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Institute for  
Sustainable  
Food Systems



# Planning for Sustainable Food Systems

## A Scenario Planning Toolkit

January 2024

Kristi Taebe & Kaelan Watson

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Kwantlen Polytechnic University's Institute for Sustainable Food Systems  
Produced in Partnership with the Lincoln Institute of Land Policy and the Consortium for  
Scenario Planning

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## About ISFS

The Institute for Sustainable Food Systems (ISFS) is an applied research and extension unit at Kwantlen Polytechnic University in BC, Canada, that investigates and supports regional food systems as key elements of sustainable communities.

Our applied research focuses on the potential of regional food systems, including agriculture and food, economics, community health, policy, and environmental integrity. The ISFS also facilitates extension programming which provides information and support for farmers, communities, business, policy makers, and others. Community collaboration is central to our approach.

## Acknowledgments

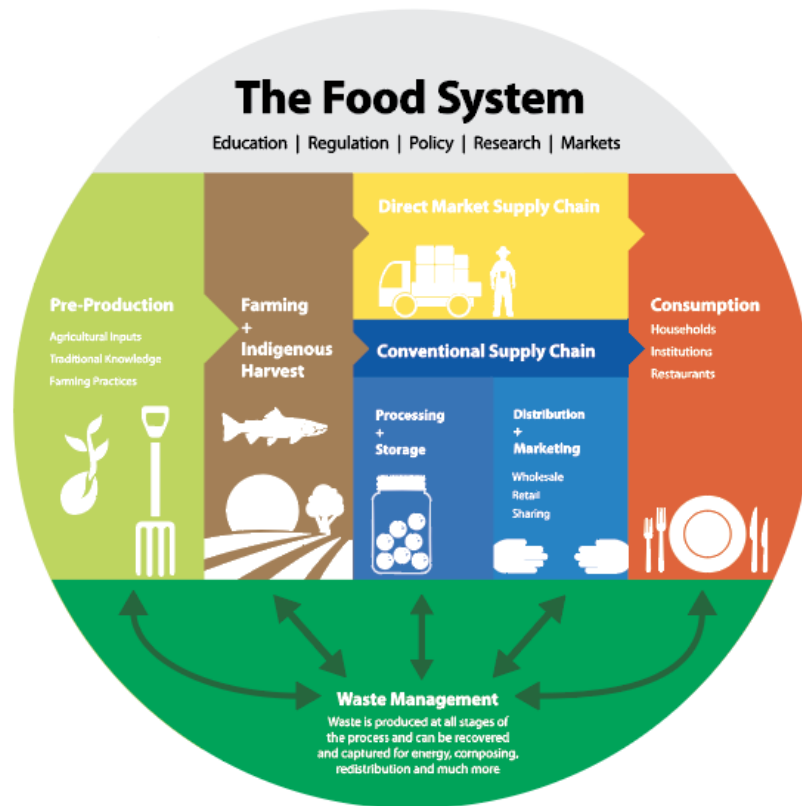
We would like to extend our gratitude to the following collaborators: The Lincoln Institute of Land Policy and the Consortium for Scenario Planning. The Natural Science and Engineering Research Council of Canada in partnership with the Social Sciences and Humanities Research Council of Canada's College and Community Social Innovation Fund. The community participants across Canada that generously provided their time in helping us develop planning case studies.

## About This Toolkit

This toolkit is intended to provide planning practitioners and other food systems stakeholders with a step-by-step guide to the application of scenario planning for bioregional food systems. It was developed by the Institute for Sustainable Food Systems (ISFS) at Kwantlen Polytechnic University in partnership with the Lincoln Institute of Land Policy and the Consortium for Scenario Planning as part of the Consortium's annual request for proposals to conduct scenario planning research and workshops around the world.

The introductory sections outline the rationale for food systems planning, and for scenario planning as a method. A 9-step overview of scenario planning follows, illustrated with food systems planning examples. The toolkit concludes with reflections and lessons learned, and a compendium of useful resources.

# Planning for Sustainable Food Systems



## Food Systems

### What are food systems?

Food systems are the resources, people and activities that provide communities with food. This includes the flows of materials, knowledge, money, and labor involved in farming, fishing, hunting, food distribution, processing, retail, preparation, and waste management.

As the diagram illustrates, food systems are complex, interconnected, and touch on many aspects of our daily lives, communities, and

established planning practice. At the Institute for Sustainable Food Systems, we believe working towards sustainable food systems is critical to a sustainable future.

### Food system challenges

The COVID-19 pandemic brought a constellation of challenges facing the globalized food system to the forefront. Rapid spikes in unemployment highlighted our vulnerability to food insecurity and the economic barriers to food access. The underpaid and often unsafe working conditions of essential food workers underscored our collective dependence on

unjust labor practices. Empty grocery aisles from panic-buying called attention to the precariousness of global supply chains. Inequities were made visible throughout as these impacts were disproportionately experienced by racialized people.<sup>1</sup>

Climate change has also intensified the food systems challenges faced by communities. In 2021, the Pacific Northwest experienced an unprecedented heat wave, the deadliest weather event in Canada to date.<sup>2</sup> The event also caused significant damage to agriculture as fruit “cooked” on the trees and ranchers had to cull their herds.<sup>3</sup> Communities experienced unprecedented flooding that ruined crops, caused livestock to perish and isolated communities from supply lines.<sup>4</sup>

There are rising rates of food insecurity in communities across the USA (approximately 14 million or 10.2% of households)<sup>5</sup> and Canada (5.8 million Canadians or 15.9% of households in 2021<sup>6</sup> per Statistics Canada), exposing the complicated interplay of income, housing, and food security (For more on this complex relationship see [Fafard St-Germain et. al, 2020<sup>7</sup>](#)). In addition, while overall agricultural productivity and gross revenues in Canada have increased over the past 50 years, farmer livelihoods have remained stagnant or declined.<sup>8,9</sup>

Globally and locally, unsustainable farming practices and efforts to continuously increase production have resulted in freshwater pollution, soil erosion, and biodiversity loss.

## Why should planners care?

If we accept that the role of professional planners is to safeguard the health and well-being of communities by addressing the use of land, resources, facilities, and services with consideration to physical, economic, and social efficiency,<sup>10</sup> it is surprising that critical considerations about food systems have been overlooked in contemporary planning activities and processes. The American Planning Association [APA] described this deficiency well, suggesting that “of life’s basic necessities - air, food, water, and shelter - only food has been neglected from contemporary planning and community development”.<sup>11</sup>

The ISFS’s past work confirms that modern planning practice often diminishes or dismisses food from its scope entirely. A [survey](#) conducted to explore the role planners play in the food system in Canada garnered 435 responses from planners across various sectors, career stages and regions. The responses revealed significant gaps in knowledge, education and training opportunities amongst planners, and a lack of clarity around jurisdiction and responsibility, rural/urban responsibilities, and diversity in food systems planning in Canada.<sup>12</sup> Additionally, planners acknowledged that these gaps are recognized within the industry, with one respondent aptly stating: “Food is everywhere and nowhere when it comes to planning, and often falls through the cracks.” More than half the survey respondents indicated that they would be interested or very interested in developing their capabilities to incorporate food in their professional activities through webinars, training courses and toolkits.

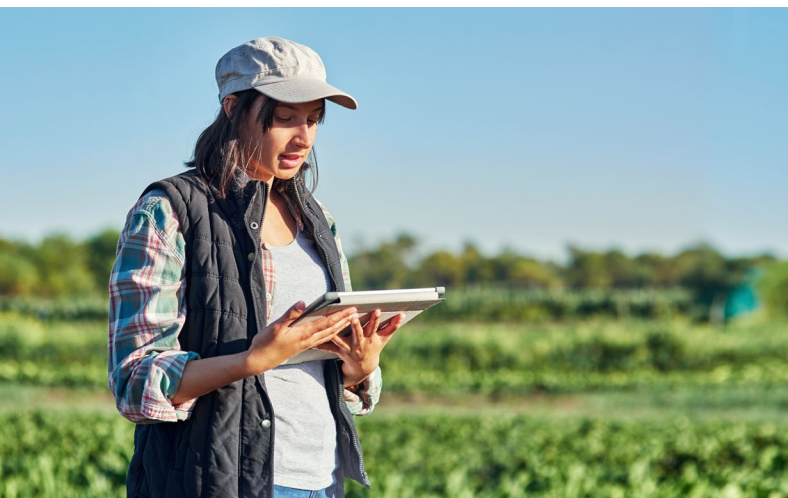
## Scenario Planning

What is scenario planning and why should I use it to plan for food systems?

The Lincoln Institute of Land Policy defines Scenario Planning as “...a practice through which communities plan for an uncertain future by exploring multiple possibilities of what might happen. The practice guides planners, community members, and other stakeholders through considerations of various futures and how to effectively respond to and plan for them.”<sup>13</sup>

Scenario planning can examine how to achieve a desired vision or can explore the implications of different possible futures. As a practice, scenario planning encourages participants to take a broader look at the issues facing their communities, making it particularly well-suited to complex problems and issues that have many variables and interconnections. As stakeholder engagement is central to the approach, scenario planning processes can result in plans with a high degree of buy-in and stakeholder support.

In the context of food systems planning, with its complex intersections and relationships to other well-established planning domains (e.g., transportation, housing, land use, social planning), we suggest that scenario planning is an integral process in food systems planning and is particularly effective at a bioregion scale. While relatively well-established in the United States, scenario planning as a discipline in Canada appears less common, and our research indicates that its use in a food systems context is rare. Using an exploratory scenario planning approach (such as that outlined in detail in this toolkit) in food systems planning allows stakeholders and policymakers to better understand the impacts of different food system related decisions they might make, and the trade-offs that must be considered in such an integrated reality. When working with such complexity as that inherent to food systems, understanding the sometimes unintended consequences of certain decisions is important to robust decision-making. For this reason, scenario planning is a methodology well suited to food systems planning.



## The ISFS Bioregional Food Systems Planning Projects

Bioregional food systems planning uses an exploratory scenario planning approach to provide makers with information about how regional food systems can benefit local communities, address data gaps concerning economic, environmental, and social impact, and social impacts, and appropriate weigh the tradeoffs of food system regionalization.

Bioregional food systems planning can provide data-driven information on:

- The extent to which a bioregion can meet local food demand with local food production and processing
- The economic, ecological, and social impacts of increasing local food production for local markets
- The potential to mitigate environmental impacts of food production
- Policy precedents to advance bioregional food system goals
- Considerations for food systems planning in the face of uncertainty
- Principles for bioregional food systems development

For more information, see the [Southwest BC Bioregion Food System Design Project](#) and The Okanagan Bioregion Food System Project.







## A 9-Step Guide to Scenario Planning for Food Systems

## Step 1: Project Initiation

Set planning horizon, determine stakeholders, and develop focal question.

### A: Understand Planning Timelines

In the Okanagan Bioregion Food System Project, we adopted a 30-year timeframe (the year 2050). This matches the planning horizon for most comprehensive planning. It is close enough to the present to be relatable to stakeholders, but also far enough in the future to plan for and see the impacts of policy changes made today.

**Consider this:** Data to support planning processes may only be available for certain time horizons. It is useful to investigate this and use this information as you define your planning horizon.

### B: Define Planning Area / Scale

Rarely do food systems fit within predetermined jurisdictional boundaries. We source our food from outside our city or region, and food system waste is often exported out of these legal boundaries.

*We recommend planning for food systems at a bioregion scale.* Bioregions encompass varying community types (i.e., rural, urban, peri-urban, etc), all of which play critical, yet distinct roles in developing, sustaining, and nurturing local food supply chains.

Effective collaboration across each of these food system activities is essential in the operation of robust, sustainable food systems, and communities have a responsibility to the rest of the bioregion to carry out these roles if the system is to function successfully.

## What's a Bioregion?

Bioregions are areas that share the same natural ecosystems and human culture. Defining a bioregion considers both the human and natural elements of the landscape, including the ecology, topography, water flows, economies, and regional identities. Looking at food systems through a bioregional lens links human activities to the places that sustain them, recognizing that the health and well-being of humans and ecosystems are not separate outcomes, but inextricably linked. The bioregional scale is a functional scale to plan for food systems.

Okanagan Bioregion Food System Project: [Bioregion Delineation Technical Brief PDF](#)

Southwest BC Bioregion Food System Project: [Bioregion Delineation Research Brief PDF](#)

**Consider this:** Collaboration is critical to a successful process. This includes collaboration across jurisdictions, within organizations, and across a region. As such, a bioregional planning process should include stakeholders from different levels of government, different departments within a government, and different governments within a region.

### C. List Potential Stakeholders to Consult / Involve

Given the comprehensive nature of food systems planning, *a broad range of stakeholders should be engaged in the process*, including:

- Local government officials and planning staff
- Indigenous government officials and knowledge keepers

- Relevant local government committees (e.g., sustainability, ecology, agricultural advisory, planning)
- Groups at higher risk of food insecurity
- Higher levels of government (in our case, provincial ministry agrologists)
- Local health authority stakeholders and partners
- Higher education institutions
- Agriculture advisory councils
- Regional land use planning councils
- Food policy councils
- Civil society/grassroots groups with a food focus
- Food banks
- Emergency food providers
- Health and wellness groups
- Sustainability and climate change focused groups
- Local farming institutes and organizations
- Conservation and ecology groups
- Industry stakeholders, such as unions, marketing boards or advocacy groups

**Consider this:** Black and Indigenous community members are at greater risk of food insecurity, and are also often left out of typical planning processes. To center equity in the planning process it is important to ensure their voices are included and heard. For example, in the development of their regional Food Strategy, Thunder Bay, Ontario consulted with the Thunder Bay Indigenous Food Circle: a group representing 14 Nation communities that collaborate to reduce Indigenous food insecurity, increase food self-determination, and establish meaningful relationships with the settler population through food.

## D. Determine Goals

Motivations for engaging in comprehensive food systems planning can differ between communities. Interviews with practitioners from various communities across Canada revealed that common motivations include reducing food insecurity, addressing climate change impacts, improving community sustainability or resilience, attaining improved self-reliance, bolstering economic development, and preserving agricultural roots and character in a community.

*Clarifying core objectives at the beginning of the scenario planning process is essential to ensure the desired outcome.* One identified, the core objectives will help narrow the focus and shape the scope of the scenario planning process.

### Food Policy Councils

Food Policy Councils (FPCs) bring together diverse stakeholders to provide recommendations for how food policy can best meet community needs. FPCs can operate entirely as a grassroots initiative, an initiative of local government, or a hybrid of the two. Regardless of which entity houses and operates the FPC, it will typically report to a council member or a committee of local council.

There are over 300 food policy councils in North America.<sup>14</sup>

*Examples:*

*City of Winnipeg: Winnipeg Food Council*

*City of Greater Sudbury: The Greater Sudbury Food Policy Council*

*City of Kamloops: Kamloops Food Policy*

**Consider this:** There are various ways that stakeholders can be engaged in a planning process. Ask yourself the following questions:

- To what degree should stakeholders influence the process?
- What kinds of activities will produce needed feedback?

Where in the process should feedback be?

In general, the earlier in the process and the deeper the stakeholder engagement, the higher the likelihood of success in terms of final project adoption and implementation.

The Lincoln Institute’s Policy Focus Report proposes two stakeholder workshops as part of the scenario planning process. The first covers the preliminary work to lead to scenario creation, and the second explores the implications of the scenarios and develops actions and strategies.

## Project Goals

In the Okanagan Bioregion project, the goal was to provide decision-makers with information about the outcomes and trade-offs associated with regionalizing the food system. While the goal was to provide data for decision support, scenario planning approach is also an effective tool to develop comprehensive and actionable plans.

**Consider this:** Normative scenario planning is used to determine how to achieve a pre-determined goal. An example could be in the context of a transportation plan, where the goal would be to increase the access to food retail outlets to the population. Different scenarios could explore the outcomes of different approaches to the problem, with the metric of the number of people with access to retail outlets. In contrast, exploratory scenario planning aims to help navigate uncertainty. In this example of the development of a food strategy, key drivers of change (like market forces, population growth, and trends in the local agriculture sector) are assessed and used to create plausible future “what-if” scenarios. Predictive scenario planning identifies likely future states. Exploratory scenario planning is the focus of this toolkit due to our experience with it and its applicability to the layers of uncertainty encountered in food systems work. For more in depth information see the [Lincoln Institute’s Policy Focus Report](#).

**Consider this:** Collaboration is critical to a successful process. This includes collaboration across jurisdictions, within organizations, and across a region. As such, a bioregional planning process should include stakeholders from different levels of government, different departments within a government, and different governments within a region.

## Step 2: Brainstorm Driving Forces

Understand 5 to 10 of the most significant drivers of change.

Drivers of change can be determined by discussions on PESTLED:

- Political (elections, protest movements): In a food systems context, jurisdictional responsibility, elections cycles, higher levels of government.
- Economic (the sharing economy, booms, and busts)
- Social (lifestyle and activity preferences): Diet, consumer/purchasing behavior.
- Technological (autonomous vehicles, artificial intelligence: Agricultural technology or lack thereof, production systems (no-till, greenhouse production).
- Legal (local, state, federal, or international regulations.
- Environmental (drought, biodiversity, extreme weather).
- Demographic (migration, aging populations).

**Consider this:** It is important to identify root causes to topics that are discussed to assure that solutions aren't simply addressing symptoms of underlying problems. One example in a food systems context is food insecurity. Often emergency food programming or urban agriculture approaches (e.g., community gardens) are proposed as solutions to food insecurity, however studies have repeatedly shown that food insecurity is a direct outcome of poverty, and as such, income policy and related areas like housing policy must be addressed as root causes.



### ***Okanagan Drivers***

*In the Okanagan Bioregion project, we identified the following key drivers of change to inform our modeling scenario:*

- Population growth and impacts on potential for food self-reliance
- Land availability for food production and farmland loss
- Erosion of local food processing capacity
- Nutrient pollution from urban waste streams and agricultural dependence on synthetic fertilizers
- Consumer behavior, including diets and the degree to which residents would choose local food
- Market forces, including existing key agricultural activities and industries
- Climate change impacts on agriculture and water availability
- Biodiversity loss and agriculture land conversion
- Economic development potential of keeping “food dollars” in the community

### Step 3: Rank Driving Forces

Organize driving forces in order from most significant to least.

In the Okanagan Bioregion Project, we created food system objectives based on the key drivers of change impacting the food system. The food system objectives are outcome-oriented statements that can be used to guide policy priorities.

We asked stakeholders to prioritize the food system objectives using worksheets and a dot-mocracy voting exercise. The priorities that emerged informed the creation of our scenarios.

**Ranked food system objectives from 3 stakeholder workshops in the Okanagan bioregion.**

PRELIMINARY FOOD SYSTEM OBJECTIVES	RDNO	RDCO	RDOS	TOTAL
Preserve agriculture land to be used for food production	10	8	14	32
Develop local post-production infrastructure to support the type and scale of primary food production	11	7	5	23
Increase the local economic impact of the food system	7	4	5	16
Increase food self-reliance within the bioregion	5	5	2	12
Reduce negative environmental impacts of the food system	5	4	3	12
Food security is increased in the bioregion	2	7	1	10
Water use for agriculture does not impact ecological integrity	4	2	4	10
Protect and enhance wildlife habitat, and ecological integrity	1	1	4	6
Support Indigenous food sovereignty	1	4	0	5
Increase social capital associated with the food system	2	2	0	4
Derive crop fertilizer from bioregional waste streams	1	1	1	3
Achieve balance between export agriculture sectors food self-reliance	2	0	0	2

For more information on our stakeholder workshops and scenarios, see the [stakeholder workshop summary report](#).

## Step 4: Identify Most Critical Uncertainties

In this step, *brainstorm what is certain and what is uncertain about the future*. List which uncertainties determine the most credible, challenging, and plausible range of futures we may encounter.

Critical uncertainties may be events or actions over which the community has little or no control, or they could be situations that stakeholders could affect

through collaborative local action such as advocacy, policy making, or funding changes.

In a food systems context, uncertainties could include changing market forces, supply chain disruptions, consumer choice, climate change impacts to agriculture, changes to water supply and demand, political forces affecting policymaking or lack thereof, or infrastructure development or lack thereof (e.g., for post-production and processing activities).



## Step 5: Create Scenario Matrices

Having defined driving forces and critical certainties/uncertainties, the working group should next *rank the driving forces* based on level of uncertainty and level of importance to the focal question and to the future. This defines the critical certainties and critical uncertainties inherent in the key drivers. The critical certainties are set aside for inclusion in the upcoming scenario narratives, and the critical uncertainties are used to differentiate the futures that will be explored.

Participants then create an uncertainty matrix by crossing two (or possibly more) uncertainty axes. The matrix defines the scenario narratives.

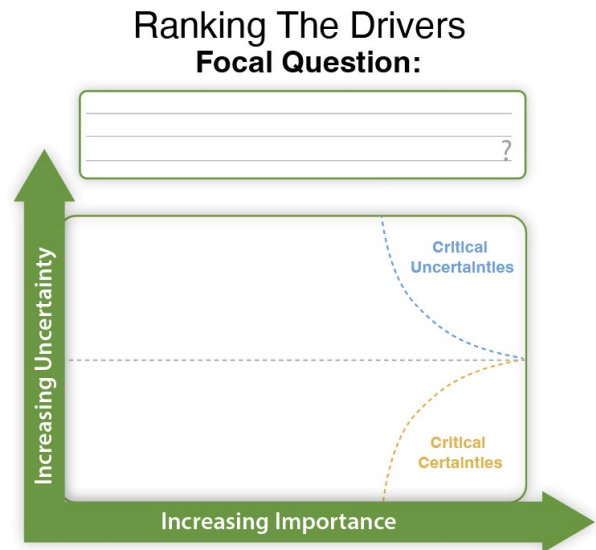


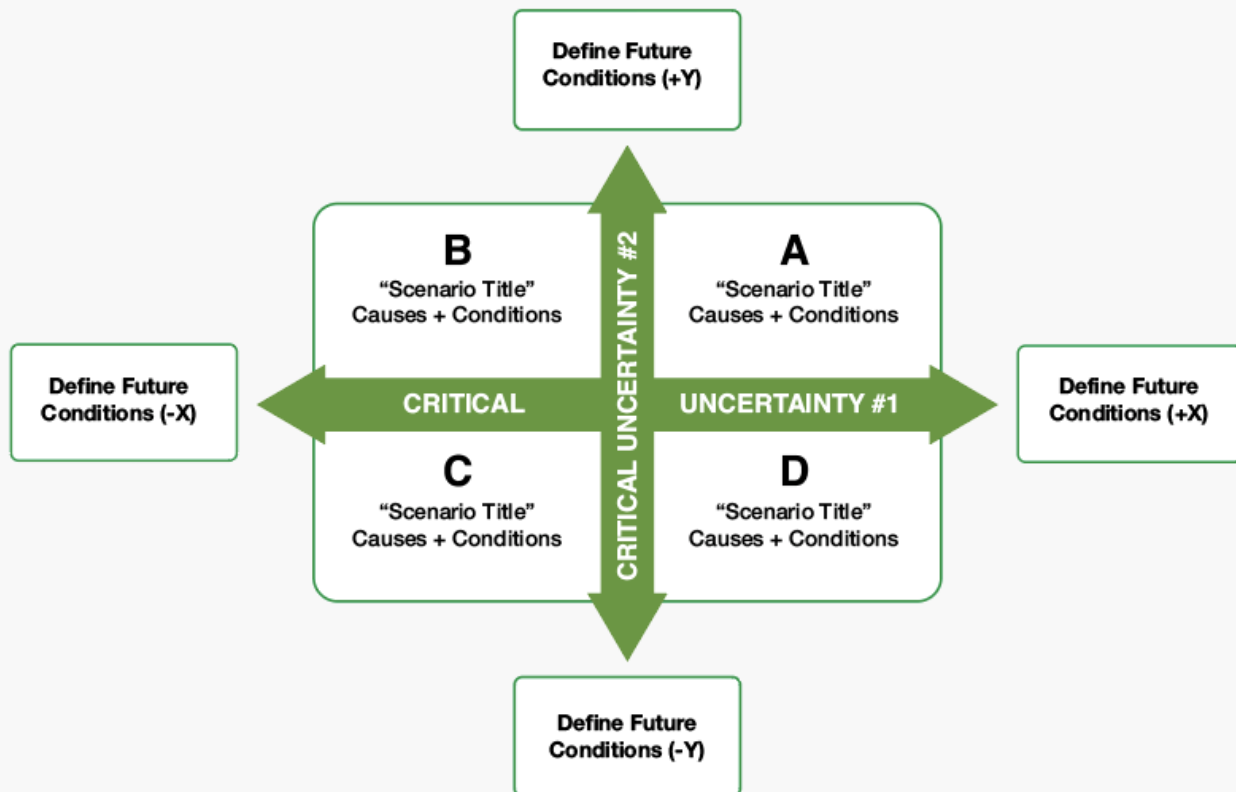
Figure 1: Ranking drivers to determine critical certainties and uncertainties (source: [How to Use Exploratory Scenario Planning \(XSP\): Navigating and Uncertain Future](#))

### Critical Certainties and Uncertainties

In our Bioregion research projects, our goal was to provide data on the impacts of food system regionalization. From our stakeholder consultations, we knew which objectives were most valuable to the community. Some of the drivers behind these were more certain than others. These critical certainties included population growth trends, and increased pressure on agricultural land from alternate uses. Critical uncertainties included the degree of food system regionalization (the key variable we were seeking to understand), and the degree of agricultural land use for agriculture.



## The Scenario Matrix | Defining Four Futures



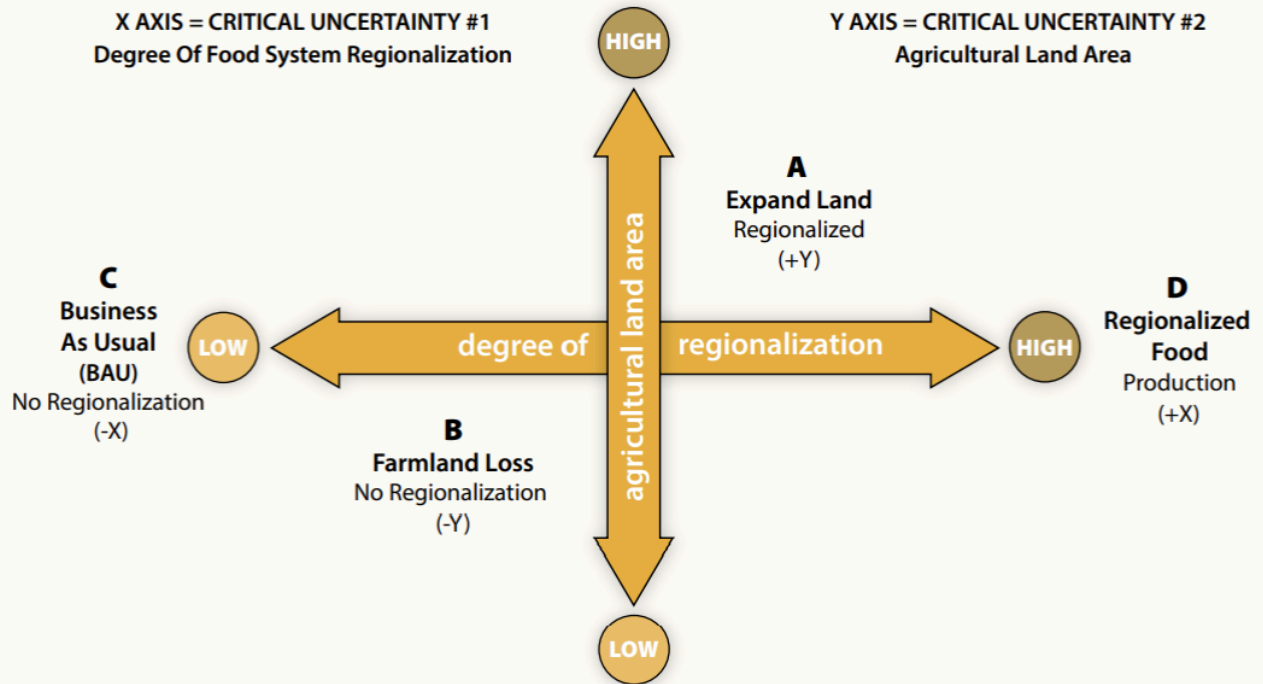
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(Source: [How to Use Exploratory Scenario Planning \(XSP\): Navigating an Uncertain Future](#))

# Okanagan Scenario Matrix

## Bioregion Projects



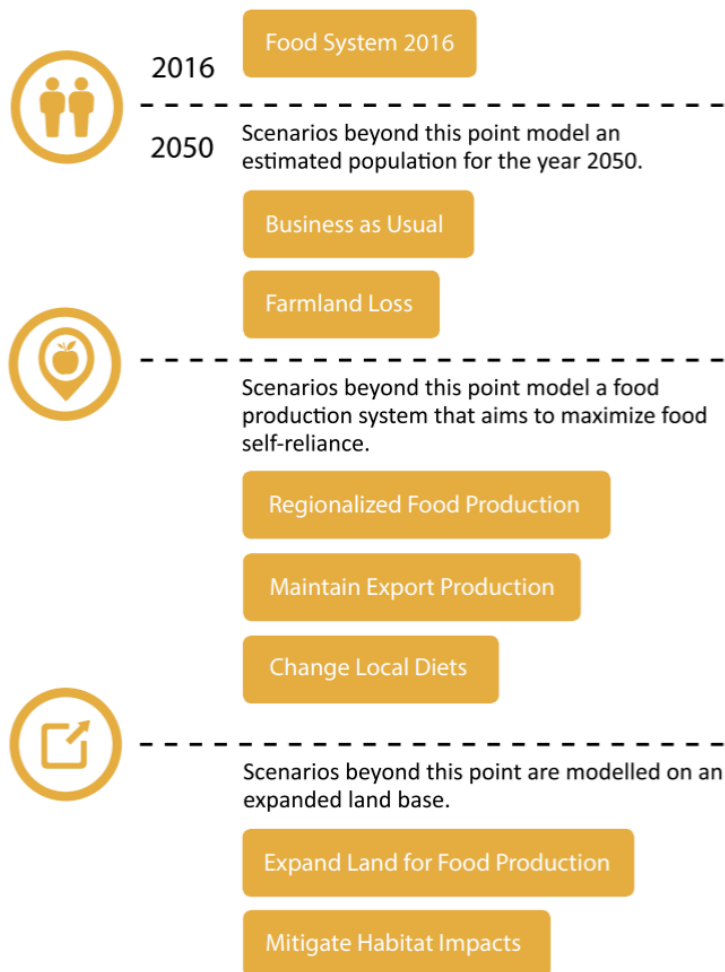
In our Bioregion projects, crossing the amount of agricultural land area (Y Axis) with the degree of food system regionalization (X Axis) yielded four scenarios. Upon modeling, we kept three of the four, as the fourth didn't yield any new information.

## Step 6: Develop Scenario Narratives

Following the definition and prioritization of uncertainties with stakeholders, the core project team should craft scenario narratives that reflect the previously defined priorities. There is no standard method for crafting scenario narratives - they can be point form or concise sentences. Narratives should be concise, objective, and generally unobjectionable. In general, these will describe the four quadrants of the uncertainties matrix. Either the quadrant matrix approach or a looser approach could be used to craft scenarios - the key is that the scenario narratives provide useful information in achieving the goal of the process.

If using a quadrant model, four scenarios will be created. If not, try to keep the number of scenarios manageable (in the Okanagan project we used seven (including a baseline), and wouldn't recommend using more than that).

**Consider this:** Although our scenarios were model-based, scenarios do not need to be data-driven. Narrative and qualitatively defined scenarios are also effective and yield useful discussion and strategies to address future uncertainties.



Scenario overview from the *Okanagan Bioregion Food System Project*

## Scenario Narratives

The scenario matrix example on page 13 illustrates four important scenarios for the Okanagan project. An additional baseline scenario was also important since it permitted comparisons to current conditions in order to communicate the outcome and impacts of different food system trajectories.

Detailed narrative stories can be found on pages 13-21 of the [Okanagan Bioregion Food System Project Report](#).

### Baseline 2016:

- Population: 362,000 people
- Food Need: 332,000 tonnes
- Land in production: 40,000 Ha
- Food production: 236,000 tonnes
- Food production system: current (2016)

### Farmland Loss:

- Population: 517,000 people
- Food Need: 479,000 tonnes
- Land in production: 32,000 Ha
- Food production: 189,000 tonnes
- Food production system: current (2016)

### Expand Land:

- Population: 517,000 people
- Food Need: 479,000 tonnes
- Land in production: 70,000 Ha
- Food production: 361,000 tonnes
- Food production system: regionalized

### Business As Usual:

- Population: 517,000 people
- Food Need: 479,000 tonnes

- Land in production: 40,000 Ha
- Food production: 236,000 tonnes
- Food production system: current (2016)

### Regionalized Food Production:

- Population: 517,000 people
- Food Need: 479,000 tonnes
- Land in production: 40,000 Ha
- Food production: 302,000 tonnes
- Food production system: regionalized

As well as these five scenarios, our team generated additional scenarios important for delivering information to policymakers around food system decisions. These included scenarios examining preserving wildlife habitat areas, maintaining key existing agricultural sectors, or changing diets. We ended up with a total of seven scenarios as a result.

## **Data Availability**

*Given that the goal of the Okanagan Bioregion Food System Project was to provide data and information to inform planning processes and decisions, our scenarios were dependent on compiling satisfactory data to successfully model and meaningfully illustrate different food system futures. As such, scenario selection was also influenced by data availability for the Okanagan bioregion for important inputs such as food production, food consumption, agricultural management practices, economic linkages, ecological information, climate change, and indigenous knowledge.*

## Step 7: Explore Implications of Each Future

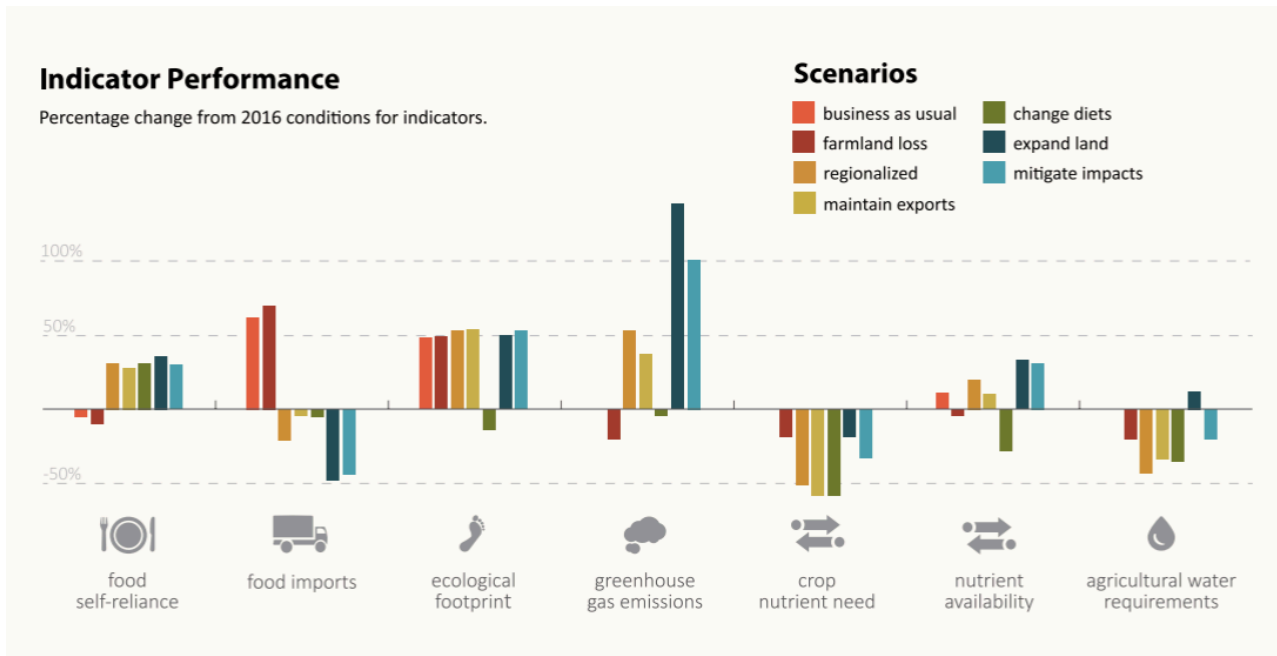
In this step, the implications of scenarios are fleshed out and understood, by assessing what key factors (i.e., the PESTLED factors presented earlier) would look like in each scenario. The Lincoln Institute’s method suggests that this step should be done in a second stakeholder workshop, with the benefit of these stakeholders developing ownership and deepened understanding of the scenarios. In the case of model or data driven scenarios, the project team will need to bring model data for each scenario to these stakeholder discussions, if the models are not accessible in real-time.

To accompany the discussion, create a system to list and cross-reference implications across scenarios. In the case of the ISFS bioregional food system projects, a series of 14 indicators were used.

This “at a glance” presentation is useful to allow stakeholders to understand the trade-offs and relative benefits and drawbacks to each scenario. Excel spreadsheet matrices can also be used, or flip chart notation.

**Consider this:** It’s important to note that while implications may be quantitative and data driven (as in the example indicators presented here which presents the results of a computational model), narrative implications are also informative and may be necessary to further nuance the scenarios outside of the story that numeric data is able to tell. In the Okanagan Bioregion project, a parallel investigation into the social capital implications of regional food systems was undertaken to flesh out a dimension not captured in the food system computational model.

### Okanagan Bioregion Project Indicators



Okanagan Bioregion Project Indicators (above) outlines seven of the 14 indicators used in the *Okanagan Bioregion Food System Project*, as well as the relative scenario performance across each.

## Step 8: Brainstorm Critical Actors and Actions to Adapt

After a thorough understanding of the scenario implications (the threats and opportunities posed by each), discussion and brainstorming of actions and strategies to address the threats and opportunities for each future should occur, thus developing alternative paths to attain the group's established vision and goals.



### ***Knowledge Sharing***

In the Okanagan Bioregion project, the model results and discussion points were shared widely with stakeholders via a series of webinars, workshops, and presentations. In this case, the intent of the project was to provide information, stopping short of undertaking an actual planning process. As such, we shared work with indigenous partners, local planners, health authority stakeholders, government officials, agriculture advisory committees, economic development and tourism offices, civil society groups and non-profit organizations. In so doing, we hoped to initiate collaborative planning and visioning discussions and tease out actionable next steps.

You can view one of the results dissemination webinars on our YouTube channel [here](#).

## Step 9: Identify Robust Actions and Strategies

In this final step, the group should cross-reference the brainstormed action items to identify robust strategies, which are applicable across the entire range of scenarios. This identifies robust strategies that will avoid undesirable futures, while the community can begin to implement low-regret, high-impact solutions in the short term. The working group should vote on a strategy to move forward.

As a final step, the project team should summarize the outcomes, deliberations and lessons learned in a final report. Alignment with the existing policy landscape in the region should also be examined as part of a comprehensive approach.

The final project report could then be adapted by planners into measurable goals or into an implementation strategy/policy document.



## Supporting Implementation and Action

*In the Okanagan bioregion, the research team identified key levers/drivers of change as action areas for consideration. These were areas that relevant decision makers have influence over and that would have the largest impact in terms of advancing sustainable food systems. These included:*

- Support for post-production facilities
- Climate change mitigation in the food system
- Water policy centering ecological values
- Encouraging productive use of agricultural land, and nutrient cycling/food waste

*For each area, a policy precedent study and policy brief were prepared to suggest actions and policies to advance each area and inspire place-based solutions. That said, a stakeholder process undertaken by planning departments to develop actions and implementation strategies would be a logical next step in achieving these goals. In addition, a final project report was shared widely and all outputs were made freely available on the [project webpage](#). The project team continues to be available for project presentations and engagement sessions about the project to support local governments in the region who may have questions or request assistance interpreting the project results and relevance to their planning needs. Additionally, the project team commissioned a local artist to create artwork (facing page) that depicts core components of a regional food system to support project communications and build a shared vision in the bioregion.*

## Recommendations and Principles

Throughout our bioregional planning processes, we have developed a series of planning principles to consider moving forward, which should be applied throughout a scenario planning process.

### Comprehensive Policy Development

Historically, food systems have been addressed through “siloed” approaches to planning across levels of government. Adopting more comprehensive approaches to plan across the food system at the local level could reduce conflicting policy goals and build support for common objectives. This requires food policy to be integrated across domains and planning scales, adopting a “food system lens” for planning and policy development. Incorporating food policy considerations into comprehensive planning documents, land use and zoning, economic development, social planning, climate change, etc. can be an effective strategy for comprehensively embedding food system considerations.

### Collaborative Planning

The boundary of the food system extends beyond that of any single community, municipality or planning agency. Collaboration could involve collecting and sharing food system data and information between local jurisdictions, or developing shared visions for the food system. Collaborative planning approaches must cross traditional planning boundaries at the municipal level while also integrating diverse perspectives.

### Collaborative Planning

Data collection is an important component of developing public policy and monitoring its impacts. As local governments become increasingly active in policy and planning in the food system, there is a

need to select and monitor metrics that represent the comprehensive and locally integrated nature of food systems planning. Integrating agricultural production, ecological and consumption metrics with existing local level data on health, affordability and community well-being has the potential to present a more comprehensive picture of local level food system outcomes and connections.

### Equity

Food system outcomes and opportunities are not equally afforded. Food system inequalities are often structured around systemic racism, colonialism and other forms of oppression and disenfranchisement that disproportionately disadvantage Indigenous and racialized communities. This is visible in patterns of food insecurity, wages and job security, and workplace safety issues. Adopting an equity-based approach to local food systems planning and development is imperative and requires policy development processes that center the perspectives, knowledge and lived experiences of the communities that are most acutely impacted by societal inequities.





## Recommendations and Principles to Plan By

In addition to these general principles, our work has led us to question how implementation of robust processes like those described can be supported, as users of the reports can often find the amount and scope of the data and scale of the problem daunting.

We recommend the following:

- Ensure stakeholders are engaged and are supportive throughout the process
- Use a diversity of communication strategies to reach different audiences (e.g., technical reports, presentations, artwork, etc.)
- Be clear about the project goal(s) and refer to these throughout the process to guide the discussions when complexity arises
- Embrace multidisciplinary work to inform planning from a diversity of perspectives

Scenario Planning as a discipline in Canada seems to be in its early days, but we suggest that it is a robust and effective method to address the inherent uncertainty encountered in food systems planning.

Many resources on scenario planning exist south of the border to inform planning practice here in Canada. However, very few examples of scenario planning in a food systems context exist at time of writing. The Lincoln Institute of Land Policy's recent support of food system planning projects should yield other interesting applications of scenario planning in a food systems context.



## Resources

### Scenario Planning

- Lincoln Institute Consortium for Scenario Planning
- Policy Focus Report
- Pas Memo and Gameboard and Worksheets
- Scenario Planning 101 Online Course

### General Food System Planning Resources

- KPU Food System Policy Database
- Growing Food Connections Network (US)
- ISFS Bioregion Projects
- Plan Canada Article: “Planning to Eat”
- Food Communities Network Canada
- Food Secure Canada



## Author Bios

### Kaelan Watson, MA Planning

Kaelan joined the ISFS Team in 2021 after finishing her Master's Degree at York University in Environmental Studies with a specialization in Environmental Planning in 2020. Kaelan first realized her passion for food and sustainability while running her breakfast pop-up shop in Toronto. Her business provided her with firsthand experience in many design flaws associated with all facets of the food supply chain. From there she decided to pursue a Master's degree that allowed her to draw attention to food systems as an integral concept in planning for sustainable communities. Kaelan has experience working at the Organics Council of Ontario and as a consultant for small businesses and non-profits in developing programs to reduce emissions through food policy. Her research at ISFS will continue to focus on planning for sustainable food systems.

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### Kristi Tatebe, MCIP, RPP

Kristi joined the ISFS team in 2017. She is a community planner with an MSc. from the School of Community and Regional Planning, and a BSc. from the Faculty of Agriculture (now Land and Food Systems) at UBC. Living on a small farm in the Okanagan with her family of four, she coordinates ISFS's Okanagan projects. She is passionate about sustainable local food systems and their role in building healthy, resilient communities. Her previous work has included sustainability planning and research coordination with UBC's Design Centre for Sustainability, and the Collaborative for Advanced Landscape Planning. She has also been a planning consultant, first with Smart Growth on the Ground, and later as a sole proprietor working on agricultural climate change adaptation projects in the province, and local government roles in supporting sustainable food systems. She brings her planning perspective and interest in food policy.

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## About the Consortium for Scenario Planning

The Consortium for Scenario Planning is a community of practice that helps to foster growth in the use of scenario planning at all scales. Through research, peer-to-peer learning, networking, training, and technical assistance, we help communities develop better plans to guide a range of actions, from climate change adaptation to transportation investment. In addition to planners, the Consortium also convenes researchers and software providers to develop more effective tools and reduce barriers to entry.

Established in 2017, the Consortium today includes members from rural, city, county, and regional planning agencies; software development companies; academia; and more. We work to increase the practice, accessibility, and resources of scenario planning as a field for both newcomers and longtime practitioners—and to expand scenario planning practices to rural and less urban areas, municipalities, and other applicable contexts.

## Endnotes

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