

M.Sc. Integrated Natural Resource Management (INRM)

at Thaer Institute / Faculty for Life Sciences

An Introduction

KLAUS EISENACK - RESOURCE ECONOMICS GROUP HUMBOLDT-UNIVERSITÄT ZU BERLIN WWW.RESOURCE-ECONOMICS.HU-BERLIN.DE

15.04.2025



Challenges for sustainable development

- Loss of biodiversity, climate change, conversion of land use, ...
- Local, regional and global pollution
- Overexploitation and degradation of living and fossil resources
- Hunger, poverty and social exclusion
- UN Sustainable Development Goals (SDGs)
- These challenges...
 - -...are, in principle, well-known, ...
 - -...we know some fixes since decades, ...
 - -...but the goals are far from being achieved yet.





"The philosophers have only interpreted the world, in various ways; the point is to change it." (Marx, 1888, Theses on Feuerbach)



Challenges for you

- Becoming up-to-date experts on these topics in the next two years
- Becoming more smart than analysts and decision-makers in the last decades
- Converting difficulties from working in an interdisciplinary and international group into an asset
- You will be studying in one of the most outstanding sustainability science clusters in Germany, probably in Europe



Short introduction

- Study Program Director: Klaus Eisenack; support: Ines Jeworski
- INRM student speakers team
- Who are you? Catch the dice!
 - Country where you come from?
 - Previous training / bachelor?
 - Why did you apply for INRM?
- Challenges
 - What challenges of interdisciplinary studies do you expect?
 - What challenges in an intercultural group do you expect?



General notes: Studying in Germany

- Compared to some other countries:
 - -Much freedom
 - -Little guidance by professors
- Take your opportunities: you are mature students!
 - -Study regulations (Studienordnung) give you many options/modules to chose from
 - Many modules let you enough time to chose your own emphasis in learning and personal development
- > Deal with the limitations (66 students per professor in German average!)
 - Prepare and rework lectures (not everything trained in presence time / recordings)
 - Prepare substantive questions to ask teachers during presence time / synchronous sessions
 - -Self-organize and collaborate with other students
 - In the beginning of the semester, ask teachers about their expectations (tasks, examination)
- > Who has already experience with studying at a German university?
- > What do you expect from a German university?



Structure of INRM

- 1. Compulsory Modules ("Pflichtmodule", 4 courses / 24 ECTS)
- Elective Compulsory Modules ("Wahlpflichtmodule", 9 courses / 54 ECTS), that need to cover
 - At least 3 out of 4 knowledge areas ("Wissensgebiete") of INRM
 - Two priority areas out of 6 ("Studienschwerpunkte", each 3 courses / 18 ECTS)
 - Optional study project (12 ECTS) can replace two Elective Compulsory Modules in the knowledge areas
- 3. Elective Compulsory Modules outside INRM ("Überfachlicher Wahlpflichtbereich", 2 courses / 12 ECTS)
- 4. Master Thesis (30 ECTS)

Plan your ECMs, but admit flexibility.



Compulsory Modules

Winter term, (1st) 2nd semester

O Institutional Economics and Political Economy

- Ecosystems of Agricultural Landscapes and Sustainable Natural Resource Use
- O Soil and Water Protection

Summer term, 1st / 3nd semester

O Environmental and Resource Economics



Elective Compulsory Modules within the – 4 Knowledge Areas (KA)

- Natural Sciences Applied to the Use and Protection of Natural Resource Systems
- Social Sciences Applied to the Use and Protection of Natural Resource Systems
- Advanced Methodologies for Empirical Analysis of the Interaction of Social, Natural and Technical Systems
- Management of Environmental and Natural Resource

Systems	Cover at least 3 KA, each with
	at least one module
	[= not more than 1 KA shall
	be completely unstudied in the end]
	usually easy to achieve



List of Priority Areas

- I. Methodology and Modeling of Sustainability
- I. Sustainable Production Processes
- **III.** Sustainability Institutions and Policies
- IV. Land and Water
- V. Biodiversity and Nature Conservation
- VI. Climate Change and Renewable Energy

Cover two of them

Need to be announced at examination office at end of second semester



Composition of Priority Areas

- Two Priority Areas must be selected
- Decision about PA needs to be made not after 2nd semester, but...
- This leaves 2-3 modules from the program for free choice

Each priority areas offers 4-5 modules

You need to chose at least three of modules in each selected PA (18 ECTS)



Priority Area 1: Methodology & Modeling of Sustainability

- Human-Environmental Systems Interaction – KA III
- 2. Advanced Empirical Methodology for Socio-Ecological Systems Analysis - KA III
- 3. Geographic Information Systems (GIS) and Landscape Analysis KA III
- 4. Risk and Uncertainty in Science and Policy – KA III
- 5. Economics of Human Development KA II



Priority Area 2: Sustainable Production Processes

- 1. Practices and Organization of Organic Farming KA I
- 2. Environmental Management and Information Systems – KA IV
- Plant Pathogens in the Environment and Control Management – KA I
- Cooperation and Cooperative Organizations KA
- Public Policy Analysis: Agriculture and Food Policy – KA III



Priority Area 3: Sustainability Institutions and Policies

- 1. Environmental Sociology and Environmental Policy – KA II
- 2. Advanced Environmental and Resource Economics / ERE III – KA II
- Cooperation and Cooperative Organizations – KA II
- 4. Human-Environmental Systems Interaction
 - KA III
- 5. Advanced Empirical Methodology for Socio-Ecological Systems Analysis – KA III



Priority Area 4: Land and Water

- 1. Irrigation and Drainage Systems KAI
- 2. Land and Water Management KA IV
- 3. Geographic Information Systems (GIS) and Landscape Analysis KA III
- Project Management Applied to Natural Resource-based Sectors and Development Programmes – KA IV
- Advanced Environmental and Resource Economics – KA II



Priority Area 5: Biodiversity and Nature Conservation

- 1. Biodiversity: Assessment, Function and Evolution KA I
- 2. Biodiversity and Conservation Management KA IV
- **3**. Advanced Empirical Methodology for Socio-Ecological Systems Analysis – KA III
- Integrative Fisheries Management (every even year) – KA IV
- Advanced Environmental and Resource Economics – KA II



Priority Area 6: Climate Change & Renewable Energy

- Agricultural Climatology and Ecophysiology – KA I
- 2. Climate and Energy Management KA IV
- 3. Human-Environmental Systems Interaction – KA III
- 4. International Forest Use and Management KA IV
- Advanced Environmental and Resource Economics / ERE III – KA II



Further interesting offers (winter or summer term, not ECM)

From related programs at Thaer Institute or IRI THSys (<u>www.iri-thesys.org</u>), or other unis.

- MSc Global Change Geography
 - Ecosystem Dynamics and Global Change
 - Climate and Earth System Dynamics
 - -Earth Observation
- MA Philosophie
 - Climate Ethics
- MSc Agricultural Economics
 - -Qualitative Research Methods
 - Intermediate Computable General Equilibrium Modelling
 - Futures of Agriculture and Food
 - European and International Agricultural Policy
 - -Qualitative Research Methods
 - Multifunctional land-use
- Other universities
 - Economics of Climate Change (TU, Edenhofer)
 - -Sustainable Development (FU, Lepenies)
 - Carbon Sequestration and Accounting (HNE Eberswalde)



Be careful about changing module titles

MSc. Integrated Natural Resource Management

Code	Old & some still official	New & frequently used
CM2	Environmental and Resource Economics II: Strategies and Policies	Environmental and Resource Economics
CM4	Institutional Economics and Political Economy I – Basic Concepts and Applications	Institutional Economics and Political Economy
FM7	Environmental and Resource Economics III: Environmental Institutions and Governance	Advanced Environmental and Resource Economics
FM9	Economics of Human Development	Economics of Agricultural and Rural Development
FM14	Market and Policy Analysis	Public Policy Analysis: Agriculture and Food Policy
FM22	The Role of Gender for Sustainable Resource Management	Gender Analysis in Economics (requires approval, without risk)



Summer semester compulsory(*)

	Monday	Tuesday	Wednesday	Thursday	Friday
08-12					
12-20	12:00-14:00 Environmental and Resource Economics Hagen 1st Lect.: 14.04 .	14:00-16:00 Environmental and Resource Economics Hagen 1st Lect.: 15.04.			

(*) Only recommended for 1st semester if you have previous training in economics (as provided in "Institutional Economics and Political Economy" in winter term)



Winter semester, compulsory

	Monday	Tuesday	Wednesday	Thursday	Friday
				09:00-12:00	
08-12				Agroecosystems,	
				Environment and	
				Sustainable Natural	
				Resource	
				Bellingrath-Kimura,	
				Hillmann	
					13:00-16:30
		14:00-16:00	18:00-20:00		Soil and Water
12-20		Institutional Economics	Institutional		Protection
		and Political Economy	Economics and		Riesbeck/Schweitzer
		Eisenack	Political		
			Economy		
			Eisenack		

Current (summer) semester, electives & recommended menu for 1st semester

Monday	Tuesday	Wednesday	Thursday	Friday	(Weekend) Blocks (Friday)/Saturday/Sunday
08:00-12:00 Biodiversity: Assessment, Function and Evolution (PA 5) Robischon, Zeller 1st Lect.: 14.04.	08:30-12:00 Land and Water Management (PA 4), Schleyer, Proestou (online) 1st Lect.: 22.04.	8:00-12:00 Advanced Empirical Methodology for Social-Ecological Systems Analysis (PA 1) Hamidov/Kasimov 1st Lect.: 16.04.	08:00-12:00 Cooperation and Cooperative Organizations (PA 3) Hanisch, Robischon 1st Lect.: 17.04.		Land and Water Management 09:00-16:00 10.05 11.05.2025 (online) 14.06 15.06.2025 (in presence)
		12:00-16:00 Gender Analysis in Economics (PA 1) Brückner/Brettin 1st Lect.: 16.04.	13:00-17:00 Economics of Agricultural and Rural Development (PA 1) Brück 1st Lect.: 17.04. 13:00-17:00 Experiencing Water (in)security in the city: the case of Berlin (find via Geography, teachers can help you accounting it for INRM) 1st Lect.: 17.04.	13:00-17:00 International Forest Use and Management (PA 6) Günther-Dieng 1st Lect.: 25.04.	





Typical electives in winter semester

FM 2: Agricultural Climatology and Ecophysiology	FM 15: Risk and Uncertainty in Science and Policy
FM 3: Irrigation and Drainage Systems	FM 16: Environmental Management and Information Systems
FM 4: Plant Diseases in the Environment and Control Management	FM 18: Biodiversity and Conservation Management
FM 6: Environmental Sociology and Environmental Policy	FM 19: Climate and Energy Management
FM 7: Advanced Environmental and Resource Economics	FM 20: Integrative Fisheries Management
FM 8: Participatory Rural Innovation and Knowledge Systems	FM 24: Study Project
FM 11: Human-Environmental Systems Interaction	



Typical electives in summer semester

FM 1: Biodiversity: Assessment, Function and Evolution	FM 17: Land and Water Management
FM 7: Advanced Environmental and Resource Economics	FM 21: International Forest Use and Management
FM 8: Participatory Rural Innovation and Knowledge Systems	FM 22: The Role of Gender for Sustainable Resource Management
FM 9: Economics of Agricultural and Rural Development	FM 23: Project Management – Applied to Natural Resource-based Sectors and Development Programs
FM 10: Co-operation and Co-operative Organizations	FM 24: Study Project
FM 12: Advanced Empirical Methodology for Socio-Ecological Systems Analysis	



Information for the next days

- Plan your course schedule for the semester & enroll courses on Moodle (Agnes)
- Moodle access is quite essential
- Attend first courses
- Some courses require Agnes registration for participation, or 'Moodle keys' which protect their course
 - -You will obtain Moodle keys in the first session or by asking teachers
 - -Later in the semester, registering exam participation on Agnes becomes a must
- Please subscribe to the mailing list -- This is the only way in which we can reach you!
- Empty mail with subject
 'subscribe inrm-imrd.thaer' to 'sympa@lists.hu-berlin.de'
- Questions?



If you are looking for advice...

- Examination Office (s'he's very important for you, but has much to do) Hendrik Jahn
 E-Mail: <u>master.thaer@hu-berlin.de</u>
- Head of Program
 Prof. Dr. Klaus Eisenack
 E-Mail: <u>resource-economics@hu-berlin.de</u> (you don't reach him via other addresses)
- INRM Student Speakers
 E-Mail: <u>inrm.berlin@gmail.com</u>



Enjoy Studying in Berlin!

