

Planning for Uncertain Food Futures Policy Brief

Revelstoke, BC



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SUMMARY

Food systems are complex, and local governments are tasked with the challenge of developing plans and visions for local food systems in the face of high degrees of uncertainty. Recognizing this challenge, a workshop was held in the community of Revelstoke (British Columbia, Canada) to explore various food systems futures and enhance local planning in the face of uncertainty. The workshop gathered nine food systems stakeholders and actors, and it began by examining a food for all (FfA) scenario where all residents of Revelstoke have barrier-free access to food. Then, the workshop participants explored how this scenario would change under global environmental and socioeconomic conditions defined by the Intergovernmental Panel on Climate Change's (IPCC) Shared Socioeconomic Pathway (SSP) scenarios, namely SSP1 (sustainability, taking the green road) and SSP3 (regional rivalry, a rocky road). The outcomes of the workshop include a series of policy responses and actions that would occur to produce the FfA-SSP1 and FfA-SSP3 scenarios, with these responses/actions relating to governance, labour, water, values, health, emergency services, skills and training, and energy. These outcomes can be used by the community of Revelstoke (and other communities) to support long-term planning and long-term preparation in the face of global challenges such as climate change and geopolitical tensions.

KEY RECOMMENDATIONS

- Establish a food system governance structure that identifies pressing food needs, connects and coordinates local and regional actors and organisations, and implements a long-term vision.
- Scale local food production through investment in agricultural technologies and regenerative farming practices that contribute to social, cultural, and environmental goals.
- Integrate community and shared meals with collective action and wrap-around services to enhance health and social connection.

BACKGROUND

Food systems are complex, consisting of a multiplicity of interacting systems (e.g., farming, water, legal, economic, health, etc.) that are necessarily for the health and wellbeing of people and other living beings. Accordingly, food systems planning constitutes a significant challenge. The future is uncertain and unknown, while plans often attempt to define a concrete vision of the future, as if crystal ball gazing. Planning for a single, well-defined future is not realistic, nor is it necessarily desirable as many community visions of the future tend to reproduce the present unequal power relations and inequities. Rather than trying to achieve one particular vision, communities should build their capacity to plan for multiple local development trajectories in the face of global uncertainty (e.g., climate change, geopolitical conflicts, economic decline, etc.) and a variety of possible future scenarios.

A workshop was conducted by researchers from Royal Roads University in May 2024 with food systems actors in Revelstoke (British Columbia, Canada) to explore various food systems futures and enhance local planning in the face of uncertainty. The workshop included nine participants from non-profit organizations, municipal government, the school district, and the health authority. The workshop was built on previous research efforts, the Reimagining Food Systems for a Sustainable and Equitable Future project (www.triaslab.ca/equitable-food-systems), which developed a series of scenarios that articulated various futures (i.e., in 2100) where progress is made toward food justice in Revelstoke in different ways (Dring et al., 2024). The workshop focused on one of the scenarios from the previous research effort, this being a food for all (FfA) scenario where all residents of Revelstoke have barrier-free access to food (Appendix A). The workshop participants explored and identified how this scenario would change under different conditions and global trends. These conditions/trends were defined using the Intergovernmental Panel on Climate Change's (IPCC) Shared Socioeconomic Pathway (SSP) scenarios, which provide narratives about the economic, political, and societal aspects of scenarios for greenhouse gas emissions and climate change projections. The workshop applied SSP1 (Sustainability Taking the Green Road) and SSP3 (Regional Rivalry, A Rocky Road) for this exercise (Appendix B) (Hausfather, 2018).

Participants created new scenarios by altering the FfA in accordance with the global conditions and assumptions of SSP1 and SSP3. The aim of the exercise was to explore uncertainty as it impacts and changes Revelstoke's food system and futures. The participants connected the features of these new scenarios to social and environmental outcomes, using the climate-biodiversity-health-justice nexus framework to facilitate this work (Newell et al. 2023). Then, the participants identified events, issues, and/or actions that occur over 25-year increments from present (2024) to 2100 that can move Revelstoke toward the conditions and features of these new future scenarios (SSP1-FfA and SSP3-FfA).

Planning for uncertainty does not inevitably mean that communities must be reactive to unanticipated events and conditions. Instead, communities can make progress in the face of uncertainty through responsiveness, adaptability, and imagination. Based on the outcomes of the workshop, this policy paper details actions that lead and enable responses to two significantly different climate and sociopolitical futures that support barrier-free food for everyone in Revelstoke. The following sections present actions and policies that address uncertainty into local food system planning and governance.

ASSUMPTIONS, POLICY RESPONSES & ACTIONS

Below are a series of assumptions, policy responses, and actions that were identified in the workshop discussion and activities as events and drivers of change toward the SSP1-FfA and SSP3-FfA futures. The Values category below, describes assumptions that underpin the conditions, series of changes, and/or events that produce these futures and responses to said changes and events. The responses and actions are itemized and categorized by theme. Note that the items below are not necessarily recommendations for policy and action, rather they serve to elucidate the steps toward certain futures in order to inform interventions toward desirable futures and preparations against potential issues and hardships.

Actions Related to SSP1-FfA

Values

- Shift values towards sustainability, cooperation, and combating divisive issues (i.e. racism, colonialism, patriarchy) through collective action meeting community needs of those who are not seen as ‘economically profitable’ or ‘independent’ (in the normative sense) such as seniors, people with diverse needs, children.
- Share technological and social innovations to pursue social and environmental goals rather than exclusively on profit and economic development.
- Support the development of long-term funding relationships based on trust, open communication, and long-term investment between nonprofit and government organisations and programs to strengthen social innovations and programs.

Governance

- Shift election cycles to alternating terms to allow governments to implement long-term plans and actions
- Build a bottom-up governance system that responds to regional food systems in ways that align with and connect to global coordination and cooperation efforts of international agencies (i.e., United Nations Food and Agriculture Organization, World Health, etc.).
- Establish a two-generation municipal council, with diverse membership, to review and approve government decisions, and evolve this governance body into a seven-generation council.
- Foster local governance approaches and philosophies that contribute to the preservation and creation of common spaces for improving community connectivity and well-being.

Labour

- As climate crises increase, global movement of people builds more contact between diverse peoples.
- Plan for the possibility of transient labour decreases from extreme weather events and changing growing seasons.

ASSUMPTIONS, POLICY RESPONSES & ACTIONS

Health

- Increase local food production by 10% (2025-2050) to 30% (2050-2075) to 60% (2075-2100) through a combination of agri-tech (e.g., vertical agriculture) and regenerative practices (e.g., Indigenous foodlands & waters), with financial support for farmers to transition and diversify their practices/operations and for food distribution pathways to connect to remote areas.
- Improve forest health and management to enhance conservation and protected areas in order to reduce impacts of wildfires and heat domes, including impacts on food production and health.
- Develop and implement programs and policies that increase access to nutritious and sustainably produced food for all.
- Scale the delivery of community meals to address both food insecurity and social isolation issues.
- Couple meals with collective action and wraparound services delivered through community and local channels, with broad integration across different organizations and community groups that work in the fields of community health and well-being.
- Establish education and awareness programs that promote a holistic view of food, health and well-being, shifting way from ultra-processed food and reducing the influence of corporate ties and marketing.

Water

- Develop new water usage regulations to address water scarcity issues (e.g., 'soft water governance' - integrating supply and demand, public participation, equitable access).
- Integrate necessary infrastructure into community water systems to enable water sharing between households, organizations, and neighbourhoods, with such infrastructure enhancing water treatment efficiency and reducing residential, industrial and agricultural consumption due to improved technologies and social norms.
- Extend water systems and supply to encompass broader ecosystems so that wildlife can survive and thrive in the face of increasing drought (e.g., beyond human-centric domestic, industrial, commercial needs).

Actions Related to SSP3-FfA

Values

- Invest in community arts and culture in ways that support celebrations and ceremonies, as well as trades and makers.
- Reduce reliance on digital interactions/social media, and promote in-person interactions and community building.

ASSUMPTIONS, POLICY RESPONSES & ACTIONS

Governance

- Improve regional coordination and governance of food systems, and establish new governance structures to support this coordination.
- Develop educational resources and programming that teaches skills in food system coordination, challenge identification, community consultation and engagement, and shared decision-making.
- Focus food system governance efforts on building community capacity, with the aims of meeting the needs of people and building community/social cohesion.

Skills & Training

- Enhance localisation in response to climate change issues through increases in local skill development in trades (e.g., carpentry, agriculture, fishing, water purification/treatment, engineering, hunting, etc.).
- Mobilize community skills to make bespoke and artisanal goods that relate to place-based local needs and cultural features.

Health

- Shift health knowledge and expertise from being the purview of 'experts' to a community- wide, diffused knowledge system.
- Establish a place-based/localised diet that improves health outcomes.

Emergency Services

- Preserve and develop seed sovereignty systems, community gardens, and norms around living with a less diverse and seasonal local diets in response to the withdrawal of international and national government involvement and a loss of international labour (greater local food production is needed).
- Invest in vertical agriculture and greenhouse production.
- Increase regulations on the price of food.
- Increase corporate taxation to finance food production efforts.

Energy

- Shift toward energy self-sufficiency to provide power to local neighbourhoods, households, etc. in response to reductions in global energy trade, ultimately leading to increases in decentralised community renewable energy infrastructure.
- Consider the trade-offs and benefits of dismantling the Revelstoke dam once local energy generation capacity has been well-developed, thereby opening access to river resources.

CONCLUSION

The outcomes of the workshop highlight the importance of planning for multiple potential futures in addressing the uncertainties that shape food systems. By using scenario frameworks like the IPCC's Shared Socioeconomic Pathways (SSPs) and emphasizing the interconnectedness of climate, biodiversity, health, and justice, communities like Revelstoke can proactively adapt to changing global conditions. This exploration of SSP1-FfA and SSP3-FfA scenarios underscores the value of fostering local resilience through inclusive governance, sustainable practices, and community-centred approaches to health and well-being.

This policy paper provides actionable insights that not only prepare Revelstoke for diverse future trajectories but also support the creation of equitable and sustainable food systems. There is a need for continued imagining and future-proofing policy work across the diverse areas of challenges and community-needs across Revelstoke's non-profit, private and government organizations. As the IPCC continues to update and expand its scenarios, communities should employ its (and other) scenario frameworks to chart a path toward barrier-free access to food, while also addressing the local impacts of global challenges and harnessing opportunities in an uncertain world.

Revelstoke: Food For All Scenario

Key events and actions

- Broad educational efforts integrating core values of the importance of local food producers, food as a human right, and social responsibility among community members
- Educational interventions lead to greater taxation of large, food corporations and stable revenue for food initiatives
- Increasing policy advocacy at higher government levels (provincial, federal) for control of food pricing, and advancing policies for food procurement (local government)
- Change in how people value food, with 'barrier free food' as a 'seed' for transforming the food system. These changes relate to support for local producers and community; inclusivity and removing obstacles for food access; physical accessibility considerations (distance to food, # of food outlets, safe & effective transportation); meeting health, dietary and cultural needs; and affordability
- Food affordability scenario in 2100 includes changes to global food supply chains, reduced corporate profits and international trade agreements, and expansion of 'fair price' regulations
- Public control and takeover of land for barrier-free food support, involving the creation of communal cooking spaces and increased sense of community
- Place-based effects include collaborations between food banks and grocery stores, eating seasonal foods, and increased local food production and food security
- Support for local food production through diversion of food waste to compost, compost accessibility, greater variety in local food products, and increased seed sovereignty
- Extension of barrier-free concept, involving edible landscapes in urban environments, providing food for non-humans, and safer human to animal relation

APPENDIX B: SSP1, SSP3 Scenarios

SSP1: Sustainability	SSP3: A Rocky Road.
<p>Key events and actions</p> <ul style="list-style-type: none"> • Shift towards sustainability, including emphasis on inclusive development, respect for environmental boundaries, and recognition of social, cultural, and economic costs of environmental degradation • Improved management of global commons, including facilitated by cooperation of various organizations and sectors, and collaboration of local, national and international entities • Accelerated demographic transition, resulting in relatively low population growth and driven by investments in education and health • Emphasis on human well-being over economic growth, with a focus on achieving development goals and a reduction of inequality across and within countries • Investment in environmental technology, leading to improved resource efficiency and reduction in energy and resource use • Promotion of renewable energy through increased investment and financial incentives and changing perceptions making renewable energy more attractive • Consumption oriented towards sustainability, involving low material growth and lower resource and energy intensity • Low challenges to mitigation due to directed development of environmentally friendly technologies, favorable outlook for renewable energy, and strong global, regional and national institutions • Low challenges to adaptation due to improvements in human well-being and flexible institutions for adaptation efforts 	<p>Key events and actions:</p> <ul style="list-style-type: none"> • Drivers of focus on domestic and regional issues include resurgent nationalism, concerns about competitiveness and security, and regional conflicts • Limited global institutions, leading to uneven coordination and cooperation for global concerns • Policy orientation towards national and regional security, resulting in trade barriers (especially in energy and agricultural markets) • Shift towards authoritarian forms of government and highly regulated economies • Decline in investments in education and technological development • Slow economic development, involving material-intensive consumption and persistence (or worsening) of inequalities • Challenges in providing basic needs, including access to safe water, sanitation, and healthcare • Environmental degradation occurs, as environmental concerns are a low international priority • Poor progress towards sustainability, impeded development, and limited environmental concern • Population dynamics, involve low growth in industrialized countries • Challenges to mitigation due to growing resource intensity and fossil fuel dependency and difficulty in achieving international cooperation • Challenges to adaptation due to limited progress in human development, slow income growth, and lack of effective cross-regional institutions

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