

# **ROSAMOND LEE NAYLOR**

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## **EDUCATION**

1989	Stanford University, Stanford, California Ph.D. in Applied Economics
1981	London School of Economics, London, England Master of Science in Economics
1980	University of Colorado, Boulder, Colorado Bachelor of Arts in Economics, Magna Cum Laude Bachelor of Arts in Environmental Science

## **PROFESSIONAL HONORS AND AWARDS**

1/99	Aldo Leopold Leadership Fellow in Environmental Science and Public Policy
6/94	Pew Fellow in Conservation and the Environment
7/90-9/91	McNamara Post-doc Fellowship, The World Bank

## **EXPERIENCE**

12/14-present	William Wrigley Professor, Department of Earth System Science; Professor by courtesy, Department of Economics, Stanford University
9/07-present	William Wrigley Senior Fellow, Freeman-Spogli Institute for International Studies and the Woods Institute for the Environment, Stanford University
6/05-present	Director, Center in Food Security and the Environment, Stanford University
9/92-5/09	Director of Studies, Goldman Interschool Honors Program in Environmental Science, Technology, and Policy, Stanford University
9/00-8/09	Associate Professor by courtesy, Department of Economics, Stanford University
9/00-8/07	Julie Wrigley Senior Fellow, Center for Environmental Science and

## Policy, Stanford University

Naylor has been employed by Stanford University's Institute for International Studies since 1990. Between September 1990 and August 2000, she advanced from Research Associate to Senior Fellow with academic council status. She also advanced from Lecturer to Associate Professor (by courtesy) in Economics and in 2009 was named a Professor of Environmental Earth Systems Science in the School of Earth Sciences and a Professor (by courtesy) in Economics.

## PUBLICATIONS

Byerlee, D., Falcon, W., & Naylor, R. *The tropical oilseeds revolution*. Forthcoming from Oxford University Press (2016).

Naylor, R. L. (2015). A global perspective on food systems. *Journal of Agriculture, Food Systems, and Community Development* (in press).

Cao, L., Naylor, R., Henriksson, P., Leadbitter, D., Metian, M., Troell, M., & Zhang, W. (2015). China's aquaculture and the world's wild fisheries. *Science*, 347(6218), 133-135.

Naylor, R. L. (Ed.). (2014). *The evolving sphere of food security*. New York, NY: Oxford University Press.

Falcon, W., & R. Naylor, R. (Eds.). (2014). *Frontiers in food policy: Perspectives on sub-Saharan Africa*. Stanford University: Center on Food Security and the Environment.

Troell, M., Naylor, R., Metian, M., Beveridge, M., Tyedmers, P., Folke, C., . . . de Zeeuw, A. (2014). Does aquaculture add resilience to the global food system? *PNAS*, 111(37), 13257-13263.

Naylor, R. L. (2014). Biofuels, rural development, and the changing nature of agricultural demand. In W. Falcon & R. Naylor (Eds.), *Frontiers in food policy: Perspectives on sub-Saharan Africa* (343-376). Stanford University: Center on Food Security and the Environment.

Barrett, S., Lenton, T. M., Millner, A., Tavoni, A., Carpenter, S., Anderies, J. M., . . . de Zeeuw, A. (Including Naylor, R. L.) (2014). Climate engineering reconsidered. *Nature Climate Change*, 4, 527-529.

Chiu, A., Li, L., Guo, S., Bai, J., Fedor, C., & Naylor, R. L. (2013). Feed and fishmeal use in the production of tilapia and carps in China. *Aquaculture*, 414-415, 127-134.

Naylor, R. (2013). The truth about GMOs. (Forum comment). *Boston Review*. Retrieved from: <http://www.bostonreview.net/forum/truth-about-gmos/preventing-hunger>

Burney, J. A., Naylor, R. L., & Postel, S. L. (2013). The case for distributed irrigation as a development priority in sub-Saharan Africa. *Proceedings of the National Academy of Sciences*, 110(31), 12513-12517.

Garrett, R. D., Lambin, E. F., & Naylor, R. L. (2013). The new economic geography of land use change: Supply chain configurations and land use in the Brazilian Amazon. *Land Use Policy*, 34, 265-275.

Liu, J., Hull, V., Batistella, M., DeFries, R., Dietz, T., Fu, F., . . . Zhu, C. (Including Naylor, R. L.) (2013). Framing sustainability in a telecoupled world. *Ecology and Society* 18(2). Retrieved from

<http://www.ecologyandsociety.org/vol18/iss2/art26/>

- Klinger, D., & Naylor, R. L. (2012). Searching for solutions in aquaculture: Charting a sustainable course. *Annual Review of Environment and Resources*, 37, 247-276.
- Garrett, R. D., Lambin, E. F., & Naylor, R. L. (2013). Land institutions and supply chain configurations as determinants of soybean planted area and yields in Brazil. *Land Use Policy*, 31, 385-396.
- Naylor, R. L., & Falcon, W. P. (2011). The global costs of American ethanol. *The American Interest*, 7(2), 66-76.
- Matson, P., Naylor, R., & Ortiz-Monasterio, I. (2011). Looking for win-wins in intensive agriculture. In P. A. Matson (Ed.), *Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution in Agriculture* (31-46). Washington, DC: Island Press.
- Naylor, R., & Falcon, W. (2011). The Yaqui Valley's agricultural transition to a more open economy. In P. A. Matson (Ed.), *Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution in Agriculture* (107-138). Washington, DC: Island Press.
- Matson, P., Naylor, R., & Ortiz-Monasterio, I. (2011). Lessons Learned. In P. A. Matson (Ed.), *Seeds of Sustainability: Lessons from the Birthplace of the Green Revolution in Agriculture* (231-258). Washington, DC: Island Press.
- Naylor, R. L. (2011). Expanding the boundaries of agricultural development. *Journal of Food Security*, 3, 233-251.
- Burney, J. A., & Naylor, R. L. (2011). Smallholder irrigation as a poverty alleviation tool in the Sub-Saharan Africa. *World Development*, 40(1), 110-123.
- Venayagamoorthy, S.K., Fringer, O.B., Koseff, J.R., & Naylor, R. L. (2011). Numerical modeling of aquaculture dissolved waste transport in a coastal embayment. *Environmental Fluid Mechanics*, 11(4), 329-352.
- Martinelli, L., Garrett, R., Ferraz, S., & Naylor, R. (2011). Sugar and ethanol production as a rural development strategy in Brazil: Evidence from the state of Sao Paulo. *Agricultural Systems*, 104( 5), 419-428.
- Naylor, R., & Falcon, W. (2010). Food security in an era of economic volatility. *Population and Development Review*, 36(4), 693-723.
- Martinelli, L. Naylor, R., Vitousek, P., & Moutinho, P. (2010). Agriculture in Brazil: impacts, costs, and opportunities for a sustainable future. *Current Opinion on Sustainable Development*, 2(5-6), 431-438.
- Naylor, R. L. & Leonard, G. H. (2010). Aquaculture made safe. *Los Angeles Times* (editorial). Retrieved from:  
<http://articles.latimes.com/2010/feb/15/opinion/la-oe-naylor15-2010feb15>
- Burney, J., Woltering, L., Burke, M., Naylor, R., & Pasternak, D. (2010). Solar-powered drip irrigation enhances food security in the Sudano-Sahel. *PNAS*, 107(5), 1848-1853.

Deng, X., Huang, J., Yang, J., Rozelle, S., Naylor, R., Falcon, W., & Battisti, D. (2010). Impacts of El Niño-Southern Oscillation (ENSO) events on the world rice market. *Journal of Geographical Sciences*, 20, 3-16.

Naylor, R., & Mastrandrea, M. (2009). Coping with climate risks in Indonesian rice agriculture: A policy perspective. In J. A. Filer and A. Haurie (Eds.), *Uncertainty and Environmental Decision Making* (127-153). New York, NY: Springer.

Chapin, F. S., Carpenter, S. R., Kofinas, G. P., Folke, C., Abel, N., Clark, W. C., . . . Swanson, F. J. (Including Naylor, R. L.). (2009). Ecosystem stewardship: Sustainability strategies for a rapidly changing planet. *Trends in Ecology and Evolution*, 25(4), 241-249.

Naylor, R., Hardy R., Bureau, D., Chiu, A., Elliott, M., Farrell, A., . . . Nichols, P. (2009). Feeding aquaculture in an era of finite resources. *PNAS*, 106(36), 15103-15110.

Vitousek, P.M., Naylor, R.L., Crews, T., David, M.B., Drinkwater, L.E., Holland, E., . . . Townsend, A. R. (2009). Nutrient imbalances in agricultural development. *Science*, 324(5934), 1519-1520.

Roberts, M., Dawe, D., Falcon, W., & Naylor, R. (2009). El Niño-Southern Oscillation impacts on rice production in Luzon, the Philippines. *Journal of Applied Meteorology and Climatology*, 48(8), 1718-1724.

Naylor, R. (2009). Managing food production systems for resilience. In F. S. Chapin, G. P. Kofinas, & C. Folke (Eds.), *Principles of natural resource stewardship: Resilience-based management in a changing world*. (259-280). New York, NY: Springer.

Battisti, D., & Naylor, R. (2009). Historical warnings of future food insecurity with unprecedented seasonal heat. *Science*, 323(5911), 240-244.

Vimont, D. J., Battisti, D. S., & Naylor, R. (2009). Downscaling Indonesia precipitation using large-scale meteorological fields. *International Journal of Climatology*, 30(11), 1706-1722.

Naylor, R., & Falcon, W. (2008). Our Daily Bread: A Review of the Current World Food Crisis. *Boston Review*. Retrieved from <http://www.bostonreview.net/rosamond-naylor-and-walter-falcon-our-daily-bread-global-food-crisis>

Naylor, R. (2008). Is it Africa's turn? *Boston Review* (commentary: "The global food crisis exposes the fragility of sub-Saharan economic progress"), 33(3), 15.

Naylor, R. L., & Falcon, W. P. (2008). When cars compete with people for food. *San Francisco Chronicle*. Retrieved from <http://www.sfgate.com/green/article/When-cars-compete-with-people-for-food-3214845.php>

Chapin, F. S., Trainor, S. F., Huntington, O., Lovcraft, A. L., Zavaleta, E., Natcher, D. C., . . . Naylor, R. L. (2008). Increasing wildfire in the boreal forest: Causes, consequences, and pathways to potential solutions of a wicked problem. *BioScience*, 58(60), 531-540.

Lobell, D., Burke, M., Tebaldi, C., Mastrandrea, M., Falcon, W., & Naylor, R. (2008). Prioritizing climate adaptation needs for food security in 2030. *Science*, 319(5863), 607-610.

- Galloway, J., Burke, M., Bradford, E., Falcon, W., Gaskell, J., McCullough, E., . . . Wassenaar, T. (Including Naylor, R.) (2007). International trade in meat: The tip of the pork chop. *AMBIO*, 36(8), 622-629.
- Naylor, R., Liska, A., Burke, M., Falcon, W., Gaskill, J., Rozelle, S., & Cassman, K. (2007). The ripple effect: Biofuels, food security and the environment. *Environment*, 49(9), 30-43.
- Naylor, R. N., Battisti, D. S., Vimont, D. J., Falcon, W. P., & Burke, M. B. (2007). Assessing risks of climate variability and climate change for Indonesian rice agriculture. *PNAS*, 104(19), 7752-7757.
- Naylor, R., Eagle, J., & Smith, W. (2007). Response of fishermen to aquaculture and the salmon crisis. In W. W. Taylor, M. Schechter, and L. Wolfson (Eds.), *Globalization: Effects on Fisheries Resources* (244-268). Cambridge: Cambridge University Press.
- Naylor, R., Falcon, W., Fowler, C. (2007). The conservation of global crop genetic resources in the face of climate change. Summary report from a Bellagio Conference. Bellagio, Italy. Retrieved from <http://fse.stanford.edu/>
- Naylor, R. L. (2006). Offshore aquaculture legislation. *Science*, 313, 1363.
- Naylor, R. (2006). Environmental safeguards for open-ocean aquaculture. *Issues in Science and Technology*, 22(3). Retrieved from <http://issues.org/22-3/naylor/>
- Goldstein, J. H., Daily, G. C., Friday, J. B., Matson, P. A., Naylor, R. L., & Vitousek, P. M. (2006). Business strategies for conservation on private lands: Koa forestry as a case study. *PNAS*, 103(26), 10140-10145.
- Luers, A. L., Naylor, R. L., & Matson, P. A. (2006). A case study of land reform and coastal land transformation in Southern Sonora, Mexico. *Land Use Policy*, 23(4), 436-447.
- Chapin, F.S., Robards, M., Hunington, H.P., Johnstone, J.F., Trainor, S.F., Kofinas, G.P., . . . Naylor, R. L. (2006). Directional changes in ecological communities and social-ecological systems: A framework for prediction based on Alaskan examples. *The American Naturalist*, 168, S36-S49.
- Chapin, F.S., Lovcraft, A.L., Zavaleta, E.S., Nelson, J, Robards, M.D., Kofinas, G.P., . . . Naylor, R. L. (2006). Policy strategies to address sustainability of Alaskan boreal forests in response to a directionally changing climate. *PNAS*, 103(45), 16637-16643.
- Naylor, R., & Manning, R. (2005). Unleashing the genius of the genome to feed the developing world. *Proceedings of the American Philosophical Society*, 149(4), 515-528.
- Naylor, R., Steinfeld, H., Falcon, W., Galloway, J., Smil, V., Bradford, E., . . . Mooney, H. (2005). Losing the links between livestock and land. *Science*, 310(5754), 1621-1622.
- Falcon, W.P., & Naylor, R. L. (2005). Rethinking food security for the 21<sup>st</sup> Century. *American Journal of Agricultural Economics*, 87(5), 1113-1127.

- Naylor, R., & Burke, M. (2005). Aquaculture and ocean resources: Raising tigers of the sea. *Annual Review of Environment and Resources*, 30, 185-218.
- Naylor, R., Hindar, K., Fleming, I., Goldberg, R., Williams, S., Volpe, J., . . . Mangel, M. (2005). Fugitive salmon: Assessing risks from aquaculture escapes. *BioScience*, 55(5), 427-437.
- Goldburg, R., & Naylor, R. (2005). Future seascapes, fishing, and fish farming. *Frontiers in Ecology*, 3(1), 21-28.
- Diaz, S., Tilman, D., Fargione, J., Chapin, F. S., Dirzo, R., Kitzberger, T., . . . Eardley, C. (Including Naylor, R.) (2005). Biodiversity regulation of ecosystem services. In *Ecosystems and Human Well-being: Current State and Trends, Volume 1; Millennium Assessment of the World's Ecosystems*, Washington, DC: Island Press, 299-329.
- Matson, P., A. Luers, K. Seto, Naylor, R., & Ortiz-Monasterio, I. (2005). People, Land Use, and Environment in the Yaqui Valley, Sonora Mexico. In B. Entwisle & P. C. Stern (Eds.), *Population, Land Use, Environment: Research Directions*. Washington, DC: The National Academies Press.
- Lobell, D., Ortiz-Monasterio, I., Asner, G., Matson, P., Naylor, R., & Falcon, W. (2005). Analysis of wheat yield and climatic trends in Mexico. *Field Crops Research*, 94, 250-256.
- Lobell, D., Ortiz-Monasterio, I., Asner, G., Naylor, R., & Falcon, W. (2005). Combining field surveys, remote sensing, and regression trees to understand yield variation in an irrigated wheat landscape. *Agronomy Journal*, 97, 241-249.
- Drew, W.M., Ewel, K.C., Naylor, R. L., & Sigrah, A. (2005). A tropical freshwater wetland: III. Direct use values and other goods and services. *Wetlands Ecology and Management*, 13(6), 685-693.
- Falcon, W., Naylor, R., Smith, W., Burke, M., & McCullough, E. (2004). Using climate models to improve Indonesian food security. *Bulletin of Indonesian Economic Studies*, 40(3), 355-377.
- Nelson, R. J., Naylor, R. L., & Jahn, M. M. (2004). The role of genomics research in improvement of orphan crops. *Crop Science*, 44, 1901-1904.
- Naylor, R. (2004). Threats to aquatic environments: Is aquaculture a solution? A. G. Brown (Ed.), *Fish, Aquaculture, and Food Security*. Proceedings from ATSE Crawford Fund Conference. Canberra, Australia.
- Eagle, J., Naylor, R., & Smith, W. (2004). Why farm salmon out-compete fishery salmon. *Marine Policy*, 28(3).
- Naylor, R. L., Falcon, W. P., Goodman, R. M., Jahn, M. M., Sengooba, T., Tefera, H., & Nelson, R. J. (2004). Biotechnology in the developing world: A case for increased investments in orphan crops. *Food Policy*, 29(1), 15-44.
- Naylor, R., Eagle, J., & Smith, W. (2003). Salmon aquaculture in the Pacific Northwest: A global industry with local impacts. *Environment*, 45(8), 18-39.

- Turner, B. L., Matson, P. A., McCarthy, J. J., Corell, R. W., Christensen, L., Eckley, N., . . . Tyler, N. (Including Naylor, R.) (2003). Illustrating the coupled human-environment system for vulnerability analysis: Three case studies. *PNAS*, 100(14), 8080-8085.
- Tilman, D., Cassman, K., Matson, P., Naylor, R., & Polasky, S. (2002). Agricultural sustainability and intensive production practices. *Nature*, 418, 671-677.
- Naylor, R., Nelson, R., Falcon, W., Goodman, R., Jahn, M., Kalazich, J., . . . Tefera, H. (2002). Integrating new genetic technologies into orphan-crop improvement in the least developed countries. Proceedings from the 6<sup>th</sup> Annual Conference on Agricultural Biotechnologies: New Avenues for Production, Consumption, and Technology Transfer. Ravello, Italy.
- Naylor, R. L., Bonine, K., Ewel, K., & Waguk, E. (2002). Migration, markets, and mangrove resource use in Kosrae, Federated States of Micronesia. *AMBIO*, 31(4), 340-350.
- Naylor, R., Falcon, W., Wada, N., & Rochberg, D. (2002). Using El Nino/Southern Oscillation climate data to inform food policy in Indonesia. *The Bulletin of Indonesian Economic Studies*, 38 (1), 75-91.
- Naylor, R. L., Williams, S. L., & Strong, D. R. (2001). Aquaculture: A gateway for exotic species. *Science*, 294(5547), 1655-1656.
- Naylor, R., Goldburg, R., Beveridge, M., Clay, J., Folke, C., Kautsky, N. . . Troell, M. (2001). Aquaculture: A net loss? *Conservation Biology in Practice*, 2(4), Fall 2001.
- Goldburg, R. J., Elliot, M., & Naylor, R. L. (2001). Marine aquaculture in the United States: Environmental impacts and policy options. *Pew Ocean Commission*. Retrieved from [http://www.iatp.org/files/Marine\\_Aquaculture\\_in\\_the\\_United\\_States\\_Enviro.htm](http://www.iatp.org/files/Marine_Aquaculture_in_the_United_States_Enviro.htm)
- Naylor, R., Falcon, W., & Puente-Gonzalez, A. (2001). Policy reforms and Mexican agriculture: Views from the Yaqui Valley. CIMMYT Economics Program Paper. Mexico D.F.: Mexico.
- Mosier, A., Bleken, M., Chaiwanakupt, P., Ellis, E., Freney, J., Howarth, R., . . . Zhu, Z. (Including Naylor, R.) (2001). Policy implications of human-accelerated nitrogen cycling. *Biogeochemistry*, 57/58, 477-516.
- Naylor, R., Goldburg, R., Primavera, J., Kautsky, N., Beveridge, M., Clay, J., . . . Troell, M. (2000). Effect of aquaculture on world fish supplies. *Nature*, 405, 1017-1024.
- Naylor, R. (2000). Agriculture and global change. In G. Ernst (Ed.), *Earth systems: Processes and issues* (462-475). Cambridge, UK: Cambridge University Press.
- Naylor, R. L. (2000). The economics of alien species invasions. In H. Mooney, H. & R. Hobbs (Eds.), *Invasive species in a changing world* (241-259). Washington, D.C.: Island Press.
- Chapin, F. S., Zavaleta, E. S., Eviner, V. T., Naylor, R. L., Vitousek, P. M., Sala, O. E., . . . Lavorel, S. (2000). Consequences of changing biodiversity. *Nature*, 405, 234-242.
- Naylor, R., Goldburg, R., Mooney, H., Beveridge, M., Clay, J., Folke, . . . Williams, M. (1998). Nature's subsidies to shrimp and salmon farming. *Science*, 282(5390), 883-884.

Matson, P. A., Naylor, R. L., & Ortiz-Monasterio, I. (1998). Integration of environmental, agronomic, and economic aspects of fertilizer management. *Science*, 280(5360), 112-115.

Naylor, R. L., & Drew, W. M. (1998). Valuing mangrove resources in Kosrae, Micronesia. *Environment and Development Economics*, 3(4), 471-490.

Naylor, R. L., Falcon, W. P., & Zavaleta, E. (1997). Variability and growth in grain yields 1950-1994: Does the record point to greater instability? *Population and Development Review*, 23(1), 41-58.

Naylor, R. L. (Ed.). (1997). *Herbicides in Asian rice: Transitions in weed management*. Los Banos, The Philippines: International Rice Research Institute Publications.

Naylor, R. L. (1997). Herbicide use in Asian rice production: Perspectives from economics, ecology, and the agricultural sciences. In R. L. Naylor (Ed.), *Herbicides in Asian rice: Transitions in weed management* (3-26). Los Banos, The Philippines: International Rice Research Institute Publications.

Naylor, R., Falcon, W., & Kennedy, D. (1997). Developing a weed management strategy for Asian rice production. In R. L. Naylor (Ed.), *Herbicides in Asian rice: Transitions in weed management* (255-266). Los Banos, The Philippines: International Rice Research Institute Publications.

Naylor, R. & Ehrlich, P. (1997). Natural pest control services and agriculture. In G. Daily (Ed.), *Nature's services: Societal dependence on natural ecosystems* (151-176). Washington, D.C.: Island Press.

Naylor, R. (1996). Invasions in agriculture: Assessing the cost of the Golden Apple Snail in Asia. *AMBIO*, 25(7), 443-448.

Naylor, R. (1996). Energy and resource constraints on intensive agricultural production. *Annual Review of Energy and Environment*, 21, 99-123.

Naylor, R. L., & Falcon, W. P. (1995). Is the locus of poverty changing? *Food Policy*, 20, (6), 501-518.

Naylor, R. (1994). Culture and agriculture: Employment practices affecting women in Java's rice economy. *Economic Development and Cultural Change*, 42(3), 509-535.

Naylor, R. (1994). Herbicide use in Asian rice production. *World Development*, 22(1), 55-70.

Naylor, R. (1994). Rice-based farming systems in Asia: Driving forces and implications for global change. In D. Caron, F. S. Chapin, J. Donoghue, M. Firestone, J. Harte, L. Wells, & R. Stewardson (Eds.), *Ecological and social dimensions of global change* (ch 6). University of California at Berkeley, CA: Institute of International Studies.

Naylor, R., & Matson, P. (1993). Food, conservation, and global environmental change: Is compromise possible? *EOS Transactions*, 74(15), 178-179.

Naylor, R. (1993). Real wages and institutional change: Women's welfare in the Javanese rice economy. *Food Policy*, 18(1), 73-78.

Naylor, R. (1992). Labor-saving technologies in the Javanese rice economy: Recent developments and a look into the 1990s. *Bulletin of Indonesian Economic Studies*, 28(3), 71-91.

Naylor, R. (1991). The rural labor market in Indonesia. In S. R. Pearson et al. (Eds.), *Rice Policies in Indonesia* (58-98). Ithaca, NY: Cornell University Press .

Naylor, R., "Equity Effects of Alternative Rice Policies. In S. R. Pearson et al. (Eds.), *Rice policies in Indonesia* (138-161). Ithaca, NY: Cornell University Press.

Pearson, S., Naylor, R., & Falcon, W. (1991). Recent policy influences on rice production. In S. R. Pearson et al. (Eds.), *Rice policies in Indonesia* (8-21). Ithaca, NY: Cornell University Press.

Naylor, R. (1990). Wage trends in rice production on Java: 1976-1988. *Bulletin of Indonesian Economic Studies*, 26(2), 133-156.

Naylor, R. (then Lee, R.), Lillydahl, J., & Singell, L. (1981). Youth Unemployment and the Minimum Wage. *Annals of Regional Science*.

## STANFORD COURSES

**The World Food Economy:** Departments of Economics and Earth Systems Science (cross-listed), undergraduates and graduates, survey course on agricultural demand, supply, and trade theory; food security; food policy (Economics 106/206).

**Human Society and Environmental Change:** Departments of Earth Systems Science and History (cross-listed), core course on human-environment interactions (Anthrosphere) (ES112/History 103D).

**Food and Security:** sophomore seminar integrating concepts of food security and international security as more traditionally defined (ES 61Q/EESS 61Q/INTNLREL 61Q).

**The Evolving Sphere of Food Security:** graduate and upper-level undergraduate seminar on global food security, modeled after the volume by R. L. Naylor (ed.) 2014. (ES168/268)

**Goldman Interschool Honors Program in Environmental Science, Technology, and Policy:** Center for Environmental Science and Policy, undergraduates, students selected competitively (IIS 195). Directed the program from 1994-2008. This program entails a yearlong seminar with 8-12 undergraduate students selected competitively from all schools and departments. A high percentage of Goldman alumni remain in continuous contact, and an unusual number of theses from the program are published in the peer-reviewed literature.

## GRADUATE ADVISING

Advisees who have completed PhD degrees:

David Lobell (Geological and Environmental Sciences)

Amy Luers (E-IPER)

Josh Goldstein (E-IPER)

Kirsten Oleson (E-IPER)

Geoff Shester (E-IPER)

Joanne Gaskell (E-IPER)

Kaitlin Shilling (E-IPER)  
Rodrigo Pizarro (E-IPER)  
Kristen Honey (E-IPER)  
Rachel Garrett (E-IPER)  
Dane Klinger (E-IPER)  
Andy Gerhart (E-IPER)

Current PhD advisees:

Katrina ole-MoiYoi (E-IPER)  
Casey Maue (E-IPER)  
Tannis Thorlakson (E-IPER)  
Elsa Ordway (Earth Systems Science)

**UNIVERSITY SERVICE**

2013-2014	Faculty Representative, Advisory Panel on Investment Responsibility and Licensing (APIR-L), Stanford University
2008 – present	Member, Advisory Committee, E-IPER
2008 – present	Member, Executive Committee, Earth Systems Science Program
2006 – present	Member, Faculty Steering Committee, International Policy Studies Program
Ongoing	Undergraduate advisor in Earth Systems, International Relations, and Human Biology
2004 – 2009	Environmental Ventures Program, Woods Institute for the Environment (Co-Chair, 2004-2006; member 2007-2009)
Various years	Admissions Committee, E-IPER PhD Program
Various years	Member of numerous search committees in the Department of Environmental Earth Systems Science, Freeman Spogli Institute for International Studies, and the Stanford Woods Institute for the Environment

**EXTERNAL SERVICE - MEMBERSHIPS**

1/2015 – present	Member, Scientific Advisory Board, Institute for Food and Agricultural Literacy (IFAL), University of California-Davis World Food Center
2013 – present	Science Advisor, United Nation’s Secretary General Ban Ki Moon’s initiative on Sustainable Development (Sustainable

Agriculture section)

2012 – present	Trustee, The Nature Conservancy, California Chapter
2012 – present	Member, Scientific Advisory Board, Aldo Leopold Leadership Program
2011 – present	Member, Advisory Board, Aspen Global Change Institute
2011 – 2017	Member, Scientific Board of the Beijer Institute, Stockholm
2011 – 2012	Member, Advisory Panel for the African Human Development Report at UNDP (United Nations Development Program)
2009 – 2011	Member, U.S. National Committee for the Pacific Science Association, National Academy of Sciences
2007 – 2010	Member, Pew Fellows Advisory Committee
2005 – 2009	Member, Selection Committee, Aldo Leopold Leadership Program
2005 – 2009	Member, Scientific Advisory Board, COMPASS (Communication Partnership for Science and the Sea)
1998 – 2007	Member, Oversight Committee for the Collaborative Crop Improvement Program, McKnight Foundation
2006	Judge, Risser Environmental Journalism Prize for the American West
2003 – 2005	Member, NRC Committee on “Alaska Yukon Salmon: Research and Restoration Priorities”. National Academy of Sciences

#### **EXTERNAL SERVICE - EDITORIAL**

2012 – present	Associate Editor, <i>Journal of Food Security</i>
2011 – present	Editorial Advisory Board, <i>Global Food Security</i>
2009 – present	Editorial Board, <i>Aquaculture Environment Interactions</i>
2007 – 2011	Editorial Board, <i>Environmental Research Letters</i>
2004 – 2008	Editorial Board, <i>Annual Review of Environment and Resources</i>

Frequent reviewer for *Science*, *Nature*, *PNAS*, *Food Policy*, *Global Environmental Change*