

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

# The three pillars study programmes at BOKU for sustainable Bioeconomy

Barbara Hinterstoisser

University of Natural Resources and Life Sciences, Austria





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

# **Missionstatement BOKU**

The University of Natural Resources and Life Sciences, Vienna, the *Alma Mater Viridis*, sees itself as an **education and research centre for renewable resources**, which are a necessity for human life. With its wide range of areas of expertise it is the task of BOKU to contribute significantly to the **protection of life resources for future generations**. With a connection between **natural sciences**, **engineering and economics**, BOKU is trying to deepen the knowledge of an **ecologically and economically sustainable use of natural resources in a cultivated landscape**.



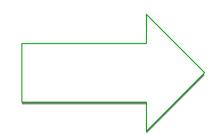
# **Global questions and challenges**

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

"Grand Challenges": many questions have to be solved in/for future

- ≻global change
- Iimited natural resources and their loss
- Ionging for renewable resources and their limitations
- exploitation of nature and loss of biodiversity
- increasing poverty gap between poor and rich

### ▶.....



Need for critical thinking interaction ! Need for holistic systems thinking ! Need for interdisciplinarity in study programs ! Policy Paper BIOS Science Austria

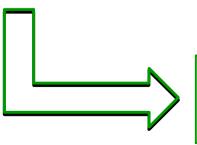
# Sustainable Bioeconomy



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

"Bioeconomy is the **knowledge-based production and use of organic resources** in order to provide products, procedures and services for all economic sectors in the framework of a **sustainable economic system**....

Among the most important sectors of the bioeconomy are those of **primary production (agriculture, forestry and fisheries), the food and feeding stuff industry, the wood-processing businesses**, the pulp and paper industry, as well as parts of the chemical and **biotechnological** industry, and of **renewable power industry**...."



How to prepare our students for a sustainable Bioeconomy?

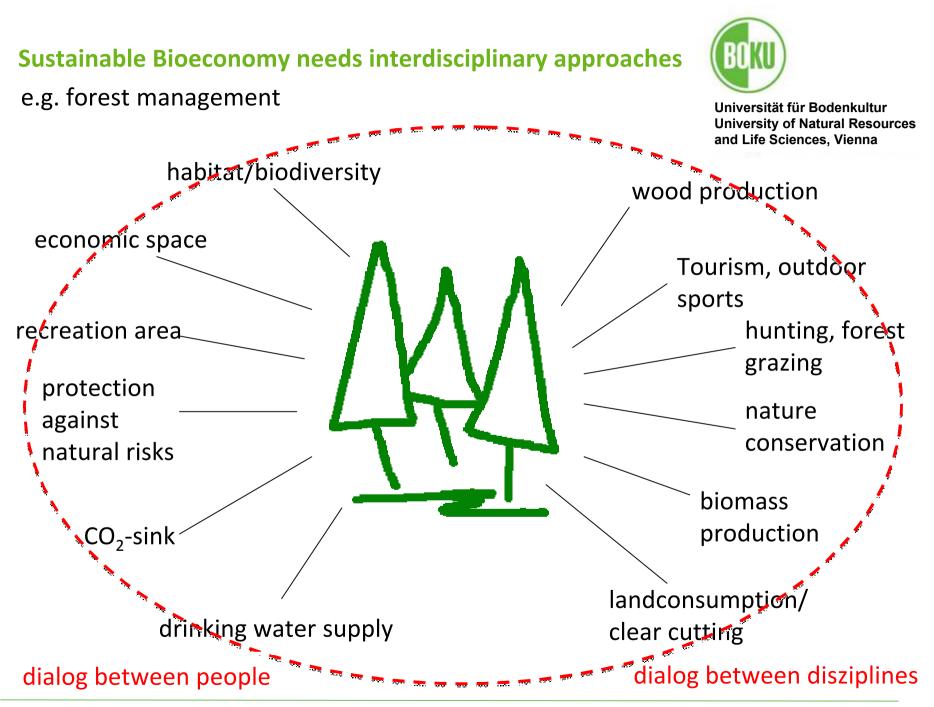
# Sustainable Bioeconomy

- needs innovative graduates
- with holistic systems thinking skills:
- interdisciplinary thinking abilities





- •willingness to build bridges between specialists and people
- ability of multidimensional thinking
- •strong scientific thinking ability
- knowledge in basics and theory of natural-, technical-,
- economic- and social-sciences
- know the practical applications and the demands of society
- •williningness to keep up with the state of the art (LLL)



Barbara Hinterstoisser

### We need innovative graduates

### with holistic systems thinking skills:

graduates with knowledge in

Natural Sciences

Technical Sciences

Economics and Social Sciences

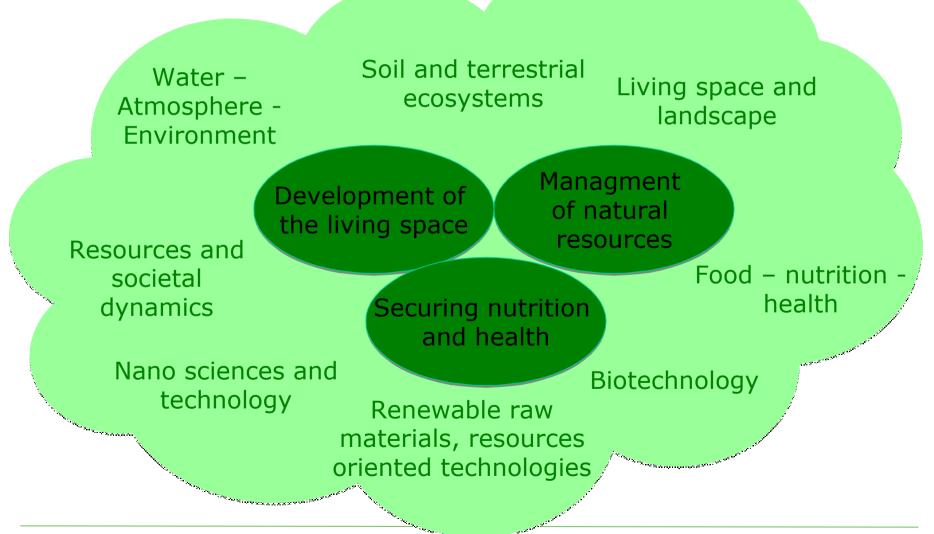






### BOKU – themes and competences







# **BOKU** bachelor programs

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

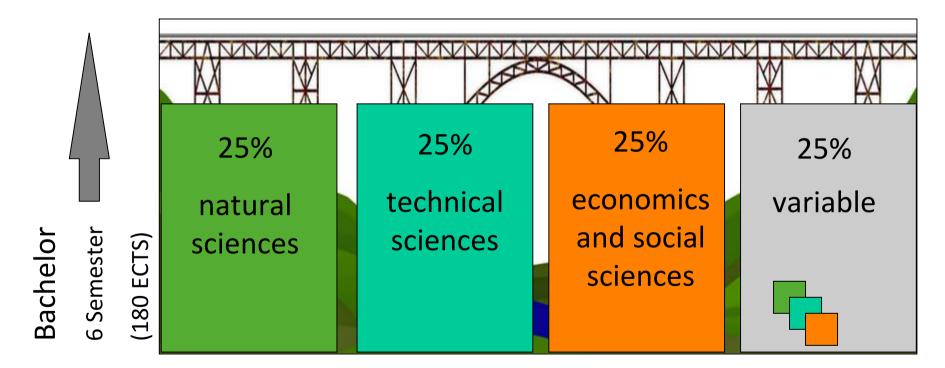
- Forestry
- Wood and Fibre Technology
- sounds just like **Environment and Bio Resources Mangement** ۲
- **Environmental Engineering**
- Food Sciences and Biotechnology
- **Agricultural Sciences**
- Landscape Architecture and Planning ۲
- Viticulture, Oenology and Wine Marketing
- **Equine Sciences** •
- Further information: www.boku4you.at : ۲

### www.boku4you.at

# Curricula at BOKU Bachelor programs



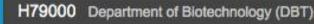
Universität für Bodenkultur University of Natural Resources and Life Sciences, Vienna



### Bridging the disciplines



Department of Material Sciences and Process H89000 Engineering (MAP)



Department of Water - Atmosphere - Environment H81000 (WAU)

H80000 Department of Nanobiotechnology (DNBT)



H77000 Department of Chemistry (DCH)

H83000

Department of Integrative Biology and Biodiversity Research (DIB)

H75000

Department of Food Science and Technology (DLWT)

Department of Landscape, Spatial and H85000 Infrastructure Sciences

Department of Economics and Social Sciences H73000 (WISo)

H93000 Department of Sustainable Agricultural Systems

Department of Civil Engineering and Natural H87000 Hazards

H91000 Department of Forest- and Soil Sciences

H95000 Department of Crop Sciences (DNW)

H97000 Department of Agrobiotechnology, IFA-Tulin

Department of Applied Genetics and Cell Biology H94000 (DAGZ)



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

## **BOKU-departments** provide the lectures for many study programs



# **BOKU-departments**

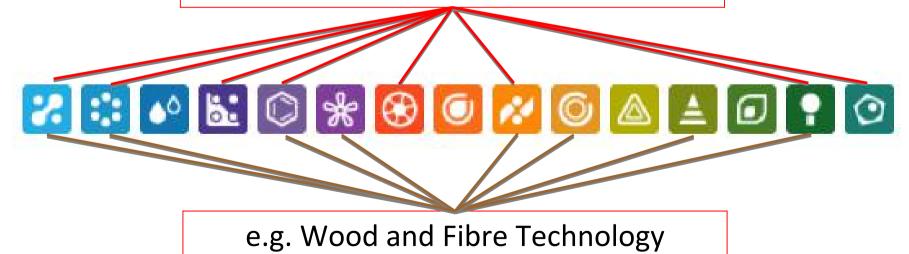
Universität für Bodenkultur University of Natural Resources and Life Sciences, Vienna

are always involved in several different study programms



dialog between disziplines and students get to know the different languages

e.g. Food Science and Biotechnology





# **BOKU-departments**

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

are always involved in several different study programms



dialog between disziplines and students get to know the different languages

e.g. Agricultural Sciences





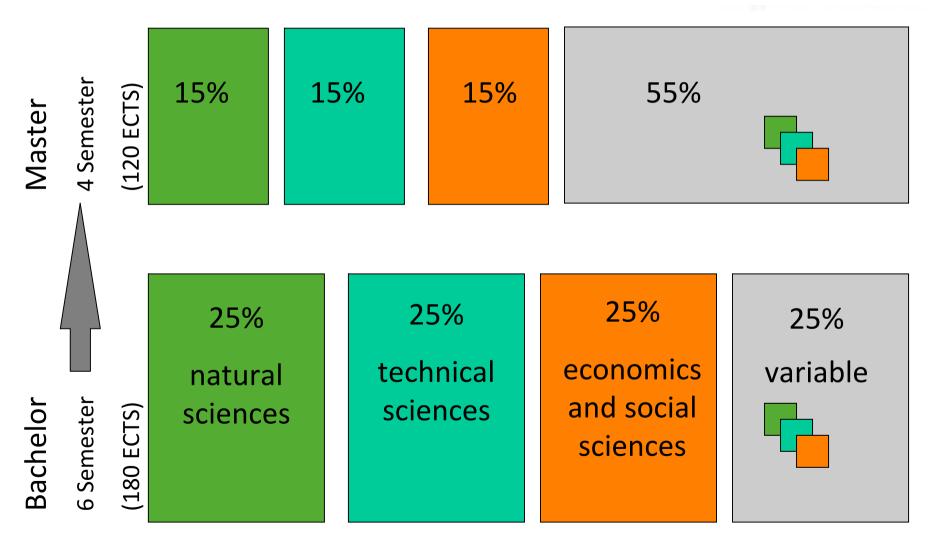
				Universi	ität für Bodenkul	tur
Bachelor	Master (german)	е	english/internat. Master			urce
HNT	HTM			NAWARO		
FW	FW	MF	EuroF		Boku Dr.	
	WWM					
	PM		11	NAWARO		
AW	AW-Nuwi		HortSc			
	AW-Nupfl	AgroEco EUR-org	EM-ABG			
	AW-EW		WÖW	Danube		
LBT	LWT		SIFC	AgriFood	Biotop	
	BT				IGS-	
KTWW	KTWW	WMEE	ENVEURO		nanoBio	
	AN-WL	AppL	NARMEE			
UBRM	UBRM					
LAP- LARCH	LAP- LARCH					

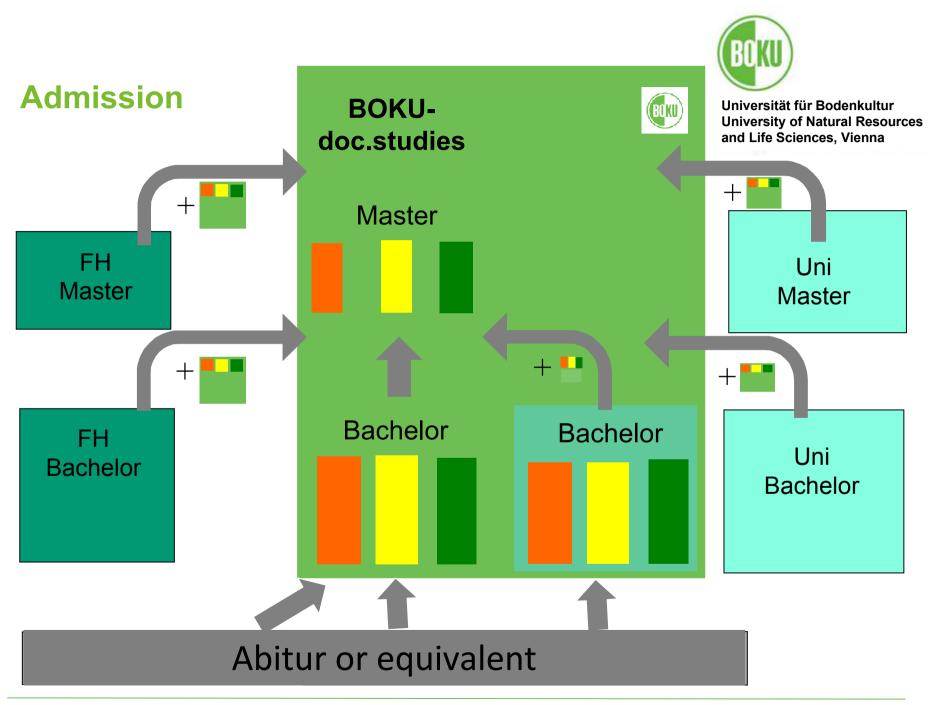
Barbara Hinterstoisser

### **Curricula at BOKU**

since2004/2005 Bachelor- und Masterprograms







Barbara Hinterstoisser



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

Our universities should be left by innovative graduates with holistic systems thinking skills for a society based on sustainable bioeconomy!



