

The Economics of Common-Pool Resources

Instructor: Prof. Timo Goeschl, Ph.D.

Email: goeschl@eco.uni-heidelberg.de

Schedule: Initial meeting: October 16, 2014, 16.00 - 18.00

Seminar event (TBC): January 8 and 9, 2015

Classroom: Seminar Room #215, Bergheimer Str. 20

Office: Room #220, Bergheimer Str. 20 (☎ 54-8010)

Office hours: Tuesdays, 17:00 – 18:00 (email/call the office for appointments: office@eco.uni-heidelberg.de)

Language: English

Target audience: B.Sc. students in Economics.

SYNOPSIS

Despite their rivalrous nature, many of the world's most important resources are not subject to private property rights, but managed by assemblies of individuals. This reflects the fact that they are so-called common-pool resource that “generate finite quantities of resource units so that one person's use subtracts from the quantity of resource units available to others”(Ostrom et al. 1994) while being “sufficiently large that multiple actors can simultaneously use the resource system and efforts to exclude potential beneficiaries are costly” (Ostrom 2002). Typical examples are fisheries, forests, water, etc.

Are such resource systems doomed, as Hardin's ‘tragedy of the commons’ posits, or can the users self-organize into something approaching an efficient use of the resource? – This seminar provides a variety of theoretical, empirical, and experimental starting points for coming to a better understanding of the likely fate of common-pool resources and the economic underpinnings of their trajectory.

Every participant will study a general background reading. In addition, each participant will write and present a research paper on a specific topic (see list below), **reviewing** and **critiquing** the assigned specific readings.

- ▶ *Reviewing* means (i) summarizing and (ii) contextualizing the key points of the reading's argument so as to make its content understandable to a person who has not studied the reading.
- ▶ *Critiquing* means engaging with the substance of the reading's argument, trying to point out weakness of logical consistency, coherence, or empirical factuality, and ideally, offering an alternative perspective based on logic, theory, and/or evidence.

PREREQUISITES

Familiarity with the English language; familiarity with intermediate micro, public economics, mathematics for economists, and statistics.

ASSESSMENT

Your performance will be evaluated based on the following assignments:

1. **Research paper** (“Seminararbeit”) on the topic assigned. Maximum length: 4000 words. Weighting: 50 percent.
2. **Seminar presentation.** Duration: 20 minutes. Weighting: 30 percent.
3. Written **referee report** constructively critiquing the research paper of a fellow participating student and 3 minute presentation thereof. Maximum length: 1000 words. Weighting: 20 percent

LITERATURE

The full set of readings is attached below. The following paper introduces the field. Irrespective of topic, each participant will read this paper, intellectually process its content, and productively use it in their research paper.

- ▶ Hardin, Geoffrey (1968). The Tragedy of the Commons. *Science* 162, 1243.

KNOCK-OUT CRITERIA

For a pass grade, the following minimum requirements are to be fulfilled:

1. You need to be in attendance for the entire duration of the seminar event.
2. You need to hand in a research paper, a report, and give a presentation on time according to schedule.
3. You need to observe the upload deadline of your research paper.

SCHEDULE

<i>October 16, 16:00-18:00</i>	Introduction, assignment of places and topics, email list
<i>Nov. 13. 17:00</i>	Due-date for uploading a draft (for feedback by your advisor) of your research paper on Moodle (voluntary)
<i>Nov. 17-21</i>	45min feedback session with your advisor (student to make appointment by email)
<i>Dec. 19, 17:00</i>	Deadline for uploading your complete research paper on Moodle for evaluation by your discussant. No excuses, no exceptions.
<i>Jan. 8-9</i>	Seminar event and presentations At the start of the seminar event, all referee reports need to be handed in in hard copy
<i>Jan 13, 16:00</i>	Deadline for handing in your final research paper in hard copy at the Secretary’s office, room 219, Bergheimer Str. 20.

E-Learning

This seminar course has a Moodle website at <http://elearning2.uni-heidelberg.de>

List of Topics and Readings

Part I Theory

1. The 'Conventional' Theory
 - ▶ Gordon, H. Scott (1954): The Economic Theory of a Common-Property Resource. *Journal of Political Economy* 62(2), 124-142.
 - ▶ Scott, Anthony (1955): The Fishery: The Objectives of Sole Ownership *Journal of Political Economy*, Vol. 63, No. 2 (Apr., 1955), 116-124
 - ▶ Weitzman, Martin (1974). Free Access vs. Private Ownership as Alternative Systems for Managing Common Property., *Journal of Economic Theory* 8(2), 225-234.
2. Game Theory Applied to Common Pool Resources
 - ▶ Dasgupta, P.S. and Heal, G.M. (1979). Economic Theory and Exhaustible Resources. *Cambridge: Cambridge University Press*, 55-78.
 - ▶ Baland, J.M. and Platteau, J.P. (1996). Halting Degradation of Natural Resources. Is there a Role for Local Communities?. *Oxford: FAO and Oxford University Press*. Chapter 4 (The Unregulated Common Property).
3. Explaining Cooperation: Evolutionary pressure
 - ▶ Bergstrom, Ted (2003). The Algebra of Assortative Encounters and the Evolution of Cooperation. *International Game Theory Review*, 5(03), 211-228.
 - ▶ Boyd, R. and Richerson, P. J. (1992). Punishment allows the evolution of cooperation (or anything else) in sizable groups. *Ethology and sociobiology*, 13(3), 171-195.
4. Explaining Cooperation: Repeated Interaction
 - ▶ Seabright, Paul (1993). Managing Local Commons: Theoretical Issues in Incentive Design. *Journal of Economic Perspectives* 7(4), 113-134.
 - ▶ Dutta, P.K. and Sundaram, R.K. (1993): The Tragedy of the Commons?. *Economic Theory* 3(3), 413-426.
5. Explaining Cooperation: Joint Supply Dependency
 - ▶ Caputo, Micheal R. and Lueck, Dean (1994). Modeling Common Property Ownership as a Dynamic Contract. *Natural Resource Modeling* 8(1), 225-245.
 - ▶ Lueck, Dean (1994): Common property as an egalitarian share contract. *Journal of Economic Behavior & Organization* 25(1), 93-108.
6. Explaining Cooperation: Cultural Norms and their Evolution
 - ▶ Platteau, Jean Philippe (1994) Behind the market stage where real societies exist Part II: The role of moral norms. *The Journal of Development Studies* 30(4), 753-817.
 - ▶ Ostrom, Elinor (2000) Collective action and the evolution of social norms. *The Journal of Economic Perspectives* 14(3), 137-158.
 - ▶ Sethi, Rajiv and Somanathan, Eswaran (1996): The Evolution of Social Norms in Common Property Resource Use. *The American Economic Review* 86(4), 766-788.
7. Explaining Cooperation: Preferences for Fairness

- ▶ Fehr, Ernst and Schmidt, Klaus (1999): Theory of Fairness, Reciprocity, and Cooperation. *Quarterly Journal of Economics*. *Quarterly Journal of Economics* 114(3), 817-868
- ▶ Fehr, Ernst and Gächter, Simon (2000) Fairness and Retaliation 14(3): The Economics of Reciprocity. *Journal of Economic Perspectives*.

Part II

Empirical Evidence

8. Learning from History: The Debate About Enclosures

- ▶ Boyle, James (2003). The Second Enclosure Movement and the Construction of the Public Domain. *Law and Contemporary Problems* 66(1), 33-74.

9. Alpine Meadows

- ▶ Netting, Robert (1972). Of men and meadows: Strategies of Alpine Land Use. *Anthropological Quarterly* 45(3), 132-144.
- ▶ Casari, M. and Plott C. (2003): Decentralized Management of Common Property Resources: Experiments with a Centuries-Old Institution. *Journal of Economic Behavior and Organization* 51(2), 217-247

10. Marine Environments: Lobsters and Clams

- ▶ Acheson, Neal (1988). The Lobster Gangs of Maine. Hanover, NH: Univ. Pr. of New England
- ▶ Janmaat, Johannes A. (2005). Sharing Clams: Tragedy of an Incomplete Commons. *Journal of Environmental Economics and Management* 49(1), 26-51.

11. Marine Environments: International Fisheries

- ▶ Stephanie F. McWhinnie (2009). The Tragedy of the Commons in International Fisheries: An Empirical Examination. *Journal of Environmental Economics and Management* 57(3), 321–333
- ▶ Jan S., Noussair, C. N., and van Soest, D. (2012) From the Lab to the Field: Cooperation among Fishermen. *Journal of Political Economy* 120(6), 1027-1056

12. Irrigation

- ▶ . Weissing, F. and Ostrom, E. (1991). Irrigation Institutions and the Games Irrigators Play: Rule Enforcement without Guards. In: *Game Equilibrium Models II: Methods, Morals, and Markets*, 188-262. Berlin: Springer-Verlag.
- ▶ . Weissing, F. and Ostrom, E. (1993). Irrigation Institutions and the Games Irrigators Play: Rule Enforcement on Government and Farmer-Managed Systems." In: *Games in Hierarchies and Networks: Analytical and Empirical Approaches to the Study of Governance Institutions*, 387-428. Frankfurt: Campus Verlag; Boulder, Colo.: Westview Press.

13. Forest Commons

- ▶ Rustagi, D. Engel, S. and Kosfeld, M. (2010): Conditional Cooperation and Costly Monitoring Explain Success in Forest Commons Management., *Science* 330, 961-965.
- ▶ Voors M., Bulte E., Kontoleon A., List J.A. and Turley T. (2011): Using Artefactual Field Experiments to Learn about the Incentives for Sustainable Forest Use in Developing Economies, *The American Economic Review* 101(3), 329-333

Part III

Experimental Evidence

14. Rent dissipation in the lab

- ▶ Walker, G., and Ostrom, E. (1990). Rent Dissipation in a Limited Access Common-pool Resource. *Journal of Environmental Economics and Management* 19, 203-211.

15. Creating Institutional Solutions in the Lab

- ▶ Ostrom, E., Walker J, and Gardner, R. (1992): Covenants with and without a Sword: Self-Governance Is Possible. *American Political Science Review* 86(2), 404-417.

16. Monitoring and Fines

- ▶ Rodriguez-Sickert, C., Guzmán, R. A., and Cárdenas, J. C. (2008). Institutions Influence Preferences: Evidence from a Common Pool Resource Experiment. *Journal of Economic Behavior & Organization*, 67(1), 215-227.
- ▶ Janssen, M.A., Holahan, R. Lee, A. and Ostrom, E. (2010) Lab Experiments for the Study of Social-Ecological Systems, *Science* 328 (5978), 613-617

17. The Role of the Decision-Making Entity: Do Individuals or Groups Do Better?

- ▶ Gillet J., Schram A., Sonnemans J. (2009). The tragedy of the commons revisited: The importance of group decision-making. *Journal of Public Economics* 93 (5), 785-797.

18. Tests of Motivation

- ▶ Velez, M. A., Stranlund J. K. and Murphy J. J. (2009) What motivates common pool resource users? Experimental evidence from the field. *Journal of Economic Behavior & Organization* 70(3), 485-497