Sustainability Science and the Future of Food
ANST-GA 2500-004
Prof. Matthew Hayek
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Class Schedule
Tuesdays 5-7:30 PM – 194 Mercer St. Room 207
Office Hours:
Mondays and Thursday 10-12 – 285 Mercer St. Room 701
link to appointment calendar

Sustainability Science and the Future of Food offers an overview of global food systems and their impacts on the environment and animals, followed by a deep dive into thinking creatively about their potential solutions.

Sustainability pertains to the pursuit of better lives while maintaining a habitable planet. This class will be guided by a concept from sustainability and social justice called informed agitation: to tackle solutions, we first need to describe the problems carefully and correctly. We will draw from science, economics, and development theory to understand impacts more deeply.

Readings and classroom discussions guide students to identify leverage points for change. We will discuss how government, non-profits, and markets can help scale solutions. We will also draw from scientific fields to estimate the potential consequences of large-scale changes to the global food and environmental system. A number of guest speakers will also visit us to share their unique approaches to tackling our food system’s impacts on the environment and animals.

Grading rubric:
10% reading responses online
20% midterm papers
15% student presentations
45% final papers
10% class participation

Students will engage with weekly readings on NYU Classes forums. Each week, students will respond to at least one reading (selecting from those marked with an asterisk*) in 5 to 10 sentences describe what the author is arguing, how they’re defending their position, and why they seem to be pursuing their respective topic or question. Additional, more specific questions may also be posted, by Thursday at the latest, with responses due the following Monday night before class on Tuesday.

Students will be expected to decide on a research topic, in the form of a regional or global food system problem, by February 25. The midterm paper will explore a solution to their problem in 2,500-3,000 words. Right after the break, students will sign up to briefly present on their papers in weeks 10-13. Presentations will give students the chance to solicit feedback from
their classmates and prompt discussion. Feedback from the classroom presentations will help students deepen their understanding and refine their ideas for final papers (4,000 words).

This class will also give students an opportunity to engage with guest speakers, namely practitioners who are developing and executing novel solutions to problems in food and sustainability. Students are expected to engage both critically and graciously. Remember that our guests are taking time out of their busy schedules to share their accumulated wisdom with the class. This means being our most polite and grateful selves, but also being bold enough to ask for clarity when we’re uncertain about something, and trusting that they benefit from thoughtful challenges. This can be a hard balance to strike, so don’t let perfection paralyze you. If you are uncertain if a question is rude or goes “too far”, say by invalidating a deeply held assumption or foundation upon which they rest their career, hold off. We will have a debrief period after they leave or first thing the following class to engage more deeply and critically with one another over what the presenter offered.

**Week 1** - January 28
Introductions and course overview

**Week 2** - February 4
**Population growth** – Major issue or a major distraction?
- *Joel K. Bourne “The End of Plenty”—Introduction, chapters 1, 3, 5
- David Roberts “I never write about population” on Vox.com

**Week 3** - February 11
**Climate change** – the carbon cycle and food systems
- Damien Carrington. “Avoiding meat and dairy is ‘single biggest way’ to reduce your impact on Earth” *The Guardian.*
- West et al., 2010. Trading carbon for food. *PNAS*
- Video from Vox.com: “How humans disrupted a cycle essential to all life”

**Week 4** - February 18
**Changing food production 1** – Alternatives to conventional crop production
- Philip Rothcock “Land Sparing vs. Land Sharing” *Mongabay.com*
- *Joel K. Bourne The End of Plenty. Chapters 4, 12—14
- Jon Foley “No, Vertical Farms Won’t Feed the World” *Globalecoguy.com*
- Michael Hamm “The buzz around indoor farms and artificial lighting makes no sense” *The Guardian*
- “A reality check on regenerative agriculture” *The Undark Podcast.*
**Week 5** - February 25 (Deadline to choose paper topics)

**Changing food production 2** – Animal lives and environmental impacts  
Guest speaker: Professor Jennifer Jacquet  
- Schiller et al., 2018. High seas fisheries play a negligible role in addressing global food security. *Science Advances.*  
- Fry et al., 2018. Feed conversion efficiency in aquaculture. *Environmental Research Letters*  
- Jonathan Carey. “There’s Only One Way for Grass-Fed Cattle To Be A Sustainable Farming Practice”. *Huffington Post*  

**Week 6** - March 3  
**Changing food consumption**  
Impacts of dietary change, flexitarianism, tradeoffs in sustainability vs. animal suffering and numbers (e.g. chickens vs. cattle)

**Week 7** - March 10  
**The role of local government**  
Guest Speaker: Rachel Atcheson (Brooklyn Bureau President’s office)

Midterm papers due - March 12  
Spring Break - March 17

**Week 8** - March 24  
**Pressuring corporations for better environmental governance**  
Guest Speaker: Lucia Von Reusner (Mighty Earth)

**Week 9** - March 31  
**Whole plant foods for the whole world?** – Changing the social fabric to change diets  
Guest Speaker: Dan Buettner (Blue Zones)

**Week 10** - April 7  
**Disrupting meat** – using markets to scale interventions rapidly.  
Class presentations 1

**Week 11** - April 14  
**Outside the box** – changing social behavior through technology  
Class presentations 2

**Week 12** - April 21  
**Litigation week**  
Class presentations 3
**Week 13** – April 28
Legislation week
Class presentations 4

**Week 14** - May 5
Current events and/or biodiversity and wildlife

Final papers due: May 14