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Generating Systems Resilience: Factors Sustaining Vermont Food System

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GENERATING SYSTEMS RESILIENCE: FACTORS SUSTAINING VERMONT FOOD SYSTEM

ABSTRACT

This case study explores key elements that must act for sustaining LFS in communities, using a case study from Vermont. Rooted in community-based and direct-marketing sales, the LFS in Vermont was a result of new market interactions formed in the 1970’s. Since then, consumers demand for transparency and quality food has expanded and local food is increasingly offered at public institutions, supermarkets and local restaurants across the state of Vermont. As LFS has gained momentum in policy and the marketplace, this research looks at the role of collective efforts, and key drivers that sustain the LFS. As demand for social, economic and environmentally responsible food increase, this case study explores the way collective efforts can play a major role in facilitating for sustainable food system change.

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. Now, that simple light may raise out, from complicated darkness- Bread and Puppet, VT

1 INTRODUCTION AND BACKGROUND

Local food systems (LFS) or alternative food communities (AFC) has grown in popularity the past two decades as more and more people express greater interest in where and how their food is grown. Combined with more knowledge on how food systems are interlinked with the environment, society and the economy, more people appreciate its significance.

Feenstra (1997) describe local food systems as rooted in particular places. In a world where many people are disconnected from where and how their food is grown, LFSs offers space for community members to engage in, and support local food and agricultural activities, and build in many ways on the people themselves, forming personal relationships.

Grassroots movements and the civic engagement has been central actors in the initiation of LFS in communities through new webs of interactions between people and food producers (Migliore 2014). With the aim to be economically viable for farmers and consumers, LFS actors has established new market arrangements, such as farmers' markets, community-supported agriculture, roadside farm stands, U-pick operations, local bakeries and breweries, specialty food processors (Feenstra 1997). LFS is also linked to the use ecologically sound production and distribution practices, and the enhance social equity and democracy for all members of the community (Feenstra 1997).

With time, local food and LFS has gained tremendous attention as growing, cooking and eating food has become widespread, and "trendy" activity to take part in. More and more consumer groups seek traceable, ethical, pesticide- and hormone free food. Engagement in LFS initiatives has also given citizen space for expressing a greater sense of autonomy over local food and resources. This pose new opportunities for shaping the future of our food systems.

Local production, distribution, sales and consumption of food as an example, involve the community closer to where their food comes from. It calls for a decentralized food system as opposed to large corporate powers which has no attachment to a specific place or community where it operates. As a

counterpoint to these anonymous players, the LFS is embedded in its community and can facilitate for more employment opportunities, and a greater notion of closeness and added value to knowing where and how the food was produced.

As consumer demand for transparency increase, the market has become a political arena where consumers can use the market response to express these needs. The market and for-profit actors have responded to the growing demand for local food, and local products can be found in restaurants, supermarkets and larger corporate chain stores. With the rapid increase in popularity, large companies such as Walmart has realized local foods potential, and coupled with advertising and marketing campaigns, the “mainstream” part of the population are exposed to local food in restaurants, public institutions, supermarkets, public institutions and corporate offices. With the growth of LFS, the concept has also received federal support such as the Know your Farmer know your Food program by US Department of Agriculture (USDA) (USDA, 2010), and support at state level.

A shift towards LFS is expected to be effective in sustaining rural economies, managing environmental resources, improving access to quality food, preserving traditional skills and knowledge and developing innovative and fair routes to the market- making LFS a great potential for the coming years (Kneafsey et al 2013).

1.1 THE NEW AGRARIAN WAVE?

“It is important to recognize that control of the food system today rests in the hands of economically powerful and highly concentrated corporate interests (Lyson, 2000)

The growth of LFS is directly connected to new needs from consumers, whose demand is increasingly influenced by environmental, ethical and food safety concerns (Migliore 2014, Marsden 2000). Followed by episodes of contamination and animal disease, consumer have raised concerns about how and where the food was grown. As a counterpoint, LFS embraces community control and equitable access to resources (DuPuis and Goodman, 2005) and a core element of the new wave is the resistance to the agro-food corporations (Winter, 2003b: 508). The LFS movements within the new agrarian wave is a reaction to what Anderson and Cook (2000: 237–38) call ‘the distortion of power and knowledge relationships in food supply systems’- and it is possible that LFS can reinvent these. The new agrarian wave involves decentralization, democratization, self-sufficiency and small-scale participatory cultural economies, which earlier on were explained and ‘small is possible’ models (McRobie, 1981). The increased awareness among consumers offer new opportunities for producers (Agency of Agriculture, 2015). "Now all of a sudden many small independent organic farms are looking at profitable returns of several thousand dollars per acre." Miller declares that "there has never been a better time to be a farmer." (Carlson 2013). “The new agrarianism is also in harmony with the new urbanists as both movements seek "renewal of traditions of human settlement that has emerged”. New urbanists note that "human settlements have traditionally been oriented toward the pedestrian," and that "the neighborhood is the fundamental unit of human settlement." They define a true neighborhood temporally: a walk from the center of a neighborhood to its edge should take only five minutes”. (Carlson 2013)

1.2 EMBEDDEDNESS AND SENSE OF PLACE

The term social embeddedness is the interaction between economic activities and social behavior (Granovetter, 1985 in Migliore, 2013) and very much applicable to describe how local food systems form these legacies of commitment and personal connections that takes place as people engage in direct marketing, community food events and sharing the joy of cooking and eating food together. Specifically, the social behavior in the context of LFS express a sense of responsibility and ethical concerns over the food and common resources, with specific attention to local resources (Delind and Bingen 2002). Sense of place refers to a set of meanings and attachments to places that are held by individuals or by groups. another element which materialize in community's celebration of Vermont landscapes, typical Vermont dishes and specialties of that region. Local food systems is spaces where people express familiarity and commitment to ones' place, community and environment, (Feagan 2007).

1.3 LOCAL FOOD SYSTEM NETWORKS

LFS Networks in this research are the engagement of multi-stakeholder groups from across the local food landscape, aiming to organize and strengthen LFS. These bodies engage governmental agencies, researchers, restaurant managers, food banks, producers, community members, grassroots organizations, and food advocates to specifically explore and create strategies for action that supports improvement of the food system -and contribute to sustainable natural resource management. These networks share knowledge and expertise in response to concerns such as the loss of agricultural lands, environmental problems, water pollution, and so forth. The multi-stakeholder groups in this research is a holistic approach to food system change. The network studied operate through cross-scale interactions, where the governmental level is working together with the grassroots level in creating a future plan. Such food system networks differ from similar, but narrower food networks which can be placed within sales, distribution or marketing of local/regional products. In the network studied, aggregation, marketing and sales in only one of five main working groups.

1.4 PURPOSE OF THE STUDY

The primary objective of this study is to fill the current information gap on the multiple contributions that Local Food Systems (LFSs) offer to communities in Vermont. The study explores the role of collective efforts and key drivers which contribute to sustain the LFS (resilience).

This question is raised because Vermont has hosted a wide diversity of LFS initiatives over several decades, and to stakeholders interested in exploring what sustains LFS in communities, Vermont is an excellent place to study LFS dynamics.

1.5 RESEARCH QUESTIONS

1.5.1 WHAT FORCES SHOULD BE PRESENT (ACT) TO ENSURE MAINTENANCE OF LOCAL FOOD SYSTEMS IN COMMUNITIES?

- 1.5.2 What is the role of collective efforts in maintenance of LFS?
- 1.5.3 What drives LFS in communities, and what forces act to maintain the system?
- 1.5.4 What is the impact on producers and the community?

Efforts to strengthen Local food systems are promising for local communities that intend to develop lasting sustainable food system change. Local food systems can potentially offer community members access and enjoyment of healthy quality food, new employment opportunities, and involves an active participation based in sustainable lifestyles and community betterment. However, there might be certain elements that must be in place for the LFS to maintain in a community. Due to limited data on the central drivers that enable these LFS to sustain in their communities, the main research question seeks to explore the forces that act to ensure maintenance of local food systems in communities. The ladder questions are used for the examination of the findings, and in order to answer the main question.

2 CASE VERMONT

Vermont is one of the New England states in the North East of US and share borders with Canada in the North, New Hampshire in the East and New York state in the West. With the total population close to 626.000, Vermont is one of the least populated states. (State of Vermont 2014). Burlington is the biggest city, followed by the capitol Montpelier.

Located in a liberal New England state, Vermont leads the nation in number of direct sales through CSAs, farmers’ markets and farm stand sales. With more than 70 farmers’ markets, Vermont has the most farmers’ markets per capita in the country. Food and agriculture has strong roots in this state, and is critical part of Vermont’s economy, culture and landscapes (Mendez 2016). It is estimated that farming has a \$4 billion impact on the states’ economy through direct sales and farm-based tourism (Mendez et al 2016).

There are about 7338 farms in the state, and dairy is the largest industry (Mendez et al 2016). For the past 15 years, the growing demand for locally produced food products has generated additional revenue streams and diverse sales channels for local farmers and producers. This has attracted more people into food and farming, and a wave of new entrepreneurial businesses. Through various forms of direct sales such as farmers’ markets, CSA’s, Food Hubs and farm-restaurant partnerships, the farmers have built direct relationships with consumers, and connected with their communities. Recent times, local food is entering institutions such as hospitals, schools, universities, food shelters, and retirement homes.



Figure 1: MapVermont, New England

“Everyone talks about how the food system needs to change. In Vermont, we are kind of obsessed with local food”. Interviewee

2.1 VERMONT’S FOOD SYSTEM

The local food systems in Vermont have evolved over several decades with the emergence of local farmers and food coops across the state. The period around 1970's welcomed a great number of "back to the landers" interested in creating alternative to the mainstream industrial food system. Their involvement in organic farming and establishment of local coops to make healthy food available to more people set a start for a lasting local food system. According to stakeholders, home gardening has been a cultural norm in Vermont for more than a hundred years. Creating economic opportunities for Vermont farmers and food producers has been a major goal in this state (City Market Coop, 2015). The growing local food movement in Vermont link actors across all sectors such as farmers, schools, scientists, businesses and lawmakers and they have come together to create a wide number of LFS activities. (Vermontfoodecuation).

As local food and food systems blossom in countries North-America and Europe, this thesis hope to bring insights from a place that has advanced its local food landscapes over several decades. It is hopeful that we can learn from their experiences in developing a local food system through policies, farm viability, institutions, research and education. Nicherson (2008) conducted a study on the LFS activities taking place in Vermont, and found that consumer demand is a driver fueled by peoples' interest in ethical, healthy, safe food. Beyond that, the shared commitment among Vermonters to maintain a working landscape is another driver. Being the state where a Mc Donald's restaurant were transformed into a Farm to Table Restaurant speaks in favor of Vermonters being passionate about supporting local farmers. Vermont is a suitable place to learn more about what forces that has contributed to the LFS that exist in Vermont today. As the interest in local food- and food systems increase in countries across Europe and USA, it is valuable and important to explore its dynamics, the outcomes and what impact this convey to a local community (story see appendix).

2.2 VERMONT'S FARM AND FOOD ECONOMY IS GROWING.

From 2007 to 2012 food system economic output expanded 24 percent, from \$6.9 billion to \$8.6 billion (UVM, learn.uvm.edu). Food manufacturing is the fastest growing industry in Vermont and over 60,000 Vermonters are employed as farmers, waiters, cheese makers, brewers, bakers, butchers, grocery stockers, restaurateurs, manufacturers, marketers, distributors, and many other food-related jobs. About 12,000 businesses are part of Vermont's food system. From 2009 to 2014, it is estimated that the food system has contributed to the creation of 3,486 direct jobs and 645 farms and food businesses (vtfarmtoplate.org/casestudy). From what has been found, for every food system job created there are also another additional job created in Vermont. (UVM, learn.uvm.org, vtfarmtoplate.org).

2.3 LOCAL FOOD SYSTEM SALES

- It is estimated that in Vermont, local food sales are approximately 5% (about \$100 million) of total food sales.
- In 2010, farmers received 14.1 cents of every food dollar spent, while the remaining 85.9 cents went to processing, distribution, retailing, and other services.
- In 2007, only 52% of Vermont small farms (farms with less than \$100,000 in sales) realized net income gains while 48% experienced net losses.
- In 2007, 21% of Vermont's land was in agriculture and about 84% was considered "harvested cropland," while the remaining 16% was in pasture, cover crops, laying fallow, or had experienced crop failure/abandonment.

(Data from City Market Coop, <http://www.citymarket.coop/local-food-stats>)

2.3 PUBLIC SUPPORT AND THE LFS

The State is involved in LFS development through institutional and legislative change. In response to public interest in sustainable food, farming and land stewardship, the Vermont legislature created the Farm to Plate initiative to facilitate a collective approach to strengthening the local food system. The state is also involved in the LFS through the Agency of Agriculture, whose role is to convene the LFS actors together, promote local food to consumers, and facilitate for the local food system to grow in Vermont. According to one of the State's programs, the working landscape is the backbone of Vermont's heritage and economic viability. The "working landscape" consists of agriculture, food system, forestry, and forest product based businesses. In 2012 the legislature committed to Vermonters' values by passing the Working Lands Enterprise initiative for the management and investment of \$1 million into agricultural and forestry based businesses (Vermont government, theworkinglands.gov)

Coupled with the need for sustainable land stewardship, the State is also functioning as a regulatory body. Linking sustainable food production to the natural resource management, the Vermont Clean Water Act was initiated to ensure sustainable management of common resources.

Vermont's Clean Water Act

- Vermont's Clean Water Act came out in 2015 is the most comprehensive water quality legislation in Vermont's history and aim to reduce levels of pollution to the environment, facilitate sustainable land stewardship and maintain a clean environment. The new law regulates and incentivizes better farming practices that reduce runoff from farms.
- The Regional Conservation Partnership Program has awarded \$16 million to 26 partnering organizations, agencies, non-profits and businesses that offer financial and technical assistance to landowners to improve water quality in Lake Champlain. An additional \$45 million has been promised to support producers to meet the criteria of these new regulations. (<http://dec.vermont.gov/watershed/cwi>)

2.4 THE FARM TO PLATE NETWORK

In 2009, the Farm to Plate Network was launched, and their mission states:

"Our food system—how food is produced and distributed—affects everyone: our health, our environment, our communities, and our economy. The problem is that the current food system is out of balance. We are far too reliant on food grown and distributed outside of our region and decisions made outside of our control. This creates vulnerabilities for Vermont's working landscape, the resilience of our farms and communities, and for environmental quality and public health". (Farm to Plate, "the farm to plate network", 2016).

In practice, the F2P create space for the existing initiatives to across the food system to collaborate on the following:

- Increase jobs and economic activity in Vermont's food system;

- Improve access to healthy, local food for all Vermonters (especially low income Vermonters);
- Improve the quality of our environment (e.g., soil, water, energy); and
- Improve the ability of the local food system to support the health of Vermonters

(For all 25 network goals, see the appendix 1)

2.3 VERMONT LOCAL FOOD SYSTEM INITIATIVES

There are numerous initiatives taking place in Vermont, both in non-profit and in for-profit sector. The case study explores these efforts, and their role in strengthening the LFS.

For description on the LFS initiatives, see appendix 2

3 NON-PROFIT INITIATIVES

3.1 NOFA VERMONT

The Northeast Organic Farming Association is a non-profit association established in 1971, and is an important piece in the Vermont food landscape. NOFA promote the values of organic practices to Vermont's producers and gardeners, inform consumers on the impact of choosing organic (or local). NOFA is also involved in community outreach, through building awareness, technical assistance, policy and advocacy and facilitate for a stronger food community.

3.2 FOOD COOPERATIVES

Food coops are non-profit business organizations owned and managed by the members themselves. Many of Vermont's food coops started in 1970's and committed to provide residents with healthy, sustainably produced food at affordable prices. Some memberships involve coop members to take part in the daily management of the store. There are currently 18 food coops in Vermont. The food coops are dedicated to supporting local producers by offering their products in the stores. In 2014, City Market Food Coop reported annual sales of \$13 million that were spent on local products in their store, which amounted for 31 percent of their gross sales. They have invested \$66,000 in supporting local farms infrastructure and production capacity. (city market, citymarket.coop).

3.3 FARM TO SCHOOL PROGRAMS

Farm to School Programs have existed in Vermont since 1990's and Vermont school districts ranked 7th nationally for the percentage of school districts offering farm to school programs (Farm to Plate Annual Report). Vermont FEED, the Agency of Agriculture, and the Vermont Farm to School Network are active in developing farm to school programs. Farm to School Programs are in nearly 2/3 of Vermont schools and involve nearly 30,000 kids every year. These schools purchase \$1,380,280 worth of local produce annually, and makes Vermont the leading State in New England in local food in schools. Since 2007, Vermont's Farm to School Grant Program has supported 96 schools (30% of Vermont public schools). Schools with farm to school programs report twice the national average in vegetable consumption. There are about 375 community and school gardens around the state that provide space for people of all ages and backgrounds to grow their own food. (Vermont FEED, www.vtfeed.org)

3.4 VERMONT FEED

Vermont Food Education Every Day (VT FEED) is a partnership managed by NOFA VT and Shelburne Farms. The program raises awareness about healthy food, good nutrition, and the role of Vermont farms and farmers in

helping sustain a healthy community. The program reach out to students in classrooms, cafeterias staff, communities, and local farms to make “good food” and education in every step from the grower, the preparing of the food and the students eating the meal. (Vermont FEED, www.vtfeed.org).

3.5 THE INTERVALE CENTER

The Intervale Center on the city limits of Burlington host programs such as the Intervale Food Hub, Farm Incubator Programs and a Conservation Nursrey. In 1989, the Intervale Center establishing Vermont’s first CSA. The Farm Incubator program lease land, equipment, greenhouses, irrigation and storage and offers 135 acres of land which contributes to about 60 new job positions. Founded in 1990, is one of the oldest incubator programs in the US. Through technical assistance and business planning, incubator farms give beginning farmers the opportunity to develop their businesses, build a customer base and hone skills before investing in land and equipment. (<http://www.intervale.org/about-us/history/>)

3.6 RESEARCH AND EDUCATION

UVM (University of Vermont) plays a central role in the development of Vermont’s food system. UVM host Farm Training Program, Food Hub Management Program, Breakthrough Leaders Program for Sustainable Food Systems, and the UVM Food Systems Summit. According to the university webpage, UVM were founded on the belief that teaching and research is inseparable. UVM offers students both knowledge and practical skills and account for is one of the supporting factors in efforts to strengthen the food system in Vermont (UVM, learn.uvm.org).

4 FOR PROFIT INITIATIVES

4.1 THE INTERVALE FOOD HUB

Intervale Food Hub offers a direct-to-consumer year-round market, with community drop-off locations in the Burlington area, serving individuals and families, including local college students. Recently, the food hub initiated wholesale services as an approved vendor to Sodexo at the University of Vermont (Intervale Center, intervale.org).

4.2 FARMERS MARKETS

Since 1980, Burlington Farmers Market has been held downtown Burlington at City Hall Park. There are about 90 stand, offering citizen connection to local farmers and their community. People come to buy seasonal produce, organic meat, artisanal pastries, and more directly from the producer.

Old North End Farmers market allows customers to double their purchase of local food and vendors accept Farm to Family coupons for fresh produce and EBT cards for food items. This collaboration between producers and state programs aim to make local food available to more Vermonters.

4.3 INSTITUTIONAL PROCUREMENT OF LOCAL FOOD

Institutional Procurement of local food is growing in Vermont. Sodexo is one of the world’s largest food service companies, and through partnerships with local farmers and distributors, local food is offered in several Vermont institutions. Through a student lead campaign, The Real Food Challenge, Sodexo is in dialogue with students and university staff to discuss food sources.

4.4 THE REAL FOOD CHALLENGE

The Real Food Challenge is a student lead campaign for shifting university food budgets toward local and community-based food sources. The campaign aim for fair, ecologically sound and humane food, which they term “real food”. The Real Food Challenge also maintains a national network of student food activists— providing opportunities for networking, learning, and leadership development for thousands of emerging leaders.

In 2014, Sodexo spent \$3.2 million on local food in served to Vermont college and university students at 16 campuses. The UVM Medical Center purchased \$1.6 million in local food in 2014, including \$343,000 directly from farmers. They also purchased an additional \$260,000 worth of food from regional food purveyors (up 18 percent over 2013) (UVM, learn uvm.org).

4.5 LOCAL RETAILER: BLACK RIVER PRODUCE

Founded by Steve Birge and Mark Curran in 1978, Black River Produce (BRP) started as a local distributor of quality, fresh fruits and vegetables to local restaurants. Today the company links 600 producers and 3,000 wholesale customers. In 2014, BRP transformed an abandoned Ben & Jerry’s plant into a 50,000 square foot meat processing facility providing market opportunities for Vermont farmers. (Black River Produce, blackriverproduce.com).

4.6 ENTREPRENEURIAL FOOD BUSINESSES

The LFS in Vermont attract a number of food entrepreneurs to Vermont and between 2009 to 2013, 665 new food and farm businesses were added to Vermont’s food system (UVM, learn.uvm.org) Many of these produce value-added products based in local produce. Vermont Bean Crafters is the company behind “Joe’s Bean Burgers”- burgers based on beans and legumes, Citizen Cider make hard cider on local apples, there are microbrews, and smoothie bars with slogans like “Eat More Kale”. Some of these brands have received national, and even international attention. The Vermont based brewery called the Alchemist, in particular, has customers travel across states to get hold of their brew called “Heady Topper” which is often completely sold out. One comment from an interviewee was that local products may taste better than the conventional products, and that’s why consumers are willing to spend more to have it. “Sometimes, local options simply taste better. When people have tasted the difference it is really hard to go back to the cheap product”.

4.7 SKINNY PANCAKE

Sourcing produce from local growers, The Skinny Pancake is one of the local businesses that contribute to shape Vermont’s local food scene. Operating several restaurants and a stand at the student dining hall University of Vermont (UVM), their company is on a mission: *“...to change the world by building a safer, healthier and more delicious food shed while creating everyday enjoyment that is fun and affordable”*. Skinny Pancake is a member of the Farm to Plate Network and host public fundraiser to LFS initiatives such as financing CSA shares for low-income community members.

5 FOOD SYSTEM NETWORKS: POTENTIAL FOR COLLABORATE WORK

Nickerson (2008) conducted a study of a wide range of LFS initiatives in Vermont and found that there were much to be gained from collaborate work between different LFS stakeholders. From stakeholders perspective, there was a need to increase communication between LFS initiatives and facilitate for dialogue between food system actors. Specifically, actors urged for organizing ongoing dialogue between producers, the supply chain, and local food advocates. Additionally, many LFS initiatives were working on similar issues without coordinating their efforts. Respondents expressed an interest in seeing greater involvement by the state and regional economic development

organizations. Finally, in order to meet address these challenges, Nickerson (2008) recommend to “organize a summit for Vermont’s food and agriculture actors using a systems perspective to create a unified vision, policy platform, and action plan to develop Vermont’s food system, including metrics for success, to present to funders, investors, and federal representatives” (Nickerson, 2008).

5.1 A CALL FOR SOCIAL LEARNING AND ENVIRONMENTAL STEWARDSHIP

According to Berkes (2003), it is critical to manage the ecological system in order to strengthen the social wellbeing. Taking inspiration from what stakeholders addressed in previous research by Nickerson (2008), food systems are interlinked with nature and the surrounding environment and a food system network could hence incorporate a better understanding of nutrient and waste management as a foundational component of a sustainable and regenerative food system. A LFS network could operate to support the conservation of energy and building of soil fertility through cover crops, composting, and the re-capture of climate change gases. (Nickerson 2008).

6 THEORETICAL FRAMEWORK

“Local communities represent the social space in which people interact, where people have access to and make use of resources, and where the use of ecosystems services translates into social well-being. Strong social-ecological governance increases the likelihood that governance at other scales will be successful”, Dietz et al 2003).

6.1 AGROECOLOGY

Agroecology emerged as a reaction to the negative social, economic and environmental impact from agro-industrial system (Gliessman 1990) and can refer to a science, a movement, and a practice. The definition of agroecology is “the integrative study of the ecology of the entire food system, encompassing ecological, social and economic dimensions”, (Francis et al 2003). Relevant for this research, the ‘ecology of food systems’ (Francis et al 2013) integrates economic viability, ecological soundness and social justice in transformation toward food system sustainability (Gliessman 2014). Seeing Agroecology as a social movement, it prioritizes local solutions and based on local resources (Mendez 2016). Within the field of agroecology, agricultural systems or LFS are understood as part of ecosystems, and a product of nature and society.

6.2 SOCIAL-ECOLOGICAL RESILIENCE

Resilience is the capacity of a social-ecological system to sustain its structure and identity or recover from reorganization”. A resilient system is able to reorganize itself and recover after disturbance, learn from it, and develop new structures and processes (Chapin et al 2009) In the context of LFS, it’s the ability of the system to recover from disturbance, learn from these changes, and maintain its structure (or develop capacities to develop new structures in order to maintain itself). As LFS are social-ecological systems, its resilience can indicate its ability to sustain.

6.2.1 COMMUNITY SOCIAL-ECOLOGICAL GOVERNANCE

Strong local institutions can serve as a foundation for social-ecological governance. Instead of relying on centralized decision-makers in social-ecological governance, cross-scale interactions from grassroots to state government may involve informal institutions which includes unwritten rules,

taboos, customs and traditions, and the local community itself in consensus- or decision-making (Ostrom, 1990). While communities' role in social-ecological governance is important, globalization and centralization make self-governing small-scale resources rare (Dietz et al, 2003).

Building on Ostrom (2000) and Migliore (2014) the LFS involves a range of community relations based on social norms, which generates ties of reciprocity and trust, and enable the community to administer local resources. This produces benefits for the community for long periods of time (Ostrom 2000).

6.2.2 SOCIAL LEARNING

Social learning is critical for building and maintaining strong community-based social-ecological governance. Social learning in governance is defined as “the processes by groups assess social-ecological conditions and respond in ways that support their well-being”. In practice, social learning link institutions and community organizations through cooperation and the transmitting of knowledge. Gunderson (1995) tie the ability for institutions to renew themselves following crises or to generate new and novel solutions to resource problems to the creation of engagement, learning and a deeper understanding of trust (Gunderson et al, 1995), these collective processes are also termed *social learning*.

More specifically, social learning is the ability of groups to detect gaps or overlaps in the system, and seek better practices, solutions to challenges and contribute to conflict resolution, which facilitate for better practices over time. The transfer of social learning takes place through feedback loops between the stakeholders involved. From the literature, the failure to transmit knowledge across generations may limit the community's capacity to understand the historical (and cultural) basis of its ecosystem and governance. Cultural factors are central here, such as to the extent the group shares a common identity, and the depth and richness of local knowledge in the governance process (Ostrom, 2007).

6.2.3 CROSS-SCALE INTERACTIONS WITH MULTI-STAKEHOLDER GROUPS

Multi-stakeholder networks across scales involve stakeholders from different levels and interest groups: from policy institutions, grassroots organizations, community members and businesses. Their engagement contributes to a 'down- and up-scale effect' where grassroots level and the community provide direct feedback to policy institutions. Ostrom (2007) elaborate the need of cross-scale interactions among institutions and organizations. Local communities, government agencies, research institutes, non-profits, grassroots organizations and more, has the potential to form social networks which facilitate for action.

In a directionally changing world, neither top-down nor bottom-up interactions are the preferred direction of interaction, but instead two-way transactions are needed to account for observations, understandings, and human needs as perceived at the various levels (Chapin et al 2009).

Cross-scale institutional networks facilitate for 1) Identifying inconsistencies, overlaps or lack of information flow in the current system. 2) Creating shared processes for defining problems, seeking solutions to problems, information exchange, 3) Feedback from grassroots level to the policy level (Chapin et al 2009).

6.2.4 ADAPTIVE MANAGEMENT (ADAPTIVE LEARNING)

Taking in account that there are certain levels of uncertainties in complex systems, decision makers and managers need to take use of appropriate ecological, social, and economic information into management. Adaptive management necessitates some degree of feedback (including qualitative data) between the policy-level and the social-ecological system itself. Relevant sources for social-ecological and economic knowledge can be based in local community (local knowledge and legacies) and based in knowledge generated by conventional science (Berkes 2003).

Based on this, one principle from social ecological resilience theory is the need for the people themselves (resource users) to play an active role in the development of rules or plans for sustainable systems change e.g land use, food production or environmental stewardship. Sharing a common identity, language and culture is another central principle that facilitates for adaptive learning to take place when these actors come together, and create a space for this feedback to take place.

This is very relevant in the management of local food system networks and sustainable natural resource management. According to participatory research, participation and collaboration with all stakeholders are the only way to create the desired change (Pretty, 1997). Coupled with Folke (2009) local communities are key components of any social-ecological governance system. (Folke, 2009) The success of collaboration depends on the networks ability to create shared goals and objectives Folke (2009) among the stakeholders, and facilitate for shared commitment for long-term goals. Building on this, it is important to incorporate the voices, knowledge and expertise of the farmers in the efforts to strengthen LFS.

6.3 SOCIAL EMBEDDEDNESS

Social embeddedness is the integration of social relations and behavior within economic transactions (Migliore 2014, Hinrichs 2000) and is suitable to describe how people's actions are guided by a commitment to support the local economy, express their identity, and social responsibility. Seeing social embeddedness as integrate part of the LFS, this give insights to people's behaviors based on personal relations with other actors, transparency, knowledge about food and commitment to community. etc. Migliore (2014) found that LFS initiatives create personal bonds and interlinkages with each other which increases over time as these initiatives interact.

Based on this study, places where LFS initiatives have existed over several decades are likely to be socially embedded to a greater extent and possess valuable interlinkages take place between the different LFS initiatives, and contributes to enhance the level of social embeddedness as people and initiatives engage over time.

6.4 SENSE OF PLACE

According to Winter (2003) the new food economy and the commitment to support the local economy is connected to a strong sense of community. Through personal interaction among community members, and commitment to ones' place, there is a motivation to act for the common good and to identify with shared values. In this research, the notions of sense of place play a significant role in maintaining LFS in communities, and an inseparable part of what local food

systems. The LFS can also see as a reaction to the modern economic system where actions are to a great extent based in economic motivations. Incorporating that LFS are socially embedded, consumers use the market as a political arena to respond to social and environmental needs. These spaces can be characterized by peoples' participation in local food events, sharing of new recipes, and enjoyment of local handcrafted food. It can be spaces for communities to express what is unique about their home town in terms of local food, history and landscapes. It can be physical spaces where people interact regularly and becomes what they can refer to as "community".

7 METHODOLOGY

7.1 QUALITATIVE RESEARCH

Knowledge and understanding in this research is perceived as socially constructed, and there is no "correct" understanding. It is therefore recommended to seek multiple perspectives on a situation, and a wide involvement of different groups (Pretty, 1997). Based on this, qualitative methods were applied in the engagement of various stakeholders from cross-sectors of the LFS. A combination of techniques was applied to triangulate and confirm information.

7.2 CASE STUDY

A case study approach was chosen to explore the socially constructed realities that people were involved with and helped create. Case studies allow researchers to limit their attention to a particular social phenomenon in a particular area (Babbie 2001). The research approach was used to gain a deeper understanding of the diverse realities occurring in the LFS in Vermont. Case studies are often applied when the motivation for the research is to understand cases and generate knowledge related to experiences, problems, successes and sensations (Yin 1994). Further, instrumental case studies are where a researcher undertakes to support or build understanding of general phenomena by looking in depth at one typical example Stake (2005). As this study seeks to explore forces that sustain the LFS in Vermont, this research follows an instrumental case study approach.

7.3 PARTICIPATORY RESEARCH

The objective of participatory research is the engagement with the stakeholders in the research process. This approach incorporates stakeholders' views and their priorities, and can be used for the benefit of the community under study or to provide valuable learning to other communities. Pretty (1994) describe that conventional reductionist science often fails to incorporate the complexity and changing reality of farmers and actors in rural development. Participatory research can provide a more accurate assessment of what people really value, for example in cases when their values are not reflected in market prices. Through participation in network meetings, community events, volunteering at farms, and engaging with local community events, this added value to understand people and culture in Vermont. A stakeholder meeting was organized to share preliminary findings, and stakeholders were able to comment on, share their view and raise questions about the preliminary findings.

7.4 PARTICIPATORY RESEARCH IN PRACTICE

Participation and collaboration are considered essential components of any system research, as any change cannot be effected without the full involvement of all stakeholders and the adequate representation of their views and perspectives (Pretty 1997). *“We can only get a human idea of what is in the world, and so science itself can only be a human picture of the world. How we see the world depends on what matters to us. As different people have different values, this raises critical issues for the methodologies we use for finding out about the world”*. Pretty, (1997)

In the research, stakeholders’ values were taken in consideration throughout the research process. Inspired by Pretty (1997), rather than focusing primarily on 'tools' or 'instruments', what should become central is the people themselves. How do their values affect their actions? Why do they think these actions are important? A central objective is to seek multiple perspectives and diversity, rather than characterize complexity in terms of average values. The assumption is that different individuals and groups make different evaluations of situations, which lead to different actions. All views of activity or purpose are heavy with interpretation, bias and prejudice, and this implies that there are multiple possible descriptions of any real-world activity (Pretty, 1997).

7.5 IN-DEPTH INTERVIEWS

In-depth interviews were chosen to provide qualitative data on the stakeholders’ perceptions, views, experiences, knowledge and values. In-depth interviews also proved useful as an indicator for how the different stakeholders relate to one another. Not seldom did stakeholders refer to each other by name. The researcher went to the stakeholders’ workplaces and interviews lasted from one to two hours. A few interviews were conducted using Skype due to practicalities. Interviews at farms were done while working together with the farmer, harvesting bok choy, packing potatoes, or while sitting in the field eating Vermont peanut-butter straight from the jar.

7.6 INFORMAL CONVERSATIONS

Often times, people would open up and share their personal stories, cultural values, norms or habits. Informal settings can add more ‘authentic’ details which are not natural to share in an interview. Because the researcher had previously lived in Burlington, there were certain aspects, (being cultural, common acquaintances or place specific details), which during informal talk, could be a comfortable icebreaker or a way to relate to each other.

7.7 PARTICIPATION

Volunteering at farms, farmers markets, F2P network meetings and annual conference, Agroecology group meetings, stakeholder meeting, go to community food events, visiting local businesses,

8 DATA COLLECTION:

Multiple methods is the application of several methods, using findings derived from combining a range of methods, which reduces the uncertainty of error introduced by using only one method to derive these results.

<i>In-depth interviews</i>	with LFS stakeholders to provide a detailed account of their experiences, thoughts and values. The meetings with stakeholders are dependent on their time and availability.
<i>Participant meeting, stakeholder meeting</i>	Preliminary data was shared with key stakeholders. Discussions around findings, and research questions, identification of relevant problems and possible solutions.
<i>Document Reviews</i>	Webpages, farm to plate, USDA, websites, news articles,
<i>Diagramming</i>	Drawing relations between findings,
<i>Informal conversations</i>	Social experiences were also given meaning through, participation and observation. This took place at F2P meetings, farmers markets, volunteering and visiting farms,
<i>Storytelling</i>	people would tell their personal story and explain their personal encounter with LFS initiatives.
<i>Creative research</i>	Looking for symbols, meanings or behaviors outside of the 'conventional' way of conducting the research
<i>Informal research, Informal Conversations:</i>	data collected when surrounded by the setting being studied. For example, can informal benefit the development of formal research, Informal conversations took place when engaging with local consumers, employees in the local food system, artists, activists,

8.1 CHOOSING STAKEHOLDERS

Stakeholders were 1) members with the F2P network, and involved across the LFS, 3) local businesses and 2) farmers and producers.

Strategy: Snow ball sampling, first meeting was organized with key stakeholders, and they would provide new contacts for the next step of the interview process.

WHAT ACTORS WERE INVOLVED?

Producers involved in the LFS were placed around Grand Isle, Franklin, Chittenden, Addison and Washington county. Some producers were engaged in the LFS through farmers' markets, direct sales or as members of the Farm to Plate initiative. From interviews and informal conversations, the characteristics of the producers involved in the LFS have changed over time, from the smaller-scale 'back to the landers movement' in the 70s to the more 'entrepreneurial' and market-oriented farmers involved today. The farms visited during the fieldwork ranged from fruit and vegetables

growers, chicken, eggs, beef and poultry producers. Many producers combined several of these products to add more diversity on their land.

The data collection with other LFS stakeholders took place in communities around Chittenden County, around Grand Island, Hardwick and Montpelier. The term community in this setting includes private and public consumers and actors like community-based organizations. Farm to Plate coordinators, University faculty, non-profits, local businesses, restaurants, practitioners. Their motivations are expressed through partnerships, the participation in LFS initiatives and in values and principles.

CATEGORY	STAKEHOLDERS
LOCAL BUSINESSES	Restaurants, distributors, farmers, local businesses,
NON-PROFIT ORGANIZATIONS	Organic Food Association, Food and Education Programs, Local Food Coops
NETWORKS	Farm-chef Partnerships,
POLICY INITIATIVES	Farm to Plate
PUBLIC INSTITUTIONS	Public Schools, hospitals, university,

8.2 THE FARM TO PLATE INITIATIVE

The Farm to Plate Network is organized into five different working groups as described below.

<i>Working Groups</i>	<i>Details and Goals</i>	<i>Relevant stakeholders</i>
Aggregation and distribution	Expand linkages between locally produced food to different markets	Distribution companies, restaurants, institutions,
Consumer Education and Marketing	Enhance consumer education and awareness	Non-profits, restaurants, food companies
Farmland Access and Stewardship	Expand farmland conservation, increase farmers’ access to affordable farmland, promote best practices for land use.	Food hubs, producers, non-profit organizations
Education and Workforce Development	Improve education and qualification to food system jobs, address food system labor issues,	Educators from K-12 to college level, educational consultants,
Production and Processing	Improve resources available for food producers; from business services, technical and financial assistance.	Key organizational stakeholders

8.2.1 ANALYSIS

The interviews covered views and insights from a wide range of LFS stakeholders involved in different sectors. A matrix systemized themes according to each stakeholder group:

- 1) Key concept frequently mentioned by stakeholders, such as “supporting the neighbor”. Concepts shared by many actors were indicators of common values and beliefs.
- 2) Concepts most frequently mentioned across actors were listed within themes such as “support for the local economy”, “consumer awareness”, etc.
- 3) Themes were organized into motivations, problems and barriers, opportunities and solutions. What motivated actors to participate, did the motivations change from one actor to the other? Had the motivations changed over time? What were the barriers? Solutions?
- 4) Combining motivations and themes together: In what ways does the answers relate?
Direct sales+ motivation for higher price for products = a local food system based in direct sales and contributing to market opportunities for farmers.

8.2.2 EXPEDITION FIELD TECHNIQUE: PEOPLE ORIENTED

This technique captured some of the values and priorities of the people interviewed. By listening to peoples’ stories, and use their stories to give rich descriptions and details on how people in the community experience the local food system and what contributions the LFS initiatives offer the community.

8.2.3 CONTEXT-DEPENDENT RESEARCH

The LFS is in many ways a social phenomenon, and it includes multifaceted endeavors because a variety of people have influence over the process and its outcome (Kara 2012). The LFS investigated is built on the people’s realities and people and the community are to a large extent motivated by their values. “Social phenomena” does rarely investigate a case following a rigorous plan (Kara 2012). It is therefore difficult to investigate the local food system in Vermont by following a pre-determined set of rules or using a very detailed plan for conducting the research. The transformative research is a suitable framework for understanding the local food system and its interconnectedness with the surrounding community. This approach is flexible and takes in account relevant *contextual factors* (Kara 2012). This type of framework is based on, and intend to, promote social values such as equality and justice. Examples are feminist research, participatory research, decolonized research or activist research.

8.2.4 CONTEXTUAL FACTORS (VIEWS, BELIEFS AND VALUES) PRESENTED IN THIS PAPER COMPRISES

- Consuming local food products is understood as healthy, safer, fresher, better quality, (with the exceptions of highly processed local foods)
- Local food and local food system in this case study involves food systems designed with social-economic and environmental responsibility.

- When actors have described ‘good food’ or ‘local food’ they have referred to criteria such as high levels of well-being, social justice, environmentally sound stewardship and system resilience.
- Sustainable farming practices that take in account its environmental impact such as clean air, and water.

8.2.5 CUSTOMS, CULTURE, NORMS

- Community engagement as a (culturally) meaningful custom. Volunteering students and parents at the high school. There are programs for integrating immigrants, lonely, elderly, poor in community activities such as North End Farmers Market.
- Celebration of changing seasons, such as harvest festivals, Halloween, Thanksgiving is a cultural custom and symbols.
- Supporting local farmers and their businesses boost local economy, and is culturally meaningful

8.2.6 LIMITATIONS TO INTERDISCIPLINARY RESEARCH

This research was designed to explore the LFS in Vermont, and one of the major challenge was how to measure or analyze findings when immersing oneself in the complex realities of the local food system. Even though much of the data collection involved various stakeholders to provide different perspectives and enable cross-checking of information, there is a limitation to that information as the researcher choose an ‘academic model’ to make sense of the data collected.

“One problem of identifying the key social variables for studying complex social-environmental realities is often exacerbated by academic models that reward disciplinary-based research...when it comes to critical issues and categories outside of their disciplines, and commonly shared perceptions about the feasibility of what can, or should, be measured. Atop these academic rigidities comes the inherently political, value-laden, and often-contested process of prioritizing the most important variables for analysis. Finally, there is the technical challenge of measuring these variables and tracking them over time and across spatial scales. (Norgaard and Baer 2005).

8.2.7 WHAT HAS NOT BEEN INCLUDED?

This explorative study of the main LFS drivers and their role in maintaining the LFS in Vermont is based on limited time and budgets. Due to practical limitations, some elements that are important for the operations of the LFS in Vermont might have been left out. If possible, more time would be spent investigating more details from the community’s perspective and specifically the role of funders, grassroots movement and the role of food activists and community figures that spend their time and energy teaching children and the public about the value of food, nature and landscapes.

8.2.8 TERMINOLOGY

LFS	Local Food System
FCN	Food Community Network
F2P	Farm to Plate Initiative

9 RESEARCH QUESTIONS

What forces should be present (act) to ensure maintenance of Local Food Systems in communities?

9.1 WHAT IS THE ROLE OF COLLECTIVE ACTION IN THE EFFORTS TO STRENGTHEN THE LFS (RESILIENCE)?

Sub questions to guide data gathered are the following

- How do collective efforts increase cross-pollination of knowledge and resources?
- What are the actors' experiences from the collaborating in the network, and what strategies have been successful?
- What are the lessons learned from the F2P partnerships in Vermont?

9.1 WHAT FORCES DRIVES THE LFS?

9.3 HOW DOES THE LFS IN VERMONT IMPACTS FARMERS AND THE LOCAL COMMUNITIES?

9.4 WHAT HAS NOT BEEN INCLUDED? WHY?

The impact of support systems such as public policy or infrastructures such as available land, access to loans and grants, transport, etc are essential in local food systems. However, it is beyond the scope of this research and will not be discussed in detail.

10 RESULTS

The Primary Objective is to fill the current information gap on the multiple contributions that Local Food Systems (LFSs) offer to communities in Vermont, and results of the interviews are presented here under two more specific research objectives.

Contributions are expressed in actual outcomes from collective work, and values that the network offered in terms of *social- and ecological learning*.

10. 1. WHAT IS THE ROLE OF COLLECTIVE EFFORTS IN MAINTAINING LOCAL FOOD SYSTEMS (RESILIENCE)?

This section demonstrates the values that are generated when combining a range of food system actors to collectively strengthen the LFS. Collaboration through F2P provided space for existing food system initiatives in Vermont, and the transmitting of knowledge and resources. Members were challenged to incorporate social, ecological and economic responsibility in the efforts to strengthen the LFS. Collective efforts through the F2P initiative is a holistic approach engaging multi-stakeholder bodies for strengthening the LFS. Highlights from the findings indicate that collectively managed, multi-stakeholder networks increased the capacity of the network in several ways. First, members

would participate in sharing of information, knowledge and expertise and thus access information and knowledge about the LFS they would otherwise not have, or be involved with. This also helped members obtain a deeper understanding of LFS issues, and more specifically about natural resource management which food and farming is built upon.

Second, because the network consists of long-time and already existing LFS initiatives, the network did not have to create “new infrastructures” for strengthening their food system. Instead of creating new infrastructures, the F2P brought together actors that was already present, and capitalized on their expertise and knowledge about the needs of the LFS in Vermont. Having these actors working together reduced “duplicating efforts” and had them working together toward shared goals. Third, the sharing of resources within the network also made it possible for the actors to embark on projects one organization would not have the capacity to operate alone.

Finally, the “collaboration across scales” also created a new space for social learning. As members would collaborate, share knowledge, and interact in the network, it linked the different actors closer together both personally and professionally. This personal connection held the actors accountable to larger food systems issues, which created commitment and interest among actors to work to improve- and to learn something new about the food system. Social learning occurred through the way the network communicated culturally, how the network solve conflicts and problems, or ways that the network understand and act in management issues concerning natural resources, agricultural land, community development and the local economy.

10. 2. THE FARM TO PLATE NETWORK

For several decades, Vermont has been the home for LFS initiatives such as community gardens, farm- chef’s partnerships, university farm programs, a statewide organic food association, school food programs, CSA’s and local food restaurants. Taking in consideration the existing initiatives, the Farm to Plate network was by some stakeholders, a “latecomer” in the work to strengthen Vermont food system. Placing sustainability as a core value, F2P were initiated to offer a shared platform for all the existing grassroots organizations from cross-sectors of the LFS. The network connects all the initiatives to collaborate on issues touching on farm viability, environmental stewardship, the local economy, and the wellbeing of community. Representing their own organization, network members were organized in five working groups. In addition, some members engaged in cross-cutting teams where stakeholders could address issues in energy, financing, health, research, food access, labor, research, soil and water. To measure their progress, all the working groups were encouraged to monitor and keep records that say something about the present situation, and creating measurable steps for what the group wanted to achieve. By monitoring progress, the working groups could check their own progress to see what it takes to reach any of their set goals, as well as looking back to see what has been achieved.

10. 3. CROSS-POLLINATION OF RESOURCES AND FEEDBACK LOOPS

The sharing of knowledge and expertise across scales and schools of thought increased the capacity of the network to address LFS issues. The cross-pollination across sectors introduced stakeholders to knowledge and information they would otherwise not be involved with. The network was also a platform for sharing the new knowledge and information with stakeholders on other scales, which

created cross-sector learning for a broader specter of LFS stakeholders, also referred to as feedback loops. Members explained they learned useful skills when combining multi-stakeholder groups with various competencies and backgrounds. At meetings, actors would discuss issues ranging from food-related health challenges, scaling-up production, farm viability, workforce development, and strategies for increasing consumer demand. This was seen as a valuable trait, for example as businesses would normally be focusing on budgets and tax structures now became involved with health, consumer education, composting and water quality issues.

While the most obvious interest among for-profits would be economic incentives for joining the network, one business member explained that the network could offer valuable opportunities that exceed the economic incentives. In some cases, being part of the network can be in the interests of both the business, the community, and the environment. “The big opportunity for us now is waste reduction”, one restaurant manager explained. “Through the F2P we learned that our business can donate our food waste and receive a tax reduction in the end of the year”. This way, the network offers for-profits appropriate incentives to take responsibility and care for sustainable alternatives while ensuring the economic return for their efforts.

“I love talking about trash now” because I’ve learned this from the Farm to Plate. From the conversations in the network, I’m able to take it back to our team and say “here is some way that we can save money diverting our food waste”.

Another example was that F2P hosted a “scaling up” workshop where producers and companies shared their experiences and views on scaling up a business. *Can Vermont producers scale up their production to accommodate a growing demand from retailers?* Food business managers, retailers, practitioners and economists shared their insights in scaling up a local business. From the distributors and institutions point of view, it is desirable that more farms choose to scale up their production as this could lower their price points but also serve a lot of convenience for logistics and transport reasons. Vermont Bean Crafters shared their experience as a Vermont based food company that scaled up rapidly from its startup in 2010. The company created value added products such as bean burgers and dips, and partnered with the food distributor Black River Produce, and signed a contract with food service manager Sodexo. By 2015, the company served their products in Vermont hospitals, schools and colleges. Overall, participants discussed challenges and opportunities for what Vermont producers could do to scale up for such farm-institution partnerships. The workshop introduced the participants to different perspectives; some producers shared their experiences, from being a small-scale business involved in both production and sales of their products, to larger farmers growing bigger volumes for wholesale. Some businesses discussed the advantage of going to farmer’s markets as they could get good price points and connect with their customers. Other producers saw the advantage in spending lesser time on sales and instead put in more time in the production. This allowed them to sell larger volumes in short time, but at slightly lower prices.

10.4 DEEPEN THE UNDERSTANDING OF NATURAL RESOURCE MANAGEMENT (SOCIAL-ECOLOGICAL LEARNING)

F2P meetings facilitated for members gaining a deeper understanding of natural resource management, and have them reflect upon how natural resources links to the LFS. At F2Ps annual conference for example, a soil demonstration was held to show the 250 members the water holding

capacity in tilled and no tilled soil. No-tilled soil kept its structure while the tilled soil fell apart after immersed in water. This demonstration was to shed light on farming practices that maintains soil health such as cover cropping, or the integration of diversity of plants and animals. It also demonstrates how soil health links to water quality in the surrounding lakes. From what was said at the conference *conservation and stewardship start with how we treat our soil. Soil is a precious resource that must be fed and nurtured, much like feed and nurture our children (Farm to Plate annual gathering, 2015).*

F2P and their member organization Vermont Fresh Network facilitated for spaces where LFS actors could discuss possible solutions to complex problems involving farming and the environment. One example was a fishing event for farmers and chefs asking *How does farming practices link to the environment and pollution of the surrounding lakes?* Knowing that a number of local restaurants serve fish from Lake Champlain, chefs were encouraged to think about the farming practices that their farm partners are practicing. Farmers were able to ask questions and think about possible solutions to mitigating run-off. One possible solution that came out of this discussion would be to create an incentive for farms doing “best practices” to mitigate pollution of the lake. For example, there could be a higher market value on environmentally responsible products from farms that pay attention to the way their farming practices affect the local environment. However, this meant that chefs and consumers would be encouraged to pay more for “environmentally sound” food. Restaurants can receive a certification so consumers can know the food served at a given restaurant, is environmentally responsible and express care for the surrounding environment.

The background for this event was the new Clean Water Act that addressed excess phosphorus in Vermont lakes. From what was explained at the F2P annual gathering, stakeholders expressed a concern about this law, as part the problem could be traced back to runoff from nearby farms. For some it meant that the new law would incentivize better farming practices that mitigate runoff. However, the local newspapers featured stories from farmers claiming the new law could pose a serious threat for small farms that could not pay for major changes in the ways they managed their farm. The Clean Water Act created some level of uncertainty and frustration among stakeholders, and at F2P meetings, members could ask questions and receive information about incentives such as financial and technical grants that could help farmers and other members to meet the challenges of improving their practices. This way, more actors were engaged in the conversations around best-practices at farms, and widen the link between the food system and natural resource management.

10.5 ACCESS TO HEALTHY LOCAL FOOD FOR ALL VERMONTERS

Improving access to healthy local food for all Vermonters were discussed within the network, being one of the main network goals. For low income people in particular, prices were often a barrier to consume locally grown products. Different strategies were applied, from State funded coupons to spend at farmers’ markets, to fundraisers that help finance CSA shares for low-income people. More recently, there has been a growing recognition that people’s connections, thoughts and feelings towards the LFS initiatives may be off-putting to some people. This might be caused by the high prices at farmers’ markets, or the lack of affinity to the groups of people and the typical venues where local food exists. For this reason, a community funded farmers market was opened in a neighborhood outside the city center of Burlington. Local farmers pay parts of the price, enabling

consumers to receive local food at reduced costs. Farm to institution was considered an important pathway to have more people access local food. Local food in public institutions could offer local food at reasonable prices, and reach out to more mainstream people, a group the network was targeting. Serving local food to people in elementary schools, high schools and college campuses would also increase access to local food regardless of their households' status or income level.

In 2012, the Agency of Agriculture (member of F2P) organized the first *“scaling up of the farm to institution workshop” with actors across the supply chain. The question was what does it take to bring more local food into a Sodexo managed institution, like a college or corporate office?* Present at the workshop were distributors, processors, food hub people, Sodexo staff, University administrators, and producers. From interviews with stakeholders, we learned that this marked the first time a food service company could explain about their policy, and producers could ask questions about it, and see the opportunities for partnerships. It broke down communication barriers and presumptions. This concept has been replicated several times. At present, the University of Vermont (UVM) host “Farm to Institution Forums” where producers and processors are introduced to food service providers. Over 80 producers attended one forum held at UVM where twelve direct local food relationships were made with Sodexo.

10.6 INCREASE PARTICIPATION IN LFS

In terms of participation *within* network, this mainly took place in form of dialogues at meetings, as well as information shared online, through emails and the network webpage. Many stakeholders experienced that their involvement in the network increased access to information, knowledge and resources. Some pointed out that their contacts within the network could direct them to specific resources or expertise when they needed it, as well as directing their own clients to resources within the network. Nutrition Services at the hospital found the network useful to share their success stories. As the hospital hosted LFS events or made new farm-partnerships, this could be shared within the network and reach many relevant people. This way, the network allowed participation through better access to valuable information and opportunities for more LFS actors.

The Agency of Agriculture staff were active members in the network, and expressed that the organization's structure increased the members' capacity to participate. With one organization facilitating the network itself, more time could be spent on implementing solutions. One staff member explained that “at times, state representatives are confronted to play the convener role and a project manager at the same time. In the F2P network, all the member organizations are able to participate, and for the State, it means playing mainly the convening role as we connect people together and direct them to relevant resources”.

Some stakeholders felt that the network was dominated by non-profits and representatives from academia, and several stakeholders questioned the lack of farmers and for-profits participating in the network. According to the network, the intention was to include more of these groups, but many producers would be working long days in the field, would not be able to attend meetings. For-profits and producers addressed clearer incentives for participating in the network and argued that if there were more for-profits attending the meetings, this would be an incentive for more for-profits wanting to attend. What was discovered from the fieldwork however, was that stakeholders that did have the time to participate, would still be in a position to follow what the network was working on.

As an example, Agency of Agriculture and the University Extension Services would attend the meetings, and share the information back to the farmers. This created a feedback loop where farmers could stay updated on news and information without having to be present at all the network meetings.

In terms of *public* participation, consumer awareness and education was the strategy widely acknowledged by network members. Increasing food literacy was believed to lead to more people to appreciate and value local food and farming. During the interview process the network was working on a social media campaign which aims to increase consumer demand and interest in Vermont's local food economy. In 2016 "Rooted in Vermont" was launched as a participatory tool for people in Vermont to share ideas with family members as they are all involved in food and farming, using the slogan "how do Vermonters enjoy local food"?

10.7 RIGHTS AND VOICE OF UNDESERVED GROUPS

The network and the member organizations were in a position to address the rights and voice of undeserved groups in communities around Vermont. Coupled with the fact that more consumers are asking for ethical food which secure a fair deal for the producers, efforts were made to address working conditions for migrant farm workers living and working on Vermont farms. At a network gathering, the members addressed working conditions of Vermont farm workers. One of the dairy workers became a community leader after his wages were stolen on a Vermont dairy farm shared his story. He and his colleagues described working long hours at the farm where they barely had time to rest between their shifts and enjoyed no days off. *"They stayed in a run-down camper with no running water. Diaz organized his co-workers to stand up to their abusive employer—demanding and winning their stolen wages"*. A campaign was launched as "Milk with Dignity" and call for responsibility of larger corporations such as Ben and Jerry's to take responsibility for the welfare of workers in the milk industry. The following year, Victor were arrested by the ICE (Immigration and Customs Enforcement). However, the larger community in Vermont successfully organized a rally and had 2.000 signatures to stop the deportation of Diaz.

10.8. WHAT ARE THE ACTORS' EXPERIENCES FROM THE COLLABORATING IN THE NETWORK, AND WHAT STRATEGIES HAVE BEEN SUCCESSFUL?

10.8.1 BUILDING ON SOCIAL LEARNING

Stakeholders described the network as a *"community of practice"* referring to the way that the members learn and act together to strengthen their local food system. The involvement included the processes of *participation* in collaborative work, as well as the *social learning* that took place as the representatives from cross-scale of the LFS (from grassroots organization to government entities) were able to sit around the same table and contribute to build a common network. Some of the grassroots organizations were well-established in LFS work for long time. NOFA VT (Northeast Organic Farming Association) as an example, is experienced in working with Vermont farmers, the community and other LFS actors since its establishment in 1971. Partnering with such grassroots organizations with long-time experience, could offer some insights on real needs of local farmers, consumers and other LFS actors.

The network coordinator explained that the participation in the network challenged the members to think and act collectively. Members referred to each other by first name, and expressed that this personal connection to the people within the group helped them acknowledge that they were part of a larger team, committed to meet shared goals. “When people know each other, like we do here in Vermont, they hold each other accountable”. At times they were confronted to handle disagreements, conflicts or problems. Some themes or issues could be sensitive conversations to have, but the regular interactions among people knowing each other helped members feel more confident to bring up larger conversations at meetings.

The shared goals and monitoring of progress helped reduce “duplicating efforts”, members explained. Instead of having several actors operate independently or working on the same issues, members can contribute with their expertise, work together and collaborate on issues. All in all, the F2P network allowed the member organizations to work on projects where one organization would not have the capacity to operate alone.

Because the members came from very different backgrounds, the establishment of the network was time consuming. This could lead to some actors were unable to attend meetings and for this reason, many farmers and for-profits were not directly involved in Farm to Plate. Although the network was mentioned as a way to expand market opportunities for these actors, stakeholders explained; “farmers are too busy farming, distributors too busy distributing”. As the overall mission is to strengthen the LFS and increase the amount of local food consumed, for-profits partners and farmers addressed the need for stronger incentives to engage more for-profit organizations.

10.8.2 SHARED LANGUAGE

From members’ experiences, the network had to build a language in order for the different actors to be discussing issues without having to explain details in every meeting. It was challenging to have a diverse group of people discuss LFS issues from access to land and grants, healthy soils and farming practices, pollution and clean environment to social justice and workers’ rights. After spending time talking about this in F2P meetings, more people knew more about challenges from the perspective of actors in production, processing, distribution, or the preparing of food. At the time of the interviews, several members experienced that they spent less time on meetings as the network has started creating its own culture. Some members explained that through the shared network these issues become a shared responsibility. “Eventually the network has created its own language and we spend less and less time getting people up to speed on different topics”. Members explained that *it is the people themselves that are creating the network together. The people are very important.*

“The network has been helpful to bring more light to the conversation around food system development. It has brought organizations and stakeholders together across the state of Vermont. I think the conversations that they are having are at a higher level now, people have a similar language, and they can talk about an issue without getting anybody up in speed, and that’s been very helpful.

From what stakeholders experienced, the network structure could be complicated to operate, and organizing the network where at times very time-consuming. “Looking ahead, maybe there is no need for the organization F2P in the future. Maybe this network provided members with valuable learning and a platform for communication that the LFS organizations could carry on themselves.

However, members interviewed had an overall impression that the F2P were proved useful, and some stakeholders believed the network would play an important role in the future.

10.8.3 VALUES OF SOCIAL- AND ECOLOGICAL LEARNING

Core values in the network were based in sustainability thinking, and linked agricultural land, and natural resource management to the local food system. Members from different schools of thought and disciplines ranging from businesses, research and education, policy got engaged in topics such as sustainable land use, best practices at farms, nitrogen- and soil management, etc. With time, the actors would be better informed on many of these topics. In terms of social-ecological learning, members of the F2P were exposed to scenarios where short-term costs had to be evaluated against long-term goals. In terms of environmental stewardship, aspects of nature and the environment will not be easy to “effective” or “intensify”.

“We don’t know what all the answers to our food system problems. But we are trying to find out what works. Maybe some things could have been done differently” one of the coordinators explained.

10.8.4 ADDRESSING GAPS AND OPPORTUNITIES FOR LFS DEVELOPMENT

From what members experienced, the farm to Plate were suited as an umbrella organization for convening the existing LFS initiatives. However, interviews indicate that there were groups of people that were not aware of the Farm to Plate network and according to some community members, the network were also more concentrated around certain counties of the state.

Some stakeholders felt that the network was dominated by non-profits and representatives from academia, and several stakeholders questioned the lack of farmers and for-profits participating in the network. According to the network coordinator, the intention was to include more of these groups, but many producers would be working long days in the field, and thus unable to attend meetings. For-profits and producers addressed clearer incentives for participating in the network and argued that if there were more for-profits attending the meetings, this would be an incentive for more for-profits wanting to attend.

10.8.5 FEEDBACK LOOPS

What was discovered from the fieldwork was that stakeholders that did have the time to participate, would still be in a position to follow what the network was working on.

As an example, Agency of Agriculture and the University Extension Services at UVM would attend network meetings, and share the information back to the relevant actors in the community. This created a feedback loop where groups like farmers and businesses could stay updated on news and information without having to be present at all the network meetings. One restaurant manager and member of the F2P network had the impression that many farmers were linked the LFS through UVM extension services and specifically through a Vern Grubinger. “He runs conference calls and has all the information from the farmers. He is also active in all the F2P conversations”. From what stakeholders experienced, there was an indirect link between what was happening at the F2P meetings, and the information that was passed on to the farmers. there is ongoing farmer-to-farmer communication taking place in Vermont. Even though many farmers were not aware of the Farm to Plate network

and not directly involved, farmers were involved indirectly through UVM extension services and other agricultural practitioners.

PART 2 LOCAL FOOD SYSTEM DYNAMICS

11 WHAT DRIVES LFS IN COMMUNITIES, AND WHAT FORCES ACT TO MAINTAIN THE SYSTEM?

Many stakeholders, being policy institutions, food retailers or local farmers, were questioning whether LFS is “just” a movement, or if is a concept that is to stay. Are local food system initiatives worth investing in? Exploring the forces which drives the LFS forward, and the forces that enable it to retain, could provide insights for what the interest in LFSs builds on, and whether this LFSs are there to stay.

Findings suggest that there were drivers that act to maintain- and to push the development of the LFS forward. These were drivers based on market-values on one side, such as demand, producer-partnerships and marketing of local products, and drivers based on non-market values such as personal connections, identity and sense of place, public participation, collaboration and civic movements on the other.

1.1.1 DRIVERS BASED IN MARKET: DEMAND AS A LFS DRIVER

Based on findings, the values based in the market are to a great extent shaped by the demand for LFS products and demand was considered to be critical in moving the LFS forward- as well as a critical force in sustain the LFS.

Consumer- and community demand for local food has increased drastically in Vermont the past 15 years, stakeholders explained. Demand as a driver has helped create new market opportunities for many producers, enabled new partnerships between LFS actors, facilitated for new spaces for local food, and supported the establishment of many food entrepreneurial businesses. All together community- and consumer demand has contributed to drive the LFS forward, and the economy it builds. Other drivers based in market values were linked efforts that exposed the public to local food, such as restaurants, and educational efforts that contribute to consumer awareness and education about local food and consumption.

Interviewees explained that demand as a driver of the LFS has changed over time. According to them, the initial drivers of the LFS in Vermont was linked to individuals in the 1970s who addressed the lack of affordable, pesticide free food. There were little alternatives to the food available at the supermarkets, especially for people looking for organic, pesticide free food. This sparked the establishment of local food coops which offered healthy, affordable alternatives, along with the connection, and responsibility to the local environment. Around the same period the organic movement had settled in northeast Vermont with a growing number of organic farmers providing the local food coops with fresh produce.

More recent drivers started to appear in the 90s, when local chefs started to order quality products from local producers. Restaurants promoting local producers and quality food to the general public has helped drive the LFS forward. From findings, the most significant changes in terms of demand for

local food are happening through retail sales to public Institutional (hospitals, universities and schools). According to one of the local distributors, students have played a major role in what has contributed to transform the amount of local food available at college campuses.

1.1.2 PRIVATE CONSUMER DEMAND

Based on interviews, private consumers involved in the organic movement were the initial drivers that enabled the LFS to take off. Consumer demand is claimed to increasingly be a driving force of the LFS. Partly this demand is rooted in a quality, transparency, ethical and environmental considerations. Some explained that these consumers are concerned about things like workers' rights, what are being fed to the animals, GMO labeling or the effects of soybean production. Food is cheap in America; we know how to do it. But we got stupid and started using growth hormones and did things wrong, according to one interviewee. Sometimes these consumer groups were referred to as the 'local food movement'.

From what consumers explained, local food is at times more expensive than food in conventional stores, and some consumers balance between shopping directly from farmers and going to the supermarket. Generally, consumers were willing to pay extra money for better taste and quality. *"Today, consumers demand transparency"* interviewees explained. *People are better informed, and more and more concerned about things like workers' rights, what are being fed to the animals, GMO labeling or the environmental effects of soybean production"*. Sometimes the increased interest in local food was referred to as the "local food movement".

1.1.3 INSTITUTIONAL DEMAND FOR LOCAL FOOD

Vermont's largest hospital, has committed to buy local, nutritious and sustainable food and their mission statement reads: *"The UVM Medical Center partners with environmentally responsible food producers with the goal of being the greenest hospital in the country. (UVM Medical Center).*

According to the nutritional Director of Food Services, the hospital serves about 5,000 meals a day and estimate 2 million meals are served annually. In addition to offering patients and employees local fresh produce in their restaurants, the hospitals host a weekly farmers' market where faculty and patients may buy fresh produce from local producers.

"The hospital can serve as a role model to the community", the Director of Food Services explained. Through partnerships with local distributors and producers, the hospital aim to provide valuable markets for Vermont farmers while providing patients with fresh, healthy food. The hospital uses local vegetables and meat such as beef, chicken and poultry. In 2012, the hospital reported \$ 1,5 million was spent on local produce (FAHC goes localvore, WCAX.com). From a nutritional perspective, the priority is minimally processed food without pesticides or growth hormones, and much of these products can be traced locally, the Director informed. However, not all local food meets the expectations of what is considered "healthy" food. Local food is trendy in Vermont, and food services can popularize local food, but not all the products are necessarily quality material. In essence, all local food did not reflect values such as social, economic and environmental profile that was often linked to the LFS.

One interviewee explained a situation where the hospital had stocked up with large amounts of rutabaga, (a vegetable not the most favored), and many of the hospital staff didn't think they could serve it. However, the director had the hospital serve rutabaga, "and people loved it!" he explained. From such incidents, local food in public institutions could be in a position to introduce people to food they at first thought they didn't like. "Some consumers never buy rutabaga. Many people do not know how to prepare it". At public institutions, people are exposed to simple food, that can be local and healthy, and easy to prepare. Based on these findings, anchor institutions such as hospitals and universities are in a position to expand markets for many local producers and increase the consumption of fresh, local food. It is also an arena for local, fresh food can be "normalized" and have people try new local food products that most people normally never try.

Restaurants have played a role in getting local food out to the consumers;

1.1.4 STUDENT DEMAND FOR LOCAL FOOD

A growing number of college campuses in Vermont offer local fresh produce in their dining halls, and students' demand for healthy local options are taken seriously. According to a local distributor, "College kids and high school kids really care about where their food comes from. They are customers, and they are going to get what they want. That's the beauty of the open market. Where there is demand, someone will supply to meet that demand".

Part of the background is that students organized "The Real Food Challenge", a student led group in dialogue with Sodexo, University Staff and others actors in the food industry. The students demand for more local food in their dining halls. Sodexo is one of the world's largest food service companies. According to the distributor to Sodexo's institutions; "My prediction is that in 10 years when you go to UVM or St. Michaels College, most of the food in the cafeteria is going to be organic". However, he added "If you tell Sodexo that, they would say 'you crazy, there is no way we can afford that' But wait and see."

1.1.5 CORPORATE DEMAND FOR LOCAL FOOD

In Vermont, corporate supermarkets are increasingly offering local and organic products and many LFS actors in Vermont frequently brought up that Walmart had started selling "local food" in their stores. Hannaford's, a New England based supermarket chain store has launched an "I love local campaign" where Vermont made products are displayed under the campaign name. One distributor collaborating with these stores explained that their customers have asked for more local products. "The stores do whatever they can to make their customers happy". From a local distributors' perspective this is a growing trend that illustrate the power of demand in the commodity market. "As soon as the giant food companies find out people want grass fed, animal welfare or organic, they have to react to it. Like Walmart has organic food now! Nobody would ever guess that 10 years ago". On one hand, these "local food campaigns" increased access to local food to more consumers. However, supplying more local food through larger chain stores raised concerns for many of the stakeholders interviewed. These concerns were in particular, about what impact these corporate arrangements might have for local producers. Among researchers and LFS practitioners, concerns were that corporate chains are not necessarily committed to certain standards such as environmental responsibility, fair price for products, animal welfare or decent working conditions for

farm workers, values that have been central in LFS efforts to strengthen the LFS. On the other side, some actors believed the corporate actors can operate on social and environmental values in addition making good profits.

11.2 DRIVERS BASED IN VALUES AND PRINCIPLES

From findings in Vermont, many people referred to shared community values and principles. Starting with the organic movement which addressed the lack of affordable, healthy and pesticide free food in 1970's, followed by incidents of animal disease, the need for connecting people to fresh, healthy food has increased. Some referred to the importance of supporting the "working landscape", the value of shopping locally, and to support the neighbor. In terms of consumer values, growing, cooking and eating "real food" was described frequently by people during the fieldwork. Commitment to shared values, and community engagement was also found as an important part of the communities studied such as participation in community events and volunteering in community organizations.

One stakeholder explained that "there is a very progressive, probably well educated, sometimes affluent, segment of our societies (might be the today's hippies), very progressive, that understand, interested in buying locally, supporting the farmer down the road, not the anonymous farmer anywhere on the planet. That's good for VT, that's good for our economy, that's the kind of community we want to be part of. That's a big segment of our population".

11.2.1 Consumer education and food literacy

The community actors interviewed expressed that their efforts have addressed the gap between the people and their food sources. Community organizations acknowledged that in order to reconnect people back to where their food was grown, much of this comes from the way the people and the community value good food. "We have lost touch with how important food is, and many people are unaware of the real price of the food that they eat" one stakeholder said. Exposing people to value good food, and develop "food literacy" were frequently mentioned as a way to counteract this disconnection between community to their food source. Food literacy refer to the knowledge people in their community had about cooking, eating and growing food and links to awareness and knowledge people have about food.

The Vermont FEED program encouraged community members to take the risk of trying new products and recipes. The students participated in harvesting produce from the school garden, preparing the food in the kitchen, and serving it in the school cafeteria. "We are working on the demystification of eating and preparing real food", the director explained. It was noted that there is a need to teach people in the community the skills of preparing food from scratch. One interviewee explained that this is the strength of the LFS; "People learn to value "good food", and to like different things". The program also reached out to school cafeteria staff, and the wider community were exposed to cooking and growing healthy food.

In the past, the Vermont food coops were influential in connecting people to the local food. From what stakeholders explained, LFS in Vermont started to take form in the 1970's as farmers and consumers connected over fresh, safe and healthy food. The establishment of local food coops became a place for community socialize, stay updates on community events, and to buy fresh

produce. This way, the food coops became a meeting point for people to stay connected. Stakeholders also mentioned that public institutions in Vermont has been important partners with local farmers and local organizations involved in the LFS. The University of Vermont (UVM) has its own Food System Initiative through partnerships with local farms, Students learn skills in running a farm business from seedlings to harvesting, sales and distribution of the products as part of the course curriculum. The Agency of Agriculture that represents the state of Vermont concluded that *more people knowing more about the local food system is just great, that is one step ahead in the right direction*. Farm to School programs are partnerships where local schools purchase directly from local farmers to offer students healthy local produce. The School food program at Burlington High School for example, buy local food from nearby farmers at the Intervale Center, and students are engaged in growing food outside the classroom doors.

11.2.2 SENSE OF PLACE

Stakeholders emphasized that many people in Vermont grow up close to farmland, and this impact how peoples' values around food and farming. There is a close link between people, nature, and the landscape and many people express gratitude for the beauty of Vermont. Stakeholders compared this to people in cities like Boston or New York, where many people have no connections to farms and farmland.

It was not long ago that there were a lot of farmers in Vermont and we have a lot of people that are connected to the land. I think the agrarian connection result in a lot of enthusiasm, even for those who do not associated themselves with the local food movement. One business owner explained “many people drive past farms and farm landscapes every day. It is hard to be too distanced from it”.

11.2.3 SUPPORTING YOUR NEXT-DOOR NEIGHBOR

“Supporting your next door neighbor” was probably the statement most frequently mentioned as a motivation to engage in the LFS. For many people interviewed, there was an added value in shopping locally supporting your neighbor and local businesses.

Vermonters desire a strong working landscape for all its scenic, cultural, economic, environmental, and recreational benefits. - Vermont Working Lands Enterprise (2016)

According to what informants explained, some of the agricultural traditions in Vermont are the same as the new traditions of the local food movement. This is likely to be one of the forces that enable the LFS in the community. *“The traditions of growing your own food have been a very strong tradition in Vermont for a hundred years. To buy from your neighbors or support your local community. Those are values that have never gone away here”.*

This way, many of the values identified with the LFS were similar to what people described as “Vermont traditions”. LFS cultural tradition is based on sustainable land use, maintaining biodiversity, spending money locally, and supporting the “working landscape”. The working landscape refers to agriculture, food system, forestry, and forest product-based businesses. From what people explained, the LFS has helped reinforce these cultural traditions.

Stakeholders explained that many Vermonters see the working landscape and businesses based in food system forests and agriculture as their cultural heritage. Some stakeholders linked this values to the back to the land movement which addressed the closeness to the land, and environmental consciousness, to the way people choose to buy food products outside the conventional market in support for the neighbor and the local economy.

“Passion” was frequently used as a motivation from the community side to participate in the LFS. “We need people with passion. People with shared passion for the same issues” one of the LFS actors explained. “And we need people and places to go to every day with some hopefulness”, said one of the directors involved in the LFS.

ALTRUISTIC BEHAVIOR?

Another interesting finding was that the mentality of “helping out the neighbor” could translate into the business world. Instead of competing over producers or “stealing the markets” for other actors, some actors shared their contacts and resources, or collaborated with other local businesses in the area. As an example, a restaurant manager experienced an openness among the people involved in the local restaurants and distribution business. Restaurants would share their local suppliers and share prices on the products that they buy.

If businesses share their information, possible collaboration could occur with other businesses and the local distributor. If one restaurant or business has a good source, and if this grower wants to supply more of this product, it could be possible deliver to several places at once. This could make distribution more economical for the farmers. “It is in our interest that some of the local farms can grow bigger” one restaurant manager explained. For farmers that wants to grow, it is convenient for us, and for the distributor that businesses share their resources and enable more efficient distribution of their products. One of the local restaurant saw advantages in sourcing their products locally. “if we used SISCO we wouldn’t know the person actually making the products, but here in Vermont growers may self-distribute or go through Black River Produce (they are one of the reasons why this food system works), and this way, the restaurant can know the growers more personally, and commit to buy from them.

11.2.4 PUBLIC PARTICIPATION/THE CIVIC MOVEMENT:

Public participation in celebrations of food and farming are common across the state of Vermont, and help drive the LFS forward. Interviews addressed public participation has been a force shaping the Vermont LFS since the 70s. In the 60s and 70s there was a wave of “back-to-the-landers” that settled in Vermont. Interviewees said many of them wanted to reconnect with the land as a reaction to the consumerism they experienced in the cities. Their involvement in organic food production, and the establishment of local food coops, contributed to the LFS that we see today, interviewees explained. Food coops are collectively owned, non-profit, and locally managed stores that source local products, and they have a long tradition in Vermont. Some individuals that moved to Vermont in the 70s were associated with the anti-war movement, and participating in demonstrations against the establishment of big corporations. Vermont was the last state to get a Walmart store, one producer said; activists tried to stop it from coming to Vermont.

From information gathered during fieldwork, there are about 70 farmers' markets across the State. There are food festivals, art exhibitions, fundraisers for local businesses, and other food events where people come together to celebrate the interaction between local food and community.

Volunteer organizations organize bike tour to farms, and community and school gardens are widespread across the state. At one of the high schools, for example, students help run a food truck that offer local food during lunch time.

There is a large artist-community based in Vermont which is often built on traditions of growing food, supporting the community, as well as sustainable land use. The traditional red barn or the black and white cows are iconic symbols in Vermont, and are not unusual in the art scene. The art scene is appreciated by the local community, and it appears to be a "force" that helps drive the interest and celebration of what is local, authentic and esthetic about the Vermont agriculture and landscape.

"Eyes on the land" is an art project where artists explore Vermont farms and forests. One artist interviewed produces art about food, farming and community together with kids in the local elementary school. (Acker)

11.2.5 SOCIAL EMBEDDEDNESS

From observations and participation in Vermont communities, it seemed that the LFS facilitated more community members to stay "connected". Many people involved in the LFS were connected, both personally and professionally to other LFS actors. For example, many people interviewed would mention other LFS actors by first name. Farmers in Hardwick mentioned names of farmers in Burlington. Food businesses in Burlington knew farmers in Grand Isle, for example. When asked, the answer was that "we all know each other". Some LFS actors explained that they connect with other people involved in the LFS at local farmers' markets. Other people connected to their community through LFS events such as food festivals or fund raisers to support the community. One of Vermont's seed companies explained that there is a lot of sharing between the actors (knowledge) and many organic farms share their experiences and good practices.

Compared to many other places in US, Vermont has become well-known for its local food system activities. Interviewees explained that many of the people that moved to Vermont since the 1970's came there to create a different reality from what they had in the city, and different from many other places in the US. "Many were really motivated to participate in the local agriculture because they didn't like what was going on in the cities, with the Vietnam War and such". Some farmer families that had lived in Vermont for many generations experienced that their own kids wanted to move to the city, and were happy someone were eager to learn how to farm, one interview explained.

Stakeholders described that, as citizens in communities around Vermont, people have an appreciation for the beautiful landscapes in Vermont and for the activities that has been created. "We have a community spirit here in Vermont, it is the way we do things here". Many had the impressions that Vermonters are able to work together and discuss how to solve problems collectively. It appears to be a sense of "we" in Vermont which can be seen as a force that reinforce LFS activities and initiatives.

For many people in Vermont, there is a value in supporting your community and being good to your neighbor is considered important. A community' value system depends on the environment where you live another interviewee said. "If your community involves people producing food, then that value of being a good neighbor and supporting your community could be to buy local food". In Boston, being a good neighbor might be something different. Supporting local food and the community is not affiliated with a particular political belief. You can be a Democrat or Republican and still support local food because it is a core value for many people in Vermont, as described by one informant.

Findings indicate that civic engagement is still a force that works in Vermont communities. One example was told by stakeholders: it involved a McDonald's restaurant in Burlington that finally had to close down. According to interviews, people didn't want a McDonald's anymore. It was placed downtown in Vermont's biggest city Burlington. "Where this restaurant used to be, is now a Farm to Table Restaurant", a restaurant staff confirmed. The Farm House tap and grill sources seasonal food from local producers and "normalizes" the buy-local to the public. In some ways, interviewees explained, Vermont and the people living here might be described as a little progressive. This linked to another example which is the new GMO law from 2015, which marked Vermont as the first state that requires companies to label all products containing GMO in their products. From what was expressed by several interviewees, there is "the core" types of values in the community that don't go away.

11.2.6 THE ROLE OF POLICY SUPPORT FOR LFS

The public interest in local food coupled with the variety of LFS efforts across the state, has gained a momentum and generated support from public policy.

According to representatives at the Agency of Agriculture, the local food system offers valuable contributions to the Vermont economy and the local food system is of high priority. The State has been active in programs to educate the consumer, and experience consumer awareness as a powerful agenda.

One state representative explained there is a commitment to support community and the agricultural heritage. The State Legislative have prioritized local agriculture, supporting community based agricultural programs and the local food system. On State level, the Senator co-authored a bill that would "renew and expand farm-to-school efforts, update regulations affecting hard apple cider breweries, and cut taxes on craft breweries in the state. Another bill called for an increased investment in

Farm to School programs, Farm to Plate, Food System education, Extension programming (internships supporting graduates in the transition from college to work), green jobs through coops, food hubs, CSA's, non-profits,

11.2.7 RESEARCH AND EDUCATION

Research institutions in Vermont are closely linked to activities in the local food system and stakeholders recognized their role in the development of the LFS and contribution to the community. The great strength in involving Vermont research institutions in the LFS development was that they could undertake valuable research projects that could benefit the local community and help investigate better practices from growing, storing, composting, marketing and sales.

Research and practical education can be important in convening farmers, community and other LFS stakeholders together to manage better practices. UVM has partnered with farms nearby Burlington to offer students practical and technical skills in food production.

Researchers and practitioners involved in the LFS expressed an openness and had the capacity to share research and expertise with other research institutions interested in local food system projects.

12 OUTCOMES OF THE LFS AND IMPACTS ON THE PRODUCERS

12.1 PRODUCERS MOTIVATIONS TO PARTICIPATE IN THE LFS

Some producers explained that Vermont is an alternative to many other places in the US. The local food system is built upon an appreciation of the beauty of the Vermont landscapes and some farmers identified themselves with the food community that they have contributed to create. Many mentioned a sensibility to steward the land and take care of the local environment. Many producers valued the ability to make a living out of farming the land, and took pride in providing their community with fresh, healthy food. Especially for LFS farmers participating in farmer's markets, many enjoyed to make personal connections to their neighbors and their community, and the chance to add something to the cultural diversity in Vermont. Someone referred to this as sharing tastes and culinary experiences, as well as introducing people to new food. LFS farmers mentioned words like taste, quality and *terroir* when talking about local produce. *Terroir* is a French term that describes the uniqueness of place, including soils and climate and culture, and this has been used extensively for marketing branded products with an identity to a specific region or community.

Some producers were motivated to participate for political and idealistic reasons and addressed the negative effects from corporate agriculture. The problem to some local farmers were that corporate stores operate for quantity before quality, and sell products at very cheap prices. This could lead to consumers being unaware of the amount of work farmers put in to grow quality products. One farmer said that there is a need to "fix this broken food system" and referred to how people are too distanced from their food source.

12.2 ECONOMIC IMPACTS ON LFS PRODUCERS

Despite the limited growing season, the LFS have contributed by adding many opportunities for Vermont producers. These include incubator programs, new diverse market channels, institutional partnerships, and new customer segments. All of these are recognized and appreciated by farmers. Alternative markets channels and direct sales include farmers' markets, farm stores, CSA shares, and box schemes. Many producers involved in the LFS emphasized that farming is a lot of hard work, and the short growing season was mentioned as one of the disadvantages for Vermont producers. This

resulted in a lot of work having to be done within short time span, and the reality that their salary is based on three to five months. Because of these limitations, the producers were very much dependent on available market channels and sufficient prices for their products. Proximity to colleges and campuses were emphasized as an important factor that enabled local food sales. The impression was that the young students brought a trend for trying new food, and many students really care where the food was grown. One director involved in an incubator program explained that farming is not an easy occupation and many farm businesses in Vermont struggle to keep the farm viable. *There are many farms in Vermont and though many people want to do farming, living from the land doesn't always pay very well*, another interviewee said. From some producers' point of view, farming was as a way of life rather than a career to only provide a salary. Some farmers did not attempt to charge the highest possible price, but rather prioritized making organic food available to anyone at affordable prices. Stakeholders explained that the perception of farmers has changed considerably. Before the local food system had been established, farmers were seen as "poor farmers" or "dirt farmers" stakeholders said. Since then, the growing demand for local food coupled with the establishment of alternative market channels, and community food events, the LFS has made it possible for many smaller farms to survive. Over the past 10-15 years, many new farm-based business offer value added products such as cheese, burgers, beer and cider. Today, farming and food businesses is seen as opportunistic occupation, and some expressed that "today, farmers in Vermont feel like rock stars".

12.3 FINDING WAYS TO THE MARKET

All farmers visited were involved in direct sale through farmers' markets, farm stores or CSA shares. Farmers' markets (FMs) and direct sales was a seen as a valuable strategy as products often reached a high price point. FMs were also mentioned as a good way to get time off the farm as the farmer could socialize and meet with friends, discuss marketing strategies with their colleges, and get feedback from their customers. This appears to impact farmers' enthusiasm and is seen as an advantage coming from the LFS. Some LFS producers sold larger amounts through wholesale or direct sales to local food coops or supermarkets to get a higher volume of 'produce moving' without spending much time on distribution or sales. The tradeoffs for larger volumes were lower prices per unit compared to LFS. Farmers involved in wholesale were often producing larger amounts of the same product in order to meet the larger demand. some producers combined direct sales with wholesale of their products or utilizing several market channels to sell their products. Generally, products sold as "local" often generated higher prices than conventional products and direct sales reached higher price points than selling in bulks.

Farm-partnerships are common in Vermont, from farm-chefs' partnerships to Farm to School programs. As an example, farm-chefs' or farm-restaurant partnerships enable local restaurants to buy ingredients directly from local producers. Partly, these partnerships can facilitate for stable sales and secure a decent income for local farmers. Many of these restaurants list the name of the farms on the wall and on their menus. The other advantage was that some of these partnerships enabled smaller producers to get their product out in the marketplace, where they otherwise might not have been competitive to larger brands. One local restaurant (The Skinny Pancake) has partnered with a smaller cheese producer. The restaurant exclusively uses this particular chevre from this producer on

the menu. The farmer explained that she could not compete with the prices of big brands in the marketplace, and sourcing to this restaurant enabled her to make a stable income.

12.4 ALTERNATIVE BUSINESS MODELS

Many farmers in this study have come up with creative models to operate their businesses, and there was a wide range of different models of farms among the LFS studied. Some of the farms were established through incubator programs or food hubs. At the Intervale Food Hub for example, new farm businesses share equipment, storage rooms and machinery, instead of each farm having to make large investments. The term “food hub” could be described as a community-based effort to address gaps in the food system infrastructure. Food hubs have emerged as important market channels to meet the growing demand for local food in Vermont as they serve distribution, marketing and processing needs of multiple farmers, processors and other food providers in a particular region. One of the farms visited was collectively run by five co-owners. According to them, the collective model allowed them to be flexible in all sorts of life situations, and by recording hours invested by each member, the income was distributed according to the amount of work each owner put in. Here, the work hours were valued more than ownership or status.

Bread and Butter Farm in Shelburne Vermont, demonstrated how alternative business models can offer businesses and the community multiple benefits. By co-sharing land several businesses were located on the farm, from milk production, bakery, to music classes for toddlers. The farm also hosted a “Food, Farm and Forest Program”, which is an educational program where the curriculum is based in neighborhoods, where kids learn about ecosystems, biodiversity, growing, cooking and eating seasonal food. The farm also partnered with the UVM Farm Training Program and hosts college students and provide them with practical skills in how to run a farm.

12.5 SCALING UP LOCAL FOOD PRODUCTION

For some LFS producers, opportunities for whole sale to larger supermarkets were perceived as a valuable income strategy. Wholesale throughout the year could finance seasonal activities, such as strawberry and vegetables CSA one farmer explained. However, only the mid-sized farms can work with larger supermarket like Hannaford’s in order to cover the large demand. Stakeholders expressed that scaling up local food production as well as the entrepreneurs selling value-added products, adds up to a “commercialization” effect on what is local, moving away from the initial values that the LFS initiatives were built upon. However, for some actors, these initiatives were also valuable as they provide new work places, creating new products in the market and thus contributing to the local economy. The question some stakeholders were asking was to what extent the LFS values could still be intact when local is increasingly sold at the commodity market.

Companies like Walmart, Colman and Monsanto have started to invest in local food and some producers worried this commercialization of food would prioritize efficiency and “pushing” local food out in the market at lowest possible price. One stakeholder explained that he declined partnering with corporate businesses. From his experience, in order for corporate businesses to maintain low prices, they would have to grow every year, and thus lower the price of the products. Some worried that this could put farmers in difficult situations. From the producer’s perspective, many consumers were unaware of what that cheap food really represents, and how the real costs in how it was

produced are not reflected in the sale price. The other issue was the fact that many consumers seemed to be disconnected from the land and the farms that produce their food. This disconnect could make people prioritize cheaper options rather than supporting local businesses. Producers' comments were that they invest a lot of work hours to provide healthy quality food, yet some consumers appear unwilling to pay the real price for this food.

12.6 LFS FARMS IN THE FUTURE

From what was learned from interviews, the small size of Vermont agriculture is a challenge for making farms economically viable. One local food-entrepreneur stressed that many farms could benefit from improving their business practices. On one hand, a farm business as any other business, need to be well organized and make the right kinds of investments. "Some farmers have the attitude that treating their farm only like a business takes all the heart out of it", he explained. Second, it was important that farmers made sure to differentiating themselves in the market. One of the local distributors experienced that at times, too many farms produce the same products, which limit their chances in the market. Important strategies for farmers would be to create something different. *"If the food system is to get healthier, it also needs to get economically healthier"*. What was referred to was that farmers who do not treat their farm like a business, or pay attention to their costs, were in risk of go out of business- and that is not beneficial for strengthening the food system.

However, farming is not an easy business, growers explained. There are always many things that has to be done and many farmers could work 16 hours a day. Just as important as paying attention to the numbers, a farmer needs to keep attention to the soil and the quality of the produce. From farmers' perspective, they are in a learning process too. There are always better practices that could have worked differently, or better investments that could have been made. That being said, one farmer pointed out that farms and their business models today, is nothing like the farms in Vermont 20 years ago. Today, there are many opportunities and support systems for making a farm businesses profitable

Some farmers experienced that the organic sector had been formalized since it started in the 70's. While organic certification were seen as reliable and valuable to producers and distributors, some small farms could not afford to spend their time and money on controls and paper work that the certification required. For some producers, it was hard to put the organic concepts into a formalized system. Some producers were not interested in commercializing their product. For some, it became more the growing of healthy pesticide-free food was considered more important than paying for the organic brand to put on their product. Some producers mentioned that if more consumers paid attention to what they eat and where they bought their food, they could spend their dollars locally instead of supporting corporations.

13 LFS AND THE IMPACT ON THE COMMUNITY

13.1 CONSUMER AWARENESS WILL DRIVE THE LFS FORWARD

Increased exposure, education and awareness about local, healthy food has been central to the LFS initiatives and its impact on the community. The local food movement appears to evolve together with increased awareness and food literacy.

Today people are better informed, and this way more and more demand for food that can express a sensibility, being workers' rights, animal welfare, environmental impact or the support for the local economy. As the demand for healthy local options expand, the Agency of Agriculture explained that this could be a result from the LFS efforts that has taken place in Vermont. “We have had enough Farm to School programs the past 15 years that we are now starting to see the results. Now that these students are in college, and demand the same access to local nutritious food, it is likely that communities in Vermont will start to see results from the efforts. The Vermont FEED coordinator argued, *“It is the exposure that is going to make the difference”*. The Agency of Agriculture and the Farm to Plate coordinator referred to trends showing that consumer habits are shifting away from unhealthy snacks and towards healthier options. Stakeholders experienced that the larger businesses are ‘feeling the pressure’ from consumers and responding to the demand for quality and local food. More consumers have learned the value of shopping locally, and supporting local farmers. Stakeholders believe the consumer attention to what ‘good food’ means, and the increased knowledge about sustainable alternatives, is going to “drive the local food system forward”. To some stakeholders, these partnerships express a wider public interest in connecting LFS actors together, and they could be important in creating a market for local businesses.

According to many actors, farm-chefs’ partnerships and local food being served in restaurants have had an important impact on how the community value good food. Chefs have played an important role the past 10 years in getting local food out to the “regular consumer”. As restaurants promote the farms they buy from, consumers have been exposed to local, quality food and stakeholders predict that this has increased the overall interest in the enjoyment of taste and quality of food. One restaurant manager explained that these partnerships with local farms expose consumers to local quality products they would otherwise not buy. Stakeholders believe this exposure to local food has contributed to increased interest in taste and quality of the food they eat, and enjoyment of good food. *“The understanding of buying local and supporting local businesses has changed “This is not how it was like 15 years ago”*. From restaurant manager’s point of view, continuous exposure to local food will make more people choose local food “When people taste the difference [quality], it is hard to go back to the “cheaper” alternative”. One of the interviewees involved in a local restaurant business explained that most people look for things they are already familiar with and they are more likely to spend money on products that they would usually buy. It could be anything from burgers and beer to maple syrup. So in order to include mainstream people, restaurants could market simple products, but then also serve kale, kohlrabi and even local chevre from their local producers. “You are tricking people to eat things that they though they didn’t like”, and that is a gateway into local food. That’s how to get mainstream folks”.

“When we started 30 years ago, I think Vermonters were like ‘we really get this concept of sustainability”, its been watered down, sort of lost, but there was an awareness that this was important in Vermont. And we kinda need that in order to thrive. In order for us to attract employees and talent, we need to go to a place where there is some hopefulness”.

13.2 SHIFT IN INTEREST FOR LOCAL FOOD AND FARMING

Another impact on the community is the increased interest in local food and farming. One informant explained the situation they faced at farmer's conferences 20 years back, when the majority of farmers were getting older and older. *Nobody knew who would fill those positions when they would retire. But now we see all these young people that want to be involved in farming at some level. That's very encouraging.*

One director of a LFS initiative explained how people in Vermont were not necessarily demanding local food or organic products 30 years back. In the 70s or 80s it was not popular or trendy to buy local products like it is today. "Today, people spend money where their passions are", one of the business owners explained. Coupled with new markets, the producers in this research also said that the status of farmers has changed over that same period. Referring to the way farming has changed into a more respected occupation one stakeholder said, *Before, people referred to poor farmer, or dirt farmer, but today, farmers in Vermont feel like 'Rockstars'*

13.3 PUBLIC POLICY AND THE LFS:

The Agency of Agriculture has been central in educating the public, and support efforts to have more Vermonters buy local food and support local farmers. Stakeholders appreciated the State support for strengthening the LFS and expressed that "we are lucky we have a group of likeminded here in VT" referring to the way the State of Vermont is supportive in strengthening the local food system. At the time, close to 9 % of all food purchases were local sales. From conversations with stakeholders and the Agency of Agriculture the demand for local food is growing and there is still a need for convening central actors such as producers, practitioners and distributors in the process of meeting this growing demand. The Agency believe that much could be gained from reaching out to the mainstream and the places where most people buy their food, such as supermarkets and public institutions.

From a policy perspective, the agency explained that it is unfortunate to separate the local food movement completely from the conventional food system. Emphasizing that the conventional food system and arrangements such as subsidized food inevitably pose negative impacts for many LFS actors, there are valuable opportunities from collaborating with the conventional system. The conventional food system actors have the capacity to operate a highly efficient system, ranging from transport, storage, marketing, and making profitable businesses. For the LFS to meet the growing demand, and for more farmers to reach out to more customers, there could also be better interactions with supermarket chains to source more local food in their outlets.

There is a challenge in sourcing local food as a commodity on the market, but according to the agency, there are possibilities to collaborate with the overall aim to make the LFS better. According to one of the local business owners and distributors interviewed, it is important to show people that the LFs can be fun and successful- and profitable. "By showing people that a farm or food business can be economically viable, we attract more people and actors into food and farming". "The whole movement towards local food just needed some time to "prove" that it was profitable in order to attract funders, public policy and businesses to actually start investing in it".

14 DISCUSSION

14.1 RESEARCH OBJECTIVE

The primary objective of this study is to fill the current information gap on the multiple contributions that Local Food Systems (LFSs) offer to communities in Vermont. The study explores the role of collective efforts in LFS and key drivers which contribute to LFS maintenance (resilience).

14.1.1 RESEARCH QUESTION

14.1.1.1 WHAT FORCES SHOULD BE PRESENT (ACT) TO ENSURE MAINTENANCE OF LOCAL FOOD SYSTEMS IN COMMUNITIES?

14.2 Collective identity act to maintain the LFS

Shared identity proved to be an important driver to maintain the LFS in communities and in terms of building social-ecological resilience. LFSs are space where community actors share a set of values, and become engaged and committed to collective activity around concepts such as sustainable food consumption Migliore (2014). Collective identity develops as actors build more personal relationships, ties of reciprocity and trust through personal connections with each other (Migliore 2014). Over time, these webs of interactions increase, and the LFS becomes stronger embedded in the people and initiatives. Therefore, there is much value to gain from building a common identity. According to Freyfolge (2001), people act different depending on them being individuals or as members of a group. As individuals some people might not want to sacrifice their personal benefits, but when committed to certain values of a group, people tend to act for the betterment of the community (Freyfogle 2001). This might be the case when consumers are asked, they are willing to buy organic or local, but when they shop on behalf of themselves as private consumers, people do not always follow up on this statement (Wandel and Bugge 1997). Drawing on experiences from this case study, this behavior was mirrored in the way that many LFS actors were committed to certain goals or standards that was associated with the LFS. Many stakeholders knew each other personally, and they referred to notions of collective identity and shared cultural values. On an individual level, Ryan and Deci (2000) introduced the concept of motivations based in personal identification with the value of an activity. Here, people engage in an activity because they feel personally committed to do so and they identify themselves with these activities. Seeing oneself as part of a collective 'we' and acting on behalf of one's community, revealed another level of responsibility stakeholders said. Many stakeholders involved in the LFS referred to a shared understanding of the desire to improve the current food system. Drawing from resilience theory, collective identity and sense of shared understanding is an important element in creating systems change. Taking in consideration possible personal connection to farmers and owners of local businesses, people is more likely to support someone they know and local businesses they are familiar with.

Collective identity seemed to be reinforced in community events and cultural expressions from art exhibitions, culinary events linked to the culture of food and agriculture which can be expressed by the civic celebrating what is local (Sumner, 2010). When basic human needs are met such as food and shelter, people start to feel a sense of group and space to practice and appreciate culture and art that embody people's relationship to the environment (Chapin et al 2009). These statements seem relevant for the case in Vermont, where sense of place was realized through the celebration food, culture, traditions, nature, farms and landscapes. Food events offered a social and culinary space for people to connect with their community. These activities were expressed like "the celebration of the diversity of taste and recipes that we have here in Vermont". Art exhibitions expressed Vermonters and their relationship with the environment. From the changing seasons, the colors of the fall leaves, a greater awareness around food consumption and the appreciation of enjoying food that belong to each season. Likewise, the LFS in Vermont contributed to 'form symbols and identification to common values and ethics', similar to what Callon (2007) found. LFS initiatives offered a space where people could bond over a deeper appreciation for cleaner environment, enjoyment of local food and farmland, the local economy and the aesthetics of Vermont landscapes. The sense of collective identity can be linked to the ability of creating a shared vision for the future. In terms of maintenance of the LFS, the success of collaboration depends on the networks ability to create shared goals and objectives Folke (2009) among the stakeholders, and facilitate for shared commitment for long-term goals. This included access to healthy local and fresh food in supermarkets, environmentally sound food production, or the closeness between community to food, farmers and the surrounding land. This does not mean that all community members are engaged in the LFS, and identify with exactly the same values. but there seemed to be a notion of a collective "we" that frequently referred to a desire to "do things better", meaning that there is a shared belief of reaching for the betterment of their community.

14.3 SUPPORT FOR THE NEIGHBOR AND THE LOCAL ECONOMY ADD ADDITIONAL VALUES TO MAINTAINING THE LFS

Other values than market-values were prevalent elements among the LFS actors, and these were central for maintaining the LFS. These were values rooted in the commitment to support local businesses, maintain the working landscape and taking care of the environment. Sense of place is the set of meanings and attachments to places that are held by individuals or by groups. Like Feenstra (1997) explain, *the LFS is the familiarity with, and the commitment to nearby place, community and environment*. People involved in this research expressed a proudness of what was 'Vermont made' and a source of identity and appreciation for Vermont landscapes. Common motivations were people's sensibility to the land and sustainability. Folke (2009) emphasis that "outlets for actualization of creative abilities and actions motivated by a person's sense of place provide some of the greatest opportunities to enhance ecosystem stewardship" (Folke et al 2009). It was striking that so many people in Vermont appeared identify themselves with environmental values such as "maintaining our working landscapes, and clean waters and lakes".

For many stakeholders engaged in LFS initiatives, the support for local farmers and businesses were a key priority. In Vermont, many stakeholders expressed an extra value in buying from 'the farmer down the road'. The price of these products could be more expensive, but the essence was that many people had the notions of supporting the neighbor and were willing to 'pay the real price of

food'. Correspondingly, stakeholders explained that: *"There is a sensibility here in Vermont, to what is good for health, for the environment or for the local economy"*. On a community level, a concept describes a "altruistic" behavior in the way a community value farmland, the local economy, and the commitment to buy local; PSM (public service motivation) is defined as 'the belief, values and attitudes that go beyond self-interest or organizational interest, that concern the interest of a larger political entity and that induce, through public interaction, motivation for targeted action' (Vandenabeele 2006). Comparing this concept to the findings in Vermont, many stakeholders expressed some level of identification to commitment to supporting the next-door neighbor, a personal commitment to shopping local, being a local farm or shopping independent stores. This materialized in the great variety of local independent stores in downtown areas, where many people enjoyed to do their shopping. For the same reason, many people added additional value to but directly from local farmers, which has benefited many farm businesses in Vermont. Considering the number of local businesses and community activities taking place in downtown areas in the specific towns studied, the values and priorities for "helping out the neighbor" seemed to protect local independent stores, both physically and in terms of them having a place in the local economy. Despite the support for local independent businesses, changes happening in communities in Vermont as corporate actors enter the marketplace. It is questionable whether this transition contribute to the feeling of "alienation" to common spaces, businesses and downtown areas, as well as food and nearby farms. Anyhow, as stakeholders explained, Vermont had a Mc Donald's restaurants replaced by a Farm to Table restaurant, and with the number of independent businesses and small scale farms in Vermont, the support for local (independent) businesses should not be left out or underestimated as a force in sustaining a resilient LFS.

Values based in environment and nature were another element central for LFS maintenance. Food production and nature is inherently interlinked, and building social-ecological knowledge and increase stakeholders' engagement in sustainable land management is almost an imperative for sustaining the LFS (Chapin et al 2009). Stakeholders' awareness and knowledge about sustainable land stewardship such as clean air, water, healthy soils were enhanced through the F2P network, contributing to the resilience of the LFS in Vermont. Chapin (2009) describe the phenomena of communities managing common resources where actors can manage individual trade-offs for the collective well-being. In terms of social-ecological learning, members of the F2P were exposed to situations where short-term costs had to be evaluated against long-term goals. In terms of environmental stewardship, stakeholders could gain a new level of understanding, such that agriculture and the environment does not always let itself be "intensified" without depletion or negative consequences. Operating with the non-market values in mind, these values can be translated into businesses social-ecological and environmental responsibility such as the LFS initiatives that exist in Vermont today.

14.4 STAKEHOLDERS INVOLVEMENT IS A KEY FACTOR FOR SOCIAL LEARNING

One central feature to sustain LFS is the involvement of the actors themselves in shaping the system and contribute to develop social learning. Through multi-stakeholder networks such as F2P, members have a chance to contribute in shaping the network and contribute to create the strategies for improving the LFS. In resilience theory, it is implicit that local community and the resource users possess valuable knowledge about the social, economic and ecological conditions of the system they

belong (Chapin et al. 2009). While researchers and professionals can provide information on LFS development, valuable knowledge can come from the members themselves. Including the people and resource users themselves can pay several benefits for sustaining the LFS over time. Therefore, engaging participants in development process of a system such as the LFS is an important principle for social learning and maintaining LFS resilience. Social learning took place when stakeholders from different disciplines and schools of thought such as for-profit actors, State representatives and non-profits gathered to share their knowledge and contribute to solutions to food system problems.

Social learning and co-management of resources are central features in sustaining LFS over time, as the people involved obtain valuable knowledge and memory for monitoring and manage future challenges (Berkes et al 2003). Chapin (2009) describe that “the monitoring of social-ecological conditions can detect gaps or overlaps within the system and create feedback loops that support social learning”. The network demonstrated an ability to address gaps found by Nicherson (2008) such as the need to coordinate efforts and facilitate for communication between the various LFS initiatives. From what was observed in the F2P network for instance, was that conversations, management of the group and development of solutions were made by the people themselves. By having the members participate in the management of the network, the members are empowered and a sense of commitment to the network.

Feedback loops between stakeholders and across the LFS initiatives are central to maintain the LFS. Feedback loops develops from the continuous monitoring of efforts, and the sharing of information among organizations and within network members. Through network meetings, members could share gaps or practices that need improvements, which contributed to making the system is capable of adapting better solutions to these and learn from it for future actions. One example is the water quality problem in Lake Champlain, where levels of pollution had started affecting the water quality of the lake. With effective feedback loops, researchers and professionals, policy-makers and farmers are able to communicate together and create solutions that would be feasible for all parts. However, there are potential for building further on feedback loops that bring knowledge and learning from LFS networks back to the groups that could not participate directly in meetings. In the case of including the voice of the farmers for instance, actors such as state representatives, NOFA VT and University extension are engaged in the farming community, at farmer’s conferences as well as being active members in the network. Bringing in knowledge from the literature, for local food system networks to be resilient, feedback loops can be critical in sustaining the LFS over time, to establish dialogue between active network members and groups unable to attend policy meetings. Feedback loops are important as the failure to transmit knowledge across generations may limit the community’s capacity to understand the historical (and cultural) basis of its ecosystem and governance. Cultural factors are central here, such as to the extent the group shares a common identity, and the depth and richness of local knowledge in the governance process (Ostrom, 2007). The LFS in Vermont has evolved over time, and so has the culture of transmitting knowledge and social learning that enable the LFS to reorganize itself from ‘bad’ practices, such as seeking solutions to water quality issues in the case with Lake Champlain. The LFS actors and the culture they have created, has developed over time- and that is maybe a tradeoff in sustaining resilient LFS. It is not a system that comes in place over night. It takes time, and taking inspiration from a farmer from Grand Isle, *it takes a lot of hard work.*

14.5 COMMUNITY INVOLVEMENT IS A KEY FACTOR FOR DEVELOP EFFECTIVE POLICY

One principle for successful resource management is to involve resource users in the management issues and in coming up with the solutions. According to Ostrom, (1999) cooperation and participation in “rule-making” within local institutions have proved to be important for successful resource management. The F2P network confronted stakeholders across the food chain with the different dimensions of food system challenges— from water quality and farming practices to food access and social inclusion. Similar to what Ostrom (1999) found, involving actors from the entire food system offered stakeholders with valuable knowledge in form of social- ecological learning. It might be rare to have restaurant managers talk about composting or food waste, but through community actors’ involvement in policy negotiations, unexpected change can take place within the LFS.

Sundkvist (2005) suggest increasing feedback loops are important for the sustainable development of food systems: and this is a critical for the long term resilience of the LFS. In addition, Hassanein (2003) explain that the involvement of the stakeholder themselves in shaping the system, can empower these actors in the way that members have equal and effective opportunities for participation in shaping that system, as well as knowledge about the relevant alternative ways of designing and operating the system (Hassanein, 2003). In the case of the new water quality law that Vermonters are faced with, the local food network offered spaces for all the affected parts to share and discuss how to improve practices. The policy-makers were members of the network themselves, and instead of imposing new rules, the network facilitated for actors to contribute to solutions. Through incentivizing better farming practices, and adding value to their products in the market local food networks could support the protection of water-and land- and applaud farmers that are caring for the local environment. In the literature this is described as social learning. Social learning is a result from the feedback loop that takes place as groups assess social-ecological conditions and respond in ways that support their well-being (Ostrom, 2000).

As an example, the F2P network engaged actors across levels of the LFS, from grassroots from grassroots level to the policy level and involved stakeholder groups across the food system, such as researchers, people representing health and educational sectors and business owners. Information and knowledge were shared across these sectors. Grassroots are likely to be accepted, well-established and familiar with, and concerned about the values and needs of the community itself. Cross-scale interactions among institutions, organizations and social networks enable actors to solve problems with actors at another scale. The outcome from cross-scale interactions, can lead to “down- and up-scale effect” where opinions from the grassroots level can reach up to policy level. Folke (2009) stresses the importance of a group to acquire a “common vocabulary” and mutually agreed upon visions of problems for such networks to be successful. From what was learned by Farm to Plate members, they had to “create its own language” and a “culture” in order to work on a wide range of food system issues.

From a participatory point of view, F2P seemed to be operating from a top-down approach at the policy-level, and thus operating one step removed from the farmers and the community members, actors that were central actors in sustaining the LFS. Also, stakeholders in Nicherson’s (2008) study had previously requested improved dialogue between producers, the supply chain, and local food

advocates within the LFS initiatives. Four years into the F2P network, stakeholders still addressed the lack of farmers' voice and for-profits involvement in the F2P network, (and in the LFS).

The Agency of Agriculture has been involved in facilitating for communication and information sharing and convening LFS actors together. The Agency of Agriculture can be described as a 'weaver'- as it connects actors across the LFS together through workshops and seminars (such as the "scaling up" workshop). The Agency is also in position to organize dialogues with farmers, and to bring farmers concerns back to the legislature. The Agency therefore bring on additional valuable link between farmers, the legislature and the network Farm to Plate. Develop additional incentives for stakeholders' involvement might be one strategy for involving more for-profits and farmers- and for keeping the existing members as well. The LFS could not exist without the farmers and their products, and attracting for-profits are important for the local economy. Including the voice of farmers and for profits might be one fundamental priority for the local food system in Vermont, and could be significant for sustaining it over the long run. After all the LFS is dependent on their farmers, and farmers can only exist if they receive prices to make a decent living.

14.6 ADAPTABILITY IS KEY FACTOR FOR LOCAL FOOD SYSTEM RESILIENCE

The institutional procurement and wholesale arrangements of local food through institutions, restaurants, coops and private consumers has had ripple effects on the entire food system in Vermont. As demand for local food increase, stakeholders are currently faced with the LFS expanding from being essentially based on direct-sales into wholesale scale. This brings us to the last factor for maintaining the LFS. A stable demand for local food has enabled many local growers to engage in the LFS, their economic viability is crucial for sustaining the LFS. But how can the LFS values sustain and LFS farmers' keep their integrity in the commercial marketplace? For the LFS to meet the increasing demand, calls for farmer to grow their businesses, distributors to increase their capacity, and more products to enter new markets. In this scenario, for-profit actors are, and can become valuable players for the economic resilience of the LFS in Vermont. However, stakeholders raised concerns that sourcing local food in the commodity market would pose a challenge to the values and social meanings that local food initially entailed. Local food products and the concept of LFS itself were in many ways entangled to an attachment to the land and personal relationships with people.

Stakeholders worried that local food would lose the initial properties based in community embedded and the personal relationship that the LFS initially was about- Correspondingly, Folke (2009) describe that commercialization of products and initiatives possibly will change the social relations of production and the way actors relate to each other (Folke, 2009). Some stakeholders referred what happened to the organic movement, which started off as a movement, similar to what is happening with local food today. From being a holistic approach to sustainability, food and social-wellbeing, there has been a 'corporatization' of the organic agriculture. According to Guthman (2004) this demonstrates how a concept of sustainability can be stripped from its social and environmental values, to fit into the commodity market (Guthman 2004). Ikerd (2006) argue that the economic system could pose negative effects on the community embeddedness that was found in the LFS. The commodity based market accelerates social entropy and makes the food system impersonal because it removes personal bonds on behalf of efficiency and maximizing profits. This does not easily combine with the social embeddedness found in the LFS and values of supporting local businesses.

Ikerd (2006) argues that *globalizing economies do nothing to restore the social capital needed to sustain positive personal relationships within society. There is no economic incentive to invest in families, communities, or society for the benefit of future generations. And it is typically more profitable to find new people to exploit than to invest in education and training programs* (Ikerd 2006). This critique calls for the attention that commercialization of local food is not without a price. How will the LFS actors incorporate the core values LFS when products are sold through wholesale or corporate markets?

Despite the limitations and possible pressures of the local food expanding beyond direct sales, local food is entering the commodity market and the larger supermarket chains. Member at the F2P network, have assembled to discuss these challenges, and in particular how the LFS initiatives can transfer social, environmental and economic values into the mainstream market and grocery chains. How can the LFS values translate into larger scales? One fundamental question raised is whether there should be a combination of the LFS and the mainstream market or whether the two food systems should operate separately. (Farm to Plate, vtfarmtoplate.com). Stakeholders believed there are great opportunities for learning from the mainstream food system- and possibly combine best practices. One stakeholder at the Intervale Center believe there are also valuable lessons to be learned from Vermont's conventional or whole-sale farmers that could add value to the LFS. Many actors in the conventional market have experience in how to operate the business effectively. Many of these actors can share their expertise on storing, packaging, and transportation in ways that the LFS actors may not have been involved with. However, the expansion of the local growers selling in the mainstream and wholesale market might have some tradeoffs for farmers, whom might be put under pressure to continuously grow more, if market forces are to act free.

14.7 RECOMMENDATIONS

This research explored forces that act to maintain the LFS in the Vermont context. Much of the values explored were rooted in a long agrarian tradition and civic engagement, coupled with a progressive political environment that reinforced the support and awareness about the LFS and values such as care for the surrounding landscapes. In what ways could the findings in this case study be transferable? There might be some factors from the research that are unique to Vermont, but the growth in LFS initiatives keep expanding in US and Europe (Hinrichs, 2012) and knowledge and experience from 'best practices' can be valuable for LFS stakeholders in the future. Building LFS resilience can be powerful tool for maintaining LFS. However, even though the LFS studied in Vermont were advanced in the number of LFS initiatives over time and scale, there are still gaps to be sufficiently addressed.

Bringing findings together, efforts to sustain the LFS and its resilience involves efforts from the public, the civic and the market part of the LFS (figure below). The state and policy level can play a key role in regulating and incentivize sustainable practices and healthy community values. The State can create a reward system for farmers that do an extra effort for sound farming practices. In the market place, consumers can make their statements through their choice of products. For instance, consumers can pay a higher price for products that are local, sustainable or of higher quality.

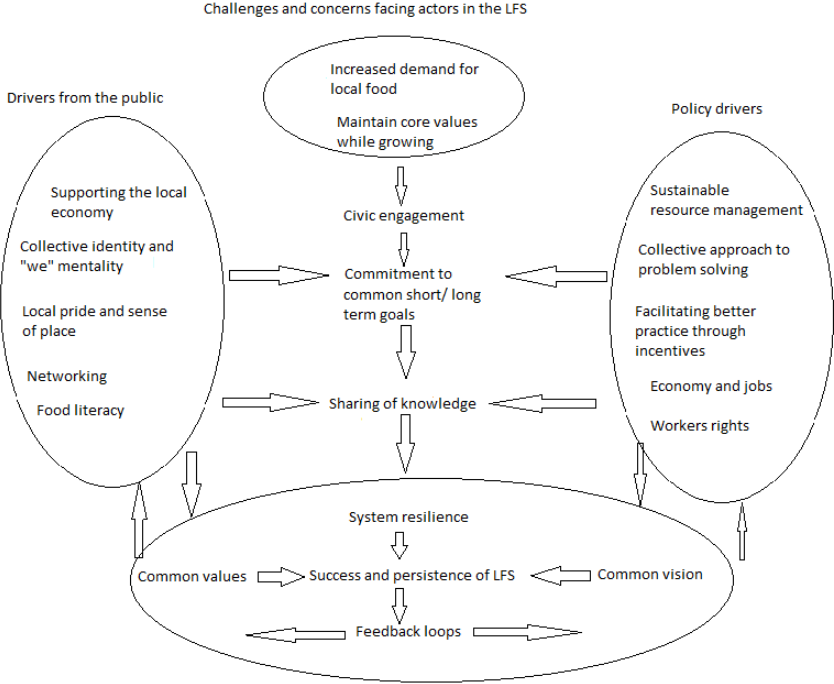


Figure 1: Diagram Main forces that act to maintain the LFS

As local food systems grow, the combination of these different actors can play an important role in sourcing local food in the conventional system, and ways that local farmers can receive a fair price for their product. However, the questions would be to what extent the conventional system can incorporate the values identified as central to the LFS.

Community involvement in policy-making is a key principle to sustain the LFS. If the LFS is to continue growing its roots within the people and places that makes up the community, engaging LFS actors such as farmers and for-profits is critical. There could be ways to better accommodate farmers to participate or stay updated on the operation of a food system network. Research on how farmers learn best has revealed that peer-based information exchanges are very effective (Bell and Mc Allister 2012) and to help farmers benefit from the knowledge held within community, and the outcome from LFS networks, there could be arranged for meetings in locations and time that is convenient for the producer. If policy institutions are not appropriately planned to include farmers, creating feedback loops can become an effective channel for including the voice and influence of groups such as farmers and other for-profit actors.

If there is such a thing like the New Agrarian Wave, Vermont could provide LFS stakeholders valuable insight from education, production, distribution, business planning or marketing. There is plenty of food system specialists, practitioners, grassroots organizations, researchers, farmers and food entrepreneur possessing valuable experience in what it takes to run the show.

As CSA's, farmers' markets and cooperatives expand in numbers across Europe and in countries like Norway, Vermont is a key role-model for sustaining LFS initiatives over time. In the future, it might be relevant that public policies launch a network for the existing initiatives and a lot of expertise could be found in a state that has long traditions of working with sustainability in mind.

14.8 POSSIBLE RESILIENCE STRATEGIES

Strategies for LFS resilience is suggested to be:

- Rooted in the local community itself and built on local knowledge
- Cross-sector/multi-stakeholder involvement
- Feedback loops across scales
- Collective efforts engaging multi-stakeholder groups across the food system
- Labelling systems for quality/environmental/socially just products

Because food production is inseparable to environment, soil, water, forests and landscape, social-ecological knowledge is a powerful element for strengthening LFS resilience. It exposes stakeholders to environmental challenges concerning common resources (such as clean air, water, healthy soils). Through collective action such as the Farm to Plate network, the people are urged to think in the bigger picture. What happens if we pollute the lake? How can we facilitate for better solutions? Labeling systems such as Farm-Chefs Partnerships could be one strategy to have consumer pay a higher price for local quality products such as Vermont Fresh Network, which is a collaboration between farmers and chefs. Because people knew each other personally and were embedded in a web of LFS initiatives, the people experienced that they held each other accountable for improving the LFS and sustainable land use practices.

As LFS embraces community control and equitable access to resources (DuPuis and Goodman, 2005) experiences from Vermont indicate that the consumers and civil society are in a position to influence the LFS through their demand for specific products. Many consumers increasingly request companies to consider the social and environmental consequences of their activities and to provide more transparency and openness with respect to their action ([Freeman ET AL., 2010](#)).

Could there be a way for the commodity market to harmonize with the values of the New Agrarian Wave? In Vermont, civil society, private consumers, local distributors, restaurants and public institutions have demonstrated that it is possible to operate businesses and markets based on values such as social, ecological and economic responsibility- and still expect economic return.

Central actors in the future might be Farm-Chefs Partnerships such as Vermont Fresh Network where an independent LFS initiative take on a labelling system of quality products such as the Vermont Fresh Network as another example have a certification for restaurants that buy from local producers. Freyfogle (2001) address the need to balance between personal freedom, community responsibility, economic efficiency and ecological restraint. He argues for the support of small private owners and entrepreneurs, as opposed to large corporations. These companies are often devoted to maximizing profits, not to the common responsibilities such as sustainable land stewardship. Relevant questions from the research is therefore whether there exist sufficient incentives for thinking environment, social welfare and support for the local economy? And could these incentives combine with corporate behavior such as minimizing costs? Also, the competitiveness of products in the market could pose a pressure on local farmers to meet the demand. Local food products can reach a higher price point. Would consumers be willing to pay a higher price for local food products that guaranteed

social, economic and environmental standards? How can values such as transparency, environmental sustainability, socially responsible food, translate into the commodity market? How can the social interaction between people maintain in a wholesale market place? Many LFS stakeholders in the LFS addressed social dimensions such as social equity, fair income and welfare for farm workers. Would these efforts still be of priority in these chain's (corporate) policies? Stakeholders brought up the opportunity for creating certifications that value social- and environmental responsible businesses. Communities' might not have to choose between core values with the sustainability aspect of local food to the commercialization of local food. One great example is farmers who managed wholesale as well as a CSA on the same land. Actors might not have to choose between the conventional or the LFS. There might be a possibility to combine the two. Maybe there are opportunities for balancing between getting products out to the market, and at the same time committing to values which people put to a given product or service. All in all, LFS are powerful in the way it connects food, people and landscapes.

14.9 CONCLUSION

This research shed light on key forces that must be in place for the maintain LFS based on the context of Vermont. Stakeholders interviewed experienced a sense of common identity, and based values that moved beyond market values- and these were forces that helped sustain the LFS in Vermont. Drawing on the experiences from the case study in Vermont, the ongoing communication and personal interaction between the different LFS initiatives, and the facilitation for dialogue between food system actors posed valuable spaces for strengthening and maintaining the LFS in Vermont.

The LFS has opened up for great opportunities for Vermont farmers in terms of access to land and sales channels. Many farmers may benefit from the local food system expanding. However, as local farmers enter retail sales and institutional procurement of local food calls for a proper certification or reward system that will encourage best practices from the producer side, and the retailer side. Stakeholders acknowledged that there could be more spaces for creating a dialogue between the producers, supply chain and for the larger consumer actors such as institutions and supermarkets. The Real Food Challenge was a good example of how actors could come together and find better ways to organize the LFS. In fact, these actors could gain a lot from collaborating as they could actively shape the future of what local food would be like in the future.

Including farmers' knowledge and voice could be valuable in shaping collective policy networks as farmers are familiar with the soil and local environmental conditions. Despite the importance of including farmers in the LFS processes, the network studied might not have been designed to have direct participation from farmers. Instead successful feedback loops can take place, and involve actor that would normally not be able or have the interest to attend. Successful strategies for how this could be facilitated remains to be further explored.

The case study demonstrates the way different drivers work together to form the LFS. A LFS like in Vermont could not be possible from one actor operating it alone. Nor can one actor sustain it in the future. Essentially, it is the community around the LFS that that has shaped it and built it up to the level that it is today.

As an interviewee said, *"The people are very important"*.

15 APPENDIX

15.1 FARM TO PLATE NETWORK GOALS

15.2 List of Farm to Plate Goals

Goal 1: Consumption of Vermont-produced food by Vermonters and regional consumers will measurably increase.

Goal 2: Consumers in institutions (K-12 schools, colleges, state agency cafeterias, hospitals, prisons) will consume more locally produced food).

Goal 3: Vermonters will exhibit fewer food-related health problems (e.g., obesity and diabetes).

Goal 4: Options for farmers to reduce their production expenses will be widely disseminated and utilized.

Goal 5: Agricultural lands and soils will be available, affordable, and conserved for future generations of farmers and to meet the needs of Vermont's food system.

Goal 6: Farms and other food system operations will improve their overall environmental stewardship to deliver a net environmental benefit to the state.

Goal 7: Local food production—and sales of local food—for all types of markets will increase.

Goal 8: Vermont's dairy industry is viable and diversified.

Goal 9: The majority of farms will be profitable.

Goal 10: All Vermonters will have a greater understanding of how to obtain, grow, store, and prepare nutritional food.

Goal 11: Vermont's food processing and manufacturing capacity will expand to meet the needs of a growing food system.

/ Farm Inputs/Food Production/Food Processing and Manufacturing

Goal 12: A sufficient supply of all scales and types of on-farm and commercial storage, aggregation, telecommunications, and distribution services will be available to meet the needs of increasing year-round food production and consumer demand.

Goal 13: Local food will be available at all Vermont market outlets and increasingly available at regional, national, and international market outlets.

Wholesale Distribution and Storage/Retail Distribution and Market Outlets/Nutrient Management

Goal 14: Organic materials from farms (e.g., livestock manure) and food scraps will be diverted from landfills and waterways and used to produce compost, fertilizer, animal feed, feedstock for anaerobic digesters, and other agricultural products.

Understanding Consumer Demand/Food Security in Vermont

Goal 15: All Vermonters will have access to fresh, nutritionally balanced food that they can afford.

Food System Education

Goal 16: Vermont K-12 schools, Career and Technical Education Centers, and institutions of higher education will offer a wide range of curricula, certificate and degree programs, and conduct research aimed at meeting the needs of Vermont's food system.

Goal 17: The number of locally owned and operated food system businesses in Vermont is expanding. Goal 18: Vermont's food system establishments will provide safe and welcoming working conditions, livable wages, and have access to a skilled, reliable workforce.

Food System Labor and Workforce Development/Food System Business Planning /Technical Assistance

Goal 19: Business planning and technical assistance services will be highly coordinated, strategic, and accessible to Vermont's food system businesses.

Goal 20: Food system entrepreneurs and farmers will have greater access to the right match of capital (grants, loans, mezzanine debt, equity, loan guarantees, leases, and incentives) to meet their financing needs at their stage of growth and for their scale of business.

Goal 21: Private foundations, state and federal funding sources, the Vermont Legislature, the governor's administration, and food system investors will coordinate and leverage available resources to maximize the implementation of this Plan.

Financing the Food System/Food System Energy Issues

Goal 22: Food system enterprises will minimize their use of fossil fuels and maximize their renewable energy, energy efficiency, and conservation opportunities.

Food System Regulation

Goal 23: Regulations and enforcement capacity will ensure food safety, be scale appropriate, and enable Vermont food system enterprises to succeed in local, regional, national and international markets.

Goal 24: Vermont's governor, legislature, and state, regional, and local agencies will continue to celebrate Vermont's food system and will champion it as an economic development driver for the state.

Goal 25: Food system market development needs will be strategically coordinated.
(VTfarmtoplate.com)

15.2 INTERVIEW GUIDE

15.2.1 OPEN-ENDED INTERVIEW FOR LFS STAKEHOLDERS:

What activities are you involved with?

Please explain the background for the project/details about your position.

What motivates you to be involved in LFS initiatives?

What do you think motivates people in Vermont to participate in the LFS?

In your opinion what factors enable the LFS to exist in Vermont?

Are there any challenges raised in the context of the LFS? What challenges/Why?

15.2.2 OPEN-ENDED INTERVIEWS WITH FARMERS

What is your main activities at the farm?

Why are you engaging in the LFS in Vermont? / Participating in farmers' markets,

What do you see at the main conditions that enable the LFS in Vermont?

Are there any challenges to maintaining the LFS in Vermont?

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Figures

Figure 1. Map of Vermont Annenberg learner, map new england, <https://www.learner.org/interactives/historymap/fifty5.html>

Figure 2: Diagram of the forces influencing the LFS



Figure 3 Photo: Diggers Mirth Collective Farm, Intervale Center, Vermont



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