

# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

## Introduction

Attention to the environment, agriculture, food, and sustainability has been increasing in academia and popular media. Evidence exposing the harms of industrialized agriculture and the globalized food system have appeared in academia, documentaries, and books (Horrigan, Lawrence, & Walker, 2002; Kenner, 2009; Schlosser, 2001). It is no surprise that people, organizations, and governments are discussing and working to solve these issues.

However, to make meaningful progress, people must examine what sustainability means in agriculture. It is clear that paradigms in sustainable agriculture must go beyond addressing the environment-agriculture interface. The new paradigm must incorporate concepts such as place, ecological economics, and the commons. Moreover, everyone has to understand the driving force behind finding sustainable solutions. Without context, the sustainable agriculture movement risks ambiguity and lack of focus.

To understand how the new paradigm can be implemented, this paper will also examine community gardens. Community gardens offer a working model of key principles in action. In order to identify and create new initiatives that reflect the new paradigm policies must be implemented to encourage diversification of approaches that are context-based. This paper will discuss the challenges and some basic actions that governments can take to spur sustainable agriculture.

## Examining Sustainability in Agriculture

The classic definition of sustainability has been: meeting current needs without compromising the ability of future generations to meet theirs. Achieving sustainability means developing solutions that balance facets of ecology, economy, and society. For sustainable agriculture, this involves profitable system-based approaches that will provide enough food for people while stewarding the environment and enhancing the lives of farmers and communities.

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

However, the major focus in sustainable agriculture has been on re-localization or local food. Re-localization is the concept that shifting food systems towards the local level will promote sustainability. Touted benefits include shorter distances between the food and consumer, more direct links between producers and consumers, and less industrial processing (Lamine, 2015). All of these are meant to reduce environmental burdens, improve societal relationships, and boost local economies. Yet, there are criticisms that sustainability and resilience of food systems has primarily focused on interactions between agriculture and the environment. According to Lamine, the re-localization paradigm often neglects the social facet of sustainability. It fails to fully address issues such as consumption, culture, food issues, access, etc. Also, solutions can place too much emphasis on the economics. For instance, in the desire to sell more local or sustainable products, there is a temptation to reduce terms such as local to merely marketable traits (DeLind & Bingen, 2008).

There is also a tendency in academia and media to portray “local food” as always good and “global food” as always bad (Cameron & Wright, 2014). The basis of many arguments involve food miles, environmental damage, and social ills. However, the debate over local and global is not two-sided. People must evaluate all aspects of the food systems, and steer clear of the “local trap”, which is the assumption that all local eating is virtuous (Schnell, 2013). Ultimately, local or sustainable solutions may not truly address the underlying problems, or offer the best solution possible.

Several researchers believe that these narrow perspectives hide the need for reconnections and considerations of place (Cameron & Wright, 2014; DeLind & Bingen, 2008; Lamine, 2015). The main reason being that the notion of local is inherently contingent upon place. The concept of place entails the relationships, culture, and experiences that are created and re-created over time at a particular location. It also encompasses the social, sensual, natural, political, and other non-economic aspects of human interaction. Similar to this concept are ideas of social capital and embeddedness, which are economic terms useful in describing how social relationships shape economic relationships. Without

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

understanding place and the uniqueness of a locale, it is difficult to develop solutions that are relevant, sustainable, and impactful.

In light of these concerns, researchers and advocates of sustainable agriculture are addressing these topics and calling for action. When it comes to understanding or promoting local food, the concept of place is gaining traction. People are at the center of local initiatives, and the relationships they have with the farmers, community, and economy are critical. Thus, if place is important for defining local projects, and place varies, then it can be argued that local has no rigid definition (Schnell, 2013). Local initiatives are only valuable when they operate with people and place in mind. Further, there is an understanding that the environmental and affiliated movements need to directly engage with social sustainability (Irvine, Johnson, & Peters, 1999). The lack thereof may lead to solutions that are ineffective or culturally inappropriate. Addressing the social dimension requires an intimate understanding of the culture and community needs.

Overall, the world needs food systems that are resilient enough to deal with uncertainties, custom-tailored to address local needs and root problems, and economically viable. The creation of sustainable food systems should not be limited to strict “local” or “sustainable” definitions or approaches. The world needs a diverse array of approaches, and ones that incorporate diverse stakeholders. Further, local projects addressing sustainability need to keep resilience in mind. Resilience is necessary for adapting to climate change, limited resources, and energy uncertainties – issues that present high uncertainties for human civilization. Under these conditions, a high degree of adaptability is necessary (O’Hara & Stagl, 2001); diversity is a prerequisite for adaptation. Moreover, solutions should address social issues without creating new problems. For instance, projects aimed at increasing food access should avoid creating a privileged system that only benefits the wealthy elite or one that promotes gentrification. Ultimately, custom solutions are needed to address local issues (Holland, 2011).

# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

## Recognizing Flaws in Capitalism and Globalization

It is worthwhile to understand how systematic flaws have catalyzed the sustainability movement. Here, the discussion focuses on the negative consequences of the dominant economic system governing the United States and much of the world.

Capitalism and globalization have benefits such as efficiency and lower prices, but also have flaws. Understanding these shortcomings reveals the need for local and embedded economies. The first consequence of globalization is that it leads to disembedded economies (O'Hara & Stagl, 2001). This disembedding separates people from having to consider the social and environmental implications of their actions. This separation is often created by geographic distancing, where consumption choices are made far away from regions of production. When the locus of problems are far away, it is difficult for consumers in one country such as the United States to comprehend the implications of their consumption choices in a country such as Vietnam. Again, this reveals people's growing disconnection from place, as production and consumption become spatially and culturally independent (O'Hara & Stagl, 2001). Moreover, both capitalism and globalization externalize problems (Schnell, 2013). The latter especially enhances the former's tendency to discount environmental and societal harms, as problems are shifted to other countries. Other problems with this economic system is that it erodes democratic values and tends to ignore valuable local knowledge (O'Hara & Stagl, 2001). In fact, the current system does not promote social equity or democracy (DeLind & Bingen, 2008). Ultimately, the very benefits of these economic approaches hinder sustainability. In the name of efficiency, globalization driven by capitalism undermines diversity, adaptability, and resilience (O'Hara & Stagl, 2001). Despite these issues, this paper is not calling for an end to capitalism. These symptoms are evidence for encouraging internationalization rather than globalization, and new forms of economy that move beyond the monetary and transactional.

# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

## The Local Response

Social theory states that amidst crisis and chaos, a response will arise to counter it (O'Hara & Stagl, 2001). In the context of agriculture, the localization trend counters the growing integration of the food system. There is evidence that people turn to agricultural gardening during times of crisis. Examples include victory gardens during World War II and gardening during the 1970s oil crisis (Turner, Henryks, & Pearson, 2011). Evidence has also shown that community gardens are a response to social issues and environmental degradation (Holland, 2011). Farmers markets, CSAs, food co-ops, community kitchens, and u-pick operations are also components of this response. These localized businesses and organizations are meant to address the issues presented by a disembedded economy. The theoretical benefits of these activities include the promotion of democracy, circulation of money and wealth in the local or regional economy, and provision of environmental dividends (Hess & Winner, 2007). However, as stated above, re-localization isn't enough to reconnect people to agriculture and food. Place must be considered for re-embedding, but even embedded systems have to be evaluated to ensure that new systems create positive cultures.

The local trend, however, does not eliminate the need for food systems that span over long distances. Local, national, and global systems have permeable boundaries (O'Hara & Stagl, 2001). Food systems overlap, and are defined by factors that are fluid and non-discrete (Kloppenburger Jr., Hendrickson, & Stevenson, 1996); they do not have fixed or determinate boundaries. Further, it is almost impossible for all societies to depend entirely on local agricultural systems. Instead of being entirely self-sufficient, it is wiser to be self-reliant. So, the focus should shift towards encouraging local and intra-regional agricultural activities, which includes activities ranging from production to distribution. This means that international supply chains may be appropriate.

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

Rather than labeling local or global as good or bad, society and policies should encourage a combination of approaches on both ends of the spectrum. Stakeholders and institutions at all levels of society should be involved. Again, sustainable responses must be holistic and enhance resilience.

### A Closer Look: Community Gardens and Urban Communities

It is useful to examine model initiatives that reflect the new paradigm in sustainable agriculture. Most community gardens address elements of the new paradigm. They are components of a sustainable food system that address social sustainability, reconnect people to food and agriculture, and is a tool for sustainable urban development.

The concept of urban agriculture is another facet of sustainable agriculture. Growing food in urban areas is appealing because it forces the consideration of limited resources, social justice, and the local economy. The WCED report in 1987 touts the value of urban agriculture as an important component for urban development (World Commission on Environment and Development, 1987). This report points to the social and environmental dividends that urban agriculture provides. These include improving nutrition and health, providing fresh and affordable produce, beautifying or greening communities, and ameliorating waste.

Community gardens are a component of urban development, and researchers are optimistic about its ability to address the environmental and social ills presented by an economy and food system dominated by neoclassical economics. In general, community gardens address all facets of sustainability. Investigations of community gardens in the UK have revealed the potential for gardening to promote sustainability and community development (Holland, 2011). Moreover, community gardens are addressing place, creating embeddedness, and mitigating problems created by the economic system.

Generally, community gardens can address all three pillars of sustainability. Research has shown that community gardens have environmental benefits (Moskow, 1999). For the most part, the focus has

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

been on local agriculture's ability to reduce food miles, which theoretically means less fuel spent on transportation (Holland, 2011). The economic benefits arise from local expenditures, which keeps money in the local area. Further, community gardens can act as education and training centers for people to develop skills (Holland, 2011). Finally, community gardens provide various social benefits. Observations across papers on community gardens reveal that gardens can promote urban health, social inclusion, and active civic participation (Turner et al., 2011). They also help address food deserts, and surplus food can be given to food banks (Irvine et. al). Moreover, community gardens can reduce crime and enhance neighborhood networks (Armstrong, 2000).

Besides provisioning and offering a place for people to become acquainted with sustainable food production, gardening can connect and ground people to place (Turner et al., 2011). In fact, community gardens can offer places for physical and emotional grounding (DeLind & Bingen, 2008). Community gardens can create embodied and embedded relationships (Turner, 2011). Similar to the way consumers build valuable relationships with farmers through direct marketing mechanisms, the communal nature of community gardens allows engagement and connections between individuals and the land. People become rooted in place, and feel that they belong. As a result, this re-embedment can encourage more civic engagement within the community.

Community gardens can also reverse trends of enclosure and privatization in agriculture (Ecologist, 1994). Thus, community gardens can help reclaim the commons, and put more power in the hands of the people. This also lends itself to supporting arguments for alternatives that reinstitute democratic and civic values within communities. In this way, community gardens are addressing more than the environment-agriculture link, and are bridging disconnects between people and the food system, especially those in urban environments (Allen, FitzSimmons, Goodman, & Warner, 2003). Ultimately, community gardens are a great tool for cities and urban communities working to address social issues.

# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

## Spurring Sustainable Agriculture

Community gardens are only one component in the quest towards greater sustainability in the food system. Achieving wide-scale change requires catalyzing actionable shifts in communities. In truth, every person is capable of inducing change. However, having an established framework that supports sustainability, resilience, responsibility, civic involvement, and democracy will expedite the process. Part of this framework involves good policy and economic paradigms.

Creating a sustainable food system will require implementing sound policies and involving relevant stakeholders. Policies will play a significant role in enhancing sustainable agriculture at the local level. However, the inclusion of community members and stakeholders is important in developing successful solutions. Local governments should strive to follow the elements of sustainable planning entailed by Local Agenda 21 in the development of policies that encourage any form of sustainable agriculture:

- equally factor economic, community, and environmental conditions into the design of development projects and service strategies;
- fully engage relevant interest groups and, in particular, service users in the development of service strategies that meet their needs; and
- create service strategies that can be sustained because they focus on underlying systemic problems rather than problem symptoms, and because they consider long-term trends and constraints. (ICLEI, 1996)

Successful implementation will address the three pillars of sustainability, engage community stakeholders, and solve the root problems. Success of local movements depend on community involvement. It means involving consumers, farmers, community organizations, schools, etc. This is true for community gardens, CSAs, food co-ops, farmers markets, and others. It also requires curing social



# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

ills, rather than simply treating the symptoms. Through the processes of civic engagement, re-embedding, and democracy solutions should help balance the ecological, social, and economic aspects of sustainability.

## Challenges

Of course, there are challenges with integrating sustainable agriculture into the economic, political, and social spheres. The economic system itself stymies local signals that reflect changing consumer preferences, and preferentially responds to the larger frequencies of global demand (O'Hara & Stagl, 2001; Seyfang, 2005). This is clear indication that economic policies need to integrate the commons, ethics, and principles of ecological economics. Other factors also suppress change. While individual choices can strengthen community resilience, there are obstacles (Metcalf & Widener, 2011). These include information barriers on the environmental and societal repercussions of consumption choices, and the insufficiency of voting-with-your-fork (Seyfang, 2005). In the latter, barriers such as affordability and accessibility for sustainable products can prevent people from signaling their preferences. Without the ability to make the right purchases, people cannot effectively influence the market. Examples include those who are food insecure and are living within food deserts.

Establishing sustainable agriculture projects in urban areas also has challenges. In particular, land tenure is an issue that may confound efforts. High rent and short-term leases are disincentives for cultivating the land. Since building soil fertility is a long-term effort, its full benefits will not be realized under short-term leases. Further, the resulting social benefits may be eroded if the land is developed after the lease ends. Even after these projects are established, those involved must consider other issues regarding privilege and access (Metcalf & Widener, 2011). For instance, local organic produce is often more expensive than that of its conventional counterparts (Seyfang, 2005). If sustainable

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

agriculture is to improve societal well-being, it must be innovative in reaching low-income and low-access consumers.

Policies are needed to address these challenges. This begins with policies that protect and strengthen local governance (DeLind & Bingen, 2008). Policies should focus on enhancing the local government's ability to make decisions. At the federal level, Congress can provide funding and political protections for local governments. Then, local governments should encourage social economies, collective ownership, and institutions or projects that are local, small-scale, and socially significant. Overall, governments need to provide funding and aid to help change attitudes, institutions, and infrastructure to ones that support sustainable food systems.

### Basic Actions

To begin, governments should create food policy councils that will address and act as a voice for agricultural and food issues in the local area (Hess & Winner, 2007). They will be platforms for key stakeholders to be involved. At the city level, these councils should work with the government to include supports for farmers markets, community gardens, and other urban agricultural projects within city plans (Ashe et. al). Since establishing agriculture within urban areas can be difficult, changes in the zoning codes can be made to enhance food production and access. City plans can include zoning codes or goals that increase the number of community gardens and rooftop gardens. In general, policies should focus on helping organizations acquire long-term access to land since land tenure is indicative of whether or not agricultural initiatives will exist in the long-run (Turner et al., 2011).

Governments also have economic tools. Federal block grants are available for assisting development of community gardens and related initiatives (Hess & Winner, 2007). Another strategy involves earmarking taxes for the specific purpose of encouraging local food. Tax money can be dedicated for grants to help entrepreneurs and urban farmers to gain access to land and tools. The

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

money can also be used to provide space for farmers markets; there are many other possibilities. While this reduces fiscal flexibility, it is a method governments can explore. Governments can also develop policies that promote non-market exchanges such as alternative currencies (i.e. Swiss Wir and BerkShares). These local currencies allow money to circulate and remain in the region. Coupling these currencies with local agricultural businesses can encourage purchase of local food. Further, encouraging recycling and trading of second-hand goods can reduce waste and enhance social capital (Seyfang, 2005). In the food system, this may involve sharing agricultural supplies, food recovery, and purchasing imperfect food items.

Ultimately, promoting sustainable agriculture need not be costly. The key is creating multi-organizational networks consisting of nonprofits, community groups, and extensions services (Hess & Winner, 2007). This may involve working with schools, nonprofits, and farmers to develop school gardens or farm to school programs. Overall, leveraging community and public organizations reduces burden on the government to allocate tax money. Further, local organizations helps create better connections with community members; they are better equipped to solve linguistic and cultural issues.

### Conclusions

A future with more sustainable food systems requires making the right choices today. Governments and organizations involved need policies and initiatives that incorporate various fundamental concepts beyond the traditional paradigm in sustainability. These include concepts such as commons, ethics, ecological economics, resilience, place, and embeddedness. Understanding these concepts leads to solutions that address all aspects of sustainability. It will encourage greater attention towards the social dimensions of the food system, beyond the traditional agriculture-environment interface. In particular, these solutions focus on the people, not just the marketplace, which allows

## **Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems**

Jimmy Shue

greater democracy and control for the consumers. Ultimately, these solutions will be holistic and reflect an understanding of the needs and culture of local or regional communities.

Overall, communities should focus on resilience and becoming self-reliant rather than self-sufficient. This means implementing a diversity of approaches, and more support for local and regional agricultural networks. Moreover, sustainability should be understood as an ongoing process. Every decision made should lead to greater sustainability and resilience, not less. Again, the decisions and solutions proposed should be custom-designed and involve relevant stakeholders. It is imperative that problems are understood before solutions are designed. Having a stakeholder-centric framework and mindset will encourage this process.

A decision-making framework guided by the concepts and paradigms mentioned in this paper is the most critical. The specific policies mentioned are only as good as the framework supporting it. The key takeaway is that policies and initiatives should reflect an understanding of stakeholders and the sustainable agriculture movement. Examining community gardens is a great way to understand how these concepts are evidenced in the real-world. Governments, businesses, and organizations should use community gardens as a case study and apply the concepts to other endeavors.

# Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

## Bibliography

Allen, P., FitzSimmons, M., Goodman, M., & Warner, K. (2003). Shifting plates in the agrifood landscape:

the tectonics of alternative agrifood initiatives in California, *19*, 61–75.

This paper examines agrifood initiatives in California. The goal is to understand whether the initiatives are oppositional, or merely alternative. There is a distinction in that oppositional initiatives are active in changing the root causes. Often these roots causes are more complex and difficult to address; issues such as income and wealth distribution.

Armstrong, D. (2000). A survey of community gardens in upstate New York: Implications for health

promotion and community development, *6*(4), 319–327. [http://doi.org/10.1016/S1353-8292\(00\)00013-7](http://doi.org/10.1016/S1353-8292(00)00013-7)

Donna Armstrong is an Associate Professor Emeritus at the University at Albany SUNY. In this paper, she outlines methods and findings from surveying community gardens in upstate New York. In general, this paper indicates many positive benefits that community gardens can provide. These benefits range from improved psychological health, physical health, better food, and increased community development. However, this is qualified with the fact that not all communities experienced these benefits from having community gardens.

Ashe, M., Feldstein, L. M., Graff, S., Kline, R., Pinkas, D., & Zellers, L. (2007). Local Venues for Change:

Legal Strategies for Healthy Environments.

The authors are program, policy, and legal directors; several are also staff attorneys. This article examines five areas of local policy that can be changed to build healthier environments. These policy recommendations are in light of major health problems in the U.S. such as obesity and diabetes. Several policy topics of relevance to this paper include earmarking taxes, zoning, and establishment of FMs and community gardens.

Cameron, J., & Wright, S. (2014). Researching diverse food initiatives: from backyard and community

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

gardens to international markets, 9(1), 1–9. <http://doi.org/10.1080/13549839.2013.835096>

This editorial provides insight into researching about diverse food initiatives. The author states that the current capital-centric paradigm is flawed, and that “alternative” is a limited term. The basis is that global and local are not black and white. There are various complexities and nuances that should not be simplified. Researching and writing on food initiatives in the context of diversity allows a holistic approach. Overall, both global and local food systems can work together towards a sustainable future.

DeLind, L. B., & Bingen, J. (2008). Place and Civic Culture: Re-thinking the Context for Local Agriculture, 21(2), 127–151. <http://doi.org/10.1007/s10806-007-9066-5>.

This paper critiques the concept of civic agriculture. The authors state that the concept cannot be meaningful without understanding the importance of place. A big problem is that civic agriculture has been reduced to a local commercial enterprise. A robust sense of civic engagement can only arise from an understanding of place. The paper expounds on the idea of place, and argue that place is not defined by occasional relationships. It involves ongoing building and restructuring of identities and values. Further, places provide physical and emotional grounding. Many of these concepts are mentioned in papers that discuss social capital and embeddedness. Clearly, social relationships define and influence economic relationships.

Ecologist. (1994). Whose common future: reclaiming the commons, 6(1), 106–130.

<http://doi.org/10.1177/095624789400600110>

This paper is an excerpt from *Whose Common Future*, a book written by the Ecologist. This paper describes what a commons is, how enclosure has negatively impacted society, and what is being done to reclaim the commons. The overarching message of this segment is that restoring the commons involves the average person. It is through the day-to-day lives of the ordinary

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

people that allows for local change and opening of the commons. It is important that economists, politicians, and environmentalists do not impose their form of the commons onto the people. The process has to be organic and be accomplished with the community.

Hess, D., & Winner, L. (2007). Enhancing Justice and Sustainability at the Local Level: Affordable Policies for Urban Governments, *12*(4), 379–395. <http://doi.org/10.1080/13549830701412489>

This article addresses the notion that many policies seeking to enhance sustainability and help low-income communities are too expensive. The authors discuss four ventures that governments can support without much cost. One of these includes community gardens and other urban agriculture projects. The paper cites the environmental and social benefits of community gardens, and argues that governments only have to act as catalysts. In fact, the most successful efforts are multi-organizational. This works because, local governments can leverage resources and work with nonprofits or other community organizations to jumpstart projects. The article indicates that governments can use block-grant funds, form a food policy council, offer public land, and encourage development of nonprofit urban farms.

Holland, L. (2011). Diversity and connections in community gardens: a contribution to local sustainability, *9*(3), 285–305. <http://doi.org/10.1080/1354983042000219388>

Holland is optimistic of the impact community gardens can have on social, ecological, and economic sustainability within communities. The article points to the various benefits that community gardens and other urban agricultural activities provide. The surveys and interviews conducted in this research reveal that community gardens are diverse and address a variety of needs. It's obvious that community schemes are developed to meet community needs. Thus, any local project requires and understanding of local needs and the culture(s) involved. Similar to other papers, Holland emphasizes the value of local and urban agricultural initiatives. More important, however, is understanding the human dimension or place.

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

Horrigan, L., Lawrence, R. S., & Walker, P. (2002). How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture, *110*(5), 445–456.

The authors are from the Center for a Livable Future at the Johns Hopkins Bloomberg School of Public Health. This is a review and overview of the various harms that industrial agriculture has on environmental and human health. The paper also provides a summary of how sustainable agriculture can mitigate and address those issues. Here, the authors recognize that there is no single solution, and that sustainable agriculture is not a set of prescribed methods. Solving problems related to agriculture involves changing the paradigm of how humans interact with the environment. They call for people to recognize resource constraints, think ecologically, and to be stewards.

ICLEI. (1996). *The Local Agenda 21 Planning Guide*. The International Council for Local Environmental Initiatives.

This document was prepared by the ICLEI. Many of the concepts are derived from the 1992 United Nations Earth Summit. This guide provides a framework for local governments to develop action plans that address complex problems at the local level. It addresses issues of sustainability, and provides useful aspects of policy implementation.

Irvine, S., Johnson, L., & Peters, K. (1999). Community Gardens and Sustainable Land Use Planning: a case-study of the Alex Wilson Community Garden, *4*(1).

<http://doi.org/10.1080/13549839908725579>

The three authors are from The Earth Council Institute in Canada. They write an analytical and historical account of the Alex Wilson Community Garden, which was established to address community gardening and ecological restoration. Wilson's vision was to restore the connection between urban and natural environments, and to connect people to nature. It is clear that the AWCG engages a diverse community, and has worked to reestablish a sense of place for urban



## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

residents, whether rich or poor. This case study also offers valuable insight on how to launch an effective community garden, which will address sustainability issues holistically.

Kenner, R. (2009). *Food, Inc.* Documentary. Retrieved from <http://www.takepart.com/foodinc/film>

This documentary is directed by Kenner, and features Eric Schlosser, Michael Pollan, and others. It is a critique of the current food system within the United States, which is controlled by a few major corporations. The film also seeks to shed light on the negative practices and consequences of the industrialized agricultural system. At the same time, the film offers some innovative approaches taken by farmers such as Joel Salatin of Polyface Farm.

Kloppenburg Jr., J., Hendrickson, J., & Stevenson, G. W. (1996). Coming into the Foodshed, *13*(3), 33–42.

The authors are affiliated with the University of Wisconsin-Madison. This paper examines the concept of the foodshed. For these authors, the foodshed encompasses the social, biological, physical, and intellectual components of the space in which we live and eat. The author make criticism of the global food system, and outline key concepts of what a foodshed is. There is an emphasis on the concept of place, the moral economy, community, and proximity (rather than local or regional). Ultimately, there is call for global change in order to usher in greater sustainability.

Lamine, C. (2015). Sustainability and Resilience in Agrifood Systems: Reconnecting Agriculture, Food and the Environment. *European Society for Rural Sociology*, *55*(1).

<http://doi.org/10.1111/soru.12061>

The author critiques the current relocalization paradigm, because it fails to reconnect agriculture and food issues. Going local is not enough, and there needs to be consideration of the diverse stakeholders involved. Through examples of agro-ecology in France and Brazil, Lamine indicates that there are instances of local policies involving both conventional and alternative agents. Overall, relocalization approaches have been good at addressing the

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

agriculture-environment connection, but fails to consider the complex interactions between institutions and the social dynamics.

Metcalfe, S. S., & Widener, M. J. (2011). Growing Buffalo's capacity for local food: A systems framework for sustainable agriculture, *31*(4), 1242–1251.

This article examines local food in Buffalo, NY through a systems framework. By understanding feedback relationships within a food system, planners and activists can shape the foodshed to provide for the food insecure, while restoring ecosystem functions. The article uses examples of urban agriculture projects and reveals the various social issues that arise. To be successful at addressing the core problems, the authors argue that effective food policy must focus on improving decision-making processes. Thus, defining feedback relationships is key. Ultimately, it is vital to cultivate an environment and culture for citizen engagement. Their involvement will catalyze changes in behavior that will lead to greater resilience within the community.

Moskow, A. (1999). Havana's self-provision gardens, *11*(2), 127–134.

<http://doi.org/10.1177/095624789901100211>

Angela Moskow works at the University of California Small Farm Center, University of California Genetic Resources Conservation Program, and works as a consultant. In this paper, the author outlines key historical factors behind the rise of urban agriculture in Havana, Cuba. The interviews conducted reveal that self-provisioning gardens have had many positive benefits. The gardens have contributed to greater food supply, increased economic security, improved public health, and enhanced urban ecology. Overall, gardens have the ability to provide social, economic, and environmental benefits. Nonetheless, it must be acknowledged that what has occurred in Havana is not replicable in all places, especially in high-density cities.

O'Hara, S. U., & Stagl, S. (2001). Global Food Markets and Their Local Alternatives: A Socio-Ecological Economic Perspective, *22*(6). Retrieved from <http://umaryland.worldcat.org/title/global-food->

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

markets-and-their-local-alternatives-a-socio-ecological-economic-  
perspective/oclc/5650296689&referer=brief\_results

This paper discusses the mechanisms degrading local food systems, the negative social and environmental consequences, and the emergence of alternatives such as CSAs. This article points to the limits of a global market, and that the disconnect is catalyzing innovative alternatives. These alternatives will appear to build back trust and confidence in individuals and institutions respectively. Overall, CSAs are alternatives that provide direct relationships between consumers and farmers. Similar to Turner's paper, both authors indicate that new alternatives cause consumers to become active participants in the food system. Further, evidence of physical/temporal embeddedness as the strongest motivator for CSA membership reinforces Schnell's observations.

Schlosser, E. (2001). *Fast Food Nation: The Dark Side of the All-American Meal*. Mariner Books.

This book provides a compelling argument against fast food. It highlights the negative social, health, and global implications of fast food. It also points towards growing trends towards local and organic food. It is further evidence of the limits of globalized and integrated agriculture.

Schnell, S. M. (2013). Food miles, local eating, and community supported agriculture: putting local food in its place, *30*, 615–628. <http://doi.org/10.1007/s10460-013-9436-8>

The author is a Professor of Geography at Kutztown University. His research focuses on local food systems, local economies, and local identities. In this article, he exposes the lack of research behind an often cited "food mile" figure. He argues that this term is an underestimate, is too difficult to calculate, and has been misused in critiques against local and sustainable agriculture. He criticizes the misunderstandings and critiques of the "food mile". Ultimately, he argues that an understanding of local must acknowledge the complexities, and not rely on simplifications. In his investigation of CSAs in the Pennsylvania-Maryland region, it is clear that

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

physical distance is not the main driver behind participation in local agriculture. In fact, as a new wave of research is revealing, it is a connection to place that motivates patrons.

Seyfang, G. (2005). Shopping for Sustainability: Can Sustainable Consumption Promote Ecological Citizenship?, *14*(2), 290–306. <http://doi.org/10.1080/09644010500055209>

Seyfang is a Senior Lecturer in Sustainable Consumption at the University of East Anglia. In this paper, she examines individual consumption choices through the paradigm of ecological citizenship. The paper examines the assumptions made in the mainstream perspective on sustainable consumption. Criticisms are made, and Seyfang points to alternative approaches as ways to compliment and encourage effective sustainable consumption. These solutions are more local, decentralized, and smaller-scale. They redefine wealth and progress, and create economies involving social capital. Ultimately, Seyfang calls for governments to support these efforts through funding and changes in social attitudes, institutions and infrastructure. Similar to other papers, Seyfang discusses elements of ecological economics and points to the need for addressing both human well-being and the environment.

Turner, B. (2011). Embodied connections: sustainability, food systems and community gardens, *16*(6), 509–522. <http://doi.org/10.1080/13549839.2011.569537>

Bethaney Turner, a faculty of Arts and Design at the University of Canberra writes an article on how to harness community gardens as an instrument to foster greater sustainability. The emphasis is on creating a culture of embodied sustainability. This embeddedness in place serves as the foundation on which community gardens can strengthen its reach towards addressing ecological, socio-cultural, and economic sustainability. It is all about bridging the disconnect between consumer and food, and making consumers more proactive. Further, the author reveals that motivations need to be investigated; independence rather than community-belonging is a main driver. Overall, community gardens is great institution for fostering place

## Investigating Sustainable Agriculture and Concepts to Encourage Sustainable Food Systems

Jimmy Shue

and embeddedness.

Turner, B., Henryks, J., & Pearson, D. (2011). Community gardens: sustainability, health and inclusion in the city, *16*(6), 489–492. <http://doi.org/10.1080/13549839.2011.595901>

The authors are faculty of Arts and Design at the University of Canberra, Australia. In this editorial, they discuss and summarize the various approaches to gardening, its context, and several important papers presented at the Community Garden Conference. Further, the authors emphasize the importance of research in community gardens to reinforce efforts addressing issues facing our communities and food systems.

World Commission on Environment and Development. (1987). *Report of the World Commission on Environment and Development: Our Common Future*.

This is a comprehensive document prepared by the World Commission on Environment and Development. The report discusses common problems the world faces and policies and frameworks that can be applied for solving them. Of critical importance for this paper are topics on sustainable development, food security, managing the commons, and addressing urban challenges.