**Modules – Sustainable Development (APEC 100)**

*Updated (August 14 2017)*

1. **What is Sustainable Development?**

*Lectures:*

1. Introduction
2. What is Sustainable Development and Sustainability Science?
3. Sustainability of Natural Resources

*Readings:*

* “What is Your Consumption Factor?” *New York Times* (2 pg.)
* “Sustainability Science: A Call for Collaborations.” Hart and Bell. 2013. *Agricultural and Resource Economics Review* (12 pg.)
* “New Jungles Prompt a Debate on Rain Forests” *New York Times* (3 pg.)
* “Mapping Tree Density at a Global Scale” *Nature* (5 pg.)
* “100 Largest Cities” World Atlas(1 pg.)

*Videos:*

* Slumdog Millionaire (2 hrs – \*\*not posted on Canvas)
* The Miniature Earth (3:21 min:sec)

*Podcasts*:

* The Real Price of Gold *National Public Radio* (27:55 min:sec)

1. **International Development and Poverty**

*Lectures:*

1. International Development and Poverty
2. International Development and Food
3. Food Production Around the World

*Readings:*

* “Catching Up.” *The Economist* (2 pg.)
* “India's water crisis: When the rains fail,” The Economist 2009 (4 pg.)
* “The Mountain Man and the Surgeon,” The Economist (4 pg.)
* “Income Gap Meet the Longevity Gap” The New York Times (8 pg.)

*View on Internet:*

* “Oh My Gosh, What Happened To Paraguay? And China, You Are So Big!” National Public Radio
  + - * + [www.npr.org/blogs/krulwich/2010/09/02/129609503/oh-my-gosh-what-happened-to-paraguay-and-china-you-are-so-big](http://www.npr.org/blogs/krulwich/2010/09/02/129609503/oh-my-gosh-what-happened-to-paraguay-and-china-you-are-so-big)
        + [www.worldmapper.org/animations/income\_animation.html](http://www.worldmapper.org/animations/income_animation.html)

*Podcasts*:

* The Resource Curse – *National Public Radio* (4:28)
* India's Farming 'Revolution' Heading For Collapse – *National Public Radio* ([www.npr.org/templates/story/story.php?storyId=102893816](http://www.npr.org/templates/story/story.php?storyId=102893816)) (8:55)
* 'Green Revolution' Trapping India's Farmers In Debt – *National Public Radio* ([www.npr.org/templates/story/story.php?storyId=102944731](http://www.npr.org/templates/story/story.php?storyId=102944731)) (7:47)

1. **Ethics and Resource Sustainability**

*Lectures:*

1. Ethics and Sustainable Development
2. Resource Sustainability: A Brief Overview of Water, Forests, and Biodiversity:

*Readings:*

* “Ethics and Environmental Economics” Kneese and Schulze (1985) (28 pg.)
* “Protecting Endangered Species: When are Shoot-on-Sight Policies the Only Viable Option to Stop Poaching” Messer, K.D. 2010. *Ecological Economics* (6 pg.)
* Africa’s Elephants Are Being Slaughtered in Poaching Frenzy - The New York Times ([www.nytimes.com/2012/09/04/world/africa/africas-elephants-are-being-slaughtered-in-poaching-frenzy.html?\_r=1&src=rechp](http://www.nytimes.com/2012/09/04/world/africa/africas-elephants-are-being-slaughtered-in-poaching-frenzy.html?_r=1&src=rechp)) (13 pg.)
* China Bans Its Ivory Trade, Moving Against Elephant Poaching ([www.nytimes.com/2016/12/30/world/asia/china-ivory-ban-elephants.html?\_r=0](http://www.nytimes.com/2016/12/30/world/asia/china-ivory-ban-elephants.html?_r=0))

(5 pg.)

*Video:*

* *Ivory Wars: Last Stand in Zakouma (http://ngm.nationalgeographic.com/2007/03/ivory-wars/zakouma-video-interactive;* [www.youtube.com/watch?v=wn56eKvbqcs](http://www.youtube.com/watch?v=wn56eKvbqcs)

1. **Economics of Private Goods, Public Goods and Common Pool Resources**

*Lectures:*

1. Economics of Private and Public Goods
2. Economics of Common Pool Resources

*Readings:*

* “Conservation Economics”, Chapter 4 from (Holchek et al.) (22 pg.)
* *“Big Fish Stocks Fall 90 Percent Since 1950” National Geographic News* (3 pg.)
* “Survey Finds That Fish Are Often Not What Label Says” *New York Times* (<http://www.nytimes.com/2013/02/21/us/survey-finds-that-fish-are-often-not-what-label-says.html>) (3 pg.)
* “Voluntary Approaches to Transitioning from Competitive Fisheries to Rights-Based Management: Bringing the Field into the Lab” Knapp and Murphy. 2010. *Agricultural and Resource Economic Review*. (17 pg.)

*Podcast:*

* “Fisheries Rebounding, But Ports Pay a Price” *National Public Radio* (7:46)

*Experiments:*

* Public Goods
* Common Pool Resource

1. **Policy and Planning**

*Lectures:*

1. Policy and Planning
2. Evidence-Based Policy
3. Randomized Controlled Trials

*Readings:*

* Chapter 5 - Planning, Policy and Administration (Holechek, et al. 1998)
* The Rational Underpinnings of Irrational Anger, *The Washington Post* (2009) (2 pg.)
* Global Environmental Facility (STAP report) Paul Ferraro (2012) (28 pg.)
* Cass Sunstein’s editorial in NY Times.
  + [www.nytimes.com/2015/09/20/opinion/sunday/cass-sunstein-making-government-logicalhtml.html?\_r=0](http://www.nytimes.com/2015/09/20/opinion/sunday/cass-sunstein-making-government-logicalhtml.html?_r=0)

*Videos:*

* Making Sense of Place (33:40)
* Correlation and Causation (5:49)
* Importance of Evidence-Based Policies (16:28)
* Voyage of the Mobro (11:59)

1. **Strategic Conservation**

*Lectures:*

1. Valuing Ecosystem Services
2. Cost Effective Conservation
3. Strategic Conservation

*Readings:*

* The Science of Strategic Conservation*.* 2017. Kent D. Messer and Will Allen. Cambridge University Press. Cambridge: England. (Select Chapters)
* Conservation Easement – *The Nature Conservancy* (2 pg.)

*Videos:*

* Green Versus Gray (1:00)
* Military Environment (1:00)

*Assignments:*

* Strategic Conservation in Pangaea

1. **Behavioral Response to Risk**

*Lectures:*

1. Behavioral Response to Risk
2. Stigma Response: The Case of HIV-AIDS
3. Behavioral Response to Food Risk
4. Process Labeling of Food – The Good, The Bad, and the Ugly

*Readings:*

* As ‘Yuck Factor’ Subsides, Treated Wastewater Flows From Taps (*NY Times*)(2 pg.)
* Measuring and Mitigating HIV Stigma: An Overlooked Imperative to Ending AIDS. Huffington Post, November 30, 2015 (2 pg.)
* Hoffman, Fooks, and Messer “Measuring and Mitigating HIV Stigma” Economic Development & Cultural Change, 2013. (26 pg.)
* Process Labeling of Food: Consumer Behavior, the Agricultural Sector, and Policy Recommendations, CAST Issue Paper 56 ([www.cast-science.org](http://www.cast-science.org)) (16 pg.)

*Videos:*

* Germs and Health
* No Reason To Worry
* Children of Bhopal
* What is a GMO?

1. **Energy Use and Climate Change**

*Lectures:*

1. Delaware’s Vulnerability to Sea Level Rise

*Readings:*

* + “Dark Green Doomsayers” by George Will, The Washington Post, February 15, 2009 (6 pg.)
  + “In Climate Debate, Exaggeration Is a Pitfall” by Andrew Revkin, New York Times, February 24, 2009 (3 pg.)
  + “Climate Science in a Tornado” by George Will, The Washington Post, February 27, 2009 (2 pg.)
  + “Massive chunk of ice breaks off Greenland glacier.” The Washington Post (2 pg.)
  + DE Sea Level Rise Survey (15 pg.)
  + Nuclear Power The dream that failed, The Economist (2012) (4 pg.)
  + Peak Oil is a Waste of Energy (2009) (2 pg.)

*Videos:*

* An Inconvenient Truth
* Breathing Earth-Global Population and CO2 Emissions (1:30)

**IX. Conclusion**

*Lecture:* Where do we go from here?