

Research and Education in Forest Sciences Universität für Bodenkultur Wien (BOKU) University of Natural Resources and Life Sciences, Vienna

Introduction - Msc European Forestry 18th of January 2024

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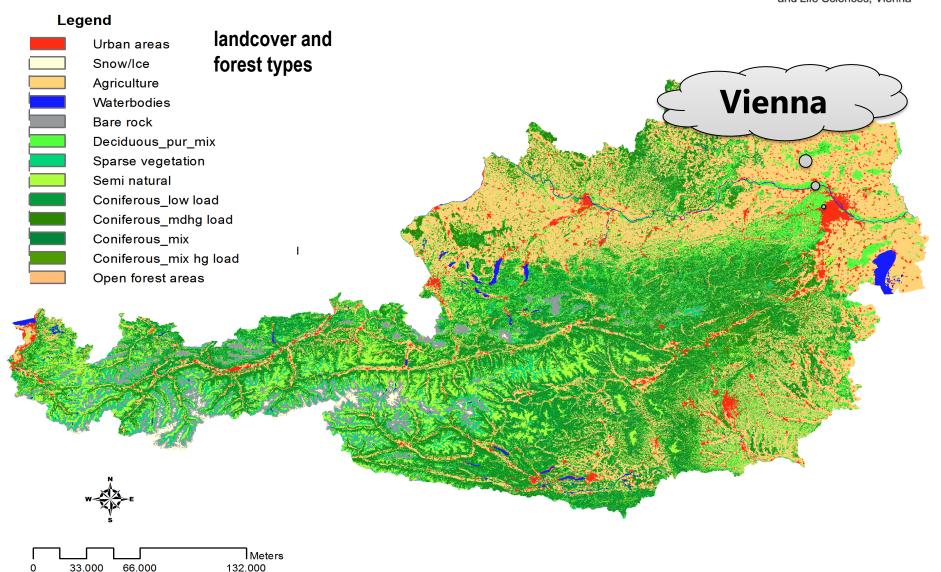








Austria - Vienna







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BOKU Site Türkenschanze



BOKU Site Muthgasse









Universität für BOdenKUltur (BOKU)







- Founded in 1872 celebrated 150 years in 2022
- ~ 10.000 students in 8 Bachelor, 26 Master (+ several double degree programms; 11 Master programs in English) and several PhD programs (~ 800 students); 1550 graduates per year; students satisfaction: top ranked in Austria; 20% foreign students; Greenmetric University ranking: no. 8 world wide, 2 in education; QS World University Ranking by Subject: Rank 33
- ~ 2990 employees (head count); ~700 scientists employed on a project basis; ~ 74 full professors (1/3 non Austrians), ~ 130 Assoc. Profs
- ~ 700 ongoing projects, ~ 100 EU projects, ~ 110 FWF projects, participation in several excellence projects (FWF, COMET, Christian Doppler, Laura Bassi, WWTF, Marie Curie,...)
- ~ 100 Mio € GUF, 42 Mio € external resources (projects; basis 2013)
- ~ 2500 scientific publications per year (~ 690 SCI), ~ 1400 presentations per year
- Organized in 15 departments restructuring process ongoing

BOKU – themes and competences



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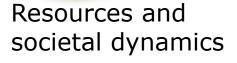


Soil and terrestrial ecosystems

Water -Atmosphere -**Environment**



Management natural resources



Securing nutrition and health

Living space and landscape



Renewable raw materials, resources oriented technologies

Nano sciences and technology



Biotechnology

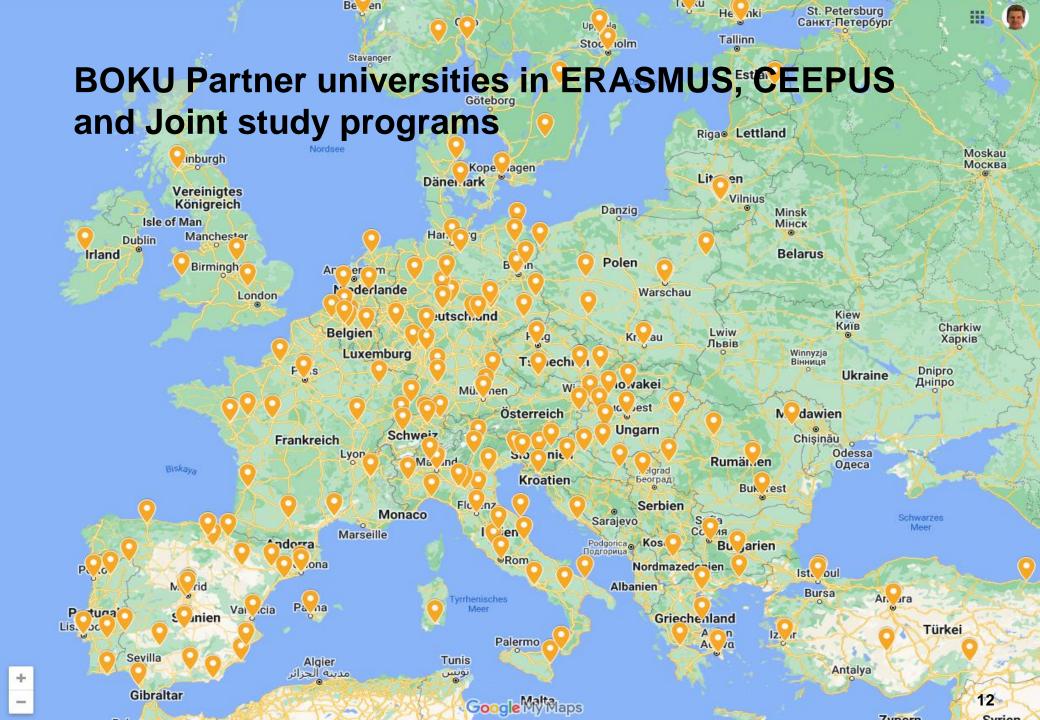
Food – nutrition · health













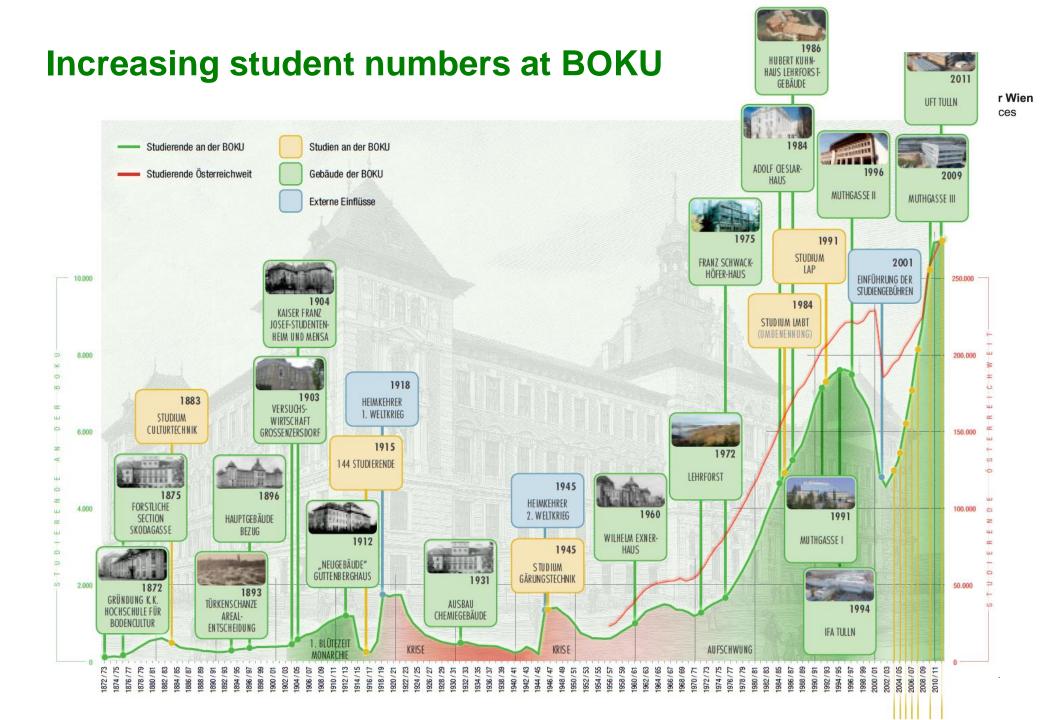
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BOKU - international master programs

Further information : www.boku4you.at

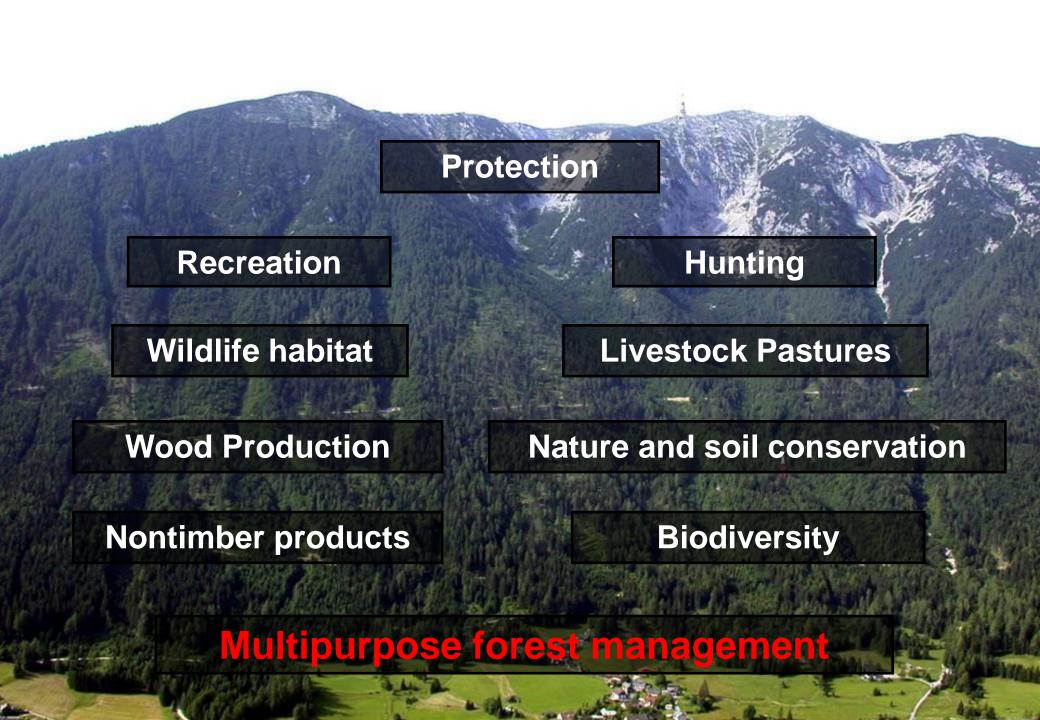
- Animal Breeding and Genetics
- Applied Limnology Wetland Management
- Environmental Sciences Soil, Water and Biodiversity
- European Forestry
- Horticultural Sciences
- Material and thermal utilization of renewable raw materials (German)
- Mountain Forestry
- Natural Resources Management and Ecological Engineering
- Organic Agricultural Systems and Agroecology
- Safety in the Food Chain
- Sustainability in Agriculture, Food Production, Food Technology in Danube R.
- Viticulture, Oenology and Wine Economy (in German)
- Water Management and Environmental Engineering





Master programs related to forestry at BOKU

- provide education in managing mountain forest resources with a global perspective
- teach students to recognise and solve problems in mountain forest management and conservation
- Focus on timber production within multifunctional management
- integration of engineering, socio-economics and natural sciences
- strengthen interdisciplinary approaches in forestry





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Learning Outcomes of Mountain Forestry

- able to describe ecological characteristics of mountain forest ecosystems and identify site specific limiting ecological factors
- describe natural dynamics and identify the ecological effects of management strategies on mountain forest ecosystems based on these specific characteristics
- able to characterize the role of specific social and economical settings of sustainable natural resource management of mountain regions
- able to apply scientific methods including participatory approaches for analyzing social and economical characteristics of mountain regions
- recognize the role of multiple stakeholder interests for management of mountain forests and are able to integrate these into management strategies which they develop and / or implement.
- able to identify, develop and implement suitable methods for resource inventories and monitoring, thereby ensuring sustainability of resource use in forests
- able to identify, develop and implement adapted and appropriate technological methods for sustainable management of mountain forests.
- able to integrate ecological, socio-economical characteristics of mountain regions
- analyse interactions between these factors and derive management strategies for sustainable provision of multiple ecosystem services.



Selected courses in MSc EF study tracks

Decision support systems for resource management	Remote sensing and GIS in natural resource management Decision support systems Multiple criteria decision making in natural resource management	3 3 3	Autumn 2024 Autumn 2024 Autumn 2024
Resource management for ecosystem services	Natural resource management in mountain forests I, III Agroforestry in mountain regions Biodiversity and conservation of mountain forests Natural resources management in mountainous areas III - wildlife problems	4+2 2 2 2	Spring 2025 Spring 2025 Spring 2025 Spring 2025
Spatial and ecological modelling	Modelling of mountain forest ecosystems Adapting forest management to climate change	2.5 2	Autumn 2024 Autumn 2024
Resource economics and policy	Forest resource economics Innovations for sustainable forest management Mountain forest policy	4.5 4 4.5	Autumn 2024 Autumn 2024 Autumn 2024
Silviculture and engineering	Harvesting systems for mountainous regions Cable yarding project Road network planning Field camp III - integrated forest management applications	2 1.5 3 3	Autumn 2024 Autumn 2024 Spring 2025 Autumn 2024



Other selected courses of Msc Mountain Forestry program

Introduction to mountain forestry and scientific skills	Field Camp I - Introduction to mountain forestry and forest sciences (2) Methods of data collection, management and analysis (2)
Ecology of Mountain Forests	Mountain forest dynamics and fire ecology (3) Mountain forest soils and forest nutrition (2,5) Field Camp II -Concepts and methods of site ecology, forest growth and yield (3) Mountain forest climatology and headwater hydrology (2,5) Biodiversity and conservation of mountain forests (2) Air pollution effects on forest ecosystems (3) Chemistry for forestry (1) Specific methods on soil analysis (1) Physical and selected chemical methods of soil analysis (4,5) Forest and water (3)
Economic and social dimensions in mountain forestry	Forest resource economics (4,5) Mountain forest policy (4,5) Participatory methods in development research and practice (3) Project management in development co-operation (2) Economics of multiple use forestry (1,5) Innovations for Sustainable Forest Management (4) Applied development research I (3) Applied development research II (3) Organisational behaviour and gender issues (3) Forest products, marketing and strategy (3)



Other selected courses from modules of Msc Mountain Forestry program

Inventory and Monitoring	Forest inventory (3) Modelling of mountain forest ecosystems (2,5) Remote sensing and GIS in natural resource management UE (3) Remote sensing and GIS in natural resource management VO (3) 3P – Sampling (2)
Forest Management for goods and environmental services	Natural resource management in mountain forests (4) Agro forestry in mountain regions (2) The role of forests in mountain risk engineering (2) Forest protection (2) Protection and mitigation measures against natural hazards (3) Risk management and vulnerability assessment (3) Mountain hazard processes (6) Decision support systems (3) Multiple criteria decision making in natural resource management (3) Fire management in mountain forest ecosystems (2) Adapting forest management to climate change (2) Natural resources management in mountainous areas III -Wildlife problems (2)
Forest Engineering	Harvesting systems for mountainous regions (2) Field Camp III – Integrated forest management applications (3) Road network planning (3) Cable yarding project (1.5) Technology assessment (3) CAD - Computer aided design (1) Timber harvesting (1)

Excursion and joint Field Camp I & Field Camp III

28 participants

- 5 continents: Africa, Asia, Europe, North America, Oceania
- 16 countries: Bangladesh, Belgium, Bhutan, Canada, China (incl. Hongkong), Ethiopia, France, Germany, India, Nepal, New Zealand, Pakistan, Rumania, Spain, Tanzania, USA



Department of Forest- and Soil Sciences



Research and scientific education in (forest-) ecosystems analysis, ecosystem modeling and management, soil use and soil protection organized by:

- Institute of Soil Science
- Institute of Forest Ecology
- Institute of Silviculture
- Institute of Forest Growth and Yield Research
- Institute of Forest Engineering
- Institute of Forest Entomology, Forest Pathology and Forest Protection
- Forest Experimental and Training Centre



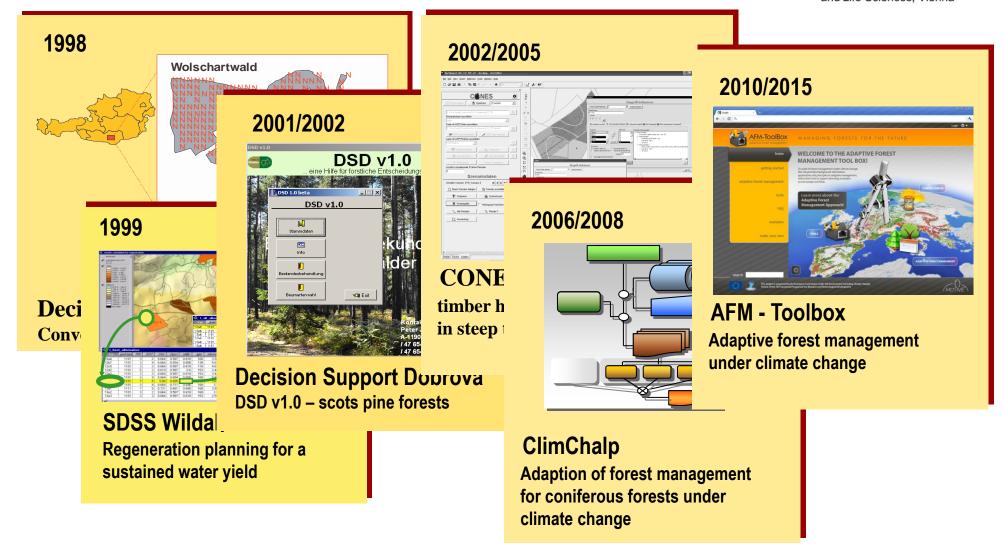


- Silvicultural techniques and management of mountain forests
- Evaluating Sustainable Forest Management approaches and Harvesting techniques
- Forest Ecosystem Modeling
- Multi Criteria Decision Making and Decision Support Systems
- Biodiversity and Forest Genetics
- Forest Ecology and natural dynamics of forest ecosystems
- Forest Policy Analysis (EFI FPNR)
- Forest Genetic and general Soil Lab
- More then 180 experimental sites
- Experimental garden and Tree Nursery "Knödelhütte"



Forest management planning and decision support systems

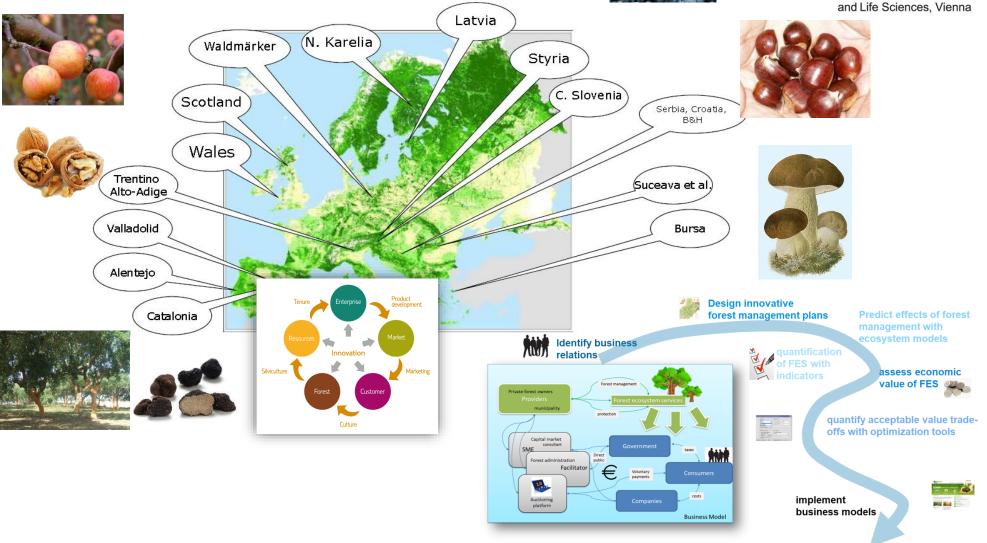




Sustainable Forest Management

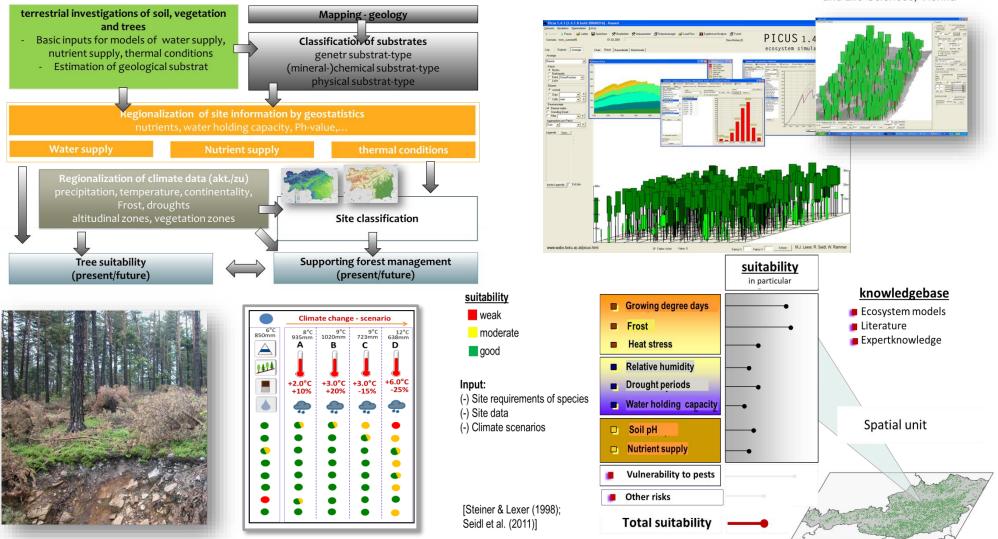
Non Wood Forest Products and Ecosystem Services





Forest site classification and tree species suitability under climate change

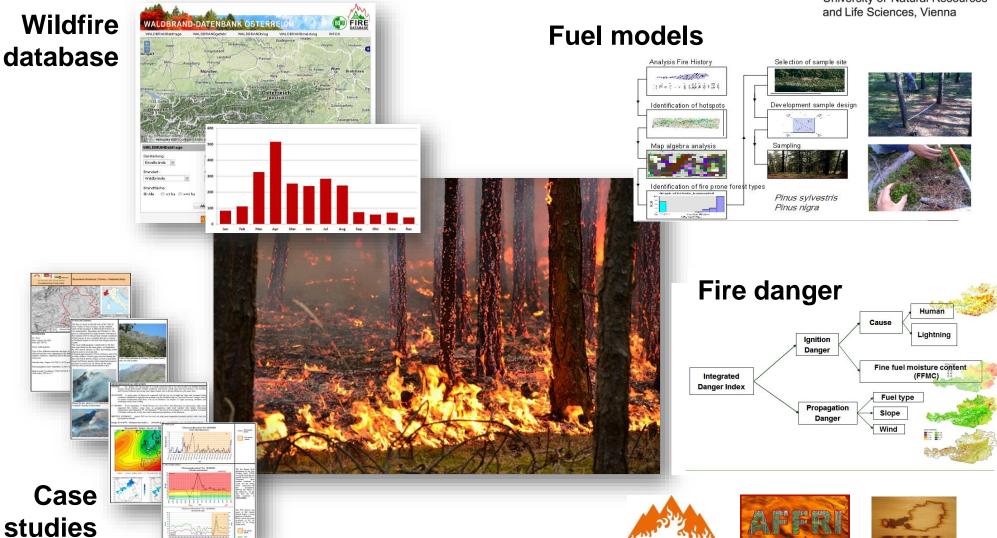




Forest Fire Research in mountain ecosystems

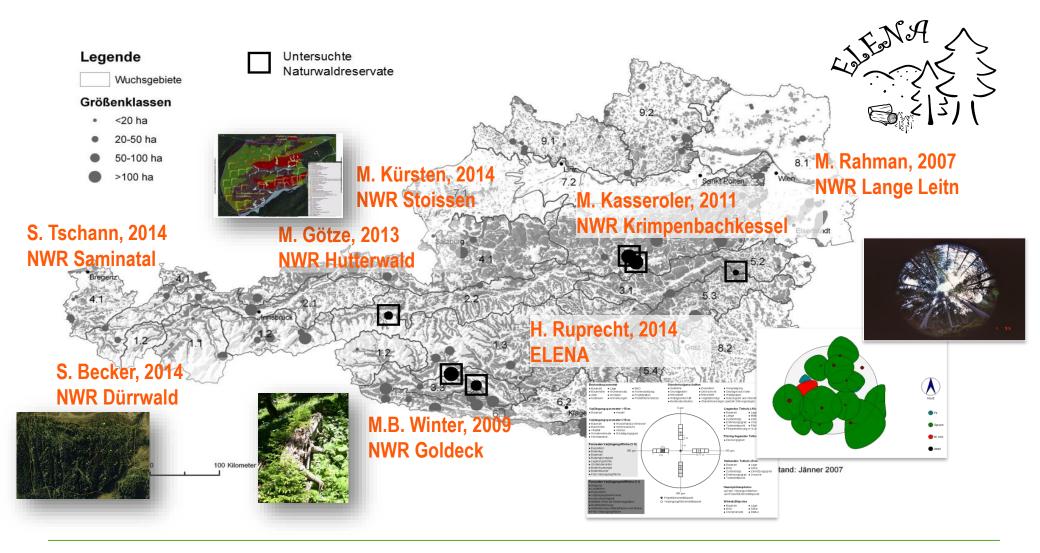


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Research in natural reserves to understand forest dynamics and maintain biodiversity







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Selected master thesis topics of last years

Starcevic A.(2022) Forest dynamics of the natural forest reserve Schiffwald

Wangchuk R. (2022) The Factors that Influence the Contribution of **Non-Wood Forest Products** to Rural Livelihoods and the Roles of Policies surrounding NWFPs in Bhutan

Imparato Maximo Y. (2022): Forest **bioeconomy** in Brazil: recent developments and opportunities.

Hoang, T.T. (2021): Analysis of the **stakeholder perceptions** and trends of forest fire occurrence in the Alpine region.

Nazari, M. (2020): Identifying successful mechanisms for the implementation of payment for **ecosystem services**

Yosef, A. B.(2019): **Growth assessment of tree species** growing in the Amhara region in Ethiopia

Delazari Deniz L. (2017): Modelling time and fuel usage in **timber transport** in mountain forestry.

Silva Andrade M. (2017): Evaluation of **drought effects** on radial stem growth of Norway spruce and Scots pine in Tyrol.

Tariyal G. (2017): Building **resilient livelihoods** towards biotic and abiotic disturbance factors in Bhutan – A community based adaptation to global change.

Ohler C. (2017) Cooperation or conflict? An analysis of global **forest governance**.

Vejnovic V. (2016) Analysis of the readiness of Serbia to effectively comply with and implement the **European Timber Regulation** (EUTR).

Yang L. (2015) Influence on nitrogen nutrition form and drought cycles on the **fine root respiration** of two tree species



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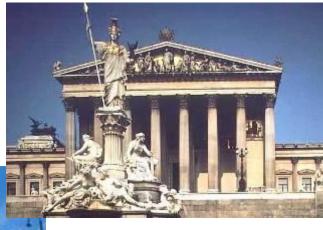


Tourist attractions (i)



Universität für Bodenkultur Wien University of Natural Resources and Life Sciences, Vienna





City Hall

Parliament



Burgtheater

Hofburg



State Opera

Tourist attractions (ii)



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St. Charles's Church



Schönbrunn Palace



Belvedere Palace



St. Stephen's Cathedral

Giant Wheel

Vienna is known for many traditional dishes

- Wiener Schnitzel
- **Tafelspitz**
- **Apfelstrudel**
- sweet pancakes
- Sachertorte

















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Any other issues

- Semester starts in October
- Welcome days offered by BOKU
- Introductory Field Camp I (October) to get to know other international students
- Offer of german language courses by CIR
- FIS research database allows to finding a supervisor for master thesis topic
 please contact me https://forschung.boku.ac.at/
- Networking with IFSA student association https://www.oehboku.at/oeh-boku-international-network/ifsa.html
- Support by OEAD housing services for finding a study room (montly rents € 320 660.-) https://www.oeadstudenthousing.at/en/, finding private rooms/flats require more time and effort
- meals offered at mensa BOKU (new wooden building)
- good infrastructure regarding public transport in the city







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Welcome days for international students

contact point for international students from MSc European Forestry programm Nicole Fohringer

nicole.fohringer@boku.ac.at

https://boku.ac.at/en/universitaet-fuer-bodenkultur-wien-boku/studieren-an-der-boku/themen-fuer-studierende/internationales/international-students-coming-to-boku/

Thanks for your attention!



UNIVERSITÄT FÜR BODENKULTUR WIEN

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