

# **Case Study:**

Building Local Food Systems and Assessing Environmental outcomes in Ithaca, New York

Organization: Groundswell Country: USA

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#### Introduction

Local food systems are about making connections, and are based on the idea that these will bring benefits to the people and places of a region. It might be said that the essence of a local food system is the building of community in an integrative and reflective learning process. Examining the phrase, local is a circumscribed geography; food provides the nutritive inputs for human energy and health; the system is the interconnected, interacting assemblage of institutions and people organized around common goals seeking to create a complex whole.



This case study tells of the emergence of the local foods movement in Ithaca, NY. It identifies some of the key ideas and motives that have stimulated the movement, and highlights ways in which diverse people and organizations have engaged in advancing it.

#### Seed-Sowers and the Setting

Monika Roth, Director of Agriculture for Tompkins County Cooperative Extension and Joanna Green, Director of Groundswell Center for Local Food and Farming, for more than two and a half decades have worked together with numerous others to develop



educational programs and stimulate market linkages that support food producers and consumers in creating a 'civic' agriculture (Lyson, 2004). Jennifer Wilkins, Leader of the Nutrition and Food Policy program at Cornell University, has been making connections between producers and public policy makers at multiple levels to enable nutritious, locally produced foods to reach children, hospital patients, low income families and others on an affordable basis. Louise Buck, Coordinator of the Cornell Ecoagriculture Working Group, brings together student and faculty researchers from different disciplines to collaborate with Ithaca-area practitioners in tracking relationships between the food system and ecoagriculture outcomes. Miguel Gomez and Christian Peters, Cornell University based researchers, lead multi-disciplinary teams that model local food systems and their consequences for food supply, affordability, consumption and the natural resource base upon which food production depends. Meanwhile, farmers in the Ithaca area including Erick Smith of Cayuga Pure Organics, Tony Potenza of Potenza Organics, John and Jen Bokaer-Smith of Westhaven Farm at Ecovillage of Ithaca and many others, work to optimize production methods and marketing strategies that make agroecologically sustainable farming a viable livelihood strategy. These and many other actors are coming together to advance the development of a local food system in Ithaca, New York.

Ithaca is located in Tompkins County at the southern end of Cayuga Lake which comprises part of the Finger Lake Region of the State. So named for the eleven linear lakes running on a north-south axis, the Finger Lakes region is composed of a mosaic of mostly small farms and a few large dairies, vineyards sloping to lake edges, a peppering of small towns, and the only national forest in New York State. Just over 100,000 people reside in Tompkins County, while the population of the Ithaca metropolitan region is about 40,000.

#### **Policy Drivers**

The rising influence of agribusiness over the last several decades in the United States has led not only to a reduction in the diversity of crops grown, but also to an expanding disconnect between producers and consumers (Wallace 2009). Recent scandals in the peanut industry, following E.coli breakouts in spinach and tomatoes, has for many Americans been indicative of a set of problems larger than industrial food safety: soil and air pollution, the bankruptcy of family farms, loss of critical wildlife habitat, and the intriguing phenomenon of the malnutrition of the wealthy are all, arguably, attributable to the increasing temporal and geographical producer-consumer distance effected by the upsurge of agribusiness (Wallace 2009; Magdoff 2007).

In response, the fledgling local food movement has been vitalized and is expanding to reconnect producers and consumers of food, to restore vitality to small farms, and to encourage more environmentally sound and socially responsible methods of agricultural production. Essentially, it is the emergence and growth of community-based agriculture and food distribution activities that meet consumer demands for fresh, safe, locally produced foods, create jobs, encourage entrepreneurship, and strengthen community identity (Lyson 2004). Component movements like the 100-Mile



Diet and Slow Food USA, encourage consumers to think about what they are eating, where it comes from, and the social, economic, and environmental costs of their decisions (Read et al. 2008).

Going further, Susan Andreatta, an anthropologist at the University of North Carolina who studies human ecology as it is related to small-scale agricultural production, defines a local food system in terms of these community connections: A local agrofood system comprises all the individuals and processes involved in getting food from local farms to local tables...a local agrofood system not only supports local communities and often, small-scale producers. Negative environmental impacts are also reduced, and consumers come to see their food purchases as part of a more sustainable food system (Andreatta 2005, pg 120). Andreatta contends that these connections can be facilitated through farmers' markets and other venues in which producers sell directly to consumers, thus facilitating "the interconnectedness of community and agriculture networks and put[ing] more of each dollar in the farmer's pocket" (Andreatta 2005, pg 123-124).

Box 1. Slow Food, USA

"Slow Food is an idea, a way of living and a way of eating. It is a global, grassroots movement with thousands of members around the world that links the pleasure of food with a commitment to community and the environment." (Slow Food USA). • Slow Foods is a growing movement spreading across the globe, supported by the Slow Foods organizations in over 100 countries around the world. As of 2008 there were roughly 16,000 members in the USA, including noted sustainable food advocates Alice Waters, Eric Schlosser, and Michael Pollan.

• It began in 1986 when Carlo Petrini recognized that the industrialization of food was leading to the extinction of thousands of foods. To combat this loss in diversity for consumers Petrini argued the need for an eco-gastronomic movement focused on the sustainability of a food system in addition to the preservation of cultural cuisine. Through the support of small artisanal producers Petrini looked to preserve the local fruits, vegetables, domestic animals, and farming practices.

• Since the foundation of Slow Foods, the movement has evolved away from its gastronomic origins to focus on the ecological and social ramifications of food. The term "slow" is used to denote the desire of individuals to step back and assess the effects of food production on community. Today, Slow Foods USA organizes numerous education programs for students, consumers and producers, and holds a variety of networking events advocating the use of local and native crops as a means of realizing a globally sustainable food system.



## Linking LFS with Ecoagriculture

The landscape unit provides a useful framework for making connections. This integrative, spatially-oriented perspective is gaining a foothold, especially, in the arenas of international agriculture, conservation and rural development. Conventional wisdom held that the conservation of wild biodiversity and agricultural production were in competition for the same resources, and that prioritizing one meant sacrificing the other.

However, when maps that identified the extent of agricultural area and projected requirements for exponential population growth were over-laid with maps that designated global biodiversity conservation priorities, it became evident that there is insufficient area on the planet to realize agricultural production and conservation goals independently of one another. In response, Jeffrey A. McNeely, chief conservation scientist for the World Conservation Union (IUCN) and Sara J. Scherr, an agricultural economist with expertise in smallholder farming systems, introduced the concept of *ecoagriculture* to refer to landscape scale production and conservation approaches that together lead to positive-sum interactions (McNeely and Scherr 2001). Subsequently, McNeely and Scherr elaborated their concept of ecoagriculture in a book (McNeely and Scherr 2003), hosted an International Ecoagriculture Conference and Practitioners' Fair in Nairobi in 2004, and in 2005, formed a nongovernmental organization known as Ecoagriculture Partners (EP).

An initial task of EP was to commission additional research from the contributors at Nairobi and others to fill in gaps in the literature, and compiled the results into a second major text (Scherr and McNeely 2007), and a synthesis article (Scherr and McNeely, 2008). Creating linkages is central to operationalizing the concept of ecoagriculture in practice. Some linkages tend to occur spontaneously while others must be deliberately fostered.

An example in the academic sphere is the Cornell Ecoagriculture Working Group (EWG), which has emerged as a forum where members of diverse disciplines from the Cornell University community can interact to help advance knowledge and understanding about ecoagriculture (www.ecoag.cals.cornell.edu). An early initiative of the EWG, in partnership with EP, was the creation of a framework to measure the performance of an ecoagriculture landscape (Buck et al. 2006). This was followed by the development of the Landscape Measures Resource Center (LMRC), an online collection of ideas and tools to aid in measuring and managing multifunctionality in rural landscapes (http://landscapemeasures.org).

#### Characterizing the two frameworks

The inherently regional nature of a local food system makes it difficult to generalize about its characteristics. Nonetheless, some common principles appear evident. First is a reduction in food miles, which implies reducing transportation inputs and impacts.



Second, a greater amount of money generated by the local economy is retained locally, to be reinvested in the community. Third, and stemming from the circumscribed geography, people eat what is in season and products that can be processed and stored to extend the season. Fourth, producers connect directly with consumers through farmers' markets and produce stands, community-supported agriculture (CSAs), restaurants that specialize in local foods and wines and other innovative marketing and distribution schemes. Locational dimensions of a local food system are captured in the concepts of foodsheds, marketscapes and food miles.

Likewise, it is difficult to pinpoint the characteristics of an ecoagriculture landscape as it is not a blueprint strategy, but an approach that is tailored to each region's resources and livelihood needs. The approach differentiates six land use and resource management strategies; three that focus on the agricultural areas of the landscape and the other three on the natural areas. In sum, farmers can intensify their production areas by improving the value of agricultural outputs and reducing cost in ways that enhance habitat quality and ecosystem services, while natural areas of the landscape can be protected and expanded in ways that provide benefits, also, for adjacent farmers and communities (Scherr and McNeely 2007).

Central to this landscape-scale management is the multiple stakeholder approach to planning and negotiation. This takes diverse forms depending on systems of governance that are in place and associated cultural norms and philosophies of land management. Innovation in ecoagriculture practice is fostered through social learning (Buck and Scherr 2009).

The overarching principles of the LFS and the ecoagriculture frameworks are parallel landscape-level thinking, regional appropriateness, and the joint pursuit of environmental, economic and social goals through building connections among people and organizations who have stakes in the outcomes. This idea suggests the possibility of synergies between the development and performance of a local food system and an ecoagriculture landscape in a particular area that could help to advance the ideals of both. We explored this possibility through the ecoagriculture landscape measures framework.



## Box 2: Modeling a Foodshed

A foodshed is the area from which a population derives its food supply, and is analogous to a watershed. This concept is useful in conceptualizing a LFS. Both the size of the foodshed and also its unique, regional characteristics are of interest. For instance, how does a foodshed in Kansas compare to one in New York State? Kansas City versus Topeka versus New York City?

The foodshed construct helps to frame the question of whether a food system has the capacity to feed a certain number of people or certain region. For example, is it feasible for the entire population of New York City to eat "locally"? Christian Peters and others (2009a) inform the debate by mapping potential local foodsheds, or, in their words, an estimation of the minimum geographic area a population center would require to meet the nutritional needs of its residents, in New York State. Peters' research encompasses issues of sustainability: by linking foodshed analysis with the growing literature on climate change and current world food prices, Peters' cross-disciplinary team attempts to uncover just how the location of food production in relation to where it is consumed relates to the environmental impact and vulnerability of the food system (Peter et al 2009b). food production.

## On measurement and management

The ecoagriculture Landscape Measures (LM) approach is rooted in the premise that measurement enhances management. Measurement is a way to establish a baseline and then track change over time so that stakeholders and investors in the system can judge whether or not it is moving in a favorable direction (Wallace 2009). Participatory measurement can engage stakeholders in a social learning process that increases their familiarity with the system and its potential. The systems perspective of ecoagriculture requires that multiple factors be taken into account in deciding on plans of action, and measurement can be a helpful way to quantify and discuss those factors. In sum, measuring well-chosen indicators of performance generates insight into how to manage a landscape more effectively.

The LM approach is a management-orientated set of tools that stand to enrich the understanding of a multifunctional landscape and lead to the expanded capacity of stakeholders to manage it in collaborative ways. It bridges science-based and social learning approaches to developing, measuring, and tracking indicators to create logically sound, locally relevant, and cost-effective assessment systems. It is a



dynamic process, involving the input, perspectives, frustrations, and skepticism of diverse actors in a creative process that can be contentious and will be complex (see LMRC Unit 1.1 – <u>http://landscapemeasures.org</u>).

# Applying the LM approach to local food system analysis in the Finger Lakes

In response to the challenges associated with the rising influence of agribusiness and the globalization of food systems is an emerging fascination with local food systems (LFS) that has penetrated the academic community. This activity, coupled with the realization that there may be unexploited synergies between a LFS and an ecoagriculture landscape, prompted researchers at Cornell to take a closer look at the local landscape. Ithaca is home to three notable institutions of higher learning; Cornell University, Ithaca College, and Tomkins-Cortland Community College (TC3), comprising an important component of the area's economic base. The area's unique situation-world-class education institutions, situated in an expansive rural landscape -coupled with an historically progressive social atmosphere that tends to nurture alternative systems, produced a powerfully enabling combination of circumstances. Harboring the brainpower, the agricultural resources, and the mindset, as well as innovation incubators such as the firmly established Ithaca Farmers' Market and Greenstar Food Cooperative, Ithaca appeared to be a well-suited place to apply the LM approach and explore evidence of a LFS, an ecoagriculture landscape, and the potential co-evolution of the two. The Finger Lakes Ecoagriculture Working Group thus emerged as an off-shoot of the Cornell Ecoagriculture Working Group.

#### The Exploration: Fall 2008

An initial step in this initiative involved forming a team. Louise Buck, Senior Extension Associate in Cornell's Department of Natural Resources (DNR) and coordinator of the EWG, collaborated with Jim Lassoie, a DNR professor who taught a combined undergraduate/graduate course entitled International Conservation, to create a final project for the class that would meet the course requirements for an independent group project and help address a real-world problem situation. Eventually, five students who were enrolled in the graduate section of the course self-selected to participate in the first part of the ecoagriculture and local food systems endeavor.

An exploratory search for performance indicators ensued. We first looked to the literature and to popular sources of information to lay the groundwork for our thinking about discovering a LFS in the Finger Lakes. Thomas Lyson, for example, was a former Cornell professor of Development Sociology who created the concept of civic agriculture, which we found particularly illuminating:

Civic agriculture is a locally organized system of agriculture and food production characterized by networks of producers who are bound together by place. Civic agriculture embodies a commitment to developing and strengthening an economically, environmentally, and socially sustainable system of agriculture and food production that relies on local resources and serves local markets and consumers. The imperative to earn a profit is filtered through a set of cooperative and mutually supporting



social relations. Community problem solving rather than individual competition is the foundation of civic agriculture (Lyson 2004, pg 63-64).

Other definitions of a similar vein introduced new ideas, including Susan Andreatta's (2005). Furthermore, because of the critical social element of a LFS, it was important for us to consider the popular atmosphere. For example, The 100-Mile Diet, started by Alisa Smith and J.B. MacKinnon in 2005, has become even more well-known as bestselling authors such as Barbara Kingsolver in her *Animal, Vegetable, Miracle*, advocate it. The widely-read and applauded writings of Berkeley journalist Michael Pollan, author of *The Omnivore's Dilemma, In Defense of Food*, as well as New York Times articles (Times Topic: Pollan, Michael) likewise helped us to grasp the changing way that some people and institutions in the US are thinking about our food. This search also reminded us to consider the host of ethical issues, such as social justice and animal welfare, which are pertinent to any food system.

Our own definition combined the ideas of connections from academia, the geographical considerations from popular sources, the tenets of ecoagriculture, and the unique characteristics of Ithaca. We wrote: A local food system is a system of food production and consumption defined by more than just the distance from production site to plate. The distance should be defined by region (in Ithaca, for example, it may be possible to maintain a fairly well-balanced, complete 30-mile diet; in Phoenix, this would be nearly impossible), with the understanding that the directness of the connection between producer and consumer and the level of community support for local food be as important indicators as the number of food-miles. Furthermore, a local food system is one that is economically (supporting economic vitality and livelihood security), socially (creating connections between producers and consumers, and helping to create a better understanding of food systems, and providing equity in access to local food), and environmentally (using ecologically and environmentally sound growing practices) sustainable (Read et al. 2008).

Equipped with a working definition, we next aimed to illustrate more specifically what would indicate a LFS in Ithaca. In other words, we developed our definition by setting hypothetical performance indicators based on the four categories: agricultural production, environmental conservation, economic vitality and livelihood security, and institutional support. In addition to unpacking the spatial dimension of a LFS, our final document outlined several indicators for each category and was a helpful guide for the next step (Read et al. 2008.)

#### Honing in: Spring 2009

For some team members, the culmination of the semester marked the end of their involvement. The remaining two students (one graduate, one undergraduate) were joined by two graduate students and two undergraduates from various fields as well as a visiting fellow in DNR. The goal for Spring, 2009 was to hone in on specific indicators for each category, including the firm establishment of a rationale, method of measurement, and potential data sources for each. Information and ideas in the



Landscape Measures Resource Center (LMRC, <u>http://landscapemeasures.org</u>) guided the process.

We were particularly interested in describing integrative indicators, that is, indicators that bring together a heterogenous set of indicators into single value indicators (Aubry and Elliott 2006). The holistic nature of these indicators mirrors the whole-landscape approach of ecoagriculture, in addition to integrating a wealth of information about socioeconomic, biophysical, and other conditions, cost-effectively (Wallace 2009). By the end of the spring, we amassed a colorful document outlining the what, why, and how for the following integrative indicators: 1) land use-land cover, 2) characteristics of local CSAs, 3) soil organic matter, 4) watershed health, and 5) farming practices. The present case study briefly presents one of these, to illustrate the LM framework in action. We recommend also reading the report in its entirety to experience the variety and richness of each indicator (see Toward the Selection and Measurement of Indicators of Local Food System Performance and/or Ecoagriculture Landscape Performance in the Finger Lakes *Region of NYS* 2009), Wallace et al. 2009.

Land use and land cover (LULC) is a key integrative indicator, telling us about the location, distribution and extent of various categories of natural resources, agricultural and industrial activities, residential and commercial development, and other landscape features. According to the LMRC "as the proportions of land uses change over time natural habitat, agriculture, human settlement in rural and urban areas, and others—so, too, will the potential to conserve wildlife, maintain ecosystem services, and produce agricultural goods" (www.landscapemeasures.org). Therefore, a major aspect of our analysis was to observe changes in landscape pattern. Comparison of LULC information between years can be particularly useful in identifying trends.

To quantify recent changes in LULC our analysis had two main components: First, maps of Tompkins County were sourced from the Cornell University Geospatial Information Repository (CUGIR) and manipulated through GIS software to suit our needs. Second, we measured changes in economic values of agricultural land uses and practices. Using data gathered from the Bureau of Economic Analysis' Regional Economic Accounts (www.bea.gov/regional/reis), we compared Tompkins County in the years for which the most relevant data were available to more fully describe the landscape. One set of maps is shown in Figure 1, below.

Though the discussion here presents just a small slice of one indicator, hopefully it suggests how using the LMRC to track changes in integrative indicators can provide information and insight into how a local food system and an ecoagriculture landscape are co-performing in the Finger Lakes. Clearly, the richest knowledge will be gained when all indicators of the larger Finger Lakes case study are woven together. For example, information about farming practices combined with LULC spatial information will allow us to more fully understand how changes in farming and marketing practices that contribute to local food system development affect changes in land use/land cover. We can then explore attendant consequences for ecosystem and livelihood performance.



## Social Learning: Building Networks

Five forms of capital are required to build a local food system: natural, social, human, physical (infrastructure), and financial (Flora 2009). Among these, *social capital* is central, that is, the norms, values and attitudes that predispose people to cooperate and build trust and social bonds (Pretty and Buck 2001). In this atmosphere of connectedness and reciprocity, *social learning* occurs. Social learning refers to the process that fosters innovation and adaptation of technologies embedded in individual and social transactions (Pretty and Buck 2001). Social learning is "group learning" hinging on discovery, experiences, and action. A local food system enhances multiple aspects of the local community, while also relying on these multiple sources of information networks of campus, community and farm organizations is expected to generate knowledge that leads to practical innovations in local food system performance and on-going adaptation.

There are also important roles for rigorous academic research in local food system development. This type of knowledge generation is important, for example, in developing and validating tools that support social learning. The act of measuring can bring people together, providing a common focus and set of concepts to people from many different backgrounds and interests. The result is a hybrid of academic ("follow your discipline") and social ("tackle a problem") learning that engages more players and further expands the science and the practice.

Social learning about local food systems and ecoagriculture is evident in several arenas in the Finger Lakes region. The Cornell Ecoagriculture Working Group, for example, links students and faculty in an academic exploration, while, extension services and community initiatives build stronger consumer-producer linkages as well as increase farmer capacity through training and information dissemination. We return in the next section to some of the innovative initiatives to develop and accelerate the education and practice of a Finger Lakes LFS. These "facilitators" (who were introduced at the beginning of our story) foster communication, learning, and action to stimulate landscape level change.

#### Monika Roth, Tompkins County Agriculture Extension

Direct transactions between producer and consumer characterize the primary marketscape for a local food system (Swanson 2006). Not only does this distribution strategy reduce economic loss by eliminating the middleman, important relationships are created: producers can learn who is eating their food, and consumers learn who is producing what they eat. Tips are shared, market demands are easier to gauge, and an intrinsic enjoyment of the experience is nurtured. Monika Roth has worked for nearly three decades to strengthen these connections.

Ithaca experimented early on with the community-supported agriculture (CSA), a direct marketing strategy in which consumers pay a fee upfront to buy a share of a farm's produce for the season. Produce is delivered to, or picked-up by the consumer weekly.



The approach makes funds available to producers when the planting season commences, and guarantees them a reliable customer base, while consumers are ensured a weekly supply of fresh, local, easily-accessible food from Spring through Fall. LocalHarvest.org lists 19 CSAs in the Ithaca region (www.localharvest.org), a comparatively large number for an area this size.

Monika also helped shepherd the creation of Ithaca Farmers' Market (IFM), a cooperative of some 150 vendors who reside within 30 miles of Ithaca. In addition to agricultural producers who grow and offer high quality fruits and vegetables, meats, eggs, and dairy products, food vendors offer freshly baked goods, jellies, honey, ethnic cuisine, and artisans sell their pottery, wood, and other hand-made crafts (www.ithacamarket.com). The IFM began in 1973 as a venue for local growers and craftspeople, and has since become a prosperous Ithaca tradition often attracting over 5,000 visitors on market days and reaching market sales in the millions of dollars. Sustainability is part of the Market's vision, and in 2007, a grant from Tompkins County Solid Waste fueled the Market's Zero Waste Initiative, a new way of looking at the waste stream in which nothing is viewed as garbage but instead as a resource to be managed or reused.

#### Joanna Green, Groundswell

Small farmers who are trying to make a living in agriculture in ecologically sound ways face heavy pressures from powerful agribusiness forces. These farmers face a range of concerns from technical know-how, to financial business planning and the marketing of their products. Recognizing the need for a hands-on learning platform in the Ithaca region, Joanna Green, then with Cornell Department of Horticulture's Small Farms Program, facilitated the formation of the Center for Local Food and Farming, which subsequently was renamed Groundswell to reflect the broad-based surge of support for local, sustainable, transformative food and farming initiatives in the area. With their home base at West Haven Farm, linked with Ithaca's sustainable co-housing community - EcoVillage at Ithaca - Groundswell taps into the expertise of local farmers, Cornell researchers, extension workers, students and others members of the Ithaca-area community who seek to create experiential learning for prospective farmers (www.westhavenfarm.net, www.ecovillage.ithaca.ny.us).

#### Miguel Gomez, Sustainable Food System Initiative

There are many challenges to studying food systems. First, there is no broad consensus about the very *definition* of sustainability in a food system (see Box 3). Second, while experts have amassed strong evidence in their own independent disciplines, there is little understanding about cross-disciplinary links. The multidimensional nature of food systems suggests, however, that it is precisely these links that are most important to discovering how sustainability of a food system may be achieved, and assessed.



## Box 3: Sustainability and Food Systems

Food systems can contribute to sustainability in many ways. For example, a more local distribution system and marketplace helps to mitigate carbon emissions; food that travels fewer miles before reaching the table requires less energy to transport and distribute. Strength in the community is also linked to a Local Food System (LFS). Susan Andreatta, an anthropologist at the University of North Carolina who studies human ecology as it relates to small-scale agricultural production, argues that a LFS "not only supports local communities and often, small-scale producers [but] negative environmental impacts are also reduced, and consumers come to see their food purchases as part of a more sustainable food system (Andreatta 2005, pg 120). These connections can be facilitated through farmers' markets and other venues in which producers sell directly to consumers, thus facilitating "the interconnectedness of community and agriculture networks and put[ing] more of each dollar in the farmer's pocket" (Andreatta 2005, pg 123-124).

Economic sustainability is linked to a LFS as well. A solid economic base is essential in a LFS. Farmers must be able to make a profit and consumers must be able to afford to buy their produce. In an interconnected community that a LFS envisions, wages play a large part in creating viable economic connections. Much like Henry Ford who paid his workers enough to afford to buy his cars (and in contrast to the "Wal-Mart" strategy that pays its workers only enough to buy their subpar products), in a fully developed LFS people would have the financial capacity to buy food that is local, nutritious, and flavorful. There is an important synergy between buying power and accessibility to local foods; an upward spiral is energized as more local money is retained and the LFS and local economy grow stronger.

A multidisciplinary group at Cornell currently is working on a project to evaluate the sustainability of food systems along multiple dimensions. <u>http://www.sustainablefuture.cornell.edu/grants/AVF/2009/index.php#Food</u>

The group has consulted literature and a wide range of experts with diverse backgrounds in sustainability of food systems to develop the following working definition of food system sustainability:

A sustainable food system produces a food supply that: is accessible to everyone; provides adequate calories and nutrients for every person; is safe; promotes health and prevents disease; is produced, processed, transported, stored, and prepared using technologies that are energy efficient, minimize greenhouse gas emissions, minimize food losses, and prevent soil and water degradation; is economically viable; and meets current needs without compromising the needs of future generations.



The Sustainable Food Systems Group at Cornell, led by Miguel Gomez and supported by the Cornell Center for a Sustainable Future (CCSF), is developing a long-term, multidisciplinary agenda to discover more precisely the nature of those linkages. By identifying methodological tools for integrative research, outreach, and extension, and applying them to the systems of food production and distribution both in the United States and internationally, this group will provide rigor and insight to support the shift from conventional to local food systems. But learning is not limited to academia; the group will continuously engage with community stakeholders in Tompkins County both to help these leaders make sound local food system choices and to learn about the desired—and actual—outcomes of these choices.

#### **Conclusions and Questions**

Monika, Joanna and many of their colleagues in Ithaca, Tompkins County and the Cornell communities are deeply committed to realizing the ideals of a local food system for the area. They are convinced that the economy, the environment, and the people who live in the area will be better off than they would be if they adhere to participation in the conventional/dominant food system.

1. What would you need to know to convince yourself that the ideals of a local food system are being realized?

2. Do you believe that these ideals are realistic in practice? Why and why not?

3. What would you need to know to convince yourself that a local food system is more beneficial, overall, than the conventional/dominant food system?

4. How might the Cornell Sustainability of Local Systems (SFS) research project, led by Miguel Gomez, help Monika, Joanna and their colleagues to pursue their goals?

5. What are some specific ways that we might measure and assess the extent to which the food system is in fact becoming more local, and the consequences of the system moving in this direction?

6. How might you use the ecoagriculture landscape measures framework to help answer these questions?

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