



# 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



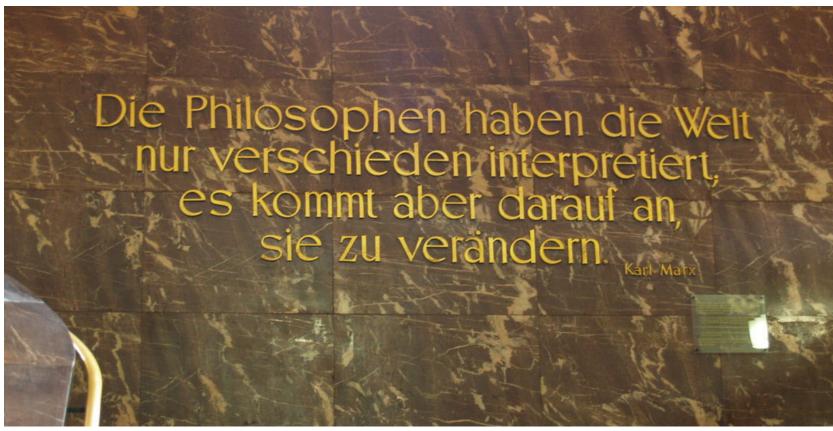


### Challenges for sustainable development

- 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
- Program Coordination: Deike Hesse-Wilting
- INRM student speakers team
- Who are you?
  - Continent where you come from: (1) Americas, (2) Asia, (3) Africa, (4) Australia & Oceania, (5) Europe?
  - Previous training: (1) natural sciences, (2) social sciences, (3) engineering, (4) humanities, (5) other?
  - Do you already have Moodle access?
- Challenges
  - What challenges of interdisciplinary studies do you expect?
  - What challenges with 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)
- What do you already experience of expect from a German university?





### Structure of INRM

- Compulsory Modules ("Pflichtmodule", 4 courses / 24 ECTS)
- 2. 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, 1<sup>st</sup> semester

- Institutional Economics and Political Economy
- Ecosystems of Agricultural Landscapes and Sustainable Natural Resource Use
- Soil and Water Protection

Summer term, 2<sup>nd</sup> semester

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 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**

- Methodology and Modeling of Sustainability
- II. Sustainable Production Processes
- III. Sustainability Institutions and Policies
- V. 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 2<sup>nd</sup> 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
- Economics of Human Development KA II





# Priority Area 2: Sustainable Production Processes

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





# Priority Area 3: Sustainability Institutions and Policies

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





### **Priority Area 4: Land and Water**

- Irrigation and Drainage Systems KA I
- 2. Land and Water Management KA IV
- 3. Geographic Information Systems (GIS) and Landscape Analysis KA III
- 4. 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

- Biodiversity: Assessment, Function and Evolution – KA I
- 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

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







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
CM1	Agroecosystems, Environment and Sustainable Natural Resource Use	Introduction to sustainable agricultural production 1
СМЗ	Soil and Water Protection	Introduction to sustainable agricultural production 2





### First semester, compulsory

	Monday	Tuesday	Wednesday	Thursday	Friday
08-12				09:00-12:00 Agroecosystems, Environment and Sustainable Natural Resource Bellingrath-Kimura, Hillmann 1st Lect.: 19.10.	
12-20	18:00-20:00 Institutional Economics and Political Economy Eisenack 1st Lect.: 23.10.	14:00-16:00 Institutional Economics and Political Economy Eisenack  1st Lect.: 17.10.			13:00-16:30 Soil and Water Protection Riesbeck/Schweitzer 1st Lect.: 20.10.







Monday	Tuesday	Wednesday	Thursday	Friday	(Weekend) Blocks (Friday)/Saturday/Sunday
10:00-14:00 Environmental Sociology and Environmental Policy (PA 3) Bonatti, Sieber  1st Lect.: 23.10.	08:00-12:00 Agricultural Climatology and Ecophysiology (PA 6), Chmielewski 1st Lect.: 17.10.  12:00-13:00 Only: 31.01.24 + Block Plant Diseases in the Environment and Control Management (PA 2) Büttner  12:00-14:00 Public Policy Analysis: Agriculture and Food Policy (PA 2), Feindt	2)	O9:00-12:00  Compulsory  Agroecosystems, Environment and Sustainable Natural Resource Use ["Introduction to sustainable agricultural production 1"]  Bellingrath-Kimura, Hillmann 1st Lect.: 19.10.  12:00-14:00  Public Policy Analysis: Agriculture and Food Policy, Feindt 1st Lect.: 19.10.	08:00-12:00 Environmental Management and Information Systems (PA 2) Mithöfer 1st Lect.: 20.10.  13:00-16:30 Compulsory Soil and Water Protection	Biodiversity and Conservation Management 09:00-15:00 04.11. bis 05.11.2023 18.11. bis 19.11.2023 13.01. bis 14.01.2024 20.01. bis 21.01.2024
Study Project: Participatory Game Design (Eisenack) 1st Session: 16.10.  18:00-20:00 Compulsory Institutional Economics and Political Economy Eisenack 1st Lect.: 23.10.	1st Lect.: 17.10.  14:00-16:00 Compulsory Institutional Economics and Political Economy Eisenack 1st Lect.: 17.10.  16:00-18:00 Study Project: Participatory Game Design (Eisenack)		14:00-18:00 Climate and Energy Management (PA 6) Auer, Grundmann, Schuster 1st Lect.: 19.10. 16:00-18:00 Public Policy Analysis: Agriculture and Food Policy, Feindt 1st Lect.: 19.10.	["Introduction to sustainable agricultural production 2"] Schweitzer, Riesbeck 1st Lect.: 20.10.	<b>08:30-18:00</b> 11.03. bis 15.03.2024





### Typical electives in summer semester

FM1: Biodiversity: Assessment, Function and Evolution	FM 17: Land and Water Management
FM 8: Participatory Rural Innovation and Knowledge Systems	FM 21: International Forest Use and Management
FM 9: Economics of Agricultural and Rural Development	FM 22: The Role of Gender for Sustainable Resource Management
FM 10: Co-operation and Co-operative Organizations	FM 23: Project Management – Applied to Natural Resource-based Sectors and Development Programs
FM 12: Advanced Empirical Methodology for Socio-Ecological Systems Analysis	





### Information for the next days

- Plan your course schedule for the winter 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...

Program Coordination (contact her first for adminstrative counseling)
 Dr. Deike Hesse-Wilting

E-Mail: deike.hesse-wilting@hu-berlin.de

Examination Office (he's very important for you, but has much to do)
 Hendrik Jahn

E-Mail: master.thaer@hu-berlin.de

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: inrm.berlin@gmail.com





# **Enjoy Studying in Berlin!**

