GLCb2020 Environmental threats and security

Environmental security: a sustainable future?

April 18, 2024 Miriam Matejova, PhD

Agenda

- Final exam
- Presentations
- Sustainable future: radical solutions

Final exam

- Written
- Four questions
- Short answers
- Concepts, theory, case studies, examples
- Each answer for max. 10 points, together max. 40 points
- Required (not recommended) literature, lectures, presentations



Final exam: what (not) to do

- Answer the question.
- Explain your answer (don't assume that I know what you are talking about).
- Explain the logic of your argument.
- Define key terms.
- Correctly link the authors with their theories / arguments.
- Use clear examples and explain how those are linked to your theory.
- Do not copy and paste text from anywhere and add references to your sources!
- Answer the question.

Rubric

- 9-10: Exceptional answer includes everything that a "7-8" answer has, but it also has something extra (e.g., linking themes/weeks/concepts, balance of arguments, etc.)
- 7-8: Good answer key concepts are defined, question is clearly answered in a structured way, emphasis on analytical thinking, the use of examples is explained

Rubric

- **5-6**: Answer is mostly descriptive. It contains key terms but doesn't include much analysis or the analysis makes no sense.
- **3-4**: No sensible answer and no analysis. Student wrote down everything on the topic. There may be gaps, mistakes.
- 1-2: No clear answer to the question. Many or most concepts not well defined. Inaccuracies in theories, authors, concepts, etc.
- **0**: No answer

Presentations: logistics

- 15 minutes presentation, 10 minutes discussion
- The group facilitates the discussion
- Don't forget to upload your presentation summary to the IS

before your presentation

Presentations: logistics

25.4.

Group#1

- Kazi Md Asiful Alam; Thomas Palaghianu; Alexa Beatrice Perez
- Water pollution in the Philippines

Group#2

- Asraful Islam; Natalia Płóciennik; Athina Tromara
- 3

Group#3

- Jules Puig, Sarunya Poolma, Emiko Shimada
- The remaining environmental problems of Black Summer in Australia 2019-20

Presentations: logistics

2.5.

Group#1

- Mehadi Hasan; Noah Jack Phelps; Illia Shnypko; Eszter Füzes
- Plastic pollution in Vietnam

Group#2

- Farhad Sufian Fahim; Kurara Yamaji; Veronika Hřibová
- Dying of Lake Chad

Group#3

- Md Ahsan Habib, Akou Kpehounton, Sofia Del Mar Rodríguez Aponte
- Drought in the Sahel Region (Ethiopia)

Group#4

- Van Giang Le Ba, Sára Petrásková; Petar Tokić
- Environmental degradation of the Mekong River

Geoengineering: history

- 19. century: preventing drought through cloud seeding
- 1983: Carl Sagan and "nuclear winter"

Geoengineering

- The use of technology to alter global or regional climatic systems
 - carbon dioxide removal (CDR)
 - solar radiation management (SRM)

Carbon dioxide removal

- Traditional environmental policies e.g., reforestation
- Lowering of the GHG emissions may not be enough → CO2 that is already in the atmosphere must be removed
 - E.g., infusing the oceans with iron → seaweed growth
- Risks are mostly local

Global Solutions for Carbon Dioxide Removal Seaweed Farming Nutrient **Fertilization** Electrochemical CO₂ Scrubbing **Ecosystem** Restoration **Alkalinity Enhancement Sinking** Seaweed Cultivation Storag

Solar radiation management

- Goal is to use science for shifting global climate systems back to early or preindustrial era
 - Reflexive surfaces
- Volcanic eruptions (Mount Pinatubo, Tambora)

Geoengineering: problems

- Side-effects
- Cost
- Lowering the urgency
- Geopolitics and intentional disasters

Population control?

- Good or bad idea?
- Realistic or not?