

Worksheet 1, February 18, 2020

Environmental Economics in the Central European Context

I advise you to work through the following problems /questions well and as a group (make sure though that no one is free-riding); it's the ticket to performing reasonably well on the exams. Number of points indicates the expected scope of the answer (should roughly correspond to time in minutes).

1. **[10 points]** Which is, in your opinion, the greatest challenge for current environmental policy? Explain.
2. **[10 points]** What is externality? Provide an example (preferably environmental) and discuss. Can you think of a way how to correct the externality in your example?
3. **[10 points]** Which are the main attributes of public good? Using an example, explain how and why a free rider problem can naturally arise. Can you think of solution?
4. **[10 points]** Imagine there is a class in which a weekly exam is given. The class has one genius, who always scores 100%, and 19 "regular" students, who always score 85%. The teacher grades the exam on a curve by taking the difference between the highest score and 100 and adding the result to each student's score (for example, if the highest score is 78, each student will have 22 points added to his or her score). The parents of these students pay them \$1 for each point scored on the exam.
 - a. Does the genius impose externalities on the rest of the class? If so, what is the value of the marginal externality for each exam?
 - b. What is the Pareto-optimal configuration of grades?
 - c. If the highest scoring student on each exam could be taxed for each point he or she scores above the second highest scoring student, what marginal tax should result in the Pareto-optimal distribution of grades?
 - d. If the 19 "regular" students were to bribe the genius to start scoring 85 instead of 100, what is the maximum amount of money they could offer?
5. **[10 points]** *"The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone we are locked into a system of "fouling our own nest." (Hardin, p. 1245) Discuss.*
6. **[15 points]** Briefly summarize an in-class experiment on public good that we did in Lecture 1.
 - a. What were the main differences between the three sessions (each consisting of 5 rounds)?
 - b. What is the expected impact of those changes (make sure to comment on both parametric change as well as communication time)? Did your group behave in line with expectations?
 - c. Did your group manage to coordinate? Explain what happened. Do you think you could have done better as a group? If so, how could you have achieved that?
 - d. Why would you contribute to public good? Why would you not?
 - e. What is the main thing that you learned from that experiment?