- N327 Food Systems
- Friedman School of Nutrition Science & Policy
- Program on Agriculture, Food and Environment

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- Instructor: Hugh Joseph
- Syllabus: Spring 2009 semester

Course description: This course on food systems addresses three major themes: food systems; sustainable food systems, and local / regional food systems. The course will introduce students to a variety of theories, perspectives and models of food systems, as well as approaches to food system change (emphasizing sustainability and localization). We will examine various constructs and frameworks to create an understanding of food systems from multiple dimensions, and strategies for promoting sustainability within them. A distinct focus on local/regional food systems will incorporate additional food system dynamics such as civil agriculture, community economic development, and municipal policy. Students will examine food systems through food comparisons, and via field projects focusing on sustainable diets, or on local / regional food systems in Boston, Massachusetts, and/or New England.

Course learning outcomes / objectives: Students will:

 develop a well-grounded framework for examining food systems rooted in definitions, concepts, and practices with respect to

- (a) food and agriculture systems, (b) sustainability related to food systems, and (c) food system dynamics and strategies for change at the local level and beyond.
- understand (and be able to examine) food systems from a variety of perspectives: physical structures; geographic and environmental parameters; and values and ethics, power; economics; and domestic and international policy.
- better appreciate the complexities, contradictions, and challenges involved in developing or realizing more sustainable food systems, by linking local and regional models to global systems and policies. This includes the evolving notions of community food security and food sovereignty in terms of social, political, environmental, economic, cultural and ethical dimensions.

Grades: 80% of the grade will be derived from completing two of the three assignment outlined below (40% each). The other 20% will reflect class participation and completion of short exercises for classes (examples outlined in the syllabus). Students are expected to keep up with readings and to participate actively in classroom discussions.

Assignment 1. Food product comparison / assessment: This will be a comparative analysis of two similar foods from sustainability and non-sustainability perspectives. Students will select a basic food item (such as a fruit or vegetable, milk, eggs, chicken) or nominally processed (e.g., dairy product). One item is produced through the 'conventional' or 'industrial' food system; the other comes through what you consider a much more sustainable path (e.g., local, organic, fair-traded). The two are

compared / contrasted through major components of the value chain, from production through distribution, marketing, and consumption / preparation differences at the household level. Reports may incorporate approaches to food system analysis such as production factors, food miles / foodprint; economics; make-up of the food chain; power/ relationships, and food quality. Examples from a prior course year will be posted.

Assignment 2. Boston-area / Massachusetts food system assessments: What does our own area's food system look like? Students will take on components of a food assessment that incorporate food systems perspectives. Examples: (1) local food systems in one or more neighborhoods; may involve comparing two communities; or (2) examination of statewide/regional food system issues and challenges re. 'localization'. Of great interest to local food systems proponents is the potential for expanding local/regional food production for distribution to the metro area. Assessment models from other cities will be available to provide perspective. Reports will include analysis from various food system perspectives.

Assignment 3: An alternative food system research paper to Assignment 2 may be proposed by students or selected from a list of ideas. It will address core issues covered in the course. It may have a national or international focus instead of just a local one as in the second assignment, and examine issues and challenges from the perspectives of design, policy, and/or implementation. Topics could focus on organic production, food miles, CAFOs, biofuels, fair trade, and so on. One example I am interested in are (a) developing models of sustainable diets, and (b) comparing the costs of sustainable diet models versus conventional diet models.

<u>Classroom activities</u>: Completing required readings on time and

active class participation, including preparation for class exercises accounts for 20% of your grade. Some of these are activities are outlined in the weekly sections below. An example is preparing a list of indicators on aspect(s) of the environment in relation to food systems sustainability, which everyone posts, re-organizes and prioritizes, and then discusses in class. Several of these exercises require some nominal preparatory work in advance of the class. In addition, we will have small group discussions on a relevant topic, frequently a preamble to a class exercise.

Readings: Readings will be available at the onset of the course or shortly thereafter. A specific set of required readings for each week is provided below. In addition to two books, many readings will be posted on Angel. However, some additional readings not available as electronic copies will be copied and made available in hard copy for you to purchase. Additional resources will be available on Angel to help with research and papers or for general interest.

Required texts: These can be ordered online from Amazon or other sources.

- C. Clare Hinrichs, Thomas A. Lyson (Editors): Remaking the North American Food System: Strategies for Sustainability. University of Nebraska Press. 2007.
- Patricia Allen. <u>Together at the Table: Sustainability and Sustenance in the American Agrifood System</u>. Penn State Press, 2004.

Weekly outlines

WEEK 1: Major theme: Systems theories and systems thinking

→ Course overview: Review of course content, assignments and requirements for the semester. This will include some detail on the major assignments, so you can get started on planning your research projects.

→ Concepts and frameworks:

• **Systems:** An overview of systems theories and system thinking; applying this to (a) natural / ecological systems as a basis for sustainability; (b) agricultural systems; (c) food systems. We will examine food systems as webs with interconnected and interdependent parts – and the ways these connections can be conceptualized and analyzed.

→ Class exercises:

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- Initial visioning of a sustainable food system. What would you want our food system to look like in 2030? Wall exercise and follow-up discussion.
- Mapping sub-systems in the food system. Connecting the dots / sketching frameworks.
- → **Documentary** National Geographic: *The Human Footprint*: 91 minutes

→ Readings: <u>Systems:</u>

- Kim, Daniel. <u>Introduction to Systems Thinking</u>. Pegasus. 1999. (printed handout)
- Feldt, Allan G. General Systems Theory.
- Capra, F. Systems Theory and the New Paradigm. 334-350 I Ecology /ecology.pdf (note: scanned version is a bit hard to read in small print)
- David S. Walonick. General Systems Theory

→ Additional resources:

• Meadows, Donella. <u>Thinking in Systems. A Primer.</u> Sustainability Institute. Chelsea Green Publishing. 2008. (bookstore or library)

WEEK 2: Major theme: Sustainability

→ Concepts and frameworks, continued:

- Systems: Concluding comments / Q&A
- Sustainability: Sustainability is now the buzzword when it comes to environment, farming and food systems, but still as fuzzy as it gets. As a term subject to multiple definitions and approaches, we will be examining the concept as it is used in "sustainable development", "sustainable economics", and "sustainable agriculture", but begin with more generic or broad-based perspectives.
- → Class exercise: Mapping food systems; components of

sustainability

- → Overview of Community Food Assessments (CFA): To get you thinking about your assignments on local / regional food systems, we will begin with a CFA overview and how it fits into the framework of the overall course content.
- → Discussion and planning of assignments / research projects.

\rightarrow Readings: Week 2:

- Patricia Allen. <u>Together at the Table: Sustainability and Sustenance in the American Agrifood System</u>. Penn State Press, 2004. Chps. 1 &2.
- U.N. <u>Our Common Future, Chapter 2: Towards Sustainable Development.</u>
- Michael Ben-Eli. Sustainability The Five Core Principles
- Kenneth A. Dahlberg. Sustainable agriculture-fad or harbinger? BioScience. Vol. 41 No. 5. May 1991. Pages 337-340.

→ Additional resources:

- <u>Principles of Sustainability: A Compilation</u>. Brock University, Ontario.
- Donella Meadows. <u>Envisioning a Sustainable World.</u> <u>Sustainability Institute</u>. 1994.
- Joseph Fiksel. <u>Sustainability and resilience: toward a systems</u> <u>approach</u>. SSPP: Vol. 2 Issue
- <u>Sustainability Values</u>, <u>Attitudes</u>, and <u>Behaviors</u>: <u>A Review of Multinational and Global Trends</u>. Annual Rev. Environ. Resour. 2006. 31:413–44.

WEEK 3: Major theme: Sustainable Agriculture

- → Concepts and frameworks, continued:
- Sustainability: Concluding comments / Q&A
- Sustainable agriculture: Notions of sustainable food systems are rooted in particular in the emergence of "sustainable agriculture" (SA). Much of this overview of SA will be a retrospective, going back 20 years when SA was emerging as a legitimate approach to farming systems.
- Overview of community food assessment (CFA): Discussion of components of food systems, sustainability, and community food security. Overview of appropriate methods options for information gathering, advantages and limitations of primary and secondary data.
- → Class exercise and discussion: As you review these, please look for elements in the discussion topics:
- An inventory of 'sustainable' components in agriculture.
- Discussion: How broad should 'sustainability' be applied in agriculture? Why? Should there be a hierarchy? Should 'ecology' be a priority?
- → Discussion of course assignments
- → Readings:

Sustainable agriculture:

- Harwood, R. <u>A History of Sustainable Agriculture</u>. In: Edwards, C. et. al., eds. Sustainable Agricultural Systems. pp. 3-19. (reading packet)
- Allen, P. and Sachs, C. Sustainability in the Balance series.
 What Do We Want to Sustain? Univ. of California, Santa Cruz.
- Fred Kirschenmann <u>Spirituality and Agriculture Biodynamics</u>, 2004
- Ruttan, V. Sustainability is Not Enough. Am. J. Alt. Ag. Vol. 3, Nos. 2-3; pp. 128-30.
- Ikerd, John. <u>Understanding and Managing the Multi-Dimensions</u> of Sustainable Agriculture.
- Magdoff, Fred. <u>Ecological agriculture: Principles, practices, and constraints</u>. Renewable Ag. & Food Systems: 22(2): 2007. pp. 109-117. (reading packet)
- Stauber, Karl. <u>The Futures of Agriculture</u>. Am. J. Alt. Ag. Vol. 9, Nos. 1&2. pp. 9-15.

Local / regional food system reports:

• In the additional resources listings at the end of the syllabus are examples of food system and community food system studies and analyses. Most are pretty substantial and are provided to give you ideas for your assignments. This is a good time to begin looking through them.

→ Additional resources:

Sustainable agriculture:

• USDA National Agricultural Library. <u>Sustainable Agriculture.</u> <u>Definitions and terms</u>.

- Jules Pretty, J. <u>Agroecological Approaches to Agricultural</u>
 <u>Development</u>. RIMISP Latin American Center for Rural Development. Nov. 2006.
- Dahlberg, K. <u>Regenerative Food Systems</u>. <u>Broadening the scope and agenda of sustainability</u>. In: Allen, P. ed.; Food For the Future. Conditions and Contradictions of Sustainability. Wiley-Interscience, 993.
- Allen, P. et al. <u>Expanding the Definition of Sustainable</u>
 <u>Agriculture</u>. Agroecology Program. Univ. of California, Santa Cruz.
- Lowrence, R. et. Al. <u>A Hierarchical Approach to Sustainable</u> <u>Agriculture</u>. Am. J Alt. Ag. Vol. 1; No. 4; pp. 169-73.
- Lockeretz, W. Open questions in sustainable Agriculture. Am. J. Alt. Ag. Vol. 3, No. 4. pp. 174-181. (reading packet)
- UC SAREP. What is Sustainable Agriculture? Dec. 1997.
- Ruttan, V. <u>Sustainable Growth in Agricultural Production</u>. Poetry, Policy & Science. U. Minnesota. Staff Paper. 1991.
- Richard Earles. <u>Sustainable Agriculture</u>. <u>An Introduction</u>. <u>(revised)</u> NCAT. ATTRA publication #IP043/121. 2005.
- D. Meadows. Our Food, Our Future. Organic Gardening.
- The Future is Abundant. Washington Tilth.

<u>WEEK 4</u>: Major themes: Sustainable development; food systems; sustainable food systems.

- **→** Concepts and frameworks, continued:
- Sustainable development (SD): Along with sustainable agriculture, SD approaches and principles provide a fundamental framework driving sustainable food system constructs.

- **Food systems:** Here we continue our overview of the structures of food systems and the notions of sustainability within food systems. Included are physical structures and systems from production through to disposal, and from global to individual.
- Sustainable food systems (SFS): SFS are presented as an integration of systems thinking, sustainable agriculture, and (conventional) food systems models. We will begin to compare and contrast what can be considered conventional and sustainable systems to understand key differences with respect to structures, players, intentions, philosophical parameters.
- → Class exercises: Mappings and discussion of physical food system components and players.
- → Discussions of food comparisons and food system assignments.

\rightarrow Readings:

- Patricia Allen. <u>Discourses</u>, <u>Epistemologies</u>, and <u>Practices of Sustainability and Sustenance</u>. In: Together at the Table. Chap. 4. pp. 79-114.
- Stevenson, G.W. et al. <u>Warrior, Builder and Weaver Work</u> (Chp. 2) In: C. Clare Hinrichs, Thomas A. Lyson (Editors):
 Remaking the North American Food System: Strategies for Sustainability. pp. 33-62.
- American Dietetic Association (ADA). <u>Healthy Land, Healthy People: Building a Better Understanding of Sustainable</u>

- Food Systems for Food & Nutrition Professionals. ADA Food System Task Force. March 16, 2007. pp. 15-20.
- Green K. & Foster C. <u>Give Peas a Chance: Transformations in Food Consumption and Production Systems</u>. CROMTEC, UK

→ Additional resources: Food systems and food chains

Steve W. Martinez. <u>The U.S. Food Marketing System: Recent Developments</u>, 1997-2006. USDA / ERS. Rept. 42 May 2007.

• Yakovleva, N. et. al. A Sustainability Perspective: innovations in the food system. CROMTEC, UK. 2004.

UK Cabinet Office. Food: an analysis of the issues. Aug. 2008.

<u>Life Cycle Assessment (LCA)</u>. [LCA in Denmark]

- Muñoz, I. et. al. Relevance of Human Excretion in LCA of Food.
 Case Study Of The Average Spanish Diet. Zürich,
 13/11/2008. Look in:
- 6th International Conference on Life Cycle Assessment in the Agri-Food Sector 2008. <u>Towards a Sustainable Management of the Food Chain</u>. Zurich, Switzerland, November 12-14, 2008. (Abstracts, slides, posters)
- <u>Agri-Food System Dynamics: pathways to sustainability in an</u>
 <u>era of uncertainty</u>. STEPS Working Paper 4. STEPS Centre,
 Institute of Development Studies, University of Sussex, UK.
 2007.
- <u>Farming and Food's Contribution to Sustainable Development</u>. Economic and Statistical Analysis. Department for Environment, Food and Rural Affairs. London, 2002.

WEEK 5: Major theme: Local / regional food systems:

→ Concepts and frameworks, continued:

- Local / regional food systems: "Local food systems" are often juxtaposed as the main alternative to conventional / globalized food systems and structures. What is "local" and how is it defined? Does it make sense? Should we also include regional approaches? We will examine how 'local' and 'sustainable' are intertwined, and how they differ. A particular emphasis will be on characteristics of local food systems that are unique to 'place based' factors and community-based interactions.
- → Class exercise: Mapping a community's food system. Identifying characteristics unique to local food systems.
- → Course assignments: Continue reviews and discussions.

→ Assigned readings:

- Hinrichs & Lyson (eds.): Remaking the North American Food System: Strategies for Sustainability. <u>Chps. 1, 11, 15</u>.
- Patricia Allen. <u>Chp. 7: Politics of Complacency?</u> In: Together at the Table: Sustainability and Sustenance in the American Agrifood System.
- Kloppenburg et. al. <u>Coming into the Foodshed</u>. Ag. & Human Values 13:3, 1996.
- Halweil, Brian. <u>The Argument for Local Food</u>. Worldwatch Institute. May-June 2003.
- Drake Bennett. <u>The Locavore's Dilemma</u>. Boston Globe. July 22, 2007
- John Cloud. Eating Better Than Organic. Time. March 2, 2007.

→ Additional resources

- Wally Seccombe. <u>A Home-Grown Strategy for Ontario</u> <u>Agriculture</u>.
- Jules Pretty. <u>Some Benefits and Drawbacks of Local Food</u> Systems. November 2nd 2001
- Kerr Center. <u>Closer to Home: Healthier Food, Farms and</u> Families in Oklahoma
- <u>Toward a Sustainable Community: A Toolkit for Local</u> Government. Univ. of Wisconsin Extension. 2007.
- Ambra Sedlmayr .<u>The Flooding of The Foodshed: How Cheap Imports Undermine Local Food Systems in Rural Portugal</u>. University of Essex. 2008.

WEEK 6:

- → Major theme: Food system and sustainability values and ethics: Philosophic frameworks for values / ethics / morals in addressing food system are covered, with discussion of how they apply to food systems matter. Understanding subjective and objective, relative and universal notions of ethical values and the contexts in which these operate. Applied examples, such as the right to food, environmental principles, and ethics of eating are discussed. This also helps to frame the next session on principles and indicators.
- → Class exercise: Outlining an ethical or values framework for sustainability, framed around food choices. This will lead into development of principles covered in week 7.

→ Assigned readings: _

• Patricia Allen. Reflections on Ideologies Embedded in

- <u>Alternative Agrifood Movements</u>. In: Together at the Table. Chap. 5.
- NCRLC. <u>Eating as a Moral Act</u>. <u>Eaters' Bill of Rights</u>. National Catholic Reporter, May 24, 2002.
- Rich Heffern. <u>The Ethics of Eating</u>. National Catholic Reporter, May 24, 2002
- Ritchie, M. and Brooks, C. Sustainable Food Security: A Human Right and a Social Responsibility. WHY Magazine.
- Keith Douglass Warner, K.D. and Mangin, T. <u>The ethical dimension of sustainability</u>. ITRS.
- Leiserowitz, A.A., Kates, R.W., & Parris, T.M. Sustainability
 Values, Attitudes, and Behaviors: A Review of Multinational and Global Trends. Annu. Rev. Environ. Resour. 2006.

 31:413–44.
- Jared Diamond. What's Your Consumption Factor? NYT op ed. Jan. 2, 2008.

→ Additional resources

- Kingsolver, B. The Ethics of Eating (podcast) NPR; July 3, 2008.
- George Kent. <u>Food Is A Human Right</u>. University of Hawaii. 2004.
- Whole Measures. Transforming Our Vision of Success.
- Leiserowitz, A.A., Kates, R.W., & Parris, T.M. Sustainability
 Values, Attitudes, and Behaviors: A Review of Multinational and Global Trends. Annu. Rev. Environ. Resour. 2006.

 31:413–44.
- Tim O'Riordan and James Cameron. <u>Interpreting the Precautionary Principle</u>. Earthscan Publications Ltd, 1994. (synopsis)
- ShuYing Sun, Yan Xiao. <u>The Environmental Ethics of Sustainable Development</u>. Environment & Planning College of Henan University; Kaifeng; 475001, China. 2004.
- Food Ethics Council. Food Distribution. An Ethical Agenda. UK.

Oct. 2008.

Peter Singer, Jim Mason <u>The Way We Eat: Why Our Food</u>
 <u>Choices Matter</u>. Holtzbrinck Publishers – 2006. (library or other)

<u>WEEK 7</u>: Major theme: Sustainable food systems principles and indicators.

- → Principles and indicators: Principles express the underlying philosophy and intent of actions and policies. Indicators here represent how we can apply measurement to these principles and to assess various facets of food systems.
- -- **Principles:** We will be examining what a principle is, and develop sustainability principles covering components of the food system.
- -- Indicators: We will define indicators for assessing food systems, examine how they are constructed, and review examples of their use in food systems assessments. Lists of indicators from a variety of sources will be available for reference. Development of indicators will be discussed, including methodological considerations.

→ Class exercises:

- 1. Developing a 'master list' of principles. What would you suggest as overarching principles as drivers of sustainable food systems?
- 2. Developing indicators for principles. We will pick one or two as illustrations.

→ Research Projects: Continued in depth discussion of procedures, next steps.

→ Readings:

- State of Washington. What does sustainability mean?
- John Dore. Developing Indicators for Sustainable Agriculture.
- Anderson, M. <u>Charting Growth to Good Food.</u> Wallace Center at Winrock International. 2009. (Draft – Not For Recirculation) (Pdf)
- UK Dept. for Environment, Food & Rural Affairs (DEFRA): Sustainable Farming and Food Strategy Indicators.
- Crews, T. et al. <u>Energetics and ecosystem integrity: The defining principles of sustainable agriculture</u>. AJAA Vol. 6, no. 3 1991. pp. 146-49. (reading packet)
- Ikerd, J. <u>Key Ingredients in a Sustainable Food System:</u> <u>Purposes, Principles, and People</u>.

→ Additional resources

- DEFRA. Sustainable Farming and Food Strategy Indicators.
- Heller M.C. & Keoleian G.A. <u>Life Cycle-Based Sustainability</u> <u>Indicators for Assessment of the U.S. Food System</u>. Center for Sustainable Systems. U. of Michigan Report. No. CSS00-04. Dec. 2000.
- American Planning Association: <u>Policy Guide on Planning for Sustainability</u>. Adopted by Chapter Delegate Assembly, April 16, 2000.
- <u>Bellagio Principles</u>. The International Institute for Sustainable Development. 1997.
- Sustainable Communities Network. <u>Inventories & Indicators.</u>
- Maureen Hart. <u>Sustainable Measures</u>.

WEEK 8: Major theme: Environment, energy, and the food system

- → Environment, energy and the food system: Overview of the intersections of environmental factors with food systems, particularly from physical and geographical food system frameworks. A review of major environmental factors that frame sustainable food systems, emphasizing energy use and climate change, as well as land use, soil, water, energy use, other resource use, pollution, and food safety. Students are generally expected to have a background familiarity with these topics, so we will use overview articles to arrive at a comprehensive framework relative to sustainability in the food system.
- → Class exercises: Environmental principles as foundations for determining fundamental environmental principles for food system sustainability. We will formulate the key components of eight environmental facets of sustainability (e.g., water access/use, energy access/use, carbon "foodprint", climate change) and then develop indicators that are practical and measurable to track changes in each.
- → Course assignments: Continued review
- → Assigned readings:
- Pimentel, D. et al. <u>Reducing Energy Inputs in the US Food</u> <u>System.</u> Hum. Ecol. Vol. 36, No.4, 2008. (reading packet)
- Naess, Arne. <u>Deep Ecology</u>. In Ecology 120-125. (reading packet)
- Lovelock, J. Gaia. In Ecology: 351-59 (reading packet)
- Tansey, G and Worsley, T. <u>Food and the Biosphere</u>. In: The Food System: A Guide. pp. 9-23. (reading packet)

- Crosby, Tim. Food System Factoids.
- Whiffen, HJ & L. B. Bobroff, LB. <u>Managing the Energy Costs of Food</u>. Florida Cooperative Extension Service. May 1993.
- The Validity of Food Miles as an Indicator of Sustainable Development. DEFRA. ED50254 Issue 7. July 2005.

→ Additional resources

- Pirog, R. et al. <u>Food, Fuel, and Freeways: An Iowa perspective</u> on how far food travels, fuel usage, and greenhouse gas <u>emissions</u>. Leopold Center. Iowa. 2001.
- Pirog, R. Checking the food odometer: Comparing food miles for local versus conventional produce sales to Iowa institutions. Leopold Center. Iowa. 2003.

Susanne Johansson. <u>The Swedish Foodprint</u>. <u>An Agroecological Study of Food</u>

- <u>Consumption</u>. Doctoral thesis. Swedish University of Agricultural Sciences. Uppsala, Sweden. 2005.
- <u>Marc Xuereb: Food Miles: Environmental Implications of Food Imports to Waterloo Region</u>. Region of Waterloo Public Health. November 2005.
- UK Dept. for Environment, Food & Rural Affairs (DEFRA).

 <u>Environmental Impacts of Food Production & Consumption</u>.

 Dec. 2006.
- John Hendrickson, <u>Energy Use in the U.S. Food System: A Summary of Existing Research and Analysis</u>. Center for Integrated Agricultural Systems, UW-Madison. 2004.
- Saunders, C., Barber A., Taylor G. <u>Food Miles Comparative Energy/Emissions Performance of New Zealand's Agriculture Industry</u>. Lincoln Univ. Research Report No. 285. July 2006
- John Ikerd. The Ecology of Sustainability.

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WEEK 9: Major themes: (1) Foodprints and food miles (2) Cost-benefit analysis;

- (3) Sustainable food systems (SFS) economics.
- → Foodprints and food miles: Our "foodprint" in essence captures the carbon load and associated impacts of food consumption and the food system on the environment, focusing on climate change. A key element of this is exemplified by "food miles".
- → Cost-Benefit analysis applications to food systems and sustainability. Sustainability inherently requires a full accounting of gains and losses or costs to assess the strengths and limitations of any given strategy. This means incorporating all the proposed and/or expected benefits across the social and physical spectrum, while accounting for costs wherever they occur. The implications are particularly critical to the application of policy and of consumer-focused actions, where costs are often diffused broadly across the public and private sectors and accountability is not well understood.
- → Other SFS economics: An overview of some additional economic perspectives to food system sustainability.
- → Class exercise: Extrapolation of costs and benefits for one

policy decisions and one food choice; discussion of implications in terms of allocation of responsibilities and related policy.

→ Research Projects: We will review progress and issues developing with respect to your research projects, with discussions of procedures, next steps.

→ Assigned readings:

- Carlin, Alan. <u>The New Challenge to Cost-Benefit Analysis</u>. Regulation, Vol. 28, No. 3, pp. 18-32, Fall 2005.
- Paul Thompson. <u>Calculating the True Cost of Food</u>. In: The Spirit of the Soil. Routledge. 1994. pp 94-113. (reading packet)
- Giman, Robert. <u>Design for a Sustainable Economics</u>. In Context. No. 32 52-59.
- Blanke, M.M. and Burdick, B. Food (miles) for thought. ESPR 12:3, 2005. pp.125-127.
- MacGregor, J. & Vorley, B. (2006) <u>Fair miles? The concept of "food miles" through a sustainable development lens</u>.
 Sustainable development opinion. International Institution for Education and Development (IIED).
- Blanke, M.M. and Burdick, B. Food (miles) for thought. ESPR 12:3, 2005. pp.125-127.
- <u>The Hidden Costs of CAFOs</u>. Union of Concerned Scientists. Issue Briefing. Sept. 2008.
- Peter Montague. <u>Cumulative Impacts: Death Knell for Cost-Benefit Analysis</u>. Rachel's Democracy & Health News #99. (PDF or

→ Additional resources

- Ron Bailey. <u>The Food Miles Mistake</u>. <u>Saving the planet by eating New Zealand apples</u>. Reason Magazine. November 4, 2008.
- Sirieix, L. et al. Consumers and Food miles. Paper presented to

- the AIEA2 and SOBER International Conference, Londrina Parana, Brasil, 22th 27th July 2007.
- Gathii, JT & Mandel, GN. <u>Cost-Benefit Analysis Versus The</u>
 <u>Precautionary Principle: Beyond Cass Sunstein's Laws Of</u>

 <u>Fear. University of Illinois Law Review, p. 1037, 2006</u>.
- Holly Hill. <u>Food Miles: Background and Marketing</u>. ATTRA / NCAT. 2006.
- Ikerd, John. <u>Toward an Economics of Sustainability.</u> May 1997 U of Missouri.

WEEK 10: Major theme: Power in the food system

- → Power in the food system: Discussion of what it means and how it operates in the food system. Power reflects who shapes policies affecting production, trade, distribution, food and nutrition programs, conservation practices, and so on. This is where trade policies, food assistance programs, and food system ownership are examined as factors exerting control and structure to food systems.
- -- **Sub-theme 1:** Policy-making and the food system. (Assumes some background from other courses.) Here we will examine how notions of power apply to policies affecting food systems at various levels local, national and international.
- -- Sub-theme 2: Food Security and Food Sovereignty. What are the inter-relationships between food system sustainability and food security? Where are some of the tensions and contradictions between producers and consumers, both domestically and internationally? How does an international construct (food sovereignty) translate to a domestic perspective?

- -- **Sub-theme 3:** Food trade and fair trade: An overview of trade policies as they may impact food sovereignty and food security as elements of economic sustainability.
- -- **Sub-theme 4:** Food systems and food security: The interfaces between food systems and food security, and the systemic power play at all levels that influence food security.
- → Class exercise: CFA project: Wall mapping on how power operates at the community level of a food system via locus of ownership and control of food programs; food businesses (retail, wholesale).

→ Assigned readings:

- Patricia Allen. Chp. 6 <u>Participation and Power in Alternative</u>
 <u>Agrifood Movements and Institutions</u>. In: Together at the Table: Sustainability and Sustenance in the American Agrifood System. Penn State Press, 2004
- Tom MacMillan. <u>Power in the Food System; Understanding</u>
 <u>Trends and Improving Accountability</u>. Food Ethics Council. May 2005.
- C. Robert Taylor. <u>The Many Faces of Power in the Food</u>
 <u>System</u>. Presented at the DoJ/FTC Workshop on Merger
 Enforcement February 17, 2004.
- Michael Windfuhr and Jennie Jonsén. <u>Food Sovereignty:</u>
 <u>Towards Democracy in localized food systems</u>. ITDG

 Publishing 2005. (Summary parts at least)
- Eric Holt-Giménez, Ian Bailey, and Devon Sampson. <u>Fair to the Last Drop; The Corporate Challenges to Fair Trade Coffee</u>. Food First, (IFDP) Rept. No. 17, Nov. 2007.
- Hendrickson, M. et. al. <u>The Global Food System and Nodes of Power SSRN Working Paper Series 2008.</u>

→ Additional resources:

- Tansey, Geoff. <u>Food, Power, Intellectual Property and Traditional Knowledge A Food Systems Overview</u>. UNCTAD. Geneva. 2000.
- Mustafa Koc, Rod MacRae, Luc J.A. Mougeot, and Jennifer Welsh. For Hunger Proof Cities. Sustainable Urban Food Systems. I.D.R.C. 1999.
- Magdoff, F. <u>The World Food Crisis. Monthly Review</u>. May 2008.
- Fred Magdoff. <u>A Precarious Existence: The Fate of Billions?</u> Monthly Review. Vol. 55.
- Istaván Mészáros. The Challenge of Sustainable Development and the Culture of Substantive Equality. Monthly Review. Dec. 2001.
- Paul Roberts. The End of Food Haughton Mifflin, 2008.

WEEK 11: Major theme: Food and the food system:

→ Food and the food system: Overview of how the food system shapes what we eat. The influence of power, domestic and international food and agriculture policy, food corporations, trade, and other factors. Attitudes and approaches of professionals and food consumers to food qualities and selection. Also, the connections between contemporary diets, dietary practices, health, and the food system.

- → **Special policy focus:** Dietary guidelines and food systems. If we broadened the dietary guidelines to include sustainability, what might they look like?
- → Class exercise: Developing a set of dietary guidelines for sustainability.
- → Course assignments: Continued review

→ Assigned readings:

- W.K. Kellogg Foundation. <u>Perceptions of the U.S. Food System:</u> What and How Americans Think about their Food. 2006.
- J. Gussow and K. Clancy. <u>Dietary Guidelines for Sustainability</u>. JNE. 18:1. 1986.
- Wilkins, J. <u>Eating Right Here: The Role of Dietary Guidance in Remaking Community-Based Food Systems</u>. In Hinrichs & Lyson. Chap. 8.
- David Lind and Elizabeth Barham. <u>The Social Life of The Tortilla: Food, Cultural Politics, and Contested Commoditization</u>. Agriculture and Human Values 21: 47–60, 2004. (Angel +/or reading packet)
- Christine McCullum. <u>Using Sustainable Agriculture to Improve Human Nutrition and Health</u>. The Journal of Community Nutrition 2004; 6(1):18-25.
- Pollan, M. <u>Unhappy Meals</u>. New York Times. Jan. 28, 2007.
- Wendell Berry. <u>The Pleasures of Eating</u>. In: W. Berry. What Are People For? North Point Press. 1990.

Additional resources:

• Lisa Mancino and Constance Newman. Who Has Time To Cook? How Family Resources Influence Food Preparation.

- Economic Research Service. Economic Research Report Number 40. May 2007.
- Gussow, Joan Dye. <u>Reflections on Nutritional Health and the Environment: The Journey to Sustainability</u>. Journal of Hunger & Environmental Nutrition, Vol. 1(1) 2006.
- Marion Nestle. <u>Ethical Dilemmas In Choosing A Healthful Diet:</u>
 <u>Vote With Your Fork! vote with your fork!</u> Proceedings of the Nutrition Society (UK) 2000;59:619-629
- Herrin, M and Gussow, J. <u>Designing a Sustainable Regional</u> <u>Diet</u>. Jour. Of Nutr. Ed. Vol. 21, No. 6.
- Malcolm Riley. <u>Sustainable futures: Food choice matters</u>. Journal of the HEIA (Australia). Vol. 12, No. 1, 2005.
- <u>Politics of Food</u>. Public Health Bulletin. Vol. 4, No.1, 2007. S Australia.
- Diane Bourn and John Prescott. <u>A Comparison of the Nutritional Value, Sensory Qualities, and Food Safety of Organically and Conventionally Produced Foods</u>. Critical Reviews in Food Science and Nutrition, 42(1):1–34 (2002).

WEEK 12: 1.5 hr. session (8-9:30) Gershoff Symposium day

Major theme: Remaking the food system

- → Remaking the food system: We will examine power from three angles:
- -- Discussions on changes to the food system from structural perspectives that address ownership and control.
- -- Policy frameworks and approaches to operational and programmatic change, including framing regional and local food

systems within the context of globalized food systems.

-- Food security and food sovereignty: How do these apply to food system change – in terms of structure, power, and sustainability? Does the notion of food sovereignty make sense in the U.S. and how would this be approached (for example, in relation to local / regional food systems)?

→ Assigned readings:

- Hinrichs & Lyson (eds.): Remaking the North American Food System: Strategies for Sustainability. Institutions and Practices to Remake the Food System. Part 11: Chaps. 5,7,9.
- Mustafa Koc and Kenneth A. Dahlberg. <u>The restructuring of food systems: Trends, research, and policy issues</u>. Agriculture and Human Values 16: 109–116, 1999.

→ Additional resources:

- Ripe for Change. Rethinking California's Food Economy. International Society for Ecology and Culture.
- <u>Healthy Land, Healthy People: Building a Better Understanding of Sustainable Food Systems for Food & Nutrition Professionals.</u> American Dietetic Association Sustainable Food System Task Force. March 16, 2007.

<u>WEEK 13</u>: Transforming local / regional food systems. Much activity among students and graduates working in the field focuses on food system change at the local / regional level.

-- Overview / discussion of opportunities and limitations to

current approaches and programs and how we can transition to a broader food system focus through policy changes, organizational strategies, and consumer practices.

-- Examples of "alternative" food system changes and their connections to the mainstream food system. Includes direct marketing initiatives and food policy councils.

→ Assigned readings:

- Hinrichs & Lyson (eds.): Remaking the North American Food System: Strategies for Sustainability. Part 111: The Importance of Place and Region in Remaking the Food System. Chaps. 15-17.
- Patricia Allen. <u>Politics of Complacency? Rethinking Food-</u> <u>system Localization</u>. In: Together at the Table: Sustainability and Sustenance in the American Agrifood System. Penn State Press, 2004 pp. 165-180.

Mustafa Koc, Rod MacRae, Luc J.A. Mougeot, and Jennifer Welsh. For Hunger Proof Cities. Sustainable Urban Food Systems. I.D.R.C. 1999.

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WEEK 14: ½ session:	
→ Reports and class present of their research projects.	ntations: Students will present results
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