indicators

The following indicators were derived from the discussions at Workshop 1 and previous indicator research undertaken by the Design Centre for Sustainability and its partner research groups.*

The proposed Food Indicators are:

Growing Space Intensity

Growing Space Preserved

Growing Space Proximity

Agricultural Distribution

Food Purchasing Distribution

Growing Space Size Diversity

Ron Kellett, Sara Fryer & Isabel Budke. 2009 Specification of Indicators and Selection Methodology for a Potential Community Demonstration Project. Report for CMHC/NRCan.

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Growing Space Intensity

INDICATOR

Growing Space Intensity reveals the extent of local food growing potential within a given area. Local growing space gives residents opportunities to grow and access food in their community, which reduces energy consumption from transporting food and dependence on food imports. Access to locally produced food helps to create complete, resilient and efficient communities and neighbourhoods.

DESIGN METRICS

- Area of dedicated growing space per dwelling unit
- Percent agricultural land/growing space
- Percent arable land
- Percent existing agricultural land reserve (ALR)
- Number of irrigated acres
- Number of farms
- Total farm acreage
- Average farm acreage
- Percent of farmers markets

SUPPORTING STRATEGIES

- Encourage gardening as a leisure activity
- Develop a structure for agriculture education
- Develop a certification process as a requirement for agricultural ownership
- Evaluate the impact of the agri-food system on the economy, development patterns and conservation
- Change cultural attitudes towards food

Growing Space Preserved

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INDICATOR

Growing Space Preserved reveals the extent to which a development conserves existing, unfragmented agricultural land. Developments that preserve land designated locally for agricultural preservation, or land with prime soils, unique soils, or soils of significance for agriculture, promote local food security. Preservation of these lands contributes to creating livable, efficient and resilient communities and neighbourhoods.

DESIGN METRICS

- Percent of existing agricultural land preserved
- Percent of protected agricultural areas that are over 10 ha

SUPPORTING STRATEGIES

- Evaluate the impact of the agri-food system on the economy, development patterns and conservation
- Re-evaluate border and trade agreements
- Reframe and emphasize the values of food as an essential part of life: production, transportation, marketing, consumption
- Draft covenants or agricultural management requirements supportive of maintaining agricultural production
- Draft buffer edge management plans

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Growing Space Proximity

INDICATOR

Growing Space Proximity reveals the ability to reduce travel and transport of foods from growing space to consumers. Local agriculture enables a relationship between land and food and easy access fosters farming as a leisure activity. Reducing travel distance and time saves energy and preserves nutritional value of foods.

DESIGN METRICS

- Average distance from dwelling unit to growing space
- Average distance from growing space to food provider
- Percentage of homes within 400m of community garden facilities

SUPPORTING STRATEGIES

- Return to small scale agriculture practices
- Promote and support grassroots efforts to sustain non-corporate farmers
- Empower communities to assume responsibility for food production and consumption
- Use food and agriculture as a community building tool
- Encourage gardening as a leisure activity
- Develop a structure for agriculture education
- Enable equal access to food to the full social and economic spectrum of the population
- Evaluate the impact of food quality and supply on health care and standard of living
- Re-establish a connection with food
- Enhance opportunities for farming initiatives

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Agriculture Distribution

INDICATOR

Agriculture Distribution reveals the degree to which food growing potential is concentrated or dispersed. Agricultural services that are situated close to one another reduce the economic and environmental implications of transportation costs incurred between the stages of production, packaging and distribution.

DESIGN METRICS

- Percent of agricultural land accessible by public transport
- Distance between growing space
- Distance between food production and distribution
- Distance between distribution and consumption
- Distance between processing and packaging
- Distance between production and processing

SUPPORTING STRATEGIES

- Promote and support grassroots efforts to sustain non-corporate farmers
- Empower communities to assume responsibility for food production and consumption
- Use food and agriculture as a community building tool
- Assess potential and implementation strategies for a municipal ALR
- Evaluate the impact of the agri-food system on the economy, development patterns and conservation
- Reframe and emphasize the values of food as an essential part of life: production, transportation, marketing, consumption
- Offer a diverse range of foods for a diverse population
- Examine the relationship between the nature of our modern day diet and eating habits on the current food system
- Establish integrated policy development to bridge municipal and provincial agricultural policies between regions

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Food Purchasing Distribution

INDICATOR

Food Distribution reveals the degree of access to food within a community. Multi-modal transportation options offer access to local produce to a wider demographic of people. Access to locally grown food reduces the economic and environmental costs of purchasing food.

DESIGN METRICS

- Percent grocery stores located on public transit route
- Transportation modes available to seniors or others with physical limitations to access food resources
- Number of market types

SUPPORTING STRATEGIES

- Empower communities to assume responsibility for food production and consumption
- Re-evaluate border and trade agreements
- Enable equal access to food to the full social and economic spectrum of the population
- Evaluate the impact of food quality and supply on health care and standard of living
- Reframe and emphasize the values of food as an essential part of life: production, transportation, marketing, consumption
- Re-establish a connection with food
- Examine the relationship between the nature of our modern day diet and eating habits on the current food system
- Promote community supported agriculture (CSA) programs

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Growing Space Size Diversity

INDICATOR

GrowingSpace Size Diversity reveals the potential for the growing space to provide varied conditions, services, functions and crops. Diversity of local crops can sustain agriculture through changes in seasons and climates, while also catering to the cultural needs of a varied population.

DESIGN METRICS

- Percentage of farms within a certain size range
- Ratio of large agriculture lands to small scale community gardens
- Simpson's Diversity Index for crop types

SUPPORTING STRATEGIES

- Return to small scale agriculture practices
- Promote and support grassroots efforts to sustain non-corporate farmers
- Develop a certification process as a requirement for agricultural ownership
- Re-evaluate border and trade agreements
- Change cultural attitudes towards food
- Offer a diverse range of foods for a diverse population
- Examine the relationship between the nature of our modern day diet and eating habits on the current food system

summary notes

The following summary notes were synthesized from the notes recorded during Workshop 1. The summaries identify themes that assist in describing key issues and developing design-based indicators.

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Food Discussion Summary – April 16, 2009

Summary Statement:

The fundamental issue for designing food systems in the future is the fundamental disconnect from where we grow our food and where we live. How we go about this can be addressed spatially, but also requires other considerations, for example: social equity, social health (quality of food), economics, and training (we no longer have the necessary skills to sustain ourselves on our land) i.e. outreach, education, technological support. Agri food systems should inform urban form, not the other way around.
Issues surrounding our current food security system:

- Culture and Values (food as a commodity, false representation of dependency and the meaning of food, false correlation between money and food)
- Energy (production, transport, packaging)
- Disconnect/disengagement with food and land
- Agri land under pressure for development
- Location (farm land is far from the cities)
- Nutrient recovery
- Quality (emerging food based disease)
- Equity lens (farmers markets and premium produce don't address low-income population)
- Lack of control (the power of corporations and mass production/distribution)
- Limited capacity to address change without addressing policy

Suggested Strategies:

- Create space to redevelop farming skills (foster direct relationships with the land)
- Redesign our cities
- Enhance educational and funding opportunities for farming initiatives
- Centralize urbanization
- Develop a democratic/capitalized food system
- Create an integrated waste system
- Reframe and reposition our distribution, marketing and access to food
- Offer food security with social housing
- Population Support – examine food demand in terms of different sectors of the popilation and their specific needs
- Internalize the cost of food relative to production (local should be cheaper!) and create public policies that match this economy to support equality
- Make higher prices for junk food
- Use agri land base more efficiently
- Create a municipal ALR
- Establish an "energy currency"
- Allow food systems to drive design

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Obstacles and barriers for changing our current food system to a more sustainable one:

Border security, access, availability, diversity, pandemics (animal, human, vegetables), genetic modifications, natural disasters (i.e. floods in Manitoba, droughts in California, Tsunami SE Asia), rising sea levels (salinization poisons soil)

workshop 1 notes

The following un-edited notes were recorded during the Research Roundtable Workshop 1 group discussions.

Research Roundtable Workshop 1: Food Discussion Group

Date: April 16th 2009

Prepared by: Lindsay Raftis

Participants:

Kevin Connery
Lindsay Raftis
Colin O'Byrne
Herb Barbolet – Centre for Sustainable Community Development at SFU – Local Food First, Van Food Policy Council, Farm Folk City Folk
Claire Gram – Vancouver Coastal Health – Food Security across the region, healthy communities – community based food security (grants) – has resulted in amazing response and results from small scale projects to larger policy advocacy with local governments – also looking at food security more internally as a regional health authority i.e. social housing
David Tracey –sits on board of food policy council, VCAN – Van Comm. Agriculture Networks (small community gardens for low income communities), edible landscaping, arborist (tree advocacy), journalist, metro van advisory committee
Kent Mullinix – Kwantlen Polytechnic University for sustainable horticulture, sustainable agriculture systems
Jim LeMaistre – Ministry of Agriculture – urban agriculture interface – land use inventory, municipal planning
James Richardson – MASA, high school teacher – interested in indicators that can help drive the design of sustainable food systems of regions/cities – and in part, looking at energy efficiency (full cycle of the food system – return nutrients back to the soil – quantify energy inputs into the systems against output of the system in terms of food itself. Also – interested in food access – typology of a region where everyone can have access to soil to grow their own food. What does a sustainable food system look like on a spatial level?
Deepthi Jayatilaka – Provincial Health Services Authority – Community Food Action Initiative - frame food as the determinant of health – engage stakeholders, build evidence, shape policies and support communities. Developed a program called "A seat at the table" – suggestions on how to make food part of everyday planning. Developed a series of research papers – 4 related to climate change and food, impact on BC agriculture and food security.

Directed Question: What are the 2 main issues integral to maintaining food security and providing for the future and changing the current system?

HB: The issue that the culture of food has shifted from being embedded in our psychology to something that is a commodity – "desacralization of food"
CG: Energy. The energy required to sustain our food system is too intensive now – " we believe that as long as we have money, we have food" – urbanization has gone from

being centralized to de-centralized. There is also an issue of oil and a centralized global system. Secondly, there is disconnect. We have forgotten what food means in the social realm – in terms of bringing people together – we spend so many hours on food and yet we have a lack of infrastructure that understands that and are quickly losing the skills to know what to do with food.
DT: We have developed a disconnect with the land that produces food – as a society we have turned our backs on the very soil that nurtures our lives – this leads back to the loneliness, depression, disengagement in urban centres – if we can get this connection through re-design of our cities – perhaps we can re-design the planet to make it more livable. We need to create space to redevelop skills with the land and learn how to sustain our selves with our available resources.
KM: Fail to recognize the dependency on food. Through agriculture, we have the most fundamental, powerful and profound opportunity to redefine what it means to be human. Our challenge is no less than that. Agriculture needs to be the vehicle to advance true democracy. Our current food system is antithetical to capitalism, and democracy.
JL: Land suitable for agriculture is under incredible pressure for different uses (i.e. development and environmental reasons); therefore, making it unavailable for agri production. Availability of land for agriculture production is quickly diminishing. Local governments are feeding the demand for rural residential.
JR: Nutrient recovery – potassium and phosphorous – integrating waste system so that nutrients can be efficiently transported to where they are needed. Sticky issue - issues that impact land use or zoning – relative location of farmland in proximity to urban centres where the food is needed. What are appropriate modes of transport given our oil shortage and needs to ship food around?
DJ: Food is killing people (i.e. chronic disease is food dependent). Water Air and Housing are NOT the fundamentals to live – food should be a right, not a commodity – we need to reframe and reposition our distribution, marketing, access of food. We must re-frame food as something that gives and sustains life.
Aside....Cultural diversity is not well-represented in this discussion – the people that are moving to Vancouver and representing a large part of the population have a different heritage, different diets, different desires for living in the city and THIS city, and don't have the desire to change to local food for environmental reasons – how do we appeal to this crowd? How do we address and include this population? DCS is happy to discuss how to develop a more diverse range of participants.

Open Discussion:

Food democracy – need to look at it with an equity lens, despite the benefits of exclusive food markets like local farmers markets, because that is not fulfilling the fundamental needs and addressing those that don't have enough to eat.

What do we need to do to change and address the issue that food production is a distant concept?

Social housing – food security issues – grocery stores, meal programs, amenity space, kitchen space, gardens – and what is the support required to ensure these amenities get used?

Population support – looking at food requirements in terms of different sectors of the population and their specific needs (quality, quantity, type, support)

Food system that forces the internalization of the cost of food relative to production i.e. food needs to be cheaper locally and not from Wal-mart – it's a false economy – we also need public policies that match this economy to support equality. Our society is backwards i.e. young mothers can't afford better food for their children – older and successful professional can afford the luxury of clean, local food.

Has food ever been equitable? Is food equity a utopian goal or a realistic goal? Food is a reflection of society.

Is Vancouver the model region? Nobody can afford to live here. If food is society and society is food, then how do we afford food in an unaffordable society?

What is internalized and externalized in our economy? We are paying heavily for the inequities in our society. i.e. health system.

Food is an easy "entre" into discussing the inequalities in our society.

High prices for proper food - Junk food is more calories and less nutrients for less cost.

NZ is going to China to build demand for eating dairy to support their dairy farming, despite the fact that the Chinese have not eaten dairy historically. This has implications to their health and to the environment and economy. Is it necessary?

What is public and what is private? The concept in our society is that we are "on our own" rather than in a community.

What are our goals for this discussion? What do we want to get out of this? (Ultimately decided to maintaining an open discussion and reserving targeted/indicator based discussion for workshop 2)

4% of food land base is used to supply a large portion of the diet in Russia.

We need a shift in our cultural paradigm – how will we organize our economy so we can actually change things?

Not everything can be represented physically

The costing structure in large companies like Cosco is based on large volumes and guaranteed shipments

Directed Question: What are the obstacles, barriers and opportunities to changing our current food system to a more sustainable one?

- border security, access, pandemics (animal, human, vegetables)
- genetic modifications
- natural disasters (i.e. floods in Manitoba, droughts in California, Tsunami SE Asia)
- rising sea levels (salinization poisons soil)
- limited capacity to address change without addressing policy

Food now represents over 40% of Wal-Mart's business

We have little ability to control, in an immediate or longer range fashion because of large corporation with a lot of power.

Unique food system in North America but we are not immune to the trends and impacts of the global systems. Our farmers are mostly elderly and young people today need to be capitalist. It is projected that there will soon be no family farmers in BC.

"Corporate Seeds" – they have privatized the essence of life.

Meat inspection

Limited capacity to influence changes without addressing major policy

Impose direct democratization so people have control over their own small plot of land – we need to return to small scale!

Tasking the urban landscape to provide opportunities for private owners, as well as public space i.e. in Burnaby, over 50% of the land base is in public ownership

"crisis approach" – people will grow food out of desperation

Rocky Mountain Institute – "food dollars" – stay in the community or international?

Gardening is a recreation, public benefit and a resource

Quick transformation of inner-city Berlin – lots of agri-activity that hasn't happened here yet because of aesthetics

People have a fear of sharing – may not put in the effort if they can't benefit from personal gain

Educational support for emerging new food system is dismal in Vancouver. This province has no institution that is committed to changing the food system in this province.

What kind of funding opportunities are available to support initiatives that are trying to teach farmers?

ALR was formed around the basis of soil types, which does not in fact have the greatest impact on farming. Can we make an ALR for cities? This could help the municipalities to stand up against greater pressures.

Focus more on energy as a measure of evaluation (or currency) than money and economics

What indicators can support this spatial arrangement?

Start out at the food experience and work down to policy rather than the other way

The food system is driven by multiple factors – a lot of what the system emerges to be will depend on transport land us planning etc. The food system should drive those factors. That is so fundamental. This exercise should integrate agriculture into the present design system, and if we fail to do that, it will fail us!

Concluding Statement:

Fundamental issues for designing food systems in the future: the fundamental disconnect from where we grow our food and where we live. How we go about this can be addressed spatially, but also requires other considerations, for example: social equity, social health (quality of food), economics, and training (we no longer have the necessary skills to sustain ourselves on our land) i.e. outreach, education, technological support. Agri food systems should inform urban form, not the other way around.