sustainability

MDPI

Article

Integrated Sustainability Planning and Local Food Systems: Examining Areas of and Gaps in Food Systems Integration in Community Sustainability Plans for Municipalities across British Columbia

Jofri Issac [1,2,*], Robert Newell [1,2,3], Colin Dring [1,4], Charmaine White [1], Mohaddese Ghadiri [1,3], Stefania Pizzirani [5] and Lenore Newman [1,5]

[1] Food and Agriculture Institute, University of the Fraser Valley, Abbotsford, BC V2S 7M7, Canada; robert.newell@ufv.ca (R.N.); colind@mail.ubc.ca (C.D.); charmaine.white@ufv.ca (C.W.); mohaddeseghadiri@uvic.ca (M.G.); lenore.newman@ufv.ca (L.N.)
[2] School of Environment and Sustainability, Royal Roads University, Victoria, BC V9B 5Y2, Canada
[3] School of Public Administration, University of Victoria, Victoria, BC V8P 5C2, Canada
[4] Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC V6T 1Z4, Canada
[5] School of Land Use and Environmental Change, University of the Fraser Valley, Abbotsford, BC V2S 7M7, Canada; stefania.pizzirani@ufv.ca
* Correspondence: jissac@royalroads.ca; Tel.: +1-6476738495

Citation: Issac, J.; Newell, R.; Dring, C.; White, C.; Ghadiri, M.; Pizzirani, S.; Newman, L. Integrated Sustainability Planning and Local Food Systems: Examining Areas of and Gaps in Food Systems Integration in Community Sustainability Plans for Municipalities across British Columbia. *Sustainability* **2022**, *14*, 6724. https://doi.org/10.3390/su14116724

Academic Editors: Aled Jones and Marian Rizov

Received: 14 April 2022
Accepted: 25 May 2022
Published: 31 May 2022

Abstract: No "one size fits all" approach exists for local sustainability and food systems planning. Such planning must balance needs for being both comprehensive and place-based. The current study explores this tension by examining Integrated Community Sustainability Plans (ICSP) developed by municipalities in British Columbia (BC), Canada. The research examines items and actions related to food systems (focusing on agriculture and food production) in the ICSPs of municipalities in different regions across BC to (1) identify how municipalities "integrate" food systems with other sustainability objectives, (2) elucidate how place and geography influence integrated planning, and (3) reveal gaps in integrated approaches to developing local food systems. The study employs document analysis and thematic coding methodology. The results indicate that common areas of food systems integration in ICSPs include local economy and education. Many plans outline goals for bolstering local food economies and building local food capacity through community participation and engagement. Findings also show how foci and approaches for developing sustainable food systems vary by region. The study elucidates how food systems are integrated within place-based sustainability plans as well as reveals gaps that local governments can address when adopting and implementing integrated sustainability plans for improving food systems.

Keywords: integrated planning; food systems; sustainable community development; place-based planning

1. Introduction

Stable food systems are an essential aspect of thriving and secure societies worldwide. Yet, food systems are becoming increasingly unstable—challenged by dynamic changes in globalization, climate change, consumer behaviors, economic incentives, government policies, and more [1–3]. Additionally, the COVID-19 pandemic has been a significant driver of disruption in global food systems, especially regarding loss of incomes and food-related livelihoods [1,4]. This rapid reshaping of food systems (and related activities and actors) is affecting all food supply chain processes, from production to consumption [5]. There is an urgent need to transform our food systems—from farming to commercial practices to be more sustainable and resilient, with greater food security and access while protecting socio-cultural values and livelihoods [6–12]. In particular, care must be taken to understand

how the nuances of stakeholder perspectives are connected with and affected by the larger, systematic issues of contemporary food systems (e.g., ecosystem health, societal wellbeing, access to wealth) [13–15].

The future of food systems relies in part on creating and supporting an integrated food system that transparently accounts for a variety of sustainable factors (social, economic, and environmental) from regional to global scales [16]. The challenge, however, is to avoid the impulse to create and implement a single "one size fits all" integrated food system approach. Instead, an integrated food system promotes adaptive strategies across the global system while acknowledging the specific goals of local communities [5,17]. The aim is to respond to diverse local needs in order to pursue larger national and international mutually beneficial collaborations [18]. Similar requests to recognize community diversity can be found in other disciplines such as planning (e.g., [19]) and policy making (e.g., [20]). Ultimately, an integrated food system should deepen the support and protection of local food economies, thus bolstering the global food network as a whole [21–24]. One way to account for local complexity and diversity within a food system is to engage in in integrated community sustainability planning processes. However, there is limited literature describing the procedures for including food systems in place-based community sustainability plans. Researchers, of course, recognize the importance of place-based food systems solutions and practices (e.g., [16]), but empirical analysis on how integrated planning facilitates this is lacking.

To address this gap, this paper examines the Integrated Community Sustainability Plans (ICSPs) of the municipalities in the province of British Columbia (BC), Canada. Each ICSP is reviewed to understand the processes used to implement food system strategies and actions within local sustainability planning. Although this study focuses on planning process across the municipalities of British Columbia, similar sustainability planning approaches that integrate foods systems have been observed in other places, such as Sweden [25], New York City [26], and elsewhere, e.g., [27]. The study has three objectives: (1) identify how municipalities "integrate" food systems with other sustainability objectives, (2) clarify how place and geography influence integrated planning, and (3) reveal gaps in integrated approaches to developing local food systems.

2. Case Study

This research analyses Integrated Community Sustainability Plans (ICSP) of municipalities in BC. ICSPs in Canada were stimulated by the 2005 Federal Government's Gas Tax Agreement, which made funds available for local infrastructure and capacity building projects for municipalities that developed ICSPs [28]. ICSPs allow local governments to identify and prioritize long-term sustainability issues and are typically developed through community engagement and cross-sectoral collaboration, thereby aligning with place-based planning approaches [19].

BC is a large and geographically diverse province, covering an area of over 944,000 km^2. The province consists of 27 regional districts and 162 municipalities [29] as well as eight economic regions [30] and six larger "tourism" regions with geographical distinctness [31]. The latter (i.e., tourism) regional structure was selected for the geographical analysis for this study, the one exception being that the Cariboo and Chilcotin Coast and north BC regions were considered together due to them containing fewer municipalities with ICSPs. The regions and their respective populations [32] are shown in Table 1. A list of ICSPs according to regions and sub-regions and their ICSPs is provided in the Supplementary Material Table S1. Following is a brief summary of each region covered in this research, with a particular focus on their food and agriculture industries.

Table 1. Regions in BC and municipalities with ICSPs.

	Region Used for Analysis				
Feature	**North**	**Southeast**	**South-Central**	**Southwest**	**Islands**
Tourism region	Cariboo and Chilcotin Coast	BC Rockies	Thompson Okanagan	Vancouver Coast and Mountains	The Islands (Vancouver Island, the Gulf Islands)
Economic regions	Northeast; Cariboo; North Coast; Nechako	Kootenay	Thompson Okanagan	Lower Mainland/Southwest	Vancouver Island/Coast
Number of municipalities with ICSPs	10	14	15	10	10
Population (approx.)	341,600	163,100	609,300	3,200,000	881,700

2.1. Islands

The Islands region includes Vancouver Island and the Gulf Islands, located off the west coast of the province. The region has primarily mountainous landscapes and a population of approximately 881,700. The economy of this region relies on tourism and attracts visitors and residents from around the globe. The key employment sectors are advanced manufacturing, agri-food and seafood, and information and communication technology [33]. The major agricultural areas of the region are Alberni, Comox, Kawai Camberley, Saanich Peninsula, Gulf Islands, and Powell River Lowlands [34]. The frost-free days in this region range from 158 to 201, with an annual rainfall between 873 to 2123 mm, providing a moderate, moist climate suitable for long-season crops [35]. Such climate conditions support field crops, fruits, tree crops, dairy products, pigs, sheep, poultry, and ornamental plants. Aquaculture is a growing industry and has the highest potential in terms of economic value and scale [35].

2.2. Southwest

The southwestern part of the province is the most populous and densely populated region in BC, with a total population of 3.2 million, and more than half of the province's population resides in the Metro Vancouver area within the region. This region is the transportation and shipping hub for western Canada and plays a huge role in connecting Canada with the global supply chain [36]. The major employment sectors are advanced manufacturing, agri-food and seafood, and information and communication technology [36]. The region has the highest number of non-frost days (i.e., 174–200) and rainfall, with annual rainfall ranging from 920 to 1500 mm [37]. The region has a moderate climate with fertile soils that offer suitable cultivation conditions for a variety of crops, including cranberries, raspberries, blueberries, potatoes, dairy products, poultry, and eggs [38].

2.3. South-Central

The South-central region identified in this work encompasses BC's Thompson-Okanagan region (it is identified here instead as "south-central" for the sake of geographical clarity). Population-wise, the region is the third largest, with a total population of approximately 609,300 [39]. Thompson-Okanagan region is a popular tourist destination and also has an emerging tech industry with annual revenues surpassing $1.7 billion [40]. This region has a mild climate, with frost-free days ranging from 148 to 175 and annual rainfall ranging from 257 to 534 mm [41]. The Thompson-Okanagan accounts for 30% of Canada's apple production, and it contains numerous wineries that produce premium wines throughout North America [41].

2.4. Southeast

The Southeast region includes the Kootenay regional districts and communities, which collectively house a population of about 163,100. It is the least populous of all the regions examined here. Tourism is a major contributor in the economy of this region and has an industrial hub that promotes shift to a circular economic model through public-private partnerships [42]. The climate is mild and suitable for horticultural culture, with frost-free days ranging from 110 to 160 and with very low annual rainfall of 370 to 569 mm [43]. The landscape is uneven, with mountain slopes and fertile valleys. The area has a good supply of cherries and apples, and it has active livestock agriculture, including dairy production and chicken farming [44].

2.5. North

The North is a region defined for this research that encompasses BC's Cariboo, North Coast, Nechako, and Northeast regions, which collectively have an approximate population of 341,600. The Northeast region is one of the fast-growing regions due to the increasing development of the energy sector [45]. The Cariboo region experiences a short growing season with moderate rainfall and shorter frost-free period (i.e., 85–120 days) [46]. The Nechako region has diverse topography and has a varying climate condition. The Peace River region in the northeast of the province has moderate climate conditions that support both long- and short-season crops [47]. Across the North, beef cattle ranching and hay farming is prevalent as well as poultry and dairy production [48].

3. Materials and Methods

3.1. Data Collection

Data collection began with an online scan that identified which municipalities in BC had an existing ICSP. Of the 162 municipalities in BC, 55 municipalities were found to have ICSPs. All the ICSPs were drafted before 2017, with the majority (n = 46) of them drafted between 2010 and 2014; six were updated after the first draft. Not all sustainability plans were explicitly identified as ICSPs, but such plans were included if they were developed using an integrated sustainability planning framework. For example, the District of Hope did not identify their sustainability plan as an ICSP but as an Integrated Official Community Plan (IOCP), which was described as a "combination of an Integrated Community Sustainability Plan, Official Community Plan, and Age Friendly Plan" [49]. Three municipalities within the Comox Valley Regional District (i.e., City of Courtney, Town of Comox, and Village of Cumberland) created a single ICSP through a joint initiative, and another three municipalities in BC had multiple documents that comprised their ICSP, these being Enderby (n = 2), Revelstoke (n = 4), and Sun Peaks (n = 3). Accordingly, the final dataset consisted of 59 documents.

3.2. Auto-Coding and Thematic Coding

The ICSPs were analyzed using the qualitative data analysis software NVivo (v. 11). Paragraphs and segments related to food systems were identified by coding these segments using the search terms: agriculture, food, farm, and market. The searches included variants (e.g., agricultural, farmers, etc.), and the research team employed NVivo's automatic coding or "auto-coding" feature, with the context set as "surrounding paragraph", which codes all text between the line breaks prior to and following a term. This purpose of auto-coding is to allow researchers to focus on data within large datasets that are relevant to their study [50], and similar to this study, the technique has been used for data extraction purposes for document analysis research on food systems issues (e.g., [51]). The auto-coding done in this research captured relevant contextual text for the terms searched within the document, which are referred to here as "food-related segments" (FRS). The FRSs were evaluated within the context of the ICSP document by referring back to the document to determine whether the reference included substantive content and would be further analyzed or

whether it consisted of text such as a heading title, table heading, or picture caption. In the case of the latter, the coded data were removed from the FRS set.

FRSs were analyzed to see areas of integration between food systems and other sustainability objectives, and this was done through thematic coding using an inductive coding approach [52]. This process revealed areas of connection between food systems and other sustainable objectives. For example, Campbell River's ICSP included in an FRS the following action: "Protect and appropriately manage forested areas, Agricultural Land Reserve, and other environmentally sensitive areas so as to maximize the carbon dioxide sequestering capacity of these areas" [53], and this was coded with the emerging themes of climate change, environmental stewardship, and land use and land conservation. Following the inductive coding, an axial coding process was performed [54] to categorize codes and identify broader themes in the data.

3.3. Analysis and Visualization

The NVivo's matrix coding feature was used to identify areas of overlap/cross-references for the thematic codes and the FRS codes (i.e., agriculture, food, farm, and market). These coded cross-references were then examined to identify the action-based items (i.e., those that refer to actions or strategies). Accordingly, the final coded dataset included only references that identified a proposed strategy or action, while references that were vague with respect to actions/strategies and that did not clearly indicate relationships between food systems and other sustainability objectives were removed. This filtration process allowed for the analysis to focus specifically on the municipalities' strategies and action plans around strengthening their local food systems (as well as to illuminate the associated gaps in such plans).

The results were visualized by aggregating all FRS codes and then by drawing connections between a central "food and agriculture" theme and the other thematic codes were aggregated accordingly. The number of cross-references between the thematic codes and FRS codes were totaled and organized by region. The percentages of municipalities within a region that exhibited FRS cross-references for a particular thematic code were also calculated to examine the extent to which different sustainability objectives are present/absent (in terms of their relationships with food systems) within the ICSPs of a region.

The data were visualized using Gephi (v. 0.9.2). Data were organized into CSV format and were imported to Gephi to create a diagram that shows the relationship between "food and agriculture" and the thematic codes. Data were also visualized in a manner that displays these relationships, as they occur for different regions and with the total number of cross-references that support the existence of a relationship.

3.4. Research Approach and Considerations

This study reports on numerical output; however, the work does not engage in rigorous quantitative analysis and exploration. Instead, the analytical output is examined in terms of the presence and (notably) absence of different sustainability objectives discussed in concert with food systems considerations as observed in various municipalities within different regions. The paper reports on these presences/absences to elucidate differences in the integration of food systems in planning among municipalities and regions. The paper also elaborates on these differences by providing examples of the actions and goals discussed in the ICSPs to illustrate the ways in which different communities integrate food systems into local sustainability planning.

The intention of the study is not to make specifically policy recommendations; rather, it aims to reveal how food systems integration is (or is not) being done in community planning and produce insights that can be used to inform the development of new approaches and frameworks for supporting comprehensive integrated sustainability planning. With this said, it is important to recognize that the study does not aim to inform food systems policies for supporting the population of BC; accordingly, the work does not weight its analysis based on population size or any of the other demographic features provided above. These

regional demographic figures and profiles are given to illustrate the characteristics of a region (e.g., the Southwest region encompasses large urban centers), allowing for place-based examination of how different types of communities (with varying environmental, social, economic, and cultural characteristics) engage in food systems and integrated sustainability planning.

4. Results

Table 2 displays the total coded references respectively found in the ICSPs for each of the regions. Altogether, 20 thematic codes emerged through this process, and these were organized into six axial codes. The axial codes loosely followed the sustainability pillars framework, categorizing the thematic codes into environmental, social/cultural, and economic dimensions while also identifying two other categories of "infrastructure and built form" and "governance and partnerships" and an "Indigenous communities" group that consists solely of the "First Nations" code.

Table 2. Numbers of cross-references between thematic codes and food and agriculture codes.

Categories	Theme	Region				
		North (*n*)	Southeast (*n*)	South-Central (*n*)	Southwest (*n*)	Islands (*n*)
Environment	Freshwater Systems and Resources	2	3	3	4	1
	Environmental Stewardship	1	2	6	1	8
	Waste Management	3	3	3	3	8
	Climate Change	2	3	6	6	8
	Habitat and Biodiversity	1	1	7	1	4
	Total	9	12	25	15	29
Social and Cultural	Health and Wellness	6	5	1	1	5
	Education	10	3	10	5	19
	Social Justice	1	1	9	6	6
	Recreation and Community Interaction	0	3	3	5	10
	History and Heritage	3	0	1	0	0
	Total	20	12	24	17	40
Economy	Local Economy	23	11	13	10	39
	Employment	1	0	2	2	4
	Total	24	11	15	12	43
Infrastructure and Built Form	Transportation	0	0	2	1	0
	Mixed-use Development	2	1	9	9	14
	Land Use and Land Conservation	2	2	6	4	24
	Total	4	3	17	14	38
Governance and Partnership	Research and Innovation	0	1	3	0	5
	Policy Development	2	7	3	4	5
	Provincial Government	1	2	0	0	3
	Federal Government	1	0	0	0	0
	Total	4	10	6	4	13
Indigenous Communities	First Nations	2	0	0	0	2
	Total	2	0	0	0	2

4.1. Municipality-Wise Integration of Food Systems and Sustainability Objectives

Figure 1 displays the coverage (in percentage) of connections between food systems and themes among the municipalities in each region. These values capture the percentages of municipalities within a region that have references to integration between food systems and broader sustainability objectives. In aggregate, the Islands region has the highest municipal coverage followed by the North, Southwest, South-central, and Southeast regions.

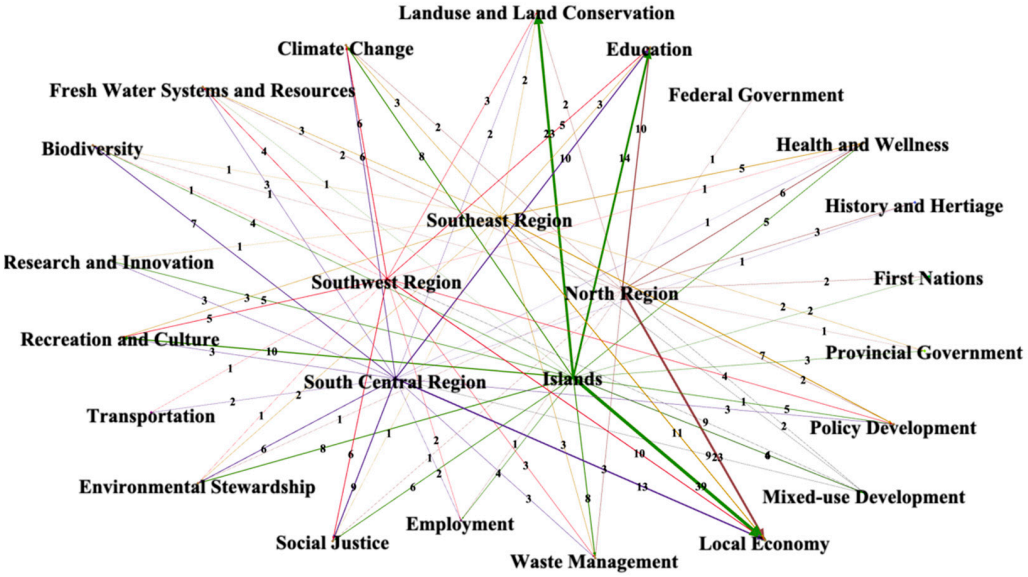

Figure 1. Number of relationships observed in the ICSPs of different BC regions.

As seen in Table 3, local economy was linked to food systems in over half of the municipalities in the ICSPs of the Islands region. Each of the other themes (e.g., waste management, climate change, policy development, etc.) were referenced in the ISCPs of fewer than half of the municipalities. The themes of history and heritage, transportation, and federal government were found to be absent in all the municipalities in the analysis of this region.

In the ICSPs of the municipalities in the North, education was the only theme found to be linked with food systems in the ICSPs of more than half of the municipalities. Other themes, such as local economy, health and wellness, habitat, and biodiversity were found in the ICSPs of fewer than half of municipalities. The themes of recreation and community interaction, mixed-use development, First Nations, provincial government, and federal government were found to be absent in all the municipalities in the analysis for this region.

In the ICSPs of the Southwest region, no one theme was found in the ICSPs of half or more of the municipalities. The most prevalent themes in terms of their coverage among municipalities were freshwater systems and resources, education, local economy, and policy development, with each of these found in the ICSPs of 30% (n = 3) of the region's municipalities. The themes of history and heritage, mixed-use development, research and innovation, provincial government, federal government, and First Nations were absent from food systems references in the ICSPs.

Similar to the Southwest region, no one theme was found in the ICSPs of half or more of the municipalities in the Southeast region. The most prevalent themes were those found in ICSPs of 21% (n = 3) of the region's municipalities, and these are primarily related to environmental concerns, that is, environmental stewardship, waste management, habitat and biodiversity, as well as transportation. The themes of climate change, education, recreation and community interaction, history and heritage, economic development, provincial government, and First Nations were found to be absent from all the municipalities in the analysis of the Southeast region.

Table 3. Coverage of thematic codes in ICSPs among the municipalities in different regions.

Categories	Thematic Code	Region				
		North (% (*n*))	Southeast (% (*n*))	South-Central (% (*n*))	Southwest (% (*n*))	Islands (% (*n*))
Environment	Freshwater Systems and Resources	10 (1)	7 (1)	13 (2)	30 (3)	10 (1)
	Environmental Stewardship	10 (1)	21 (3)	20 (3)	10 (1)	30 (3)
	Waste Management	30 (3)	21 (3)	20 (3)	20 (2)	30 (3)
	Climate Change	20 (2)	0 (0)	13 (2)	20 (2)	20 (2)
	Habitat and Biodiversity	10 (1)	21 (3)	13 (2)	10 (1)	20 (2)
Social and Cultural	Health and Wellness	20 (2)	14 (2)	7 (1)	10 (1)	20 (2)
	Education	60 (6)	0 (0)	33 (5)	30 (3)	20 (2)
	Social Justice	10 (1)	7 (1)	40 (6)	30 (3)	40 (4)
	Recreation and Community Interaction	0 (0)	0 (0)	13 (2)	20 (2)	40 (4)
	History and Heritage	10 (1)	0 (0)	7 (1)	0 (0)	0 (0)
Economy	Local Economy	40 (4)	29 (4)	47 (7)	30 (3)	60 (6)
	Employment	10 (1)	7 (1)	13 (2)	10 (1)	10 (1)
Infrastructure	Transportation	0 (0)	21 (3)	7 (1)	10 (1)	0 (0)
	Mixed-use Development	20 (2)	7 (1)	27 (4)	30 (3)	40 (4)
	Land Use and Land Conservation	20 (2)	14 (2)	13 (2)	20 (2)	30 (3)
Governance and Partnership	Research and Innovation	0 (0)	7 (1)	13 (2)	0 (0)	10 (1)
	Policy Development	10 (1)	7 (1)	13 (2)	30 (3)	20 (2)
	Provincial Government	10 (1)	0 (0)	0 (0)	0 (0)	10 (1)
	Federal Government	10 (1)	7 (1)	0 (0)	0 (0)	0 (0)
Indigenous Communities	First Nations	20 (2)	0 (0)	0 (0)	0 (0)	20 (2)

In the ICSPs of the South-central region, themes such as local economy, education, social justice, and mixed-use development were commonly found to be linked to food systems, with these occurring in half or more of the municipalities. Other references such as economic development, waste management, climate change, policy development, and environmental stewardship were less frequent, occurring in under half of municipalities ICSPs. Other themes, such as First Nations, provincial government, and federal government were absent from the analysis for this region.

4.2. Food Systems and Sustainability Objectives Integration

Figure 2 shows that most common area of food systems integration observed in the ICSPs involves the theme of local economy, followed by education, land use and land conservation, mixed-use development, climate change, social justice, and policy development. Other references such as recreation and community interaction, health and wellness, habitat and biodiversity, food security, and research innovation were as not frequently discussed with reference to food systems, and themes such as provincial government, First Nations, history and heritage, transportation, and the federal government appeared rarely in reference to food systems in all regions. Relationships between the local economy and agriculture identified in the ICSPs focus on building sustainable food production capacity for local markets as well as implementing programs to promote and support local food businesses. Municipalities have defined different approaches to improve the local food economy in their region. The strategies include linking manufacturers to retailers and identifying opportunities and gaps in food systems by consulting local producers and suppliers. These strategies seek to bolster local agricultural production

and increase the purchase, consumption, and market share of food items produced in the region.

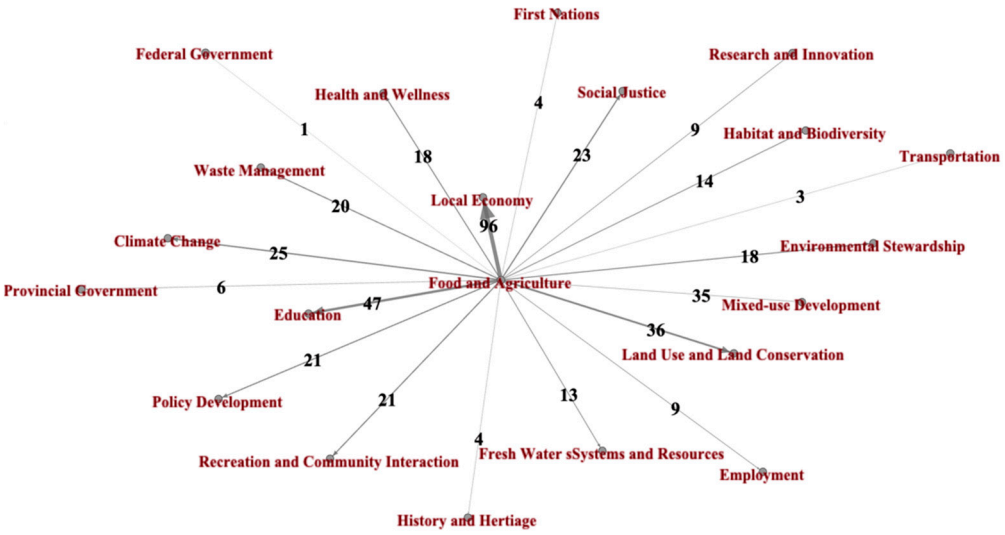

Figure 2. The number of references between food and agriculture and thematic codes.

In the North, municipalities such as 100-Mile House have concentrated on maintaining local economic health by supporting and enhancing the community's traditional economic strengths in tourism, agriculture, and forest products. Williams Lake focuses more on campaigning programs such as "buy local" initiatives as well as strategies for extending growing seasons and creating tourist attractions around local agricultural production. Williams Lake's ICSP discusses strategies for expanding local farmers markets and improving food and market infrastructure to expand the range of product availability and eventually strengthen local food sales. In the Islands region, municipalities in the Comox Valley have produced plans to support research and development in green technologies for local food production (and the economic opportunities this will provide). They have also launched an "Eat Local" program through a partnership between local government and non-profits. City of Powell River's (i.e., Islands) ICSP discusses promoting the integration of non-timber forest-based production such as mushrooms, maple syrup, and others into forest and rural land management. This municipality is also partnering with other stakeholders to promote the local seafood industry as a key sector of local, sustainable food sources. The municipality of Salmo (i.e., Southeast) surveyed local producers and suppliers to identify opportunities and gaps in the local food system for the purposes of increasing growth in this sector.

The second most common area of food systems integration observed in this study involves the theme of education. Interactions related to education and food systems focus on strategies for increasing agricultural awareness in the community by improving awareness about local farmer markets and providing educational programs on food and gardening. Prince George (i.e., North) encourages community-supported agriculture (CSAs) and promotes Farm-to-School programs. Burns Lake (i.e., North) initiated a local greenhouse development training program and a sustainable community gardens program. In the South-central region, Osoyoos's ICSP discussed multiple related programs, such as Farm-to-School and Breakfast for Learners, which are delivered to students to encourage healthy food habits and provide education on food production. The City of Surrey's (i.e., Southwest) ICSP discusses their Nature Matters Program, which aims to build awareness around the benefits of local agriculture through interactive educational activities. Comox's (i.e., Islands) ICSP discusses apprenticeships in sustainable food production and agri-food skills training programs, delivered through partnerships with the public/private/non-profit stakeholders.

The third most common area of food systems integration observed in this analysis involves the theme of land use and land conservation, which relates to conserving agricultural lands and protecting natural resources. Hudson's Hope (i.e., North) promotes the idea of utilizing and conserving agricultural spaces by focusing on the interface between industrial, agricultural, and residential lands to ensure that the functions and activities of these spaces do not interfere with each other. In the Southeast region, Grand Forks's ICSP contains multiple strategies in this area, ranging from discouraging additional dwellings on the Agricultural Land Reserve (ALR) while also ensuring that commercial and industrial developments are planned in ways that reduce conflicts between residential and agricultural areas. Municipalities such as Kamloops (i.e., Southeast) have ICSPs that discuss encouraging planting of fruit trees and food plants instead of softwoods and ornamental flowers. The City of Vancouver (i.e., Southwest) has planned to increase the local production by setting up five to six new community gardens and a new urban farm per year over the next three years. Comox's ICSP discusses plans for wastewater infrastructure that will allow it to be used as a resource for nearby agricultural lands.

Other commonly observed themes include mixed-use development, which captures municipal plans for using public spaces for community gardens and food sharing programs. Peachland (i.e., South-central) aims to increase the number of potential agricultural rooftop gardens and public courtyards with garden areas. Similarly, Surrey and the City of North Vancouver (i.e., Southwest) discuss the use of available urban space through community garden plots and green roofs. Revelstoke (i.e., Southeast region) identifies plans to partner with religious and social organizations to use their spaces for enhancing local food production. Comox Valley plans to create a fund and invest in projects that enhance green urban agriculture as well as partner with development stakeholders to develop an "agricultural urbanism".

Areas of integration between climate change and food systems observed in the ICSPs primarily focus on promoting climate-conscious local food production and supply chain. Enderby (i.e., South-central region) proposes establishment of agricultural tree farms, which can also supply biomass fuel to existing and future district heating systems. Williams Lake's ICSP aims to increase community awareness on eating and shopping behaviors that promote environmental, economic, and health benefits. Hope (i.e., Southwest) encourages intensive agricultural measures to reduce the negative impacts of agricultural expansion (which also relates to the land use and land conservation theme). Comox Valley's ICSP includes plans to undertake a research project on greener technology to improve local food production for a wide range of products that help local farmers become more sustainable and competitive. The municipality is also partnering with an academic institution to conduct a strategic analysis of the carbon footprint of the Comox Valley's food system and to formulate a strategy to reduce food system-related emissions.

Other themes that revealed areas of food systems integration within ICSPs are social justice and policy development. Related to the social justice theme, the District of Lake Country has formed community advisory committees assigned with the task to create accessible and age-friendly agriculture. This plan requires a youth representative from each committee to be heard on a variety of topics including easy access to agriculture. Revelstoke's ICSP discusses plans to implement a poverty reduction strategy through a broad community partnership to address emergency food programs for schools. The District of North Vancouver partners with non-profit agencies to provide temporary shelter and food for people in need. The municipality also plans to build partnerships with farmer's market associations to design a sustainable food strategy and set up points of access to the local food supply. Related to the policy development theme, the District of Lake Country proposes to develop policies that support local producers and suppliers to strengthen local food systems. The City of Surrey policy plans include those that would increase tax on the agriculturally-designated land that is not used for agricultural purposes.

The thematic analysis performed in this study indicates that in some cases, sustainability objectives are presented with food systems as aligned (but not necessarily integrated)

objectives for improving local sustainability. For example, some ICSPs discuss protecting agricultural production and agricultural lands from natural disasters and invasive species, and these plans also included references to protecting ecosystems. In other cases, the integration of sustainability objectives was clearer and more explicit. For example, ICSPs discussed improving the environmental performance of local food systems by promoting practices that reduce fossil fuel energy consumption and improve waste management, and some ICSPs discussed local food production with respect to improving community health.

5. Discussion

This study examines how food is embedded in ICSPs in communities across BC to generate insight on how food systems are integrated in sustainability planning. The results of the analysis indicate that food systems strategies are more frequently aligned/integrated with certain objectives than others, for example, economy and some environmental (e.g., land use/conservation and climate change) objectives were mentioned frequently in concert with food systems. In some ways, these findings follow and align with discourse that has occurred in food and agricultural systems scholarship over the last several decades or so. Particular emphasis over the years has been devoted to environmental problems such as water and air pollution, soil erosion, biodiversity loss, habitat loss, and climate change [2,15,55]. Similar attention has been directed within the alternative food movement and to the anti-globalization movement towards localization of food economies [56].

Differences among regions were noted, and such differences provided insights on the comprehensiveness (or lack thereof) in integrated food systems planning in the municipalities in different regions. For instance, municipal plans produced from the Islands more comprehensively captured food systems in their local plans than observed in other regions, as only three of the thematic codes were absent from the food systems aspect of their plans in this region (these being history and heritage, transportation, and federal government). In contrast, the Southwest and Southeast regions demonstrated higher rates of absence of different themes and objectives. In some cases, these differences could be due to stronger focuses on strategies that are appropriate for certain plans and environments, for example, urban agriculture innovations (i.e., those captured within mixed-use development theme) in the cities of the Southwest region. In other cases, however, absent themes could represent "blind spots" and gaps, and municipalities that have such gaps in food systems planning could examine and learn from municipalities with more comprehensive integrated plans.

Regional differences aside, the analysis clearly illustrated that certain considerations were rarely presented in concert with food systems, examples being history and heritage, transportation, mixed-use development, and First Nations. Some of these gaps could represent the state of knowledge and discourse at the time of the plans' creation. For example, the majority of the plans were developed prior to 2015, when the Truth and Reconciliation Commission of Canada [57] released their report on the impacts of Canada's residential school system on Indigenous peoples and communities. The report provides a strong call for action for governments at all levels to recognize issues experienced by these communities and work toward reconciliation; accordingly, it is possible (and likely) that a new or updated ICSPs would include these (or related) considerations.

The prevalent themes observed in the analysis and types of objectives on which communities focus also reflect the state of discourse. For instance, the focus on economic factors when discussing food system strategies seen in this research reflect the pro-growth perspective of sustainable development given by the Brundtland Commission's [58] landmark report that popularized the term (e.g., see [59]). In 2015, the United Nations adopted the 17 Sustainable Development Goals [60], which provide a broader perspective on the concept and could serve as inspiration for more comprehensive new and updated ICSPs. In a similar vein, the focus of strategies within a certain sustainability objective and theme can be directed by the prominent frameworks and ideas. As an example, the BC Climate Action Charter is a voluntary agreement to mandate local climate action in the province, which was launched in 2007 (i.e., only a few years before many of the ICSPs were drafted) and

primarily focused on mitigation rather than adaptation [61]. Coincidentally, many of the food systems strategies that integrate climate action objectives in the ICSPs focus primarily on mitigation and reducing carbon footprint.

Across ICSPs, social justice is a theme interacting with food systems, and the analysis indicates that objectives around access to agriculture and food are common. This reflects an ongoing trend of focusing on distributive outcomes and material forms of equality. For example, access to land for young farmers presumes an egalitarian goal for distribution of farmland to ensure that the next generation of farmers can succeed (the basis of success is being able to own farmland to justify long-term investment in the land). Social justice requires attention to both distributive justice outcomes (i.e., farmland ownership) and to procedural justice outcomes (i.e., representation in and authority for decision-making). Procedural justice outcomes are present in some ICSPs, such as the establishment of community advisory committees and youth representatives. However, what is absent is the recognition of historical configurations of inequality, and their active reproduction, and efforts to interrupt and reconfigure power relations across a region [62]. As other scholars and researchers have shown, alternative food strategies may very well reproduce inequitable configurations, as advocates for farmers markets and local food leverage their status and access to resources to mobilize economic shifts in directions that suit their own privileged interests [63,64].

Although the social justice theme was present in this analysis, it was not ubiquitous. This can be problematic, as planning initiatives such as ICSPs often frame interventions as "win-win" without articulating the intended beneficiaries of efforts. Using general framings (such as stating the goal is to simply "increase food security") supports presumptions that interventions will be beneficial to all community members, but this is not necessarily the case. For example, health is a theme that appeared in the ICSPs analyzed here and although it is a worthwhile area of food systems integration, planning interventions that aim to link food and health often fall short of achieving these objectives broadly and equitability. Strategies that focus on addressing obesogenic environments and food deserts can fail to acknowledge the histories of spatial injustice that arise in specific configurations of the built environment. In addition, shifting food deserts/obesogenic environments to "healthier" food retail outlets and markets often involves those that provide local, organic foods [65] and may perpetuate a two-tiered food system in which healthy foods are reserved for urban elites [66,67] while also doing little for economic development [68].

Another salient finding from the research relates to how little other levels of government were mentioned in references to food systems strategies. This finding could be a result of the simple fact that the analysis focused on community-level plans; however, it also could be reflective of a tendency toward localism when devising sustainable food systems strategies [24]. Born and Purcell [56] describe this as the "local trap", explaining that there is an assumption that local food production is "inherently good" and more socially just than other scales of production, which is not necessarily always the case. In reality, sustainability challenges are multi-scalar in nature, and accordingly, solutions for addressing these challenges require vertical integration and approaches that encourage multi-level governance [69]. Although it is beyond the scope of this study, future research could interrogate how frameworks such as those used to develop ICSPs encourage or discourage vertical integration and whether new frameworks are needed for addressing multi-scalar sustainability issues.

Although the analysis done in this study revealed a number of gaps in integrated food systems planning, the themes that emerged through the inductive coding process also demonstrated a breadth of relationships with different sustainability objectives and (in turn) the multifunctionality of food assets. This could be useful with respect to developing policies that recognize and leverage the multiple benefits of these assets; for example, one response to enhancing farmland protection is to broaden the public goods nature of farmland to include several non-farm uses. The multifunctionality of farmland and farm activities can be recognized through the goods and services that extend beyond

product markets, such as ecological services, tourism, landscape conservation, and rural aesthetics [70]. As a means to achieving a more multifunctional agricultural sector, there is an area of growing interest in agriculture in the integration of farmland protection and agricultural development planning. Bryant and Chahine [71] examined Quebec's efforts to draw together multiple actors (farmers, farmer and agricultural industry representatives, planning agencies, local citizens, urban consumers, and environmental groups) to direct the development of agricultural areas and the activities therein. They found that the degree of participation and integration across different geographies, sectors, and cross-cutting issues informed the degree to which plans incorporated concerns beyond farming and challenged the maintenance of the status quo [71].

Although this study was done in the context of a province in Canada, its findings are applicable beyond this geographical context, as many communities across the globe have engaged (and are engaging) in sustainability planning processes that integrate food systems considerations. For example, in response to a national goal of having 25% of publicly procured foods originating from environmentally sound production, Sweden municipalities developed plans and strategies that fall in the intersections between food, climate change, and ecological objectives, such as preserving local farm bases, minimizing producer-consumer distances, and promoting organic and seasonal foods [25]. As another example, New York City incorporated food strategies into the city's sustainability plan, One New York [72], which involved integrating a variety of urban gardens and farms into the cityscape, ranging from rooftop hydroponic greenhouses to small school gardens [26]. As a final example, the 187 municipal signatories of the Milan Urban Food Policy Pact have committed to integrating social justice and food systems planning by developing urban food assets in ways that improve access to food for all community members and support local food justice objectives [27]. Such examples demonstrate the wide range of efforts done in the areas of local food systems and integrated community sustainability planning (even if not specifically referred to as such), and future research could involve an international focus comparing place-based planning, approaches, and gaps among a range of contexts.

It is important to recognize that this research focused solely on planning and not the implementation of strategies. As such, the insights of this research are useful for understanding areas of integration and gaps in thinking around and aspirations for local food systems; however, the study does not reveal whether integrated strategies have been successfully implemented and are contributing to local sustainability objectives. The ICSPs studied in this research need to be adopted as part of municipalities' Official Community Plan (OCP) for them to effectively guide local development and land-use, for example, as done in Prince George with respect to their ICSP's adaptation components [73]. In this way, the ICSP process could be regarded as a few steps removed from on the ground action, so to speak, and the integrative thinking captured in planning may experience challenges in being actualized as strategies, for instance, related to government and sectoral silos [19,74,75]. Frameworks exist for encouraging implementation as well as for (equally as important) monitoring of effectiveness of strategies; for example, the Federation of Canadian Municipalities Partners for Climate Protection program developed a five-milestone framework for local climate action where the fourth and fifth milestones (respectively) are implementation and monitoring/evaluation [76]. Future research on integrated planning could study (a) the degree to which integrated plans translate to integrated strategies and (b) the effectiveness of implementation frameworks for supporting integrated approaches to local policy and sustainable community development.

6. Conclusions

This research examined municipal level integrated sustainability plans to gain insight into how food system considerations are integrated into these plans, and the results revealed gaps. A potential approach for addressing these gaps in future planning efforts is to employ new frameworks that ensure integrated planning and policy comprehensively capture critical sustainability objectives. With respect to food systems, this would reframe

food systems planning as a means to an end rather than the end itself. For example, Newell et al. [77] developed a framework for examining planning challenges through an integrated climate-biodiversity lens, arguing that climate change and biodiversity loss are critical sustainability issues, and any progress toward sustainability must be cognizant of these imperatives.

New planning frameworks can be expanded beyond Newell et al.'s [77] work to also include social dimensions that are inextricably related to these sustainability issues, such as those defined by health and wellbeing [78]. Moreover, as indicated through this paper, these new frameworks could (and should) incorporate social justice and equity dimensions; doing such could reveal fundamental questions and considerations, such as how individuals define "healthy" and "good" food differently [63]. In food governance, some scholars note that food policy councils encourage the political space for food justice [79]; however, these citizen councils have been critiqued for being unable to represent or bring to the table a diversity of impacted individuals, especially economic, racial, and gender diversity [80]. A framework that incorporates equity dimensions could perhaps guide planning and policy that respond to and overcomes these issues.

In addition to devising better frameworks to improve integration, this research revealed a need and value for more frequent engagement in the integrated sustainability planning process. As knowledge and public discourse around what is essential for environmental, social, and economic sustainability evolve, it is important that community plans also evolve to incorporate and reflect these new understandings. Data used for this study involved the most recent ICSPs available as of the time of data collection and analysis in 2020 and 2021, and as detailed in this paper, most of these were produced before 2015. As described in the Melbourne Principles for Sustainable Cities [81], sustainable community development requires continual improvement, which, in the case of local planning, necessitates regular developments of and/or updates in plans. Ultimately, this may be the most necessary feature of integrated planning and the most important insight produced through this study, as it is through such continual improvement processes that communities will better understand and achieve the integration of the diverse, complex, and place-sensitive suite of interrelated objectives that makes a city "sustainable".

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su14116724/s1, Table S1: List of ICSPs according to region and sub-region.

Author Contributions: Conceptualization, methodology, formal analysis, investigation, software, and writing—original draft, J.I.; conceptualization, methodology, investigation, resources, writing—original draft, writing—review and editing, and funding acquisition, R.N.; formal analysis, data acquisition, and data curation, C.W.; writing—original draft and writing—review and editing, C.D., S.P. and M.G.; supervision, funding acquisition, and writing—review and editing, L.N. All authors have read and agreed to the published version of the manuscript.

Funding: This work was supported by the Social Sciences and Humanities Research Council (SSHRC) of Canada's Insight Grant Program (Grant File Number: 435-2021-0708).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: A table of the documents analyzed in this study is available from the Supplementary Materials. All documents examined in this study are publicly available online.

Acknowledgments: We gratefully acknowledge the funding of the Social Sciences and Humanities Research Council (SSHRC) of Canada that supported this work.

Conflicts of Interest: We (the authors) declare that we have no known competing financial interest or personal relationships that could have appeared to influence the work reported in this paper.

References

1. Clapp, J.; Moseley, W.G. This food crisis is different: COVID-19 and the fragility of the neoliberal food security order. *J. Peasant. Stud.* **2020**, *47*, 1393–1417. [CrossRef]
2. Rockström, J.; Williams, J.; Daily, G.; Noble, A.; Matthews, N.; Gordon, L.; Wetterstrand, H.; Declerck, F.; Shah, M.; Steduto, P.; et al. Sustainable intensification of agriculture for human prosperity and global sustainability. *Ambio* **2017**, *46*, 4–17. [CrossRef] [PubMed]
3. Wisner, B.; Blaikie, P.; Cannon, T.; Davis, I. *At Risk: Natural Hazards, People'S Vulnerability and Disasters*; Routledge: London, UK, 2014.
4. Bisoffi, S.; Ahrné, L.; Aschemann-Witzel, J.; Báldi, A.; Cuhls, K.; DeClerck, F.; Duncan, J.; Hansen, H.O.; Hudson, R.L.; Kohl, J.; et al. COVID-19 and Sustainable Food Systems: What Should We Learn before the Next Emergency. *Front. Sustain. Food Syst.* **2021**, *5*, 650987. [CrossRef]
5. von Braun, J.; Afsana, K.; Fresco, L.O.; Hassan, M.; Torero, M. Food system concepts and definitions for science and political action. *Nat. Food* **2021**, *2*, 748–750. [CrossRef]
6. Barrett, H.; Rose, D.C. Perceptions of the fourth agricultural revolution: What's in, what's out, and what consequences are anticipated? *Sociol. Rural.* **2020**, *62*, 162–189. [CrossRef]
7. Galanakis, C.M. The food systems in the era of the coronavirus (COVID-19) pandemic crisis. *Foods* **2020**, *9*, 523. [CrossRef]
8. Hebinck, A.; Klerkx, L.; Elzen, B.; Kok, K.P.; König, B.; Schiller, K.; Tschersich, J.; van Mierlo, B.; von Wirth, T. Beyond food for thought—Directing sustainability transitions research to address fundamental change in agri-food systems. *Environ. Innov. Soc. Transit.* **2021**, *41*, 81–85. [CrossRef]
9. Klerkx, L.; Begemann, S. Supporting food systems transformation: The what, why, who, where and how of mission-oriented agricultural innovation systems. *Agric. Syst.* **2020**, *184*, 102901. [CrossRef]
10. Rasul, G. Twin challenges of COVID-19 pandemic and climate change for agriculture and food security in South Asia. *Environ. Chall.* **2021**, *2*, 100027. [CrossRef]
11. Rotz, S.; Fraser, E.D.G. Resilience and the industrial food system: Analyzing the impacts of agricultural industrialization on food system vulnerability. *J. Environ. Stud. Sci.* **2015**, *5*, 459–473. [CrossRef]
12. Zurek, M.; Hebinck, A.; Selomane, O. Looking across diverse food system futures: Implications for climate change and the environment. *Q Open* **2021**, *1*, qoaa001. [CrossRef]
13. Cadieux, K.V.; Slocum, R. What does it mean to do food justice? *J. Polit. Ecol.* **2015**, *22*, 1–26. [CrossRef]
14. United Nations. The State of Food and Agriculture. 2014. Available online: https://www.fao.org/3/i4040e/i4040e.pdf (accessed on 7 April 2022).
15. Willett, W.; Rockström, J.; Loken, B.; Springmann, M.; Lang, T.; Vermeulen, S.; Garnett, T.; Tilman, D.; DeClerck, F.; Wood, A.; et al. Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *Lancet* **2019**, *393*, 447–492. [CrossRef]
16. Blay-Palmer, A.; Knezevic, I.; Andree, P.; Ballamingie, P.; Landman, K.; Mount, P.; Nelson, C.; Nelson, E.; Stahlbrand, L.; Stroink, M.; et al. Future Food System Research Priorities: A Sustainable Food Systems Perspective from Ontario, Canada. *J. Agric. Food Syst. Community Dev.* **2013**, *3*, 227–234. [CrossRef]
17. Ingram, J. A food systems approach to researching food security and its interactions with global environmental change. *Food Secur.* **2011**, *3*, 417–431. [CrossRef]
18. Knezevic, I.; Blay-Palmer, A.; Levkoe, C.Z.; Mount, P.; Nelson, E. *Nourishing Communities: From Fractured Food Systems to Transformative Pathways*; Springer: Berlin/Heidelberg, Germany, 2017.
19. Ling, C.; Hanna, K.; Dale, A. A template for integrated community sustainability planning. *Environ. Manag.* **2009**, *44*, 228–242. [CrossRef] [PubMed]
20. Taylor, D.; Bradford, S.; Foster, J. The Right to Housing. *Counterfutures* **2020**, *9*, 11–16. [CrossRef]
21. Feenstra, G.W. Local food systems and sustainable communities. *Am. J. Altern. Agric.* **1997**, *12*, 28–36. [CrossRef]
22. Cvijanović, D.; Ignjatijević, S.; Tankosić, J.V.; Cvijanović, V. Do local food products contribute to sustainable economic development? *Sustainability* **2020**, *12*, 2847. [CrossRef]
23. Buchan, R.; Cloutier, D.S.; Friedman, A. Transformative incrementalism: Planning for transformative change in local food systems. *Prog. Plan.* **2019**, *134*, 100424. [CrossRef]
24. Enthoven, L.; van den Broeck, G. Local food systems: Reviewing two decades of research. *Agric. Syst.* **2021**, *193*, 103226. [CrossRef]
25. Granvik, M. The localization of food systems—an emerging issue for Swedish municipal authorities. *Int. Plan. Stud.* **2012**, *17*, 113–124. [CrossRef]
26. Altman, L.; Barry, L.; Barry, M.; Kühl, K.; Silva, P.; Wilks, B. *Five Borough Farm II: Growing the Benefits of Urban Agriculture in New York City*; Design Trust for Public Space: New York, NY, USA, 2014.
27. Galli, F.; Prosperi, P.; Favilli, E.; D'Amico, S.; Bartolini, F.; Brunori, G. How can policy processes remove barriers to sustainable food systems in Europe? Contributing to a policy framework for agri-food transitions. *Food Policy* **2020**, *96*, 101871. [CrossRef]
28. Infrastructure Canada. *Agreement on the Transfer of Federal Gas Tax Revenues under the New Deal for Cities and Communities*; Infrastructure Canada: Ottawa, ON, Canada, 2005.

29. Government of British Columbia. Regional Districts in B.C. Available online: https://www2.gov.bc.ca/gov/content/governments/local-governments/facts-framework/systems/regional-districts (accessed on 7 April 2022).
30. Government of British Columbia. Regions in B.C. Available online: https://www.welcomebc.ca/Choose-B-C/Explore-British-Columbia/Regions-in-B-C (accessed on 7 April 2022).
31. Government of Brtitish Columbia. Tourism Research. Available online: https://www2.gov.bc.ca/gov/content/tourism-immigration/tourism-resources/tourism-research (accessed on 7 April 2022).
32. Government of British Columbia. Population Estimates. Available online: https://www2.gov.bc.ca/gov/content/data/statistics/people-population-community/population/population-estimates (accessed on 7 April 2022).
33. Government of British Columbia. Vancouver Island & Coast. Available online: https://www.britishcolumbia.ca/about-british-columbia-canada/regions/vancouver-island-coast/ (accessed on 7 April 2022).
34. Government of British Columbia. Vancouver Island—Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/vancouver-island (accessed on 7 April 2022).
35. BC Agriculture in the Classroom Foundation. Vancouver Island-Coast Region: Agriculture Profile. Available online: https://www.bcaitc.ca/sites/default/files/resources/Grow%20BC/VancouverIsland.pdf (accessed on 7 April 2022).
36. Government of British Columbia. Lower Mainland/Southwest. Available online: https://www.britishcolumbia.ca/about-british-columbia-canada/regions/lower-mainland-southwest/ (accessed on 7 April 2022).
37. BC Agriculture in the Classroom Foundation. Lower Mainland and South Coast Region: Agriculture Profile. Available online: https://www.bcaitc.ca/sites/default/files/resources/Grow%20BC/LowerMainlandSC.pdf (accessed on 7 April 2022).
38. Government of British Columbia. South Coast-Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/south-coast (accessed on 7 April 2022).
39. Government of British Columbia. Okanagan-Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/okanagan (accessed on 7 April 2022).
40. Governmnet of British Columbia. Thompson-Okanagan. Available online: https://www.britishcolumbia.ca/about-british-columbia-canada/regions/thompson-okanagan/ (accessed on 7 April 2022).
41. BC Agriculture in the Classroom Foundation. Thompson-Okanagan Region: Agriculture Profile. Available online: https://www.bcaitc.ca/sites/default/files/resources/Grow%20BC/ThompsonOkanagan.pdf (accessed on 7 April 2022).
42. Government of British Columbia. Kootenay. Available online: https://www.britishcolumbia.ca/about-british-columbia-canada/regions/kootenay/ (accessed on 7 April 2022).
43. BC Agriculture in the Classroom Foundation. Kootenay Region: Agriculture Profile. Available online: https://www.bcaitc.ca/sites/default/files/resources/Grow%20BC/KootenayRegion.pdf (accessed on 7 April 2022).
44. Government of British Columbia. Kootenay-Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/kootenay (accessed on 7 April 2022).
45. Government of British Columbia. Northeast. Available online: https://www.britishcolumbia.ca/about-british-columbia-canada/regions/northeast/ (accessed on 7 April 2022).
46. BC Agriculture in the Classroom Foundation. Cariboo-Central Region: Agriculture Profile. Available online: https://www.bcaitc.ca/sites/default/files/resources/Grow%20BC/CaribooCentral.pdf (accessed on 9 April 2022).
47. Government of British Columbia. Cariboo-Chilcotin-Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/cariboo-chilcotin-coast (accessed on 7 April 2022).
48. Government of Birtish Columbia. Peace-Overview. Available online: https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions/peace (accessed on 7 April 2022).
49. District of Hope. Integrated Official Community Plan. 2016. Available online: https://hope.ca/sites/default/files/hopeiocpmaps-finalweb_2.pdf (accessed on 7 April 2022).
50. Auld, G.W.; Diker, A.; Bock, M.A.; Boushey, C.J.; Bruhn, C.M.; Cluskey, M.; Edlefsen, M.; Goldberg, D.L.; Misner, S.L.; Olson, B.H.; et al. Development of a decision tree to determine appropriateness of NVivo in analyzing qualitative data sets. *J. Nutr. Educ. Behav.* **2007**, *39*, 37–47. [CrossRef] [PubMed]
51. Huang, C.-H.; Liu, S.-M.; Hsu, N.-Y. Understanding global food surplus and food waste to tackle economic and environmental sustainability. *Sustainability* **2020**, *12*, 2892. [CrossRef]
52. Thomas, D.R. A general inductive approach for analyzing qualitative evaluation data. *Am. J. Eval.* **2006**, *27*, 237–246. [CrossRef]
53. City of Campbell River. SCR: Framework: Campbell River's Integrated Community Sustainability Plan. 2011. Available online: https://www.campbellriver.ca/docs/default-source/Document-Library/plans/scr-framework-integrated-community-sustainability-plan.pdf (accessed on 7 April 2022).
54. Simmons, N. Axial coding. In *The SAGE Encyclopedia of Communication Research Methods*; SAGE Publication: Thousand Oaks, CA, USA, 2017; pp. 80–82.
55. Carson, R. *Silent Spring III*; New Yorker: New York, NY, USA, 1962; Volume 23.
56. Born, B.; Purcell, M. Avoiding the local trap: Scale and food systems in planning research. *J. Plan. Educ. Res.* **2006**, *26*, 195–207. [CrossRef]
57. Truth and Reconciliation Commission of Canada. *Truth and Reconciliation Commission of Canada: Calls to Action*; Truth and Reconciliation Commission of Canada: Winnipeg, MB, Canada, 2015.

58. World Commission on Environment and Development. Our Common Future. 1987. Available online: https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf (accessed on 7 April 2022).
59. Losey, J.E.; Vaughan, M. The economic value of ecological services provided by insects. *Bioscience* **2006**, *56*, 311–323. [CrossRef]
60. United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development*; United Nations: San Francisco, CA, USA, 2015.
61. Baynham, M.; Stevens, M. Are we planning effectively for climate change? An evaluation of official community plans in British Columbia. *J. Environ. Plan. Manag.* **2014**, *57*, 557–587. [CrossRef]
62. Allen, P. Realizing justice in local food systems. *Camb. J. Reg. Econ. Soc.* **2010**, *3*, 295–308. [CrossRef]
63. Guthman, J. Bringing good food to others: Investigating the subjects of alternative food practice. *Cult. Geogr.* **2008**, *15*, 431–447. [CrossRef]
64. Slocum, R. Whiteness, space and alternative food practice. *Geoforum* **2007**, *38*, 520–533. [CrossRef]
65. Short, F.; Carruthers, T.; Dennison, W.; Waycott, M. Global seagrass distribution and diversity: A bioregional model. *J. Exp. Mar. Biol. Ecol.* **2007**, *350*, 3–20. [CrossRef]
66. Guthman, J. Neoliberalism and the making of food politics in California. *Geoforum* **2008**, *39*, 1171–1183. [CrossRef]
67. Winne, M. *Closing the Food Gap: Resetting the Table in the Land of Plenty*; Beacon Press: Boston, MA, USA, 2008.
68. Donald, B.; Blay-Palmer, A. The urban creative-food economy: Producing food for the urban elite or social inclusion opportunity? *Environ. Plan. A* **2006**, *38*, 1901–1920. [CrossRef]
69. Hickmann, T. Locating cities and their governments in multi-level sustainability governance. *Politics Gov.* **2021**, *9*, 211–220. [CrossRef]
70. Bousbaine, A.D.; Akkari, C.; Bryant, C.R. Strategic development planning for agricultural development and the integration of other domains important for the territory. *Int. J. Avian Wildl. Biol.* **2017**, *2*, 00038.
71. Bryant, C.R.; Chahine, G. Action research and reducing the vulnerability of peri-urban agriculture: A case study from the M ontreal Region. *Geogr. Res.* **2016**, *54*, 165–175. [CrossRef]
72. Cabannes, Y.; Marocchino, C. *Integrating Food into Urban Planning*; UCL Press: London, UK, 2018.
73. Shaw, A.; Burch, S.; Kristensen, F.; Robinson, J.; Dale, A. Accelerating the sustainability transition: Exploring synergies between adaptation and mitigation in British Columbian communities. *Glob. Environ. Change* **2014**, *25*, 41–51. [CrossRef]
74. Barton, H.; Grant, M. Urban planning for healthy cities. *J. Urban Health* **2013**, *90*, 129–141. [CrossRef]
75. Sperling, J.B.; Berke, P.R. Urban nexus science for future cities: Focus on the energy-water-food-X nexus. *Curr. Sustain. Renew. Energy Rep.* **2017**, *4*, 173–179. [CrossRef]
76. Federation of Canadian Municipalities. Five-Milestone Framework for Reducing Greenhouse Gas Emissions. 2008. Available online: https://mccac.ca/app/uploads/PCP-Five-Milestone-Framework.pdf (accessed on 7 April 2022).
77. Newell, R.; Dale, A.; Lister, N.-M. An integrated climate-biodiversity framework to improve planning and policy: An application to wildlife crossings and landscape connectivity. *Ecol. Soc.* **2022**, *27*, 23. [CrossRef]
78. Collier, M.J.; Nedović-Budić, Z.; Aerts, J.; Connop, S.; Foley, D.; Foley, K.; Newport, D.; McQuaid, S.; Slaev, A.D.; Verburg, P. Transitioning to resilience and sustainability in urban communities. *Cities* **2013**, *32*, S21–S28. [CrossRef]
79. Wekerle, G.R. Food justice movements: Policy, planning, and networks. *J. Plan. Educ. Res.* **2004**, *23*, 378–386. [CrossRef]
80. Boden, S.; Hoover, B.M. Food policy councils in the mid-Atlantic: Working toward justice. *J. Agric. Food Syst. Community Dev.* **2018**, *8*, 39–52. [CrossRef]
81. United Nations Environment Program. Melbourne Principles for Sustainable Cities. 2002. Available online: https://archive.epa.gov/bns/web/pdf/melbourneprinciples.pdf (accessed on 7 April 2022).