

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.A13M: Livestock-based sustainable land use	6 C 4 WLH
Learning outcome, core skills: To understand the interactions of livestock with the natural resource base and their site- and management specific positive or negative environmental impacts; To get acquainted with and test methodological approaches used in field research on livestock-environment interactions; To learn about simple modelling approaches and the significance of their results.	Workload: Attendance time: 56 h Self-study time: 124 h
Course: Livestock-based sustainable land use (Lecture, Exercise) <i>Contents:</i> This module highlights the general positive and negative impacts of livestock and livestock management on the natural resources (air, water, soil vegetation), specifically under (sub)tropical conditions, at the plot to the watershed scale. It discusses options for sustainable livestock-based land use, thereby building upon the beneficial impacts of animals on soils and plants. Management options for reducing negative environmental effects of livestock (gaseous emissions, nutrient excretion) are highlighted, and possibilities for consolidating the interests of livestock keepers with international conventions are discussed. The students are introduced, in lectures, own reading and practical field tests to up-to-date quantitative and qualitative methods that are used in studies on animal-environment interactions. Simple modelling approaches that depict animal-environment interactions at the plot level up to the watershed scale are presented and tested by the participants. Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M., de Haan, C. 2006: Livestock's long shadow. Fao, Rome, Italy; Specific scientific articles, distributed in the course.	4 WLH
Examination: Written examination (90 minutes) M.SIA.A13M.Mp: Livestock-based sustainable land use Examination requirements: Influences of animal husbandry / the individual animal on its environment: soil fertility and soil erosion, pasture vegetation, nutrient transfers, greenhouse gas emissions; livestock keeping versus nature conservation; methods for assessing quality and quantity of pasture vegetation; methods to determine the animal's behavior at pasture and its feed intake.	6 C
Admission requirements: none	Recommended previous knowledge: Basic knowledge (B.Sc. level) of soil, plant and animal sciences
Language: English	Person responsible for module: Prof. Dr. Eva Schlecht
Course frequency:	Duration:

each summer semester; Witzenhausen	1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: not limited	
Additional notes and regulations: Literature: Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M., de Haan, C. 2006: Livestock's long shadow. Fao, Rome, Italy; Specific scientific articles, distributed in the course.	