

Environmental History

Universidad Carlos III de Madrid | Optional course (*curso de humanidades*) | Spring 2023

Professor: Emiliano Travieso

ECTS Credits: 3

Class: Thursdays 2:30pm-4pm @ 4.1.08 (Getafe Campus)

Office hours: by appointment, Fridays, 4:30-5:30pm @ 18.2.D.15 (Getafe Campus)

Our current ecological crises, including climate change, have anthropogenic bases (that is, are largely caused by human societies) and thus are rooted in environmental history. This introductory course offers a long-term view of the interactions between human societies and their natural environment in order to better understand sustainable development challenges in the present. The course develops over 12 meetings structured in two parts. Part I presents an overview of the signal developments that reshaped the interaction between societies and their environment in historical perspective, from the Neolithic revolution to our own days. Part II introduces historical environmental databases and state-of-the-art scientific papers on ecological change, while encouraging students to use their historical knowledge to debate the most pressing problems of environmental sustainability today.

General reading: McNeill, J. R. (2001). *Something new under the sun: An environmental history of the twentieth-century world*. WW Norton & Company.

Objectives

Throughout the course, students will learn to:

- Identify the deeper historical roots of contemporary environmental crises.
- Use environmental concepts and indicators to measure and discuss human impacts on nature through time.
- Understand when and how some crucial historical developments fundamentally transformed the interactions between human societies and the environment.
- Broaden their intellectual outlook and appreciation for diverse scholarly disciplines.

Furthermore, this course will help students to develop the following skills:

- Evidence-based argumentation in the context of written and oral communication.
- Critical thinking, including the capacity to think historically, situating events and developments in their context.
- Teamwork in problem-solving and discussion.
- Analysing complex quantitative data visualizations (graphs, maps, and diagrams).
- Interpreting environmental indicators.

Assessment

This is an optional *curso de humanidades* and thus assessed entirely by coursework without a final exam.

Assessment is structured as follows:

- midterm test (50%): test with multiple-choice questions
- class participation (50%), including performance in debates during Part II

Course calendar

Part I: from the Neolithic revolution to an urban world

1. Introduction

- ◆ What is environmental history and why should we study it?
- ◆ Key concepts: climate change, environmental change, Anthropocene

No reading required this week.

2. Environmental change before industrialization (12,000 BCE – 1800 CE)

- ◆ Did climate change begin with the Neolithic revolution?
- ◆ How did pre-industrial societies shape the environment?

Reading: Ruddiman, W. F. (2010). *Plows, Plagues, and Petroleum*. Princeton University Press, pp. 65-76.

3. The industrial revolution and the transition to fossil fuels (1800 – 1900)

- ◆ Is the Industrial Revolution to blame for our environmental crises?
- ◆ How are modern (i.e. industrial) energy regimes different from pre-modern ones?

Reading: McNeill, J. R. (2015). Energy, population, and environmental change since 1750: entering the Anthropocene. In J. R. McNeill & K. Pomeranz (Eds.), *The Cambridge World History. Volume VII, Part 1*. Cambridge: Cambridge University Press, pp. 51-82.

4. The ‘great acceleration’ in the 20th century: the Green Revolution and an urban world

- ◆ Is urbanization a problem for the environment?
- ◆ Has agricultural intensification helped or hindered sustainable development?

Reading: McNeill, J. R. (2001). *Something new under the sun: An environmental history of the twentieth-century world*. WW Norton & Company, pp. 212-227 and 281-295.

5. Common resources and environmental threats in history

- ◆ How did past societies deal with environmental threats and crises?
- ◆ The ‘tragedy of the commons’ in the governance of natural resources
- ◆ To what extent can we learn from the past?

Reading: Diamond, J. (2011). *Collapse: How Societies Choose to Fail or Succeed*. Penguin, pp. 157-177; Tubi, A., Mordechai, L., Feitelson, E., et al. (2022). Can we learn from the past? Towards better analogies and historical inference in society-environmental change research. *Global Environmental Change*, 76, 102570.

6. The history of the future: the Environmental Kuznets Curve

- ◆ Can continued economic growth deliver prosperity for all within planetary boundaries?
- ◆ Do human societies tend to pollute more or less as they become richer?
- ◆ Production-based and consumption-based accounting of historical GHG emissions

Reading: Stern, D. I. (2004). The rise and fall of the environmental Kuznets curve. *World Development*, 32(8), 1419-1439.

Part II: debates

7. Student presentation and debate: is 'Anthropocene' a useful concept?

Reading: Monastersky, R. (2015). The human age. *Nature*, 519(7542), 144-147;
Malm, A., & Hornborg, A. (2014). The geology of mankind? A critique of the Anthropocene narrative. *The Anthropocene Review*, 1(1), 62-69.

8. Student presentation and debate: can modern economies become independent from fossil fuels?

Reading: Smil, V. (2022). *How the World Really Works: a scientist's guide to our past, present, and future*, London: Penguin, pp. 23-51.

9. Student presentation and debate: can we escape the tragedy of the commons?

Reading: Battersby, S. (2017) Can humankind escape the tragedy of the commons? *PNAS*, 114(1), 7-10.

10. Student presentation and debate: can we trust in the Environmental Kuznets Curve?

Reading: Mann, G. (2022). Check your spillover: the climate colossus, *London Review of Books*, 10 February 2022.

11. Student presentation and debate: are richer countries more responsible for environmental change?

Reading: O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). A good life for all within planetary boundaries. *Nature Sustainability*, 1(2), 88-95. [[see also the summary in *The Conversation*](#)]
Hickel, J. (2020). Quantifying national responsibility for climate breakdown. *The Lancet Planetary Health*, 4(9), e399-e404.