

A08 Socio-ecology in livestock production systems

Module	Socio-ecology in livestock production systems							
Code	A08							
Coordinator	Prof. Dr. E. Schlecht							
Language	English							
Stud. Workload	180h (60h contact time)							
Credits	6 ECTS							
Frequency (WS/SS)	SS, every second year; alternating with the module "Unconventional livestock and wildlife management"							
Instructor	PD Dr. B. Kaufmann							
Contents	<p>Theoretical background of the socio-ecological system view: System theory, 1st and 2nd order cybernetics, complex adaptive systems, human activity systems.</p> <p>Actor oriented approach to understand and influence low external input systems:</p> <ul style="list-style-type: none"> - Local knowledge and situated practices - Methodology for understanding local knowledge: Second order observation and knowledge analysis - Collaborative learning: Exchange between knowledge systems, dialogue, action research, livestock farmer experimentation, participatory monitoring and evaluation <p>Modelling of livestock systems as tool for collaborative learning: Bio-economic modelling, multi-agent modelling, role plays.</p>							
Objectives	<p>Students understand livestock systems as socio-ecological systems in which livestock farmers through <i>their actions</i> establish, maintain and develop the respective production system. Consequently, these so-called human activity systems are assessed using an actor oriented approach. Emphasis of this module is on methods that are used to analyse and improve livestock farmers' management. This serves to understand "why livestock farmers do what they do" and "how livestock farmers produce". Students learn how they can make use of the knowledge of livestock farmers to better understand how low external input systems work. Collaborative learning is introduced as methodology to develop human activity systems in a transdisciplinary research approach. They deal with the question of how mutual understanding between livestock farmers and scientists can be achieved despite the different knowledge systems. Students obtain a profound insight into methods for farmer experimentations in which livestock farmers and scientists collaborate, and into using computer models as learning tools for ex-ante assessment of improvement measures in community based approaches. In <i>what – if</i> analyses the change of action rules on the performance of socio-ecological systems is assessed.</p>							
Literature	<p>Kaufmann, B.A. 2007: Cybernetic analysis of socio-biological systems: The case of livestock management in resource poor systems. In: Kommunikation und Beratung, Volume 81, Margraf Publishing; McCown, R.L. 2002: Changing systems for supporting farmers' decisions: problems, paradigms and prospects. Agricultural Systems 74: 179-220; Wiener, N. 1948: Cybernetics or control and communication in the animal and the machine. John Wiley, New York.</p>							
Study system usability	Economy		Organic			Tropical		
	E		E			E		
Entrance requirements	Basic knowledge (B.Sc. level) of soil, plant and animal sciences							
Instruction type	Lecture	Seminar	Excursion	Practice	Tutorial	Project		
Duration [contact h]	30	10		20				
Examination type	Oral test	Written test	Homework	Sem. speech	Protocol	Work report	Proj. report	Proj. pres.
		x		x				
Grade composition	70% written test, 30% sem. speech							