

Module Name	3.2.1 Advanced Ecosystem Analysis in Environmental Management
Identification code	AEF302, EM3.2.1 (QIS-registration for examination) 78100
Subtitle	
Courses embedded	
Term	Winter
Coordinator	Prof. Dr. F. Müller
Teachers	Prof. Dr. F. Müller Dr. W. Windhorst Dr. B. Burkhard
Tuition language	English
Programme involvement	Elective MSc Environmental Management
Teaching form, contact time per week class size	Seminar Advanced Ecosystem Analysis in Environmental Management (60h/180h) 25
Workload overall	180h
Contact time	60h
ECTS credit points	6
Preconditions prescribed	
Prerequisites recommended	Assessment in Module EM2.2.1
Learning outcomes	Students understand the structural and dynamic interaction of social targets of natural resources management and the local characteristics of an ecosystem. Participants are able to demonstrate different scenarios of social measures and to model the potential ecological reactions. They are also able to evaluate the meaning of the analysis in social context.
Content	In this module advanced methods of systems analysis and ecological modelling are linked with modern methods of natural resource management. Based on a multidimensional, hierarchical indicator concept, dynamic scenarios of possible social changes are model-based developed. Students will develop and evaluate alternative operation options in smaller projects. The results will be used to create integrated monitoring systems that are able to measure the success of protection actions. Finally, the results will be evaluated in the context of local, regional and international environmental monitoring systems and environmental politics.
Assessment	Presentation 100%
Teaching media	Presentations, discussions, group work, computer exercises, case studies
References	Costanza, R. et al. (1997): Ecological economics. Boca Raton Millennium Assessment Board (2003): Ecosystems and human well-being. Washington, Wiggering, H. & F. Müller (2004): Umweltziele und Indikatoren. Berlin, Heidelberg New York
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