

Final Exam based on lectures *Flourishing within Limits to Growth*.

Answer 4 of the 8 questions (number them so it is clear which one you are answering). Each answer should be 400-500 words and a synthesis of the material you've learned in the class. The questions may overlap but try to answer them specifically and distinctly. Answers should be emailed to me by 9PM CEST on April 11. Each question is worth 10 points.

1. The original Limits to growth book was received as too negative. What is the advantage of the new messaging regarding "Flourishing within limits" and "Celebrate the limits!"? Is it working?
2. How could an introductory biology textbook introduce discrete and sustained life and how might this improve ecoliteracy?
3. What is eco-literacy? How was it covered in the book? How would you like to see it covered in other classes?
4. "Happiness means to live in harmony with people, nature, and the environment, to have skill and knowledge to understand nature, and to be able to appreciate and enjoy the beauty and the wonders of nature" (Jorgensen et al. 2015 p. 187). Philosophically, most people would probably agree with this but not implement it in their lives. What do you think is the main barrier to having people live this way and what would that look like?
5. Explain this equation: $\text{life} - \text{environment} = \{\text{environment}\{\text{ecosystems}\{\text{organisms}\{\text{environment}\}\}\}\}$ and what it means for sustainability.
6. [referring to the beginning of the fossil fuel revolution] "The profound change that then occurred seemed to be rather due to the fact that, for the first time in history, men began to tap a large capital store of energy and ceased to be entirely dependent on the revenue of sunshine. All the requirements of pre-scientific men were met out of the solar energy of their own times. The food they ate, the clothes they wore, and the wood they burnt could be envisaged, as regards, the energy content which gives them use-value, as stores of sunlight. But in burning coal one releases a store of sunshine that reached the earth millions of years ago" Soddy 1926 P 58. How does knowing we are dependent on non-renewal fossil fuel resources affect our aim toward sustainability?
7. Models are incomplete representations of reality. In what ways do you think the global model presented in the book is a good reflection of reality and how is it a poor reflection? What could be done to make the model in Chapter 7 more realistic and more useful to decision-makers?
8. Economics paints a picture of scarcity, yet nature is one of abundance. I'm reminded every spring when the leaves reappear on the trees how much generation of life there actually is. Chapter 3 addressed the ways in which nature flourishes. The chapter ends with a comparison of nature and economy (p. 42). In your opinion, which of these differences is most critical to improve the sustainability of human society?