

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.A08: Social-ecology in livestock production systems	6 C 4 WLH
Learning outcome, core skills: Students understand livestock systems as social-ecological systems in which livestock farmers, through their actions, 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 "what – if" analyses, the change of action rules on the performance of socio-ecological systems is assessed.	Workload: Attendance time: 60 h Self-study time: 120 h
Course: Social-ecology in livestock production systems (Lecture, Seminar, Block course) <i>Contents:</i> Theoretical background of the social-ecological system view: System theory, 1st and 2nd order cybernetics, complex adaptive systems, human activity systems. Actor-oriented approach to understand and influence low external input systems: 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 Modelling of livestock systems as tool for collaborative learning: Bio-economic modelling, multi-agent modelling, role plays. 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.	WLH
Examination: Written exam (90 minutes, 70%) and presentation (ca. 20 minutes, 30%)	6 C

Examination requirements: Social-ecological systems analysis; systems theory, cybernetic, complex adaptive systems, human activity systems. Local knowledge and situated practices; analysis of local knowledge; cooperative learning; modelling of livestock husbandry systems.	
Admission requirements: none	Recommended previous knowledge: Basic knowledge (B.Sc. level) of soil, plant and animal sciences
Language: Englisch	Person responsible for module: Prof. Dr. Eva Schlecht
Course frequency: SoSe, jedes 2 Jahr, alternierend mit dem Modul M.SIA.A07; Witzenhausen	Duration: 1 Semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: 30	
Additional notes and regulations: Literature: 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.	