

# 1 Course syllabus " Sustainable Natural Resource Management: do market instruments work?"

Approved by  
Programme Academic Council  
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|                    |                              |
|--------------------|------------------------------|
| Author             | Tsyachnyuk M.                |
| Number of credits  | 6                            |
| Contact hours      | 30                           |
| Self-study hours   | 228                          |
| Kypc               | 1                            |
| Educational format | Without use of online course |

## Course plan and syllabus

### I. The course plan (aims and themes of the course)

#### 1. Aims of the course

The course shall provide basic knowledge (part 1) and in-depth knowledge (part 2) about environmental problems in modern societies and the human use of natural resources (renewable and non-renewable resources). The perspective is interdisciplinary (social and human ecology), with Sustainable Natural Resource Management as basic subject area. With an interdisciplinary perspective knowledge from different disciplines is used to better understand present environmental and resource use problems. These problems result from the expected exhaustion of important fossil resources and the degradation of the global environment that limits the availability and use of certain natural resources. Through the analysis of exemplary problems of human resource use it is expected that the students understand the challenges of resource use, the relevance of natural resources for the further development of economy and society, and potential solutions to environmental problems.

After having finished the course students shall be able

- (a) to assess critically the environmental problems in modern societies in the contexts of social and economic action,
- (b) to understand the main problems that are linked with availability, access to, use, management, buying and selling, recycling of material and other natural resources,
- (c) to analyze empirically and practically, with the help the course literature and case studies, the problems of natural resource use in concrete local, regional or national contexts of economy and relevant policies,
- (d) to understand the consequences and long-term effects of specific forms of resource use for the economic system, the society, and the environment,
- (e) to argue individually and critically (as well orally as in written form) about main problems of natural resource use in present society.

#### 2. Content of the Course

The course includes lectures and seminars and requires from the students individual reading of the course literature, group work for the seminar sessions, and an individual examination paper.

## **Part 1: Introduction – development of social ecology and environmental sociology**

Theme 1. Environmental sociology – history/development and themes

Origins - a new subdiscipline of sociology (since the 1970s in USA, UK, France, Germany)

Themes – environmental problems, environmental awareness, natural resources and resource use practices

Approaches and methods

Theme 2. Neighbouring fields

Environmental sociology as part of a broader field of environmental social sciences:

- Social and human ecology
- Sociology of risk
- Natural resource management
- Environmental and Ecological Economics
- Environmental history
- Social-ecological Systems/SES

Theme 3. Main authors and researchers (publications)

- William Catton & Riley Dunlap – the HEP/NEP-paradigms
- Ulrich Beck – risk society
- Niklas Luhmann – environmental communication
- Mol & Spargaaren – ecological modernization and environmental movements
- Oleg Yanitzky – environmental movements in Russia
- Critical theory (E. Becker et al.) – material and symbolic societal relations to nature

## **Part 2: Deepening – Problems and themes of environmental research**

Theme 4. Environmental problems and risks

- Problems of natural resource use in the history of human societies (scarcity, overuse, distribution)

- The emergence of environmental problems/risks in late industrial/modern societies
- Industrial pollution of the environment
- Agricultural pollution of the environment
- Lifestyles and private consumption/households
- Dilemmas in resource use/management
- Global environmental problems/change – biodiversity reduction, climate change

Thema 5. Main themes of environmental sociology

- Environmental awareness and practical behavior
- Value changes (“postmaterial values”) and changes of lifestyles
- New social movements/environmental movements: Industrial countries, Southern countries
- Ecofeminism
- “Greening of the economy”/ecological modernization: technological change and system change
- Poverty, population growth and development (Malthusian questions)
- “quantifying and measuring natural resource use and its impacts: in-depth analyses” with the sub-themes of “impact and risk analysis” (social and environmental impact analysis) and “indicators for human resource use” (social metabolism; material and energy flow analysis, human appropriation of net primary production, environmental sustainability index).

Theme 6. Global change – problems and solutions

- Globalisation: economy and ecology
- Ecological distribution conflicts and unequal exchange – industrialized countries and “the global South”
- Sustainable development through policy programs

- The future global society – scenarios
- SES – Integration of World System, and Earth System

The course program is to be specified in a detailed course syllabus every time the course is read. The course syllabus may change over time through updating of literature and themes.

### **3. The course literature**

The course literature includes mainly English texts from social ecology, environmental sociology and neighboring disciplines. An updated list with the course literature is given in the syllabus for every term. Course literature will be handed out to the participants in form of a course compendium (electronic or paper copies).

## **II. Syllabus**

**Language: English**

### **Part 1: Introduction – Sustainable Natural Resource Management and environmental sociology, overview (themes 1-3 according to the course plan)**

#### **Lecture 1 (texts 1, 6, 11):**

Origins - a new subdiscipline of sociology (since the 1970s in USA, UK, France, Germany):  
 themes – environmental problems, environmental awareness, natural resources and resource use practices

#### **Lecture 2:**

Approaches and methods – basic concepts, theories, methods, empirical research

#### **Lecture 3 (texts 1, 3, 4, 8, 9, 10):**

Environmental sociology as part of a broader field of environmental social sciences:

- Social and human ecology
- Sociology of risk
- Natural resource management

#### **Lecture 4 (texts 1, 2, 3, 5, 6):**

- Environmental and Ecological Economics
- Environmental history
- Social-ecological Systems/SES

#### **Lecture 5 (texts 7, 13, 14):**

- William Catton & Riley Dunlap – the HEP/NEP-paradigms
- Ulrich Beck – risk society
- Niklas Luhmann – environmental communication

#### **Lecture 6 (texts 9, 11, 12):**

- Mol & Spaargaren – ecological modernization and environmental movements
- Oleg Yanitzky – environmental movements in Russia
- Critical theory (E. Becker et al.) – material and symbolic societal relations to nature

### **Part 2: Deepening – Problems and themes of environmental research (themes 4-6 according to the course plan)**

#### **Lecture 7 (texts 18, 25):**

- Problems of natural resource use in the history of human societies (scarcity, overuse, distribution)

- The emergence of environmental problems/risks in late industrial/modern societies
- Industrial pollution of the environment
- Agricultural pollution of the environment

**Lecture 8 (texts 8, 15, 20):**

- Lifestyles and private consumption/households
- Dilemmas in resource use/management
- Global environmental problems/change – biodiversity reduction, climate change

**Lecture 9 (texts 16, 19, 20):**

- Environmental awareness and practical behavior
- Value changes (“postmaterial values”) and changes of lifestyles
- New social movements/environmental movements: industrialized and non-industrialized countries
- Ecofeminism

**Lecture 10 (texts 10, 16, 22, 24, 26, 28):**

- “Greening of the economy”/ecological modernization: technological change and system change
- Poverty, population growth and development (Malthusian questions)
- Quantifying and measuring natural resource use and its impacts (social and environmental impact analysis; indicators for human resource use: social metabolism; material and energy flow analysis, human appropriation of net primary production, environmental sustainability index).

**Lecture 11 (texts 21, 23):**

- Globalisation: economy and ecology
- Ecological distribution conflicts and unequal exchange – industrialized countries and “the global South”

**Lecture 12 (text 17):**

- Sustainable development through policy programs
- The future global society – scenarios
- SES – Integration of World System, and Earth System

**Seminar 1** – presentation and discussion of literature (selected texts) by working groups of students: texts 8, 14, 24

**Seminar 2** – presentation and discussion of literature (selected texts) by working groups of students: texts 26, 27, 28

**Course literature (texts)**

**III. Grading**

O stands for “grade”. It is divided into accumulated and final grades which are described by their own formulas.

$O_{\text{accumulated}}$  formula is:

$$O_{\text{accumulated}} = O_{\text{current control}} = 0.3 \cdot O_{\text{RE}} + 0.3 \cdot O_{\text{PFP}} + 0.4 \cdot O_{\text{FP}}$$

where  $O_{\text{RE}}$  &  $O_{\text{RE}}$  are the grade for Reading exercises

$O_{\text{PFP}}$  is the grade for presentation of final paper

O<sub>FP</sub> is the grade for final paper

O<sub>final</sub> formula is:

$$O_{\text{final}} = 0,6 * O_{\text{accumulated}} + 0,4 * O_{\text{FE}}$$

where O<sub>FE</sub> is the grade for Final exam

The final and accumulated grades are rounded according to the rounding rules of math

#### IV. Grading Tools

Students' participation in the course activities is based on their individual research projects. The research project is to comply with the following:

- Comparative analysis of specific public policy in 2 countries
- Choose specific policy issue in Environmental,
- Choose 2 countries using comparative approach

Students' assessment will be based on the following:

- **Accumulated grade (60% of the final grade)** consists of:
  - **Assignments 1-3 (10% of the accumulated grade each):**

Assignment №1: Exercise 3.1 from Morse and Struyk, chapter 3, the case must be from the Final Paper

Assignment №2: Exercise 9.1, 9.2, 9.3 from Morse and Struyk, chapter 9, the case must be from the Final Paper

Assignment №3: Exercise 14.1 from Morse and Struyk, chapter 2 and 14, the case must be from the Final Paper
  - **Presentation of final paper (30% of the accumulated grade):** A student presents the policy papers prepared on the basis of the individual research project. Brief discussion is to provide opportunities for further improvement of the final policy paper. 10 minutes for presentation and discussion. Content of the presentation should reflect the content of the policy paper (see policy paper recommendations).
  - **Final paper (40% of the accumulated grade):** 10-20 pages policy paper based on the individual research project.

| <b>The recommended structure for the policy paper:</b>                             | <b>Recommendations on the content of the policy paper:</b>         |
|--|--|
| <b>1.1. Introduction</b>   | <i>2.1. Make it comparative, use:</i>                              |
| <b>1.2. Background</b>   | <i>2.1.1. Comparative tables and diagrams,</i>                     |
| <i>1.2.1. Analysis of the policy context (and external factors)</i>                | <i>2.1.2. Point out similarities and differences between cases</i> |
| <i>1.2.2. Review of a current policy</i>   | <i>2.1.3. Describe main trends and regularities between cases</i>  |
| <b>1.3. Policy Problem</b>   | <i>2.2. In <b>Introduction</b> be clear about:</i>                 |
| <i>1.3.1. Identification, detalization, and verification of the policy problem</i> | <i>2.2.1. Time period for analysis</i>                             |
| <i>1.3.2. Identification of main actors, their aims and interests</i>              | <i>2.2.2. Countries and policy issue</i>                           |
| <b>1.4. Policy Monitoring/Evaluation</b>   | <i>2.2.3. Case selection criteria (what methods you apply?)</i>    |

|   |  |
|---|--|
| <p>1.4.1. Define policy program to monitor, its main indicators</p> <p>1.4.2. Define program model and logical frame</p> <p>1.4.3. Assess program efficiency (effectiveness), define additional problems</p> <p><b>1.5. Policy Alternatives</b></p> <p>1.5.1. Define Environmental political alternatives</p> <p>1.5.2. Detail Environmental political alternatives</p> <p>1.5.3. Evaluate and Compare policy alternatives (based on established evaluation criteria)</p> <p>1.5.4. Select the best Policy among the alternatives considered</p> <p><b>1.6. Conclusion and Policy Recommendations</b></p> | <p>2.2.4. Who are your client, sponsor, and beneficiaries</p> <p>2.3. For policy problem structuring use Stakeholder analysis:</p> <p>2.3.1. Were they included and how?</p> <p>2.3.2. How they have to be included?</p> <p>2.4. For policy alternatives be clear about:</p> <p>2.4.1. Selection criteria</p> <p>2.5. In <b>Conclusion</b>:</p> <p>2.5.1. Be clear about policy outputs and outcomes: planned and achieved</p> <p>2.5.2. Define policy change</p> <p>2.5.3. Recommend what we can transfer and what to learn from best experience?</p> |
|---|--|

**Final exam (40% of the final grade).** It is done in the form of the policy paper defense includes discussion of the policy paper and questions on the actual individual research project of a student and may include relevant questions on the course content.

## V. Sources

The course literature will be copied in a course compendium (paper copies or electronic copies) and distributed among the participants before the course.

### 5.1. Main Literature

Recommended as reference book for the whole course:

B.B. Prochorov, Ekologija tscheloveka: Ponjatijno-terminologitcheskij slovar (Moskva, Isdatelstvo MNEPU, 1999)

### 5.2. Additional Literature

#### Part 1: Literature/texts used in the lectures

##### (a) Books (selected chapters):

1. John Barry, Environment and Social Theory (Routledge, London and New York 1999, 2002) – chapters 4, 6, 7
2. Fikret Berkes, Johan Colding, Carl Folke, eds., Navigating Social-Ecological Systems (Cambridge et al: Cambridge University Press: Cambridge et al, 2003) – chapters 2, 3
3. Susan Hanna, Carl Folke, Karl-Göran Mäler, eds, Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment (Island Press, Washington et al, 1996) – chapters 3, 7
4. Tomas Hellström, Merle Jacob, Policy, Uncertainty and Risk (Kluwer, Boston et al., 2001) – chapter 1
5. Robert B. Marks, The origins of the Modern World (Rowman & Littlefield, Lanham et al.), 2002) – chapter 5, conclusion
6. Emilio Moran, People and Nature (Blackwell, Malden MA and Oxford 2006) – chapters 1, 3
7. Philipp W. Sutton, Nature, Environment and Society (Palgrave MacMillan: Houndmills et al.), 2004 – kap. 6, 9

##### (b) Texts from scientific journals/papers:

8. Acheson, James M., Institutional Failure in Resource Management (Annual Review of Anthropology, 2006, 35, pp.117–34)

9. Becker, Egon; Jahn, Thomas, Societal Relations to Nature. Outline of a Critical Theory in the Ecological Crisis (<http://www.isoe.de>, [info@isoe.de](mailto:info@isoe.de))
10. Hardin, Garrett, The Tragedy of the Commons (Science, 1968, 162, pp. 1243-1248)
11. Mol, Arthur, 2006. From Environmental Sociologies to Environmental Sociology?: A Comparison of U.S. and European Environmental Sociology (in: Organization & Environment, 19, no. 5, pp. 5-27)
12. Yanitsky, Oleg 1994. Industrialism i environmentalism: Rossija na rubesche kultur (research paper, in Russian)
13. Catton, W.R, Dunlap, Riley, A Comparison of Environmental and Natural Resource Sociology (Society and Natural Resources, 2002, 15, pp. 239-249)
14. Dunlap, Riley, et al., 2000. "Measuring the Endorsement of the New Ecological Paradigm: A Revised NEP Scale" (in: Journal of Social Issues, 56, no. 3, pp. 425-442)

## **Part 2: Literature/texts used in the lectures**

### **(a) Books (selected chapters):**

15. Susan Hanna, Carl Folke, Karl-Göran Mäler, eds, Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment (Island Press, Washington et al, 1996) – chapter 12
16. Andrew Jamison, The Making of Green Knowledge (Cambridge University Press, Cambridge et al., 2001 – chapters 2, 5
17. Keekok Lee, Alan Holland, Desmond McNeill, Global Sustainable Development in the 21st Century (Edinburgh, Edinburg University Press), 2000 – chapters 1, 4, 5
18. Robert B. Marks, The origins of the Modern World (Rowman & Littlefield, Lanham et al.), 2002 – chapter 4
19. Mary Mellor, Feminism and Ecology, (Polity Press, Cambridge and Oxford), 1997 – chapters 2, 3
20. Emilio Moran, People and Nature (Blackwell, Malden MA and Oxford 2006) – chapters 5, 8
21. C. Roe Goddard, P. Cronin, I. C. Dash, eds., International Political Economy (Palgrave MacMillan, Houndmills et al.), 2003 – kap. 26

### **(b) Articles from scientific journals:**

22. Agrawal, Arun, Sustainable Governance of Common-Pool Resources: Context, Methods, and Politics (Annual Review of Anthropology, 2003, 32, pp.243–62)
23. Bogatyrev, L. G. Some Trends in Research on the Biosphere (Russian Journal of Ecology, 2004, vol. 35, no. 1, pp. 1–9; Translated from Ekologiya, no. 1, 2004, pp. 3–12; in Russian and English)

24. Burke, Bryan E., *Hardin Revisited: A Critical Look at Perception and the Logic of the Commons* (Human Ecology, 2001, vol. 29, no. 4, pp.449-476)
25. Fischer-Kowalski, Marina, *On the History of Industrial Metabolism* (In: *Perspectives on Industrial Ecology*, ed. Dominique Bourg & Suren Erkman, 2003, Greenleaf Publishing, pp. 35-45)
26. Fischer-Kowalski, Marina; Haberl, Helmut, 1998. „Sustainable development: socio-economic metabolism and colonization of nature“ (in: *International Social Science Journal*, 158, pp. 573-587).
27. Martinez-Alier, Joan, *Ecological Distribution Conflicts in a Context of Uncertainty* (Presentation. Universidad de la Laguna, Tenerife, 12. February 2003)
28. York, Richard; Rosa, Eugene; Dietz, Thomas, *Footprints on the Earth: The Environmental Consequences of Modernity* (*American Sociological Review*, 2003, 68, pp. 279-300)

### Literature discussed in the seminars:

Seminar 1: presentation and discussion of texts 8, 14, 24

Seminar 2: presentation and discussion of texts 26, 27, 28

### 5.3. Software

|    | Name  | Access conditions  |
|----|---|--|
| 1. | MicrosoftWindows 7<br>Professional RUS<br>MicrosoftWindows 10<br>MicrosoftWindows 8.1<br>Professional RUS | <i>From the university's internal network<br/>(contract)</i> |
| .  | Microsoft Office Professional<br>Plus 2010  | <i>From the university's internal network<br/>(contract)</i> |

### 5.4. Professional databases and reference systems. Internet resources (electronic educational resources)

|  | Name                            | Access conditions  |
|--|---------------------------------|--|
| <i>Professional databases and reference systems</i>          |                                 |  |
| .  | Consultant Plus                 | <i>From the university's internal network (contract)</i>               |
| .  | URAIT Electronic library system | URL: <a href="https://biblio-online.ru/">https://biblio-online.ru/</a> |
| <i>Internet resources (electronic educational resources)</i> |                                 |  |
| .  | Open Education                  | URL: <a href="https://openedu.ru/">https://openedu.ru/</a>             |

### 5.5. Material and technical support

Classrooms for lectures on the discipline provide for the use and demonstration of thematic illustrations corresponding to the program of the discipline, consisting of:

- PC with Internet access (operating system, office software, antivirus software);
- multimedia projector with remote control.