GEO 302/SUST 314: GLOBAL ENVIRONMENTAL ISSUES

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RECOMMENDED TEXTS: No specific book is suggested but multiple references will be provided during the course.

MANUAL: Overheads and filmed lectures of the class are available at https://camilo-mora.github.io/GEO302/

COURSE OUTLINE: This course first reviews the fundamental processes that maintain populations, species, and communities in nature. It will then present how different human threats influence each of those patterns and processes, illustrating with up-to-date statistics, the current extent of human threats and status of biodiversity worldwide. Finally, we will ask the question: can the Earth support us all?. For this, we will discuss the state-of-knowledge on economic and ecologic costs of maintaining humanity so far and the economic, social and ecological forecasts about ongoing human population growth.

LEARNING OBJECTIVES: Students will: be able to describe examples of how Earth systems are connected, what natural hazards humans face, how natural resources are formed and used, and how climate change affects natural resources and humans; be able to explain some of the potential ecological outcomes of different traditional resource management practices; evaluate potential solutions to address the tension between increasing demand for food, energy, and water production, ecosystem health, and human well-being; and integrate theory and evidence to evaluate tradeoffs between food, energy, and water production, and diverse impacts on ecosystems and people.

LECTURE SCHEDULE:
Class 0: Course introduction. Creative thinking and class dynamics
       Watch Netflix "Rotten" season 2 documentary…I recommend the "Sugar" episode.
Class 1: Global patterns and drivers of biodiversity
Class 2: Biodiversity, its value and need for conservation
Class 3: Global trends in marine and terrestrial biodiversity
Class 4: Extinction
Class 5: Causes of biodiversity loss: overexploitation
Class 6: Causes of biodiversity loss: habitat loss
Class 7: Causes of biodiversity loss: climate change
Class 8: Causes of biodiversity loss: human population and consumption
Class 9: Solutions to overexploitation
Class 10: Solutions to habitat loss
Class 11: Solutions to warming and pollution
Class 12: Future scenarios for our planet
Class 13: Will things change?. Public opinion, media and scientific debate

Details about tasks and grading are provided and updated in the Github website of the course.