainability-related activities



● Telegraphically

- Future waste sorting and the new challenges facing municipalities were the main focus of the roundtable discussion **Ecology and its future**, held on 21 January in Brno. The Faculty of Business and Economics at MENDELU was represented by **Ing. Lucie Veselá, Ph.D.**, from the Department of Marketing and Trade. In her presentation, she addressed reuse centres, upcycling, and how people actually behave within the context of the circular economy. The research shows that the willingness to live sustainably is there. But the system needs to be simple, clear and practically designed to make responsible choices easier.
- **Research at the Faculty of Horticulture at MENDELU** focuses on the use of antioxidants from plant-based waste materials such as vine prunings and woody biomass. These substances can be applied in food production and plant protection as more environmentally friendly alternatives to chemical treatments. The research supports the principles of the circular economy and the efficient use of natural resources. A concrete outcome is a patented antifungal spray based on extracts from vine waste. These activities link sustainability, innovation and practical application in agriculture.

Forest Adaptation Strategy (UFE Křtiny)

- The Forest Adaptation Strategy to climate change is a long-term plan that helps MENDELU's forests adapt to climate change
- Increasing tree species diversity
- Supporting resilient, mixed forests
- Improving response to drought and extreme weather
- Combining research with real forest management
- MENDELU organises professional workshops to share practical approaches to climate adaptation in forest management



Adaptační
strategie lesů
na klimatickou
změnu



Mendelova univerzita v Brně vás zve na třídní workshop zaměřený na dopady klimatické změny na lesy a na moderní přístupy lesnického hospodaření při adaptaci lesů.

**Ve dnech 20. – 22. 5. 2026 na zámku
ŠLP MENDELU ve Křtinách**

- Určeno vlastníkům lesů, státní správě, zaměstnancům lesnických společností a státních podniků
- Workshop je složen z odborných přednášek i praktické exkurzní části, vč. trénování vyznačování pěstebních zásahů na modelovém lesním majetku ŠLP. Po jeho dokončení absolventi obdrží [Mikrocertifikát](#).
- Workshop byl již úspěšně pilotně ověřen na podzim 2025.
- Cena kurzovného vč. stravného a ubytování na zámku ve Křtinách je 8 900,- Kč.
- Více informací naleznete na našich [webových stránkách](#).

Kapacita je omezena,
přihlásit se můžete do **31. 3. 2026**
na bit.ly/lesadaptace

MENDELU
Lesnická
a dřevařská
fakulta

MENDELU
Školní lesní podnik
Masarykův les
Křtiny



Education

Sustainable Horticulture & Green Campus

International workshop and knowledge exchange in Lednice

- In April 2025, the Faculty of Horticulture hosted a workshop featuring experts from MENDELU and **HAMK University (Finland)** to share best practices for green campuses. The event was part of a broader project focused on fostering "green skills" and sustainability within the university environment.
- **Innovative Research Areas:**
 - **Climate Resilience:** Research on drought and frost resistance in fruit trees.
 - **Circular Economy:** Utilizing vineyard and wood waste (canes and knots) to extract valuable substances for the food industry.
 - **New Food Sources:** Exploring non-traditional plants (e.g., Lepidium, Duckweed) as sustainable food supplements.
- Presentation of student-led projects focused on landscape planning and efficient horticultural waste management. Finnish partners presented successful models of sustainable campus operations, providing a roadmap for ecological transitions in higher education.

Healthy Nutrition & Wellbeing

Promoting health as a pillar of social sustainability

- In October 2025, MENDELU hosted a session with **PharmDr. Margit Slimáková**, a leading Czech expert on nutrition and health prevention, attended by over 40 sustainability enthusiasts.
- The focus was on eating minimally processed, natural foods instead of laboratory-made products—emphasizing quality over calorie counting.
- Discussion highlighted that medical care accounts for only **10%** of population health, while lifestyle, environment, and social factors play the most critical roles.
- The event underscored that healthy bodies, a healthy environment, and a healthy society are inseparable components of a sustainable lifestyle.
- Participants enjoyed healthy snacks from local provider *Sly Fox*, featuring sourdough bread, fresh vegetables, and low-sugar desserts, demonstrating practical ways to eat sustainably on campus.



Stockholm Junior Water Prize

- The Stockholm Junior Water Prize is a **prestigious international competition for secondary school students focused on water and sustainability**.
- Each year, thousands of students from over 40 countries present research projects on how water can help address global challenges.
- MENDELU has organised the Czech national round since 2022.



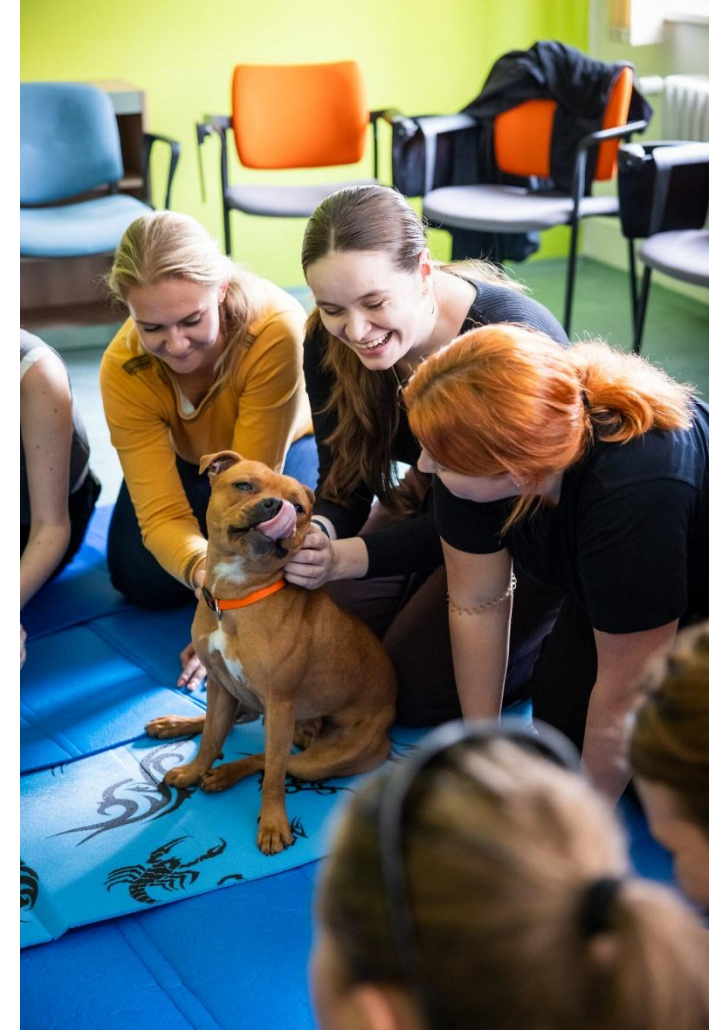
Lifelong Learning: ESG Value Creation

Professional training for sustainable business strategies

- The Institute of Lifelong Learning (ICV) offers a specialized program focused on integrating sustainability into corporate value and strategic management. Taught by specialists from the Faculty of Regional Development and International Studies, blending academic rigor with practical industry insights.
- Upon successful completion (including a final project and defense), participants receive a **Micro-certificate** and a Certificate of Completion, validating their professional expertise.
- **Core Curriculum:**
 - **ESG Reporting Frameworks:** Mastery of EU regulations like CSRD, ESRS, and EU Taxonomy.
 - **Environmental Metrics (E):** Climate change, carbon footprinting, water management, and circular economy.
 - **Social & Governance (S+G):** Workforce ethics, supply chain transparency, and responsible leadership.

MENDELU Mind Fest

- Mind Fest is a two-day festival **focused on mental health and personal development**, organised by Mendel University in Brno as part of the nationwide Mental Health Weeks campaign
- It is open to students, academic staff, and the wider public
- Mind Fest has already had two editions
 - **2024 – Mental well-being**
Self-care, stress prevention, healthy life balance
 - **2025 – Relationships**
Communication, boundaries, conflict resolution, healthy connections



Research & Innovation

"Superworms" Under the Microscope

Biological solutions for the global plastic waste crisis

- Scientists at the Faculty of AgriSciences are studying *Zophobas morio* larvae (known as superworms), which are capable of consuming and degrading synthetic polymers like polystyrene (PS), polyethylene (PE), and PET.
- The larvae mechanically break down plastic, which is then chemically decomposed in their gut by a combination of specialized enzymes and microorganisms.
- The research team uses advanced "omics" methods (analyzing genes, proteins, and metabolites) and Artificial Intelligence to identify the specific proteins responsible for plastic degradation.
- The ultimate aim is to isolate these enzymes to create eco-friendly, industrial-scale plastic recycling technologies without the need for the larvae themselves.
- Preliminary results show that these larvae can not only degrade plastic but also survive on it for extended periods. Research now focuses on optimizing conditions for maximum efficiency.



Biodegradable Bio-foils: Replacing Plastics

Innovative materials for sustainable agriculture and beyond

- Scientists at the Faculty of AgriSciences are developing bio-foils that decompose in weeks or months, unlike traditional plastics that last for centuries.
- Made from polysaccharides like furcellaran (from seaweed) and chitosan (from crustacean shells), making them fully compostable.
- These foils are enriched with phosphorus and potassium. When used as protective seedling baskets, they release nutrients into the soil as they degrade.
- Successful laboratory and field experiments on lettuce and strawberries confirm that the material degrades as planned while supporting plant growth.
- Beyond agriculture, these versatile materials could be used in packaging, pharmaceuticals, or even for simulating conditions for life outside Earth.



Food Waste Research: From Brno to Prague

Analyzing household behavior across the Czech Republic



- For over 7 years, researchers from the Faculty of Business and Economics (PEF MENDELU) have been studying food waste to help households change their habits.
- In 2025, the team expanded its trash analysis to Prague, finding that the average resident wastes **26 kg of food per year** (approx. 0.5 kg per week).
- **High-income households** tend to waste more due to "unmet expectations" (taste).
 - **Lower-income households** plan better and are motivated by financial savings.
- Waste composition varies by location; "luxury" housing areas waste more cooked meals, while housing estates (sídliště) waste more bread/pastries.
- The project resulted in a "**Manual on How to Save Food**" for municipalities to help them communicate effectively with different social groups.
- Conducted in partnership with the *Save Food* (Zachraň jídlo) organization and supported by the Technology Agency of the Czech Republic.

Sustainable Fish Farming: Feed Innovations

Improving aquatic health and reducing ecological footprints

- Researchers from the Faculty of AgriSciences are developing optimized feed additives to enhance fish growth, immunity, and overall well-being.
- Use of prebiotics, probiotics, and natural immunostimulants to support a healthy gut microbiome and reduce the need for antibiotics.

- **Environmental Impact:**

- **Waste Reduction:** Improved feed conversion leads to less nitrogen and phosphorus pollution in water systems.
 - **Circular Systems:** In recirculating aquaculture systems (RAS), biofilters and sediment utilization help minimize environmental strain.
- Efforts to replace unsustainable fishmeal (often imported from South America) with more local and sustainable protein components.
- Strategic use of micronutrients (vitamins and minerals) strengthens fish resistance to environmental stress and pathogens, ensuring long-term production stability.



Operations & Campus

Self-Service System: Reducing Plate Waste

Empowering students to minimize food waste

- Since introducing the self-service system at Canteen X, food waste has dropped from an average of **60–70 liters** to just **17 liters per day**.
- Students and staff can now choose their own portions and combinations, leading to higher consumption of the food served and less waste on plates.
- The new system includes expanded **salad and sweet bars**, showing a significant increase in the consumption of fresh vegetables and fruit cups.
- Feedback shows high satisfaction with the freedom to assemble meals, and the university is currently optimizing the layout to further improve service flow.
- This reduction in plate waste complements the university's new food waste processing technology, closing the loop on organic waste management.



Food Waste Reduction in Canteens

Cutting-edge technology for a greener campus

- Since February 2025, MENDELU has been using a new drying system that reduces the volume of food waste by **80–95%**.
- The waste is thermally treated (dried), making the final product safe and potentially usable as a **certified fertilizer**.
- The device processes all organic waste from all university catering facilities (approx. **300–500 kg per week**).
- In collaboration with the Central Institute for Supervising and Testing in Agriculture (located right on campus), we are working on integrating this output back into the soil.



Renewable Energy: Solar Power on Campus

Expanding our green infrastructure step by step

- MENDELU has recently installed **663 solar panels** across the roofs of five key campus buildings (**M, N, P, Q, and R**).
- While the current output covers a small percentage of the total campus consumption, it represents a crucial shift toward energy self-sufficiency.
- This project directly reduces the university's carbon footprint and dependence on traditional energy grids. The installation is part of a long-term plan to optimize campus operations and test the feasibility of larger-scale renewable energy solutions.



Smart Water Management in the Botanical Garden

Protecting biodiversity through technology and data

- MENDELU is creating a "digital twin" of the entire Botanical Garden and Arboretum (BZA) to monitor water pipes and environment parameters in real-time.
- The system uses weather forecasts and environmental data to automate irrigation, ensuring plants get exactly what they need while minimizing waste.
- To reduce dependence on the public water supply, the university is building a **deep-well** and a system to collect **rainwater** from campus rooftops.
- Powered by the startup *Nextdrop*, the solution allows for remote control, leak detection, and automated management of retention tanks (total capacity of hundreds of m³).
- Beyond daily operations, this unique model serves as a platform for research and student training in sustainable water management.



Social Responsibility

Social entrepreneurship conference

- In 2025 and 2026, MENDELU organised conferences on social entrepreneurship and sustainable regional development
- The events brought together students, academics, public authorities and social enterprises to explore how entrepreneurship can create social impact
- Main topics included:
 - innovation and legislation supporting social enterprises,
 - responsible public procurement,
 - partnerships between universities, municipalities and businesses,
 - practical examples of social enterprises in the region
- The conferences highlighted how business can contribute to inclusive and sustainable communities



Social Enterprise & Non-Profit Day

- A traditional event organised by the Centre for Social Responsibility and Sustainability at MENDELU
- The event brings together social enterprises, non-profit organisations, responsible businesses and students to present their work to the public
- Visitors can meet organisations at their stands, take part in activities and purchase handmade products
- The event also includes the presentation and award of student projects from the course *Social Responsibility and Sustainability of Organisations*



Dobrotrh MENDELU (charity market)

- Dobrotrh is a traditional student-led charity event held in December at MENDELU
- Students organise a charity market and online auction, selling donated, handmade products and small gifts. The money raised supports selected non-profit organisations
- The event takes place online and on campus, creating a friendly pre-Christmas atmosphere.
- Dobrotrh also gives students **practical experience in organising events, teamwork and communication**
- In recent years, it has raised significant funds and become an important part of the university's social responsibility activities



Christmas punch for Emil

- 103 Christmas punches for Emil is a Christmas charity event organised by the Emil Foundation
- The foundation supports children and young people (up to 30) with physical, sensory or intellectual disabilities who have limited access to sport because specialised equipment is expensive
- Buying a cup of punch helps fund sports equipment and activities for young people with disabilities
- The event promotes equal access to sport



Zlatá Vážka award

- The Czech Social Business Award (Zlatá Vážka) is a national award recognising organisations and individuals who support people facing disadvantages and promote a more inclusive labour market
- The award highlights organisations proving that business can be economically successful while creating a positive social impact
- **CSR MENDELU received 2nd place in the category Institution of the Year**



Thank you for your attention