Europa-Universität Flensburg
Interdisciplinary Institute of Environmental, Social and Human Sciences
Department of Energy and Environmental Management

Europa-Universität Flensburg
International Institute of Management and Economic Education
Department of Pluralist Economics

Environmental Economics

Marina Blohm & Claudius Gräbner-Radkowitsch

Master of Engineering Energy and Environmental Management
Fall Semester 2022/23

Version 1.0, September 16, 2022

Goal of the seminar

The course covers a broad range of interactions between the environment and socio-economic development. Students are introduced to different methodologies to analyze economic influences on the environment, the relevance of the environment for economic activities, and the role of social institutions in the context of economy-environment relations. In this context, students learn about different policy instruments that can be used to address (undesired) external effects of economic activities on the environment, and how the effectiveness of environmental regulations can be examined from an economics point of view.

Tentative schedule

Date	Lecturer	Content
19.09.22	Marina	1. General introduction and group formation 2. Introduction to the environment in the Sustainable Development Goals
26.09.22	Claudius	1. Theories of socio-economic development and the environment 2. Questions on how to design a poster
03.10.22		Official holiday
10.10.22	Andrea & Marina	1. Post-development and extractivism 2. Time to ask questions concerning the group work
17.10.22		No lecture
24.10.22	Marina & Franziska	External effects & valuing the environment
31.10.22		Official holiday
07.11.22	Claudius	1. Environmental policy instruments and their assessment in different paradigms 2. Time to ask questions concerning the group work
14.11.22	Claudius & Marina	Environmental policy and conflicts in the global economy with the example of hydrogen-based fuel production in Morocco and Germany
21.11.22	Claudius & Marina	Q&A and free time for group work
28.11.22	Claudius & Marina	Poster presentation and discussion Group 1-3
05.12.22	Claudius & Marina	Poster presentation and discussion Group 4-6
12.12.22	Claudius & Marina	Poster presentation and discussion Group 7-9
19.12.22		Exam week

Logistics

Course material will be distributed via Moodle. Announcements will also be made via Moodle. Therefore, students should make sure to sign up for the Moodle room as soon as possible:

Moodle room: https://elearning.uni-flensburg.de/moodle/course/view.php?id=10639
Password: Flensburg22

Expected contributions from students and examination details

To facilitate a both amicable and inspiring learning environment, students are expected to…

- …complete the required readings before the sessions, such that we can built upon this content in our discussions.
- …invest the adequate time into preparation and reworking of the sessions.
- …interact cooperatively and kindly with each other, and refrain from any disrespectful or ungracious behavior.
- …participate actively in group work and joint discussions.
- …be open to different perspectives.

Examination

Students are expected to prepare a poster (DIN-A0) and an accompanying handout, both of which will be presented to all other students during the last three sessions of the course. Students will prepare the poster together in groups of about 4 people. Each group receives a joint grade for their poster. Moreover, students receive individual grades for their part of the presentation (8-10 minutes each) and their part of the handout. Therefore, it must be very clear which part of the poster and handout was prepared by which student, and each student's handout must not exceed one DIN-A4 page. The overall grade students receive for the course will be the average of the grade for the poster, the presentation, and the handout (each weighted equally). The posters need to be printed individually and brought to the class at the day of the poster presentation. A digital copy of the poster as well as the handout should be uploaded on Moodle until 17:00 (5 pm) of the day before your presentation.

Content and guiding questions for the poster

The goal of the poster is to present an analysis of one particular country, which students have chosen during the first lecture. Please make sure that you choose a country whose documents are available in a language that you understand, and for which you are able to retrieve the necessary data (see below). In their analysis, students investigate the development model pursued by this country and its environmental implications, the environmental policy mix used in this country, the place of this country in the world economic system, the relevance of environmental conflicts, as well as possible ways to assess the performance of this country.

More precisely, while students can choose their own focus for their analysis and their poster, each group should refer to the following guiding questions:

- How does the country perform with regard to common development indicators and environmental performance indicators?
- How well is the country making progress in achieving the SDGs? What are the main challenges ahead and how is the country planning to achieve them?

- Does the country remain within planetary boundaries?[1] Why? Why not?
- What are the main challenges for the country for surpassing social thresholds while remaining within biophysical limits?
- Based on the previous results, where do you see the most urgent need for policy reforms? How does your assessment depend on the development approach chosen? Here you should refer to at least two of the approaches introduced in the second lecture!
- What is the role of the country in the world economy? In what sense is it dependent on other countries? Would you say that citizens are 'living at the expense of others' or being 'exploited for the sake of others'? Which energy partnerships support your analysis?
- What are the environmental policy mix used or discussed in the country? How would you judge the environmental policy from a classical economics perspective and one alternative (such as the environmental justice movement)? Explain and justify the focus you have chosen with regard to the indicators used!
- What are conflicts on environmental resources, or the environmental policy of this country? What is your position on how the country should choose its environmental and development policy mix in the future?
- Which external effects result from the energy and environmental policy of the country and what measures should be taken to internalize these external effects?

Wherever reasonable, students are expected to use data to illustrate and/or justify their arguments.

Criteria for the evaluation

The main criteria used to evaluate your performance are the following:

- Reference to the guiding questions outlined above
- Sufficient and reasonable use of empirical data
- Reflection of the measures used
- Internally consistent and comprehensive argumentation when interpreting the indicators referred to
- Balanced reference to different approaches to development and/or environmental justice
- Consistency and originality of the own position taken
- Presentation of underlying reasons that enable a reasoned analysis instead of a superficial description

Moreover, when determining the mark for the poster, the presentation, and the handout, the following, more specific criteria are also applied:

Poster

- Visual appeal, readability, and clarity
- Sound use of adequate visualizations
- Sufficient degree of self-explanatory power
- Contains the most relevant information without being overladen
- Red thread throughout the entire poster
- References given in a correct format
- Compliance with the format of one DIN-A0 poster

[1] You should refer to the data provided by the good life and planetary boundaries working group from Leeds University. See the links to data sources below.

Presentation

- Adequate presentation speed
- Clarification of difficult terms
- Adequate response to questions
- Compliance with the time limit

Handout

- Visual appeal, readability, and clarity
- Sufficient degree of self-explanatory power
- Contains the most relevant information without being overladen
- References given in a correct format
- Compliance with the space limit of one DIN-A4 for each student

Some hints on finding data

- Students are provided with Python snippets for the environmentally-augmented input-output table EXIOBASE3; students can use other data sources but need to analyze them on their own;
  - EXIOBASE contains data for the following countries: Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, India, Indonesia, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, United Kingdom, United States, and the Wallis and Futuna Islands.
- Students can substitute some aspect of the country analysis after consulting the examinators (e.g. substituting the carbon leakage analysis if no data is available for this country by a political analysis of external pressures)

Source	Description	Link
Atlas of Economic Complexity	Data on exports and specialization patterns.	https://atlas.cid.harvard.edu/
EXIOBASE 3	A global input-output table that is available over time and quantifies a wide variety of ecological stressors. Can be used to compute both production- and consumption-based statistics.	https://zenodo.org/record/3583071
Good life and planetary boundaries	Data on how well countries meet social needs of their population while respecting ecological boundaries.	https://goodlife.leeds.ac.uk/
IMF Data	Common macroeconomic data, focus on financial and international flow data.	https://www.imf.org/en/Data
Material Flow Database	Data on global material flows.	http://www.materialflows.net/

Our World in Data	Wide variety of data, usually collected from other sources and accompanied by blog posts.	https://ourworldindata.org/
The Global Carbon Project	Data on emissions and environmental stressors.	https://www.globalcarbonproject.org/
World Bank Open Data	Collection of common macroeconomic and development indicators.	https://data.worldbank.org/
Sustainable Development Goals	Country profiles of SDGs	https://dashboards.sdgindex.org/map