

# Promoting holistic food systems to stimulate local food economies in marginalized communities

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*Holistic strategies can provide economic and social benefits to disadvantaged communities, through local food movements such as food sovereignty. This paper examines concrete methods to increase economic opportunities for farmers and to better livelihoods for producers that also increase food security for the community at large. The focus is on recent trends that support food sheds, target marginalized populations, and stimulate the local economy through participatory community efforts in the promotion of local food sources. Case studies draw upon new developments in the rural USA, particularly in the poorest communities of New Mexico. They demonstrate how economic betterment for farmers, positive development of value chains and infrastructure improvements that increase local trade also have the potential to foster healthier communities. Findings that are applicable to developing economies highlight the value of pursuing strategies for community-based, small-scale, integrated food systems.*

**Keywords:** food sheds, food sovereignty, food security, value chains, small-scale agriculture

IN SPITE OF YEARS OF GOVERNMENT policy initiatives, technology development and food aid programmes, millions of people in the world go hungry every day. While there is immense demand for food, the survival of small farms is at risk. This creates economic barriers, exacerbates food availability, and results in rural communities struggling to feed themselves, creating greater food insecurity.

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In the United States, large farms receive the majority of government support and subsidies and small-scale farmers struggle to make a living. 'Family farms' accounted for a third of all farms in 2007, down from 51 per cent in 1991 (USDA Economic Research Service website). The majority of farmers in the United States are between 45 and 64, and the average age of farmers is increasing (US Department of Agriculture, 2007). As farms close, the land is sold to large farms, consumed

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by urban development, or abandoned because of environmental degradation or other damage. Local communities lose their economic viability and the ability of the region to feed itself decreases.

Similarly, in the developing world, food aid and large companies compete with local food production, distorting economies for small farmers. This increases the percentage of food purchased from outside the region, reduces the flow of capital within a community, and often results in a decrease in the nutritional quality of food that is consumed. With the competition in local food markets, this aid is a conduit for dependence on outside aid. This is why CARE, an international NGO, decided to refuse US food aid, stating that a profitable business is more likely than a charitable venture to survive when foreign aid runs out (CARE, 2006).

Agriculture is a key driver of local economies and a cornerstone of prosperity for many communities. The largest segment at the 'base of the pyramid' contributes to food production: 50 per cent of the world population. In Africa, Asia and Latin America, more than 80 per cent of the population is involved in this market (Hammond et al., 2007). Market-based initiatives that support healthy food production and local self-reliance are thus crucial.

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### **Trends and new initiatives offering economic opportunities for farmers**

A promising emerging global trend that does address these problems is the food sovereignty movement. In 'Food Sovereignty: A vital requirement for food security in the context of globalization', Francisco Menezes defines food sovereignty as 'the right of each nation to maintain and develop its own capacity to produce the staple foods of its peoples, respecting their productive and cultural diversity' (Menezes, 2001). In other words, food sovereignty is the right of people to shape their own food systems, rather than the food systems being shaped by global forces.

Around the world, there are documented cases where individuals, acting as engaged citizens, are working together to create system-wide change for mutual benefit. This food sovereignty movement embraces this action by citizens to bring about positive policy development, and such change is an expression of political democracy. People have agency and an avenue to express their views and play a role in their community.

Even more promising is the recognition that smallholder farms do have a role to play in meeting the food demands of our ever-rising population. In 2008, following the G8 meeting that focused on agriculture, Lennart Bage, then the president of the International Fund for Agricultural Development, stressed the importance of supporting

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small farms as a means to provide food security to the global poor. He said that small farms need help, through microfinance and through access to technology, to enhance their productivity. In the case of Vietnam, the country rose from being a food-deficit country to becoming the second largest exporter of rice, as a direct result of development of their smallholder-farming sector. Standard of living rose as a consequence, while the rate of poverty declined from 58 per cent to 14 per cent (Bage, 2008).

'Holistic' food systems seek a strong, community-oriented social network. They emphasize principles of ecological wisdom, social justice, grassroots democracy and common values to stimulate a local economy (Tormo, 2010). These systems encourage consumers and producers to work together for mutual benefits of fair pricing and good value. The concept of healthy food systems can readily support agricultural efforts as a means of poverty alleviation. Food hubs are not a single 'thing'; they advance a concept of locally based efforts through collaboration to improve food creation and distribution. 'Food hubs' are centrally located facilities with business structures to facilitate storage, processing, distribution and marketing of locally produced food items.

These hubs serve under-represented and rural communities in the ways described by Table 1 (Barham, 2010).

There are many cases emerging in numerous communities that have viable and sustainable models that are highly replicable. Many are based on age-old classic exchange and trust. Value-added efforts, such as preserving meat or canning fruits, can increase economic viability of those in agriculture. It is the manner in which such production addresses capital investment and infrastructure development. Community collaboration in such businesses pools risk, reduces costs

**Table 1.** Potential impacts of food hubs

<i>Item</i>	<i>Impact</i>
Establishing food processing and other small businesses in the community	Increases jobs, small business, community, empowerment and self-reliance
Providing steady access to fresh, healthy food	Affordable, healthy food reduces cases of malnutrition
Efficiently matching buyers and sellers locally so that money remains in the community	For every dollar spent at a local business, \$0.45 is reinvested locally, compared with \$0.15 per dollar spent at a chain store ( <i>Yes Magazine</i> 2006). Therefore, even in communities with very little, neighbours help neighbours survive
Increasing access to institutional and retail markets outside the community for farmers and producers	Brings new capital into the community

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Successful local food systems ensure self-reliance and food security

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and generates collective purchasing power, whereas individuals alone would be unsupported and more challenged. For example, in the US, community-supported agriculture (CSA), in which people pre-pay for a share of a farmer's crop in exchange for weekly deliveries, has grown by 16 per cent per year (LocalHarvest website). Initiatives around the country are also creating 'healthy, small stores' which are less costly and require community support to bring healthier food to small, convenience-type stores. Internationally, the NGO CARE International partnered up with a Kenyan horticulture business to create VegCARE, a company that effectively pools resources to provide technical training to smallholder farmers. This collaborative private-public partnership is able to bring farmers the capital and access to markets they need to thrive (CARE, 2008).

When farmers and community members participate in the design of local food systems, stakeholder decision-making often extends beyond just the financial 'bottom line'. Food hubs foster local dialogue, community gathering and the exchange of food traditions with the next generation. Successful local food systems ensure self-reliance and food security. In addition, when a food hub fosters collective action, a community increases its self-reliance to address other problems.

### The growing interest in local food

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Most of the ideas behind 'local food' are not really new

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There is an extensive array of literature, academic information and practitioner resources on these topics. While it is too early to have extensive documentation of a 'movement', most of these concepts and ideas are not really new. In some respects, it is a second wave of the 1970s 'Small is Beautiful' concept espoused by E.F. Schumacher (1973). Such values, espousing small, local food economies, echo the independence movements from colonialism earlier in the 20th century, just at a more localized level.

In popular literature and media, there has been an explosive interest in the food system in the US. From best sellers such as *Eating Animals* by Jonathan Safran Foer, to *Fast Food Nation* by Eric Schlosser, and Michael Pollan's many books, there is evidence of a renewed interest in redefining America's food culture. More and more cookbooks are fashioning local, healthy food to cater to consumer demand, including *Eating Local*, a book inspired by America's farmers. Meanwhile chefs Anthony Bourdain and Jamie Oliver are steering the healthy and local food movement through their TV shows.

There are a number of academic institutions focused on these issues on a global level. For example:

- Winrock International's Wallace Center works on capacity building for farmers and communities to strengthen the food

system. It partners with the Business Alliance for Local Living Economies.

- ERB Institute for Global Sustainable Enterprise at the University of Michigan.

Many practitioners are focused on these topics. The real heroes are at the local level. They include the following:

- Carrot Project focuses on finding capital and providing financial training for small and mid-sized farmers in the US.
- USDA (United States Department of Agriculture) has a resource centre on Food Hubs.
- IDE (Canada) promotes food security by stimulating smallholder farmers' agricultural growth, while improving their access to infrastructure and markets.
- The Community Food Security Coalition is a North American coalition working from the local to international level to build community food security and propel community members into action to build a local food movement from the ground up.

### The situation in New Mexico

Northern New Mexico is put forth as an example because, although it is in a prosperous country, it lags far behind national averages with a number of development challenges present. Therefore, to misquote Frank Sinatra, 'if it can be done here, it can be done anywhere'.

New Mexico is home to some of the poorest and least healthy people in the United States, particularly in its rural communities. Food security is a major issue: 98 per cent of food that is consumed in the state comes from outside the region. With the industrialization of food, cheaper imported food competes with the market for local food.

Climatic conditions are also a factor. Northern New Mexico is a high steppe desert above 2,000 metres. Physically, it faces a short growing season, limited water and degraded soil. Population density is low, offering few support organizations, poor infrastructure, high transportation costs and small markets (Dreaming New Mexico, 2009). Some communities are 'food deserts' that have limited shopping and require people to travel 80 kilometres and more each way to reach grocery stores. Small farms of 5 acres (2 hectares) or less account for 85 per cent of all farms, but have a small proportion of the total cultivated land. More than 80 per cent operate at a loss (New Mexico Governor's Green Jobs Cabinet and the Sustainable Agriculture Development Working Group, 2010).

Unlike much of America, the land has been settled for hundreds of years by indigenous people and Hispanic landowners, and the

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region has a long history of traditional agricultural practices and cultural ties to the land dating back thousands of years. (For those interested, the story of the Anasazi people that lived at Chaco Canyon around AD 1,000 in the largest urban community at that time in the entire North America is well worth investigating. They farmed using advanced irrigation techniques.) Many local farmers use historical farming methods in what they grow and how they grow it, such as the collective management of irrigation systems, called *acequias*.

Few have the willingness to seek new market opportunities, or lack the skills or information to do so. Struggling small farms face high costs to get their products to market. Lacking storage and processing, they are not able to preserve crops or create value-added products, and as a result, they have little control over pricing.

The net results are negative from economic, social, community and environmental perspectives:

- Local farmers are less able to earn sufficient income to maintain their livelihoods.
- People are not buying/selling from each other, so currency from food sales does not circulate in the community.
- The community sources its food from outside the region, most of which is cheaper food from large agriculture companies that is low in nutritional content.
- Stewardship of the land decreases, increasing the likelihood of environmental hazards.

### Case studies

The following case studies illustrate food democracy in action. They each use holistic food systems through a variety of methods, including demonstrating how food hubs can increase opportunities for many people. The purpose of the case studies is to provide a breadth and depth of examples of transferable models of economic development through holistic approaches and collective action.

The first two centre on Taos, a small town in the mountains of northern New Mexico, 2.5 hours by car, or 4 hours by bus, from the capital city of Albuquerque to the south. The entire county has just 30,000 people spread over 2,203 square miles (5,706 square kilometres), with wide ethnic diversity including Hispanic and Native American indigenous people. The Taos County Economic Development Corporation (TCEDC) is a non-profit organization, founded in 1987. It seeks creative solutions to agricultural problems by helping small farmers and ranchers.

### **Mobile matanza**

There are only eight meat slaughter facilities in New Mexico, with most in the south, close to the large ranches (Chrisman, 2006). To sell meat on the retail market, it must be certified, with the cost paid by the rancher. Organic certification requires additional verification expenses. As a result, northern New Mexicans face long transport distances and high per capita costs. Their only alternative is to sell live animals at a much lower price per head (Fisher, 2008).

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The *matanza* is a self-contained slaughtering facility which travels from ranch to ranch

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In 2006, TCEDC used state funds to purchase a mobile slaughtering unit (or mobile *matanza*). This is a self-contained slaughtering facility pulled by a truck, which can travel from site to site visiting ranchers up to 150 kilometres from Taos. The unit is staffed by a driver, a butcher and a livestock inspector. It offers cold storage facilities, so can take carcasses from the ranch and deliver certified meat directly to buyers (Chrisman, 2006).

Its per unit cost to prepare meat is higher than that from large-scale facilities and the total amount handled in a day is lower, but it is a tailored solution to a niche market that offers a valuable service to small ranches. They can provide high-quality tailored products, including for example special cuts of organic meat, which generate \$20/kilo or more, compared with income from selling an entire carcass of just \$2/kilo (Fisher, 2008).

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The *matanza* increases the economic viability of smallholders and the availability of local meat

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Not only does the mobile *matanza* increase the economic viability of smallholders, it also increases the availability of local meat to Taos consumers. TCEDC has fostered the brand of Taos beef with high interest in 'buying local'. It connects ranches to buyers, including grocery stores, restaurants and local consumers. Demand for local meat is so high in the community, it cannot be consistently stocked. This model enabled smallholder ranchers to overcome infrastructure constraints, earning more money from their businesses and building sales to fuel the local economy.

### **Taos Food Center**

The TCEDC-supported Taos Food Center is a commercial kitchen that provides equipment, support and advice for entrepreneurs with food-processing businesses. They create value-added products, such as salsas and jams, which increase their earnings. Local indigenous people are able to use the facility to create traditional foods during festivals, including highly prized products such as green chilli that draw on the culinary history of New Mexico. Products can also be sold year-round, to generate income in the off-season (Sierra Club, 2010).

In 2008, Taos Food Center helped 51 businesses produce more than 300 products. These were sold in the town and as far away as

Albuquerque. Speciality products were also sold via the internet (Taos County Economic Development Corporation, 2011).

**La Montanita Co-op**

The third case study is a cooperative in New Mexico named La Montanita Co-op. The co-op focuses its activities on building a healthy local food system or ‘food shed’, a term similar to a ‘watershed’, the natural region in which food is sourced for use by the local population. This viable enterprise, which started in 1976, is a community-owned cooperative with 14,000 consumer members today. It buys food from over 400 local farmers and producers. It processes more than 1,100 local products sold through its own retail stores and to outlets across the state.

The cooperative invested in a warehouse and food storage facility, known as the Cooperative Distribution Centre, which distributes beyond its store network, transporting regional products for other businesses within the food shed. It seeks to reduce food miles by consolidating pick-up and delivery routes without making an empty run.

The cooperative is more than just an agricultural business: it participates in a joint effort with local stakeholders to collaborate in promoting regional food issues, and it is active in policy and economic dialogue. It focuses on the local economy, providing farmers with living wages and affordable supplier financing at the beginning of the season. It offers healthy options for local consumers, even if the choices do not maximize profits. For example, it does not stock alcohol at any locations. It specializes in local products and organic foods with clear labels indicating where the food is from. This has built a well-regarded brand and loyal customers successfully competing against the ‘big box’ grocery chains offering more and often cheaper merchandise.

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The co-op buys food from over 400 local farmers and producers

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The co-op provides farmers with affordable supplier financing and offers healthy options for consumers, even if this does not maximize profits

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**Table 2.** Three case studies from New Mexico promoting holistic food systems

	<i>Mobile matanza</i>	<i>Taos Food Center</i>	<i>La Montanita Co-op</i>
Project type	Localized slaughterhouse for animals	Commercial kitchen	Centralized warehouse and distribution system
Funding source	Government funding to a local NGO	Community donations and grants from the US Rural Development Administration, the Economic Development Administration, and a Community Development Block Grant (Wellborn, 2001)	Co-operative members and financing, philanthropy
People affected	100 ranchers reaching 10,000 consumers	Over 50 new businesses started	14,000 members

## Applicability for development

Although the US is economically much better off than most of the world, rural New Mexico is statistically close to some communities in the Global South and these concepts offer application in the development context. They involve smallholder farms that are cash poor, operating at a loss, and acting from custom and tradition, rather than acting to capitalize on market opportunities. Educational attainment is low and many able-bodied people leave for the cities. The case studies illustrate collective actions towards market-based solutions. When local farmers have access to infrastructure and assistance to produce value-added products, their farms can succeed and their communities can prosper.

More broadly, the dynamic and issues are transferable to developing countries. In recent years, with more focus on serving the base of the pyramid market, innovative market-based solutions are being introduced. For example, in the Papa Andina region of the Andes, small-scale farmers have capitalized on the abundance of potatoes in the region, positioning it as a cash crop to alleviate food security in the region. The Papa Andina Regional Initiative worked to facilitate the role to develop participatory market approaches for innovation, which resulted in giving small-scale farmers a comparative advantage with the added value placed on their local potatoes (Meinzen-Dick et al., 2009).

The most powerful concepts from the case studies to consider in developing communities are as follows:

1. The 'food shed' concept takes a holistic approach based on a regional unit of measurement. Local agricultural business does not operate in a vacuum: community partnership and stakeholder involvement improve agricultural efforts through local purchasing, group action and buying locally. All increase the livelihoods for agricultural workers.
2. 'Food hubs' offer collective centres for business improvements including storage, processing and distribution, which has a lower cost compared with individuals operating by themselves. The aim is to start small and make incremental steps in both financial investments such as capital expenditure and human investments in collective action to build local trust. The process draws on value chain collaborations, existing resources within the community and market gaps with niche opportunities.
3. Building local healthy food systems is interconnected: local small businesses that sell food products to others locally increase food security, magnify local currency circulation and build community resilience. Increased farmer welfare and consumption of local food generates non-economic benefits

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The case studies illustrate collective actions towards market-based solutions

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The process draws on value chain collaborations, existing community resources and market gaps with niche opportunities

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that improve the environment, people's health and cultural ties.

To conclude, there is growing support for citizens to take control of their land and food, and growing policy and literature supporting smallholder farms as a viable strategy to combat food insecurity. Multi-stakeholder collaboration, which puts food sovereignty into action and makes targeted investments in local action, can bring about greater food security, thriving local economies, healthier populations and cleaner environments. Holistic food systems that recognize the interconnectivity of value chains can develop strong networks. Members encourage small incremental changes, built up with community involvement, and this is increasingly proving to have sustained and positive effects on poor and under-nourished citizens. Ultimately, acquiring the means to feasibly grow a region's food locally provides the stability necessary for citizens to be healthy, and thereby to contribute to their economy and society without sole dependence on external sources.

## References

- Bage, L. (2008) 'Supporting smallholders is crucial to food security', G8 Summit report in the *Financial Times*, IFAD [online], available from: <http://www.ifad.org/events/op/2008/g8.htm> [accessed 1 April 2011].
- Barham, J. (2010) *Getting to Scale with Regional Food Hubs*. USDA blog [online], available from: <http://blogs.usda.gov/2010/12/14/getting-to-scale-with-regional-food-hubs/> [accessed 1 April 2011].
- CARE (2006) 'White Paper on Food Aid Policy', Care USA [online], available from: [http://www.care.org/newsroom/publications/whitepapers/food\\_aid\\_whitepaper.pdf](http://www.care.org/newsroom/publications/whitepapers/food_aid_whitepaper.pdf) [accessed 1 April 2011].
- CARE (2008) 'Economic Development Unit Project Profile Brief: VegPRO', CARE Kenya [online], available from: <http://edu.care.org/Documents/VegCARE-%20Program%20Profile%20Brief.pdf> [accessed 1 April 2011].
- Chrisman, S. (2006) *Reports from the Field: Taos County Economic Development Corporation, Taos, New Mexico* [online], available from: [www.whyhunger.org/programs/fslc/tools-resources/reports-from-the-field/738-taos-county-economic-development-corporation-taos-new-mexico.html](http://www.whyhunger.org/programs/fslc/tools-resources/reports-from-the-field/738-taos-county-economic-development-corporation-taos-new-mexico.html) [accessed 1 April 2011].
- Dreaming New Mexico (2009) 'An Age Of Local Foodsheds and a Fair Trade State', Dreaming New Mexico [online], available at <http://www.dreamingnewmexico.org/> [accessed 1 April 2011].
- Fisher, K.G. (2008) 'Reclaiming Querencia: The quest for culturally appropriate, environmentally sustainable economic development in northern New Mexico', *Natural Resources Journal* 48: 479-531.
- Hammond, A., Kramer, W.J., Tran, J., Katz, R. and Walker, C. (2007) 'The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid', WRI

[online], available from: [www.wri.org/publication/the-next-4-billion](http://www.wri.org/publication/the-next-4-billion) [accessed 1 April 2011].

Meinzen-Dick, R.S., Devaux, A. and Antezana, I. (2009) 'Underground assets: Potato biodiversity to improve the livelihoods of the poor', *International Journal of Agricultural Sustainability* 7: 235-48.

Menezes, F. (2001) 'Food Sovereignty: A vital requirement for food security in the context of globalization', *Development* 44: 29-33.

New Mexico Governor's Green Jobs Cabinet and the Sustainable Agriculture Development Working Group (2010) *Sustainable Agriculture Development Report*, <http://nmdaweb.nmsu.edu/events-and-publications-folder/clean%20energy%20action%20doc.pdf> [accessed 1 April 2011].

Schumacher, E.F. (1973) *Small is Beautiful: Economics As If People Mattered*, Blond and Briggs, London.

Sierra Club (2010) 'La Montanita Coop and Los Poblanos Organics: A promising future in sustainable, carbon-neutral local and regional food supply 'food-shed'', Sierra Club [online], available from: <http://nmsierraclub.org/local-regional-food-supply-food-sheds> [accessed 1 April 2011].

Taos County Economic Development Corporation (2011) 'Taos Food Center', TCEDC [online], available from: [www.tcedc.org/TFC.html](http://www.tcedc.org/TFC.html) [accessed 3 February 2011].

Tormo, M. (2010) 'Holistic Food System', Auroville Green Practices [online], available from: [www.green.aurovilleportal.org/allcontent/14-presentations/84-holistic-food-system](http://www.green.aurovilleportal.org/allcontent/14-presentations/84-holistic-food-system) [accessed 8 February 2011].

US Department of Agriculture (2007) *2007 Census of Agriculture: Farmers by Age*, available from: [http://www.agcensus.usda.gov/Publications/2007/Online\\_Highlights/Fact\\_Sheets/farmer\\_age.pdf](http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/farmer_age.pdf) [accessed 1 April 2011].

Wellborn, C. (2001) 'Business Incubation in New Mexico', Report for the New Mexico Economic Development Department [online], available from: [http://www.unm.edu/~asalazar/incubator/incub\\_wellborn.pdf](http://www.unm.edu/~asalazar/incubator/incub_wellborn.pdf) [accessed 1 April 2011].

YES! Magazine (2006) 'The Local Multiplier Effect', *Yes Magazine* [online], available from: <http://www.yesmagazine.org/issues/go-local/the-local-multiplier-effect> [accessed 1 April 2011].

## Websites

LocalHarvest: <http://www.localharvest.org/> [accessed 1 April 2011].

USDA Economic Research Service: <http://www.ers.usda.gov/> [accessed 1 April 2011].