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Food Security in the Basin

Assessing a role for the Columbia Basin Trust

Phase 1 Report

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Peeling the Onion

Embedding local action in global awareness

just community

Preface from CBT

CBT supports efforts by the people of the Basin to create a legacy of social, economic and environmental well-being and to achieve greater self-sufficiency for present and future generations.

There are a number of current global factors that contribute to an increasing need to consider regional food self-sufficiency. This is a very prominent issue in the Basin, in terms of being able to be more self-reliant in producing the food supply necessary to sustain ourselves.

CBT has historically responded to community needs associated with food security by providing financial support to individual local projects. Last year, CBT sought to become more familiar with the context, complexities and key needs in addressing this prominent issue in order to reflect on the potential for a more strategic role for CBT.

Abra Brynne was contracted for this purpose, who then engaged a select group of CBT staff and external stakeholders to gain broader strategic insights towards addressing food security in the Basin.

Based on review and discussion of the following report by CBT staff and Board of Directors, CBT has decided to remain reactive to communities and organizations and where appropriate, support their efforts in enhancing regional food security. This will be done through existing CBT roles and potentially include the following:

- Facilitating and convening varying interests and perspectives around food security to help further coalesce common needs;
- Exploring means to fill informational gaps and conduct assessments that would be able to support both community efforts and an eventual comprehensive approach at a more regional scale; and
- Continuing to respond to community requests as they come forward through existing CBT funding channels.

CBT hopes this approach will allow us to continue to support community efforts, needs and interests in a way that will also build strategic understanding and momentum towards the issue. Staying mindful of the collective progress in the Basin, CBT will also periodically reflect on its overall role as it relates to food security.

Disclaimer

The opinions expressed herein do not necessarily reflect the views and opinions of Columbia Basin Trust.

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Executive Summary

While food fads come and go, the need for daily sustenance does not. The latter half of the 20th Century saw a significant change in how most people around the world sourced their food, with repercussions from the farm field to the kitchen table (both of which sometimes no longer appear to factor into our food supply). Events of the past decade in particular have demonstrated that we have likely put too many of our proverbial eggs in one basket by relying so heavily on a globally integrated food system.

The high level of interest in food and agriculture - from dedicated food channels on TV to the locavore and backyard chicken movements - is an indicator that there exists in much of the general population a sense at least of some of the less savory elements of the industrialized food system, in their search for the alternatives.

But a food system, particularly our industrialized one, is highly complex and unraveling the effects of 40 years of provincial, national, and international agricultural and trade policy is beyond the capacity of most community-based organizations. Yet to obtain any level of the food self-sufficiency necessary for true community food security, it must be done. This is a task for which the Columbia Basin Trust is well suited, as a partner, a funder / investor, as a convener of groups, and as an information broker.

“Although US farmers may be very efficient, they have integrated the cost of environmental, health and safety standards into their costs of production, and are therefore high cost producers, compared to countries that do not require such standards. Thus, we can (and do) import much of our food cheaper than we can produce it.

At some point, citizens must ask what kind of a food system they want and then design our food and farm policies to create and encourage that system. Even though the food system is becoming more like— and not different from—other economic sectors, such a question will probably force us to grapple with the question: Is it possible that food is so unique that it requires special public policies?”

From Consolidation in Food Retailing and Dairy: Implications for Farmers and Consumers in a Global Food System, by Mary Hendrickson et al, University of Missouri, 2001, page iii.

Introduction

Human settlements (both peripatetic and fixed) through time and across the world have always been directly related to the ability of a geographical area to provide our essential needs – shelter, water and food. It is when these most basic of physiological needs are met that human cultures have been able to thrive.

Over the course of the 20th century, the importance of the ability of a specific foodshed to meet the nutritional needs of its residents diminished with an ever-increasing ability to move food greater and greater distances. However, recent events and global realities like peak oil and climate change are causing (and in some instances, forcing) people to rethink the wisdom of relying on distant sources for something as essential as our daily nutritional needs.

In this paper I will explore the **issues**, the **needs**, possible **roles** that the CBT could take on, and the **benefits** from engaging in a strategic food security initiative. In recognition of the fact that the Indigenous Communities of the Basin¹ were here first, each section begins with information specific to the Basin's First Nations and then addresses the section title in the context of the dominant food system.

The Issues

It seems that all forms of media in the past 18 months or so have been saturated with stories related to food security – from high levels of diabetes in First Nations people, to food borne illnesses, to increasing demands on the food banks, to hog and cattle producers in crisis, to the drought threatening this year's grain and vegetable harvest in key producing areas. The stories are variously based in our home communities, our province, country or somewhere around the world. The common thread in them all is that critical elements of a globalized food system we have almost all come to rely on are unraveling or are, at the very least, less reliable than we might have previously believed.

The provincial Working Group on Indigenous Food Sovereignty deliberately uses the term “indigenous” to convey the inherent link between the people and the land and water that supported them for centuries before the settler communities arrived. As Gwen Phillips of the Ktunaxa said, “our breadbasket is already here.”² The Basin has amongst the highest biodiversity and numbers of endangered species in Canada.³ And this same land base historically supported the livelihoods⁴ of four Nations: the Ktunaxa, the Secwepemc (aka “Shuswap”), the Sinixt, and the Syilx (aka “Okanagan”).

¹ A note on terminology: I recognize that the Columbia Basin covers both American and Canadian territory, for the purposes of this report, “Basin” refers only to the Canadian portion.

² Personal communication, June 10th, 2009.

³ Personal communication on 16 June 2009 with Dave Zehnder, a second generation rancher and member of the Columbia Valley Botanical Society.

⁴ “Livelihoods” in this context represents hunting, gathering and processing for their own needs as well as for trade with other Nations.

The arrival of the settlers had an enormous impact on the food security and livelihoods of the Basin's original residents. Today, the traditional food ways of the Indigenous communities are compromised in a number of significant ways:

- ★ Land ownership is a mechanism that arrived with the settler culture; current land ownership patterns have eliminated or significantly reduced access to traditional food and medicinal sources;
- ★ Land use practices impact negatively on the health of some of the terrestrial and aquatic food sources, both plant and animal;
- ★ The damming of the Columbia River removed the possibility of the salmon returning to their traditional spawning grounds in the Columbia Basin;
- ★ Livestock grazing can have detrimental impacts on the health and viability of plants and water systems;
- ★ Loss of language and reduction of the intergenerational transmission of Indigenous food related knowledge;
- ★ Harvesting of traditional foods by people without the knowledge base to do so in a sustainable manner that could ensure there is enough for all species that rely on the food source.
- ★ Cross-cultural challenges associated with differing world views, concepts of time, and relationships with nature.

In addition to these substantial challenges to community food security for the Indigenous communities, they are also subject to the issues affecting all Basin residents to the degree that they partake of the dominant food system.

Isolation

A resilient community is generally defined as one which is able to meet its needs, irrespective of life's unexpected events. Along with shelter and water, food is clearly one of a community's basic needs. In the Basin, many of the communities are characterized by relative isolation. When the community is not on a major delivery route, the costs of bringing in food can be double that of a community less than an hour's drive away.⁵ In addition to the cost factor, weather related road closures that are common throughout the Basin can threaten the community's food supply given that it has become standard practice for North American grocers to have only three day's food on hand. The longer the distance the food travels, the less food secure any community is that depends on outside sources for their nourishment.

Distance

The current food system, dominated by major players in the key sectors such as processing and retailing, strives for a high level of predictability in supply by sourcing around the world. In North America, most food on the plate has traveled 1500 miles for a

⁵ Kaslo's food security co-ordinator, Aimee Watson, has indicated that shipping costs from Nelson to Kaslo are the same as they are from Vancouver to Nelson resulting in significant challenges for both retailers and consumers.

single ingredient food and 2200 miles for a multiple ingredient food product.⁶ This is an increasingly fragile element of the conventional food supply. In addition to the vulnerabilities discussed above in the Isolation section, moving food long distances with our current transportation systems has been identified by many, from grassroots activist, to politician to scholar, as unsustainable in a world struggling with climate change and peak oil. Both are strong economic and environmental motivators to reduce the distance that food travels.

Another key aspect of the food supply chain is that the length of the supply chain is generally inversely proportional to the farm-level income.

Supply

Historically and currently, some countries of the world have policies in place to create and maintain stockpiles of food to supply their population against crises that could affect their access to food. As an example, Switzerland has a stockpile of food to provision its citizens for up to six months.⁷ At an individual household level in Canada, most families used to stock up for the winter through a combination of canning, salting, pickling, freezing and dehydrating of fresh product, and long-term storage facilities like root cellars. Today these practices are few and far between and may not even be physically possible for apartment dwellers with limited space. Household, regional and national “stocking up” or stockpiling of foods allows communities to be less (immediately) susceptible to the various sorts of shocks that can disrupt food systems – political or environmental in nature.

Most agricultural sectors depend on moderately predictable weather for successful harvests. In this era of climate change, this is precisely the opposite of what farmers around the world are experiencing. In addition to unpredictable weather, weather events are also tending to become more extreme, be they droughts, precipitation or wind. 2008 saw food riots in various parts of the global south due to food shortages.⁸ Predictions for the 2009 – 2010 global harvest of food staples are generally lower than normal and for some sectors below projected needs. Food shortages tend to translate into higher prices – not a welcome phenomenon in a global economic recession. There is no reason to believe that if global food stocks fall below humanity’s needs that the shortages will be limited to the global south since it also supplies a significant portion of our year round diet.

Production

By today’s North American standards, all agricultural production in the Basin is small-scale, even in the Creston Valley. This has meant that most sectors cannot take advantage of the “economies of scale” that enable the investment in infrastructure that can increase profitability. This includes additional mechanization that could lessen the labour constraints on many types of agriculture. Investments like reliable and crop-appropriate on-farm cold storage, equipment for removing “field heat”, root crop diggers, and proper washing equipment suited to the various crops would help to increase

⁶ See the work of the Leopold Center for Sustainable Agriculture (among many others) found at: http://www.leopold.iastate.edu/research/marketing_files/food/food.htm.

⁷ From the OECD 2008 publication entitled “Multi-functionality in Agriculture”, page 247.

⁸ The Baltic Dry Index, an indicator of the global economy based on the movement of raw materials around the world dropped a record 93.5% in 2008 – see http://en.wikipedia.org/wiki/Baltic_Dry_Index.

efficiency on the farms as well as the shelf life of the harvested crops. This in turn would help to significantly increase production volumes on each farm.

Markets

Currently, like most North Americans, Basin residents' access to food is predominantly dependent on a monetary exchange. The average Canadian spends less than 10% of their disposal income on food, with almost a third of that spent at some form of food service, according to Statistics Canada. Four chains dominate Canadian grocery sales. As of late 2008, two foreign-owned companies, Cargill and XL, process 89% of Canada's cattle. Three companies control two-thirds of western Canada's grain-handling capacity and two companies control 63% of Canada's milling capacity.⁹

For a \$5.93 kilogram box of corn flakes, the farmer portion of the consumer dollar is \$0.17

Rural Sociologists like Mary Hendrickson and William Heffernen at the University of Missouri have, for several decades, been tracking and monitoring the impact of this sort of concentration in the food industry. The concentration is not only a factor of mergers but also of vertical integration in the most profitable and least risky sectors of agribusiness. The impact has been a system that is "a far cry from the Adam Smith vision of free markets when we have such high levels of market concentration, which economists agree severely distort market signals."¹⁰

This is the system within which individual farmers must try to make a living, squeezed by commercial prices on the input side of their operation and by wholesale prices on the output side. To counter this oppressive weight in the market, many farmers in North America have shifted to some form of direct farm marketing. The past decade has seen a substantial increase in the numbers of farmers markets, community supported agriculture programs and other similar ventures. By doing so, farmers effectively shorten the supply chain down to two links (in terms of the food exchange) and are generally able to charge the retail rate for their product, thus taking home a much larger portion of the consumer dollar.

Despite the seeming success of direct farm marketing and the continuing expansion of farmers markets, it must be noted that the percentage of food purchased at conventional grocery outlets (which now includes Walmart as the top global food retailer) still dominates the food system. The US Department of Agriculture recently undertook an analysis of the impact of direct farm marketing. While it is clear that it is increasing in importance, with a growth rate far exceeding that in the rest of agricultural sales, it still involves only a fraction of farm product raised in North America. Further, 77.4% of farmers engaged in direct marketing had annual sales of less than \$5000.¹¹ It must be noted that the appeal of this form of marketing is strong for many farmers as it results in a higher profit margin for them, as well as for the consumers seeking to "put a face on their food" – to connect with the farmer who raised or grew what nourishes them.

⁹ Statistics from the National Farmers Union document entitled "Free Trade: Is it Working for farmers?" circulated in late 2007. It can be found along with other useful documents and policy proposals here: <http://www.nfu.ca/top10.html>.

¹⁰ Food is Different, Peter M Rosset, Fernwood Publishing, 2006, pg 72.

¹¹ From *Facts on Direct-to-Consumer Food Marketing*, Adam Diamond, United States Department of Agriculture, May 2009.

The Grocers

Independent grocers are not quite as scarce as hen's teeth but are getting there. In Nelson, the Kootenay Country Store Co-operative is an anomaly, drawing farm product from across the Basin and into the Okanagan, with sales well in excess of \$8M per year serving customers from around the region. The popularity of the store is based, in part, on the fact that there are few independent grocers with the range and abundance of product that it carries, with a clear focus on and priority given to local products, from fresh produce to prepared food and body-care products. The Co-op has a pro-active approach to local producers, supporting them in product development and refinement as well as having supportive pricing policies to ensure that the local products are more readily accessible to the consumer. This 34 year old Co-operative is known across North American alternative grocer circles for its long history of having the highest sales per capita of any natural grocer and for sales per square foot exceeding three times the industry average.

In contrast, all the main grocery chains have a policy of requiring approval by head office of any product. Additionally, all product must be shipped through one of their central warehouses, even when it ends up back on the local shelf, 20km from where it was produced. Some store managers may take the risk of accepting what is known as "back door deliveries" but since all stores are corporately owned, managing payment for the products can be problematic in addition to the possible career risk of deviating from "listed products". Joe Karthein, a Self-Employment Counselor with Community Futures in Nelson, describes the experience a local producer can expect trying to get product on the shelves of a grocery chain:

"Getting product into any of these [...] chain stores "officially" is a ridiculously expensive endeavor. Each would require listing fees, a significant advertising budget and multiple sale periods throughout the year. If sales do not meet expectations, they have no qualms about pulling the product off their shelves with no notice or communication after all that investment has been made."¹²

The Global Market

Canadian farmers compete in a global market over which they have almost no control. The exception to that rule is supply management systems that affect both domestic and export oriented goods – which are under increasing pressure internationally to be dismantled. The proverbial "level playing field" is nowhere in sight when we are talking individual farmers' fields. Canadian farmers are bound by environmental and labour standards that may not exist in other countries from which the major forces in the marketplace are sourcing. In addition to those very significant factors, Canada's productive land base is only 6% of our landmass, and our growing seasons are significantly shorter than countries located further south on the globe.

De-skilled Population

A cursory analysis of the food security project proposals submitted to the Trust over the past decade shows that the vast majority of them have the intent of rebuilding food skills among community residents through such mechanisms as community gardens and kitchens.¹³ Food and agriculture scholars have monitored a trend of de-skilling of the

¹² Private communication, 25 June 2009.

¹³ CBT staff have indicated that recent years have seen a significant increase in the proportion of proposals focused on some form of food security initiative.

general population, resulting in an ever-increasing dependence on prepared and “fast” foods.¹⁴ This has coincided with an increase in diet-related diseases, particularly in North America, that is well documented and analyzed.

While this is inextricably linked to the food system, health concerns, food skills (in the kitchen and the garden) and the right to food are all surpassed by the fact that if there is inadequate supply at a community level of our key nutritional needs, they are all essentially irrelevant.

Community Gardens and Kitchens are a short-term strategy for building capacity and social capital, and a long-term strategy for re-skilling the population – not for rebuilding our key and core food supply (unless there is a significant change in the occupations of the mass of North Americans).

The Needs

Self-sufficiency in food implies that no supplies would be needed from outside the Basin. For some, based on concerns about fossil fuel consumption, climate change, environmental degradation, and nutritional quality, this may be the desired goal, however realistic it may or may not be. I would propose that, like the CBT’s Mission statement, a goal of greater self-sufficiency in food would be a judicious one for Basin residents, for all the reasons stated in the first section of this paper.

BC’s Ministry of Agriculture undertook a study in 2006 of the level of the province’s food self-reliance (based on 2001 data). The findings were that BC farmers produce 48% of the food consumed in BC. It also found that to maintain that level of food self-sufficiency - note that it is less than half of our diet - through to 2025, there would need to be a 30% increase in production. Selkirk College’s Regional Innovation Chair, George Penfold, estimates that self-sufficiency levels in the Basin may be lower than those of the province as a whole, based on current agricultural production.

To achieve greater food self-sufficiency in the Basin, we need to significantly increase the volume of food produced here. Thus the question becomes, how can this be done?

For the Basin’s Indigenous Communities part of the answer lies in the need to address access issues, sustainable management and harvesting, and intergenerational knowledge transfer. It would also be useful to undertake an assessment of the dietary and medicinal needs of the Indigenous people that can still be procured from the land within the Basin. According to Gwen Phillips of the Ktunaxa, there are Elders in her community who can no longer access the quantities of huckleberries that they need. In contrast, there are more deer and elk than ever before in parts of the East Kootenays due to grazing patterns of domesticated livestock which keep the grasslands areas open.¹⁵

There is a desire to recreate a meaningful economy in Indigenous Communities, where the notion of economy returns to its Greek language roots as the systems that support

¹⁴ See, for example, *The state of cooking in England: the relationship of cooking skills to food choice* by Martin Caraher et al, British Food Journal, 1999.

¹⁵ From personal communication with Dave Zehnder, 16 June 2009.

the healthy functioning of households and communities.¹⁶ The Ktunaxa Nation's stated Vision includes the goal of self-sufficiency, achieved through the proper management of lands and resources:¹⁷

Respectful and culturally appropriate consultations and dialogue need to be undertaken with all the Indigenous Communities of the Basin to better understand the range of needs, both with regards to their traditional food ways as well as their engagement with the mainstream food system. This could and should also result in an understanding of appropriate roles and support mechanisms for the non-Indigenous community and the CBT.

With regards to the mainstream foodstuffs, increasing local production has a number of key elements that need to be addressed in order to effectively ramp up the Basin's self-sufficiency.

Natural resources & climate analysis of the Basin

The Basin is an incredibly bio-diverse and geologically varied region. In order to better understand the level of food self-sufficiency possible in the Basin, an assessment of the "carrying capacity" of the natural resources needs to be undertaken, relative to the dietary needs of the region's residents, including the non-human ones. This sort of analysis would result in a clear understanding of the different production possibilities across the Basin.

There are sections of the Basin with clear advantages for producing certain types of foodstuffs. The westerly portions of the Basin are generally best suited to small-lot intensive and diverse vegetable production, in part due to the scarcity of level land suitable to farming. The Creston Valley enjoys the advantages of a climate, a relatively larger quantity of level land, sub-irrigation in the "flats" (which enables the production of crops that would otherwise be more dependent on a predictable rainfall), and a climate second only to the Okanagan in terms of heat units. The topography and soil conditions in the East Kootenay portion of the Basin make it more suitable to livestock grazing than anywhere else in the Basin, though small-lot livestock production is possible pretty much anywhere in the region. The length of the growing season (frost free days) varies considerably across the Basin, which is also a major determinant in what can grow where.

An in-depth analysis of production capabilities needs to be combined with an analysis of the nutritional requirements and locations of the population, resulting in a Basin-wide understanding of the production possibilities and needs relative to its residents. In support of this sort of an exercise there are local resources that can be drawn on, including the comprehensive agricultural inventory commissioned by the Creston Valley

We believe that the following land protection and management values must be respected by all people on the Ktunaxa Traditional Territory:

1. Ensuring land, air and water will be clean and healthy.
2. Ensuring access to, and protection of, traditional foods and medicines.
3. Balance of economic use of land with cultural and spiritual values.
4. Long-term sustainability and ecological integrity take precedence.
5. Land stewardship as the collective responsibility of the people.
6. *?aknumuctilil...* natural law; taking only what you need.

¹⁶ See, for example, the Final Activity Report of the Working Group on Indigenous Food Sovereignty, March 2008 which can be downloaded here: <http://fooddemocracy.org/links.php>.

¹⁷ From the Ktunaxa Chiefs' Strategy Session 2002: Proceedings, page 1.

Agricultural Society in 2002. The anecdotal knowledge base in the Indigenous communities and farm groups in the region can also render a wealth of useful information. Models such as the one proposed by Cornell University scientists for estimating the agricultural carrying capacity of a region¹⁸ could be combined with this local knowledge to better determine the carrying capacity of the Basin relative to the nutritional needs of its population.

Water is, of course, essential to most types of agricultural production in the Basin. We are fortunate to have a good supply of fresh water in the region but its availability is not consistent across the region and needs to be considered in any analysis of types and levels of production capabilities now and as we experience the increased effects of climate change.

Increasing production

Farmers are the key to local production (for both raw and processed product), yet they represent only 2.2% of the Canadian population with the numbers decreasing every year. Farmer retention happens when the farms are profitable and self-reliant – this is also key to succession planning for farm families. The question of what enables a farm to be profitable is a complex one with no one answer but a number of factors.

In my research for this paper, every external stakeholder with the exception of the Ktunaxa representative named agricultural extension services as a top priority. This need is recognized by many involved in food systems at the farm and planning level. In early 2008 the BC Ministry of Agriculture and Lands released the *British Columbia Agriculture Plan: Growing a Healthy Future for B.C. Families*. Among the 23 Strategies outlined in the paper are:

- ⇒ Assist the agriculture industry with human resources, succession planning and new entrants.
- ⇒ Strengthen current extension services.

However, one of the widespread criticisms of the Agricultural Plan is the lack of resources to implement the Strategies. Further, the Ministry of Agriculture's field staff are virtually non-existent across the province (the Basin has one serving all sectors and the entire region) and funding to its few remaining outreach services continues to be cut. Yet, as a report by the World Bank commented: "The contribution of agricultural support services such as extension in increasing agricultural productivity has long been recognized."¹⁹

A shortened food chain can be a critical factor in farm profitability when it is based in a more equal power relationship between the producer and the buyer. As indicated above, shortened supply chains are achieved through direct farm marketing (such as farm gate sales, community support agriculture schemes or farmers markets). However, most Basin residents are like the majority of the rest of North Americans – they procure almost all of their foodstuffs at conventional food outlets like grocery stores. Where independent grocers exist, the possibility of maintaining a relatively short supply chain is greater. It is likely that with an increasingly informed consumer, even the large grocery

¹⁸ Peters, Christian J et al, *Testing a complete-diet model for estimating the land resource requirements of food consumption and agricultural carrying capacity: The New York State example*. Renewable Agriculture and Food Systems: 22(2); 145 – 153, 2006.

¹⁹ pg v, Public and Private Agricultural Extension: Beyond Traditional Frontiers, by Dina L Umali & Lisa Schwartz, World Bank Discussion Papers #236

chains will come under pressure and respond to the requests for food that conforms to the “100 mile diet” by allowing the more traditional “back-door” deliveries of local product that has not had to travel to a distant central warehouse first.

One of the more common questions from farmers, particularly the start-ups is “what should I grow?” There is a real need for solid market assessments that can deliver market intelligence to the farming community, identifying what the opportunities and needs are.

Labour is another huge element in the economic viability of a farm – both in terms of its availability and wage costs. Across the various sectors, each farmer has to assess the likely market value of the crops or product against the labour costs. Small-scale agriculture tends to be less mechanized since the farms are not large enough to take advantage of “economies of scale” and invest in the equipment that could enable them to increase efficiency on the farm. This affects production volume potential as well as crop quality and shelf life.

Strawberries are a prime example of the challenges of small-scale agriculture. They are a perennially popular fruit, however are never consistently grown in the West Kootenays, despite the fact that they can be readily grown here. When picking cannot be mechanized, it requires many hands and many hours to pick the strawberries over the course of their season. If the picking is successful, there is still the challenge of removing the “field heat” from the strawberries – for every hour that a strawberry is not fully and properly cooled, it loses a day’s shelf life. Small-scale producers often cannot afford to build an on-farm cooler never mind a forced-air cooler that can be moved around the fields. For the farmers who undertake a solid analysis before embarking on a given crop or type of product, the labour to product values as well as the possibility of recouping infrastructure investment are key considerations.

Land values factor in to farm viability as well. The loss of prime agricultural land to urban encroachment and rural estates is well documented. British Columbia’s Agricultural Land Reserve (ALR) is a land preservation model lauded in other jurisdictions. As of 2008, 8% of the Agricultural Land Reserve is in the Kootenays.²⁰ However, approximately one third of the ALR in the region is of lower quality agricultural classifications, limiting the range of production possibilities on that land.²¹ Nor is the Agricultural Land Reserve within the Basin used to its full potential, with roughly half of it lying fallow and therefore subject to pressure to have it excluded from the ALR. If farming were more economically viable, it is likely that the pressure to remove land from the ALR would lessen.

Supportive land use planning and other related bylaws and practices by local governments can play a key role in the viability of agriculture in the Basin. For example, in order to mitigate potential conflict between farm operations and non-farm rural residents, buffers are often a zoning requirement. It can make a huge difference to the farm if the buffer zone setbacks are required of the

“Discourage excessively large, non-farm housing in the ALR. The gradual gentrification of farm areas should be recognized as a form of non-farm use which can seriously destabilize agricultural communities.”
Guideline for Bylaw Development in Farming Areas, Ministry of Agriculture, 1998, Section 14.3.

²⁰ Source: http://www.alc.gov.bc.ca/alr/stats/Perc_ALR_by_Region.htm, accessed June 2009.

²¹ Source, Premier’s Summit on Economic Opportunities – Kootenays, Summary of Proceedings, 1998.

non-farm neighbour rather than an enforced reduction in land use and therefore productivity on the farm.

Supportive community waste management practices can also significantly affect farm viability, when a resource recovery approach is applied to the inevitable waste streams created in food production. For instance, abattoir offal is organic material that contains valuable nutrients that could be captured, composted and then used for soil fertility enhancement. Cull cherries and other tree fruit in the Creston Valley could be better managed to produce processed food products (juice, fruit leathers, sweeteners) or used in food distribution schemes when the basis for culling is only cosmetic.

New entry farmers can find land access difficult, particularly where development pressures have driven up the cost of the land. This can result in the need to farm on less valuable land that is generally also less well suited to agriculture. It would be useful to undertake a Basin-wide assessment of the land needs and access options that could support an increase in active farming in the region. A recent CBT-funded project in the Kaslo area has developed a database of available land and those interested in farming. There are also land conservation models (trusts and covenants) with a focus on agriculture that are being promoted by BC-based organizations such as Farm Folk City Folk and The Land Conservancy.

South Island Organic Producers Association (SIOPA) pioneered a program known as Linking Land and Future Farmers (LLAFF). One of the factors in the success of the SIOPA model while it ran was a partnership with the Victoria-based Lifecycles Project that provided business training for the young farmers. After acquiring essential business management skills – such as the all important cost of production calculations – the farmers-to-be were then apprenticed with experienced area farmers. Once the practical, hands-on skills were developed, the fledgling farmers were connected with available land through long-term lease arrangements that benefitted the landowner via tax deductions. LAFF is no longer running, due to the end of project funding and volunteer burnout, but the legacy of the program lives on in the relative abundance of young farmers on southern Vancouver Island, such as the three young women who own and operate Saanich Organics. (<http://members.shaw.ca/saanichorganics/>)

The Role

The Columbia Basin Trust has a well-established relationship with the Ktunaxa Nation who have a dedicated position on the Trust's Board of Directors. An appropriate and effective role for the CBT in supporting the food security of the Ktunaxa, the other three Nations that historically have drawn their livelihoods from the Basin, as well as current Indigenous residents from other Nations can only be developed through careful dialogue with those involved.

With regards to the more conventional food security needs of Basin residents, the identification of a role for the CBT will be more easily done by clarifying if the focus is commercial or non-commercial production. As I have tried to convey in this paper, I believe that community food security rests in a primary focus on commercial production for the majority of the Basin residents who rely on a monetary exchange in order to meet their nutritional needs. At the height of the World War II Victory Garden program, 40% of

USA vegetable needs were produced in backyard gardens.²² However, our dietary needs depend on much more than vegetables. Further, the percentage of the population with both the knowledge base and garden space conducive to productive vegetable growing is much, much smaller than it was 60 years ago.

The CBT is well positioned to assume an effective role in fostering an increase in agricultural production and food security in the Basin. The Ministry of Agriculture has long since lost the capacity to be actively engaged with and readily available to the majority of BC farmers.

The CBT has the benefit of being an organization that can overcome regional, special interest group, or rivalry tensions and create bridges between communities that would not otherwise be possible. The Trust also has well-established community engagement mechanisms and is a politically “safe” voice, able to open doors at various levels of government that may not be possible for an individual, special interest group, or grassroots organization.

The ratio of land base and farms to the few remaining Ministry of Agriculture field staff means that the more distant, marginal or independent of the farmers may never see a publicly funded agrologist or horticulturalist on their land. The Creston Valley alone used to have a Ministry of Agriculture horticulturalist, an agriculturalist and a range and forest specialist to serve the Valley’s farmers. Now the entire Kootenays is served by one agrologist out of Cranbrook.

Investment

I believe that it would be a worthwhile exercise, if it has not already been undertaken, for the CBT to review what “investment” means to the organization and even more, to the residents of the Basin. My experience of small communities is that barter and exchange systems are alive and well, often as the easiest and sometimes only option for meeting an identified community good or need (for example, Kootenay Barter Bucks, the Circle of Habondia Lending Society in the West Kootenays).

The language of social capital has gained a lot of prominence in the last decade, recognizing that healthy communities are based in much more than health care and physical infrastructures. It is my opinion that the CBT also recognizes this as can be demonstrated by the range of grant and investment programs that the Trust operates. However, based on my interviews with CBT staff, there is an inconsistency or at least a lack of clear guidelines on what is an appropriate role for the CBT to play with private enterprise. There is, understandably, a concern about supporting one private business over another. However, as various CBT investment decisions over the years have demonstrated, from grants to Community Futures to full back page ads in the Route 66 magazine, there is a role of some sort for the CBT in supporting private business – it would just benefit from clarity.

The CBT’s 1997 Management Plan’s outline of the Investment Program’s Objectives lends itself well to supporting an increase in agricultural production in the Basin: “Goal 2: To generate broad secondary economic benefits for the Basin community from the Trust’s investments.”

²² From Richard Heinberg’s E.F. Schumacher Lecture entitled “50 Million Farmers” found here: http://www.smallisbeautiful.org/publications/heinberg_06.html.

Goal 2 Objectives	Food System implications
(a) Invest all of the capital received by the Trust within the Basin, as long as commercially viable investment opportunities can be found.	Commercially viable agricultural and processing ventures will increase in numbers under a multi-pronged support program that includes financial investment and specialized business incubators.
(b) Encourage others to invest in the Basin by using the Trust's capital to leverage additional investments, whenever suitable equity or loan partnerships can be found.	Matching funds are frequently a requirement of agricultural and food security granting programs. Having such a fund available from the CBT with supportive but clear criteria to qualify for grants could assist with planning and development both on farms and for community-based food security projects such as farmers markets and business incubators.
(c) Direct the Trust's capital into job-creating investment opportunities in Basin communities, where feasible.	Small-lot intensive agriculture can also be a significant employer. (The Kosiansic Farm in the Lower Slocan Valley was one of the largest area employers in the early part of the 20 th Century.) Additionally, agriculture has a high economic multiplier effect with many support industries and businesses at both ends of production (i.e. inputs such as seeds and fertilizers and outputs such as processing, storage, packaging).
(d) Diversify the Basin economy by investing the Trust's capital in emerging growth sectors, where commercially viable opportunities can be found, particularly in value-added and knowledge-based businesses.	While agriculture may not be regarded as an emerging sector by conventional standards, the shift to greater food self-sufficiency within the Basin will happen more effectively and efficiently if support systems are in place to enable access to information and equipment that fosters more efficient and place-appropriate technologies and practices.
(e) Invest the Trust's capital in traditional sectors of the Basin economy where commercially viable opportunities can be found, particularly in forestry, agriculture, mining and tourism.	The CBT could play an important role by investing in infrastructural supports where there can be no initial return on investment and where conventional financial institutions would not normally engage.

Goal 2 Objectives	Food System implications
(f) Invest the Trust’s capital in economic sectors which have a potential to increase the Basin’s ability to meet its own needs.	Since food is a fundamental need, investing in agriculture with a focus on local markets cannot help but increase our self-sufficiency and communal food security. Even in the unlikely event that no disruptions occur to the global food supply from climate change, reduced stocks of fossil fuels, or political upheaval in major food exporting countries such as China and Chile, there are few, if any detriments to having a greater level of food self-sufficiency.
(g) Identify what role the Trust might play in establishing community-based capital funds and a Columbia Basin investment fund.	A dedicated fund for capital investments could support the rebuilding of the processing and storage infrastructure for farm product that has been mostly outsourced or “off-shored” in the past four decades.

Agricultural Extension

As noted above, an agricultural extension service has been identified amongst area farmers as a high priority. The CBT could collaborate with the region’s educational institutions (public, post-secondary and private), agricultural organizations and community groups to offer a range of programs aimed at increasing the knowledge base both amongst the farming and general population.

The American Land Grant University’s Extension Services have long been the envy of Canadians concerned about the knowledge transfer for food production. As there is no equivalent publicly funded program here in Canada, private extension services have developed to fill the gap. But more often than not, in farming where the profit margins are notoriously low or non-existent, the only “extension service” providing production management information comes from the equipment and input sales reps to existing farmers. Additionally, other than the SIOPA / Lifecycles program identified above, there are few if any programs aimed at helping youth to develop the business and production skills to enter into agriculture as a career.

The World Bank’s review of agricultural extension programs around the world offers the following useful suggestions with regards to the provision of production information for farmers:

“[F]or public information ... there will still be a need to formulate stronger mechanisms to facilitate farmer articulation of their demands to ensure relevance and efficiency of implementation of extension programs directed to them. Consultation between farmers and representatives from the public, private, non-governmental and non-profit sectors needs to be promoted. In designing an effective agricultural extension program, regardless of the institutional channel, five major issues have to be resolved:

- i. What are the objectives of the extension activities;
- ii. Who is the target audience;
- iii. What is the content or message;

- iv. What method(s) will be most effective to convey this message; and
- v. How can the activities of various sources be coordinated to ensure synergism in the extension effort.²³

Information & Networking

In addition to an agricultural extension program, the CBT could integrate a food systems element into its other information gathering, assessment and dissemination activities. The two Goals in the CBT's Draft Social Strategic Plan 2008 – 2011 and their Planned Activities could readily be applied to a food security program:

1. Strengthen the ability of organizations and communities to respond proactively to complex [food systems] issues and adapt to change; and
2. Provide a range of assistance to Basin communities to enhance their ability to effectively address [food security] issues.

A CBT-based information clearinghouse, complementing an agricultural extension program, which includes "findings from research, trends/patterns, funders, success stories, best practices, and referrals to other resources" could significantly increase the efficacy of community efforts to address their food security needs. This clearinghouse would have information specific to agricultural production needs and techniques but would also encompass the information needs of individuals and communities seeking to re-skill themselves about food generally. It could develop and maintain a database of organizations across the Basin and elsewhere working on food security, disseminating and linking best practices, working models, templates, and Basin-specific knowledge.

Planning & Development

The CBT's *Social Strategic Plan* recognizes the need to influence government policy in the interests of supporting a community's social well-being: "Encourage all levels of government, particularly local government, to engage in planning, that integrates, among others, social perspectives."²⁴

This is equally a need in support of community food security. Well-informed pro-farming advocacy that is not based in an agricultural organization has the potential to effectively complement the efforts of groups more traditionally aligned with farming and food security.²⁵ There are considerable resources, based both in BC and elsewhere, to support land use and other planning that fosters an increase in community food security.²⁶

The food production capabilities of the Basin are not really known. The CBT could take the lead in a collaborative effort to assess the land suited to agricultural production, and the range of production possibilities relative to the type of soil, water availability and

²³ pg 57, *Public and Private Agricultural Extension: Beyond Traditional Frontiers*. Dina L Umali and Lisa Schwartz, World Bank Discussion Papers, Washington, D.C. 1994.

²⁴ pg 5, Planned Activities for Goal 1.

²⁵ A prime example of this has been the collaboration between the Region of Waterloo Public Health and Foodlink in Ontario.

²⁶ See the Ministry of Agriculture's "Guide for Bylaw Development in Farming Areas found here: <http://www.alc.gov.bc.ca/publications/publications.htm> and the American Planning Association's Policy Guide on Community and Regional Food Planning found here: <http://www.planning.org/policy/guides/adopted/food.htm>.

growing conditions. Partners in such an endeavour would include George Penfold, Rural Innovation Chair with Selkirk College, the College of the Rockies, the Ministry of Agriculture, Kootenay Rockies Innovation Council, Kootenay Association for Science & Technology, Windermere District Farmers Institute, the Creston Valley Agriculture Society, Regional District and Municipal Planning Departments among others.

Once the production capabilities are known, this information would form the basis for additional research projects aimed at determining, for example:

- ★ How can agricultural practices and locations be adjusted, developed and expanded in ways that also foster food security and sovereignty for the Indigenous communities of the Basin?
- ★ How much land is available for agricultural production that is not being actively farmed and why?
- ★ How can current and future agricultural production be shifted to focus on supplying the local markets?
- ★ Which agricultural sectors are in danger of losing their local knowledge base and what systems of knowledge transfer need to be put in place to maintain it?
- ★ What are the barriers and how can they be removed to encourage more young people to engage in farming?

The Benefits

Mission: The Columbia Basin Trust supports efforts by the people of the Basin to create a legacy of social, economic and environmental well-being and to achieve greater self-sufficiency for present and future generations.

Legacy

The Oxford English Dictionary defines legacy as a “material or immaterial thing handed down by the predecessor”. The Basin actually has a substantial genetic legacy bequeathed to us by early 20th Century orchardists, found in the many ancient fruit trees that dot the hillsides across the region. The long-abandoned orchards point to the importance of preserving and augmenting the production knowledge and infrastructural legacy for future generations. The fact that this region was once completely food self-sufficient before the settlers arrived points to an indigenous genetic legacy that needs to be better understood and protected.

Cultures around the world have been perpetuated in their stories and songs, their languages and their food. Thriving, food secure and knowledgeable communities create legacies that are cherished by succeeding generations who hunt, gather, grow the familiar crops and re-create the beloved dishes.

Social Well-Being

As per Maslow’s widely recognized hierarchy of needs, the social well-being of an individual and community is based upon first having their most basic needs met - food, water, shelter. Food security is also widely recognized as one of the social determinants of health. A food secure community creates healthy and resilient individuals who can engage in the cultural and economic life of their communities.

Economically sustainable farms will increase the mental and social well-being of the agricultural community – a sector where all too often one hears of crisis counseling programs striving to reduce the suicide rate amongst farmers demoralized by years of crushing debt.

Food systems that have a degree of local control also enable the inclusion of local values and priorities in the production and distribution of food. More democratic control of food systems can enable an increase in food access for area residents, no matter what their economic status, as well as the incorporation of environmental and labour standards that suit the priorities and practices of the communities.

Economic Well-Being

Fostering the economic well-being of farmers will have multiple benefits to the larger community, much beyond the mere provision of food. Small-scale agriculture is frequently labour intensive, offering employment opportunities for individuals who may find themselves displaced from their regular jobs.

Agriculture is also a sector with high economic multiplier effects due to the need for support systems and other links in the food chain such as local labour, production inputs (seeds, soil amendments, fencing, tractors, veterinarian services etc), marketing, packaging, storage and distribution.

Environmental Well-Being

While the Basin is rich in natural resources, settler communities and descendants have a long history here of “resource extraction”. With sustainable farm management practices, especially those created in support of Indigenous food ways, the natural resources of the Basin can be preserved and even amplified. Increasingly, farms are coming to be recognized for the environmental goods and services they can deliver, with programs in Europe that compensate farmers for sustainable management practices.

Greater Self-Sufficiency

An increase in food self-sufficiency in the Basin has multiple benefits, as described above and in the Capital Region Food Charter. An increase in local production can help to ensure that should the need arise to depend heavily, or even exclusively on food procured from close at hand, our communities will be better prepared to meet that challenge.

Conclusion

Obviously the task of creating a moderate degree of food self-sufficiency is a huge one and a long-term goal. There are many steps along the way, with short-term initiatives that will add to the Basin residents’ food security. The CBT has substantial internal capacity to support such an endeavour, in particular through synergies with other initiatives such as Water and Climate Change as well as the community engagement programs.

In this project I have been asked to explore if there is a strategic, feasible role for the CBT to play in fostering food security for Basin residents. The answer is clearly yes. I would also propose that more than strategic and feasible, it is a necessary role for the CBT to undertake in order to fulfill its Mission of fostering thriving and resilient current and future Basin residents.

Appendix A: Working Models

It must be stated that there are no working models that I am aware of that would be a perfect match for a CBT role in Food Security. Part of this is due to the fact that most well-developed food security initiatives have been developed in a metropolitan context, often based in the issue of hunger. As a result, their programming may not readily translate to a primarily rural context. However, there are various food security and agricultural organizations that have useful elements to them. Below is a sampling.

Toronto Food Share: <http://www.foodshare.net>

This urban-based initiative was established in 1985 by then Mayor of Toronto, Art Eggleton, out of a concern about the growth of hunger in the city. Foodshare's original mandate was to co-ordinate emergency food services, and to collect and distribute food. It has since expanded into co-operative buying systems, collective kitchens and community gardens that would have the potential to address short-term issues of household hunger, while also providing longer-term benefits by building the capacity of individuals and communities.

REAP: <http://www.reapfoodgroup.org/index.html>

Research, Education, Action, and Policy on Food Group (REAP) is a non-profit organization located in Madison, Wisconsin. The REAP Food Group is building a regional food system that is healthful, just, and both environmentally and economically sustainable.

REAP connects producers, consumers, policy-makers, educators, businesses and organizations to nourish the links between land and table. What we choose to eat, where our food comes from, and how our food is grown have impacts on our health, our regional economy, the health of our environment and the strength of our communities.

Missouri Alternatives Center: <http://agebb.missouri.edu/mac/about.htm> (more focused on ag): "The Missouri Alternatives Center's mission is to provide Missourians with timely information about alternative agricultural opportunities, to evaluate diverse enterprises, improve management decisions, increase economic returns and enhance the quality of their lives."

Hartford Food System: <http://www.hartfordfood.org/about/index.html>

"Established in 1978, the Hartford Food System (HFS) is a private, non-profit organization working to create an equitable and sustainable food system that addresses the underlying causes of hunger and poor nutrition facing lower-income and elderly Connecticut residents. HFS has developed dozens of projects, initiatives, and coalitions that tackle a wide range of food cost, access, and nutrition problems. In more recent years, the organization has extended its reach to develop food projects and to provide training and technical assistance throughout Connecticut as well as to communities across the country. This work includes active participation in a number of public policy initiatives at the local, state, and federal government levels that affect community-based food systems.

HFS relies on a collaborative approach, engaging the talents of farmers, government policy makers, local non-profit organizations, local communities, chefs, educators, and the commercial food sector. HFS directs its efforts at four major food system components: production, distribution, education and training, and public policy."

Foodlink Waterloo Region: <http://www.foodlink.ca>

Foodlink Waterloo Region is a non-profit organization that promotes local food, supports and connects farms and food businesses, provides local food education and outreach in our community, and engages decision makers in putting local food policy on the community's agenda. Foodlink has been provided with effective policy, planning and research support through the efforts of the Region of Waterloo's Public Health office, generating reports such as "Towards a Healthy Community Food System for Waterloo Region" and the more recent "A Healthy Community Food System Plan for Waterloo Region", both of which can be found on the Waterloo Region's website: <http://www.region.waterloo.on.ca>

Food Down the Road: <http://fooddowntheroad.ca>

Through visioning, researching, educating, advocating and partnership building, Food Down the Road is a vibrant community movement building a more vital and sustainable local food system. Our broad and diversified movement seeks to build a local food system that can nourish us all in the future.

Rural Vermont: <http://www.ruralvermont.org/>

Rural Vermont is a statewide grassroots organization dedicated to building a prosperous rural life. Rural Vermont supports a rural economic policy for Vermont that recognizes the importance of agriculture and natural resource based industries, support for small rural businesses, along with good jobs, fair wages, and decent health care, housing and transportation for all rural citizens. We are committed to a broad-based sustainable agriculture in harmony with the needs of the family, community, and the environment for future generations.

Capital Region Food and Agriculture Initiatives Roundtable (CR-FAIR): http://www.lifecyclesproject.ca/initiatives/food_directory/?q=node/331

CR-FAIR is a multi-stakeholder group in Victoria that connects, advocates and educates around local food and agriculture issues. CR-FAIR's vision is a sustainable and secure local food and agriculture system that provides safe, sufficient, culturally acceptable, and nutritious food accessible to everyone in the Capital Region through dignified means.

"Healthy Food Systems Are Integral to a Resilient Community:

- Food brings people together in the celebration of family, friendship and community. It also strengthens links between diverse cultures and communities.*
- Food security contributes to the physical, mental, cultural, spiritual and emotional well being of our region's residents.*
- Food self-reliance is strengthened through community-based food programs, such as community gardens, fresh food box programs and collective kitchens.*
- Food security means that our region takes responsibility for growing and processing the food we need and looks to a trade regime that fosters social justice, environmental sustainability, and community development throughout the world.*
- Domestic and local ownership of our food supply is critical for the region's future.*
- Healthy local food systems involve the active stewardship of all sectors of the community: public, private, and voluntary."*

From the Capital Region Food Charter, CRFAIR version, April 2008