



Agricultural Supports & Challenges

**Exploring the Role of Regional Districts
across British Columbia, Canada**

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1. Introduction

The past two years have seen an increase in environmental and socioeconomic shocks that have impacted food systems across British Columbia (BC). These shocks, flooding, COVID-19 pandemic, wildfires, drought, have presented challenges to food and agricultural systems, impacting the availability of food across communities (Mahmoudi et al., 2021; Pacific Institute for Climate Solutions, 2022). Such disruptions exacerbate the complex challenges of food insecurity, poverty, changing demographics, climate change, energy security, transportation infrastructure, and farm viability. Furthermore, the consequences of these shocks are disproportionately distributed across the province, with rural, remote, and Indigenous communities facing the greatest impacts of food supply chain disruptions.

BC's reliance on food imports for food security is being questioned in the face of drought and heat in food exporting countries (Parker et al. 2020). Estimates of nearly half the food consumed in BC coming from outside the province (BC Ministry of Agriculture, Food and Fisheries, 2017). Local governments are increasingly seen to have a role in food system resilience and food security (MacRae & Donahue, 2013; Zeuli & Whalen, 2017).

Local governments (municipal and regional) are having greater involvement in food and agricultural roles and responsibilities that were historically the purview of higher levels of government (e.g., extension, agricultural development, land policy implementation, enforcement/compliance). Functions and services of these levels of Canadian government are being devolved to local levels, with an increasing rate of services being taken up by the non-profit and private sectors (Phillips & Levasseur, 2004). This results in a broader approach to governing food systems, with new public-private partnership arrangements arising at the local level.

Challenges arise for local governments as their role is expanded to address food system impacts and building community resilience (Blay-Palmer et al., 2018). Limitations in resources (e.g., funding, land), staffing, and infrastructure can inhibit local food system governance. Challenges also occur due to different values, attitudes, and ideologies around the role of local government in addressing food systems, particularly food production and agricultural development.

2. Background

Given the complexities of food systems planning and the increasing role local and regional governments play in this area, it is important to understand the nature of and challenges experienced by local/regional governments that take on this role. To this end, a study was conducted that pursues two questions:

- *What are the current roles and responsibilities that regional districts (RD) are taking on to support agriculture and food systems?*
- *What challenges are RDs facing across the province?*

The study was led by the Food and Agriculture Institute at the University of the Fraser Valley, working in collaboration with the Alberni-Clayoquot Regional District (ACRD) and Royal Roads University. It began in 2021, and it involved an environmental scan on RD efforts to support and intervene in the agricultural sector. The study also explored the challenges experienced in these efforts, and the drivers that inhibit agricultural interventions. This study is part of a broader ACRD Systems Change project, funded by the Vancouver Foundation: *Expanding the Influence of Regional Agricultural Support*.

The project developed a model for regional agricultural support that informs provincial frameworks and builds capacity for flexible and dynamic engagement within various agricultural landscapes and food systems. Regional agricultural support is defined as “...as any organization that: (a) Seeks to provide general supports for agriculture from within a specific and defined area in BC, and; (b) Leads and determines priorities, management, and structure from within its specific region.” (ACRD, 2020, p.3). Food production is inextricably linked to social (e.g., food security, cultural revitalization, food sovereignty) and environmental (e.g., climate change, biodiversity, air/water quality) factors and sustainability objectives. Problems facing food production and food systems are complex, and capacity to respond differs across local governments and food system actors.

2.1 Regional Districts in BC

The study was conducted across the western province of BC, Canada. In 2021, the provincial population was over 5,200,000 people (BC Stats, 2021). The province has a diverse geography, with over 948,600 square kilometres of land area and 29 RDs. The RDs encompass 160 municipalities and 164 unincorporated electoral areas, and these communities consist of 40 village municipalities (population less than 250), 17 towns (population between 2,500-5,000), 48 district municipalities (generally geographic areas with low population density), 49 cities (populations over 5,000) (Sancton & Young, 2009).

The local government system in BC comprises both municipalities and RDs. RDs vary greatly across the province, with populations ranging from fewer than 4,000 people to over two million and land areas ranging from 2,000 to over 120,000 square kilometres (Appendix A) (Government of BC, n.d.). In 1965, amendments to the Municipal Act enabled the creation of RDs. Two main drivers provide rationale for their creation:

- *The need for regional cooperation between municipalities*
- *Cost sharing between municipal and rural areas due to rapid urbanization causing increased demands for water, sewage, and zoning services (Chadwick, 2000)*

Prior to 1983, BC had a hierarchical regional planning system that required municipalities to comply with RD plans. This approach was abolished in 1983 and in the late 1980s (and again in 2000) the Province updated the RD legislation, under the Local Government Act (LGA) to clarify and delineate the servicing role of RDs. In 1992, regional planning became more actively pursued with the creation of regional growth strategy legislation. This was largely the result of being unable to establish the economies of scale needed for municipal service delivery to those living outside of more densely populated municipalities (Sancton & Young, 2009). The resulting local planning system aimed to be more interactive, advancing cooperation between member municipalities and electoral areas to ensure that respective plans fit together and enabling multiple levels of government to address regional issues (BC Ministry of Community Services, 2006).

RDs are governed by a Board of Directors who are appointed from member municipalities, electoral areas, and Treaty First Nations (TFN) (Appendix A). The number of directors for each municipality is based on its population and is a function of voting strength. A municipality is entitled to a predetermined number of votes which is determined by dividing the voting strength by five (rounded to the next whole number). Voting strength is determined by dividing the population of the political unit (municipality or electoral area) by the voting unit with the result raised to the next whole number. The voting unit for each RD is set out in Letters of Patent.

Electoral areas are allowed only one director regardless of population size. Municipal and TFN Directors serve on the regional board until the appointing body changes the appointment; electoral area directors serve for a four-year term. RDs are unique as member municipalities, electoral areas, and TFNs authorize the regional government, rather than being subject to the RD's authority.

RD Board of Directors make decisions by voting. However, there are two kinds of voting: (1) weighted votes, where Directors representing densely populated areas have more votes, and (2) unweighted votes, where each Director has one vote. Region-wide issues are decided by unweighted voting. Budgetary matters are decided using weighted votes.

RD authority is legislated within the LGA and the Community Charter. Mandated responsibilities are few, being required to provide services in emergency management, planning regional solid waste management, and governance of electoral areas. Furthermore, RDs have general roles in providing region-wide services (e.g., parks, economic development) and inter-municipal/sub-regional services (e.g., recreation facilities), while also acting as local government for electoral areas (e.g., bylaws, planning) and provision of services (e.g., water, sewage). RDs can take on services outside of the previous roles if Directors (and/or residents) are supportive. Thus, the range of services offered by an RD can vary greatly as they respond to the unique geographic, economic, and political needs of their constituents. These voluntary services are not required to be administered across the region. Services can be established that benefit a specific area that elects to pay for that service. An important consideration for the establishment of agricultural and food-related services is the political will and ability to increase the tax rate on member municipalities, electoral areas, and TFNs. Thus, for many RDs, activities around food and agriculture are included under existing services (e.g., planning, or economic development).

RDs employ similar planning powers as municipalities to regulate land use and development in electoral areas (e.g., zoning, and official community plans), and they can also play a role in coordination across the region through region-wide planning. This might include a regional growth strategy (RGS) or stand-alone plans (e.g., Metro Vancouver's Regional Food Strategy). An RGS is a strategic plan that directs long-term planning for RDs and municipal/electoral area Official Community Plans (OCP). The RGS acts as a guide to direct how regions will grow and change over a 20-year period. These provide the basis for decisions around implementation of provincial programs within an RD. An RGS is prepared by the RD through a collaborative process with municipalities, electoral areas, and TFNs. Section 850 (2) of the LGA outlines the five essential elements that must be included in an RGS. These include housing, transportation, RD services, parks and natural areas, and economic development. Additionally, population and employment projects are to be included along with a list of actions to meet the Province's requirements. Currently, there are ten RDs across BC with completed RGSs.

2.2 BC and Agriculture

Agriculture is considered a major economic driver in the province. In 2017, BC's agri-food industry produced \$14.2B in sales of agriculture, food and seafood products. Furthermore, the sector generates an estimated 35,100 direct and indirect jobs in 2019. Estimates of nearly half the food consumed in BC coming from outside the province (BC Ministry of Agriculture, Food and Fisheries, 2017). Across BC, the agricultural sector varies greatly. An estimated 200+ commodities are grown in BC with a wide range of diversity based on different growing conditions (BCMAFF, n.d.). The Okanagan region is well known for its agri-tourism and wine, cider, and beer production. The Peace region has major commodities including beef, canola, forage seed and grains. The South Coast region produces significant amounts of berries, poultry, eggs, and has most of the greenhouse production (BCMAFF, n.d.).

Agriculture is identified by Canada's constitution as both a federal and provincial responsibility. However, in BC, prior to the establishment of the Agricultural Land Reserve (ALR) in 1973, agricultural lands were the responsibility of the local government. The management of these lands was achieved through zoning, and in the Lower Mainland, land use designations in the Official Regional Plan (Smith, 1974). Prior to the ALR, estimates of farmland loss were approximately 6,000 hectares annually in the Lower Mainland region (Smith 1974, 2012; ALC, 1983). The ALR is a provincial land-use zone which aims to preserve 4.7 million hectares of agricultural lands (Smith, 2012).

The role of local government is laid out in the LGA which operates in tandem with the Agricultural Land Commission Act (ALCA) and the Farm Practices Protection Act to support agriculture and protect farmland and farming. The Agricultural Land Commission's (ALC) mandate is: "to preserve farmland, to encourage farming on agricultural land in collaboration with other communities of interest, and to encourage local governments, First Nations, the government, and its agents to enable and accommodate farm use of agricultural land uses compatible with agriculture in their plans, bylaws and policies" (ALCA, R.S.B.C. 2002, c. 36, Section 6). Statutory powers of the ALC include approval of applications (e.g., inclusions/exclusions, soil removals/deposits, non-farm uses), and compliance and enforcement via remediation orders and administrative penalties.

Across the province, RDs are required to develop land use bylaws that are congruent with the ALCA and the ALR General Use Regulation. These land use bylaws and zones apply to electoral areas, where the RD acts as local government. Under the ALCA, where an RD has a RGS, there are requirements to identify policies that pertain to the protection of agriculture. While agricultural and food system development can be included under existing services, such as economic development, they are not explicitly required. That being said, the Province does explicitly state that a desired purposes of an RGS includes “maintaining the integrity of a secure and productive resource base, including the agricultural land reserve” (LGA, R.S.B.C. 2015, c.1, Division 2; Section 428 2e).

The LGA allows for municipalities and RDs to develop additional policies and plans in support of agriculture and food systems. The development of OCPs, enacted as bylaws, contains provisions for land use and can identify specific plans for portions of their jurisdictions (i.e., neighbourhood or local area plans). An OCP or RGS may contain specific principles, goals/objectives and policies for agriculture and food (although these are not required by the LGA). Furthermore, agricultural plans can be developed in jurisdictions where there is extensive farmland as a complement to an OCP or RGS. Agricultural plans aim to address agricultural issues and challenges, farm sector supports, rural character, and role of agriculture in contributing to broader local government priorities (Connell, 2020; PHSA, 2016). Across BC, 63 agricultural plans have been completed by local governments. Of these, 21 agricultural plans were completed by RDs (Table 1).

It is argued that effective agricultural planning integrates both land use consideration with development planning (Bousbaine et al., 2017) to achieve public good outcomes (e.g., food security, farmer economic viability, farmworker rights and protection, resilient food systems). These authors note that agricultural development planning comprises three activities:

...dealing with the sustainability of farm activities, the integration of farmland protection with the other values associated with farmland and farming activities (i.e., the multi-functionality of farmland and farming activities) and the capacity of farming (of farmers and other actors implicated in or concerned with agricultural development) to cope with major stressors other than urban development and ex-urbanization such as climate change and variability (p.3).

At the municipal level in BC, agricultural plans mostly focus on issues of farmland protection, primarily addressed through land use planning efforts. The mandate from the ALCA to ensure the integrity of the ALR. However, such a narrow focus can create challenges for planning that effectively supports agriculture as the agricultural system is highly diverse, is constantly changing, and operates at multiple scales. These challenges could be addressed by broadening the geographic scope and the economies of scale to enhance inter-connectivity between municipalities and integration with broader food system planning.

The food system can be described as a complex set of interacting processes that connects food production to consumption, and beyond, in service of social and environmental outcomes (e.g., food security, water/air quality, economic development) (Erickson, 2008). Commonalities exist between food system features (e.g., production, processing, waste management) and issues (e.g., food insecurity, escalating land prices, reliance on food imports). However, local food systems are shaped by the places in which they arise, that is various social, cultural, economic, biophysical, and governance characteristics. This variability and dynamics mean that there are no 'one-size fits all' approaches for food system planning that will achieve food system outcomes (Knezevic et al., 2017). Scholars argue that there is a role for food system planning in contributing towards regional resilience, and that expanding the scope of food system governance to coordinate between different RDs, municipalities, electoral areas or TFNs could be more effective (Blay-Palmer et al., 2018) than individual local governments operating in isolation.

Table 1. Agricultural Plans Completed by RDs in BC (adapted from BC Ministry of Agriculture, Food and Fisheries, 2021)

Regional District Agricultural Plan	Date Completed
Cowichan Valley Regional District Strategic Agricultural Plan	2001
Comox Valley Regional District Agricultural Plan	2002
Fraser Valley Regional District Economic Strategy for Agriculture in the Lower Mainland	2002
Central Okanagan Regional District Agricultural Plan	2005
Okanagan-Similkameen Regional District Electoral Area C Agricultural Area Plan	2008
Central Coast Regional District Bella Coola Valley Foodshed Analysis Project	2008
Alberni-Clayoquot Regional District Agricultural Plan 2011 - 2031 (Alberni Valley)	2011
Central Kootenay Regional District Agriculture Plan	2011
Metro Vancouver Regional Food System Strategy	2011
Nanaimo Regional District Agricultural Plan	2012
Cowichan Valley Regional District Implementation Plan	2013
East Kootenay Regional District Agricultural Area Plan	2014
Columbia-Shuswap Regional District Shuswap Agricultural Strategy	2014
Peace River Regional Agricultural Plan	2014
Squamish-Lillooet Regional District Area B: Lillooet & St'at'imc Agricultural Area Plan	2014
Sunshine Coast Regional District Agricultural Area Plan	2014
North Okanagan Regional District Regional Agriculture Plan	2015
Capital Regional District Regional Food & Agriculture Strategy	2016
Cariboo Regional District Agricultural Policy	2016
Kootenay Boundary Regional District Boundary Area Food and Agriculture Plan	2018
Kitimat-Stikine Regional District Agriculture Sector Support Plan	2020
Bulkley-Nechako Regional District Food and Agriculture Plan	2020

3. Data Collection and Analysis

This study assessed the roles of 17 RDs across BC (59% of all RDs in BC) in supporting agricultural systems across their jurisdictions (Table 2). It also identified key challenges facing RDs in addressing agricultural land use planning, economic development, and governance across the province. To determine these roles and challenges, we employed a qualitative case study approach, analyzing 24 interviews conducted with one RD Director and 23 past and present planning staff who are deeply familiar with each of the RDs' plans, policies and legislation for agriculture and food systems. Among the 24 research participants, 22 were employed by RDs either as direct staff (n=20) or as contractors (n=2). Only one of the 20 planning staff had 100% of their time allocated to agriculture (Metro Vancouver). Across the 11 regional agricultural governance groups (Appendix B), a planning staff liaison is attached to support administration, to provide local government context, and to act as a conduit between the committee and the Board of Directors and senior RD staff.

Interview questions solicited information on RD vision/goals/outcomes for agriculture, engagement with the agricultural sector, capacity constraints and opportunities, integration into other RD services and activities, and integration with other food system actors and jurisdictions (see Appendix C). Data were analyzed through thematic coding of interview transcripts. Data were coded as the transcripts were reviewed. These thematic codes were then organized into categories, which respectively focus on the research questions presented above (i.e., the roles RDs play in supporting agriculture and the challenges RDs face in enacting these roles). Themes in the 'role of RDs' category include governance support, land use planning & policy support, direct financial support for agricultural initiatives, advocacy & communications support, and research support. Themes in the 'challenges' category include governance and organizational challenges, lack of staff capacity and staffing issues, lack of enforcement, planning challenges, funding challenges, external food system challenges, and economic development challenges. The interview research was complemented with a review of available RD policy and planning documents and provincial government webpages.

Table 2. Regional Districts Across BC Regions Included in the Project

BC Region and Regional District¹	Number of research participants (n=24)
<i>Lower Mainland Region</i>	
Metro Vancouver RD	1
Squamish-Lillooet RD	2
<i>Okanagan Valley/Similkameen Region</i>	
RD of North Okanagan	1
RD of Central Okanagan	1
RD of Okanagan-Similkameen	1
<i>Thompson/Shuswap/Columbia Region</i>	
Columbia Shuswap RD	1
<i>North-Coast/Nechako Region</i>	
Bulkley-Nechako RD	3
Central Coast RD	1
<i>Peace River Region</i>	
Peace River RD	1
<i>North Central/Cariboo Region</i>	
Cariboo RD	1
<i>East Kootenay/Rocky Mountain Region</i>	
RD of East Kootenay	1
<i>West Kootenay/Boundary Region</i>	
Central Kootenay RD	2
<i>South Vancouver Island Region</i>	
Capital RD	3
<i>North and Central Vancouver Island/Sunshine Coast Region</i>	
Alberni-Clayoquot RD	2
Comox Valley RD	1
Cowichan Valley RD	1
Sunshine Coast RD	1

1. Regional Districts that were not included as staff were unavailable during the time of the study included: Fraser Valley RD, Thompson-Nicola RD, RD of Kitimat Stikine, North Coast RD, RD of Fraser Fort George, RD of Kootenay Boundary, RD of Mount Waddington, RD of Nanaimo, Qathet, Stikine Region, Strathcona RD.

4. Findings

Across the 17 RDs studied, research participants identified a range of roles and responsibilities of regional governments related to supporting agriculture, as well as challenges and barriers. The following sections are organized first by outlining the activities RDs engage in to support agriculture, and five themes emerged through this analysis. Then, the challenges and barriers facing these RDs are identified through a series of five emergent themes. Note that, unless explicitly stated, the figures presented below in the format, (n=#), refer to the numbers of RDs of the 17 RDs engaged that relate to a particular theme, rather than the number of participants who provided comments on the theme.

4.1 Regional District Activities in Support of Agriculture

Five key themes were identified through the analysis: governance (n=15), land use planning and policies (n=10), advocacy and communications (n=10), funding (n=9), and research (n=5). Many participants identified RD supports related to governance, land use planning and policies, advocacy and communications, and funding. The direct delivery of projects/services and conducting research were less common among the RDs, but mentions of these other activities are indicative of the range of roles and supports offered across these RDs.

4.1.1 Governance supports

Governance supports for agriculture include regional agricultural policies (n=12), food system governance groups (n=8), human resources (n=8), regional growth strategies (n=7), and agricultural governance groups (n=6). In addition, agricultural plans have been created in all 17 RDs. The earliest was initiated in 2001 in the Cowichan Valley RD and the most recent was completed by Bulkley-Nechako RD in 2020 (Appendix B). The presence of an agricultural plan demonstrates a level of RD support by recognizing the value of agriculture. To establish an agricultural plan requires an RD investing resources (human and funding) and convening agriculture and food system stakeholders to participate in the planning process. Some plans have an expanded scope of work; for example, the Alberni-Clayoquot RD expanded their agricultural plan to include coastal regions and forms of food production. In other cases, RDs are in the process of updating their agricultural plans, such as in the Central Okanagan and Cariboo.

Participants had mixed reactions to the agricultural plans and were generally divided on their effectiveness with respect to capacity for implementation (i.e., scope of work, mandate, capacity) and their ability to act as decision-support tools for land use, economic development, and environmental conflicts. One participant noted: “We do have an agricultural plan that was completed back in 2005, so quite outdated, and quite basic...It's something I reference infrequently, which is not something you want from policy. You want it to be something you rely on for answers or guidance” (Participant 5, 2022).

Agricultural plan implementation in four RDs was done by external contractors, and this has demonstrated success. For example, the RDEK has hired the Kootenay Boundary Farmers' Association (KBFA) to support plan implementation, with one interviewee explaining that the KBFA is taking on actions within the plan, but also addressing additional issues that arise from stakeholder engagement. Similarly, the ACRD hired two agricultural support coordinators, which enhanced their ability to provide the support, coordination and convening needed for their committees.

Since 2000, 12 RDs of the 17 examined in this study have or had agricultural advisory committees (AAC) formed by the RD. At the time of this study, three were inactive: the Capital, Cowichan, and Sunshine Coast RDs. Two RDs have more than one AAC. The ACRD has three agricultural governance groups, an AAC that has a primary role of land use planning, an Agricultural Development Committee and Coast Agricultural Roundtable focused on coordination and broader agricultural supports. Squamish-Lillooet has two AACs, these governance groups govern across electoral areas and do not encompass the entirety of the RD. Eleven of the agricultural governance networks, including the three that are inactive, have a region-wide scope, encompassing the entirety of the RD. Four AACs are specific to electoral areas (Squamish-Lillooet, Central Kootenay, and Cariboo), with Squamish-Lillooet having two AACs for different regions. Many AACs focus on development applications and were critiqued by planning staff as having little space to identify agricultural issues and proactive measures for supporting the agricultural sector.

Many RDs have representation from the agriculture and food sectors and sit on, support, or convene additional governance networks. For example, Alberni-Clayoquot has in addition to their AAC, an Agricultural Development Committee and a Coastal Agricultural Roundtable group. Similarly, interviewees in the Capital and Squamish-Lillooet regions identify an additional regional food and agriculture taskforce, and in the Capital RD, the presence of the Capital Region Food and Agricultural Initiatives Roundtable (CRFAIR).

Central Kootenay RD has several identified agricultural governance groups including a food policy council, sustainability committee, Creston Valley agricultural committee and a watershed governance initiative. In addition to their Agricultural Development Advisory Committee, the Cariboo RD supports agriculture through the North Cariboo Economic Development Advisory Committee.

With respect to regional growth strategies (RGS), seven have completed an RGS. The Sunshine Coast RD has a regional strategy policy, and East Kootenay RD has a Regional Sustainability Strategy, but these are not RGS. Within the seven RDs with RGSs, all of them have agricultural policies that relate to different regional priorities including: urban growth containment, transportation, housing, food and agriculture, economic development, parks and recreation, and environment and climate change (Appendix B).

Interview respondents speaking to the RGS described mixed sentiments. Several research participants spoke of the RGS as providing broad policies and goals to an external audience, requiring another policy/planning document to identify specific actions for implementation by the RD (Research Participants, 18 & 19, 2021). Furthermore, North Okanagan, Metro Vancouver, and Capital RDs respondents note that the RGS provides the basis for tracking hectares in farm production, average age of farmers, land in ALR, and land removed from ALR. Furthermore, in Metro Vancouver, the RGS allows for coordinated evaluation of key performance indicators across its member municipalities, electoral areas, and TFNs.

4.1.2 Land use planning and policy supports

RDs are responsible for land use planning for electoral areas, and many electoral areas encompass rural spaces within the ALR and agriculturally zoned lands. Thus, land use planning and land policy is a common role and responsibility of RDs. This includes the development of land use bylaws and zones, establishing permitted uses and requirements for development applications and permits (e.g., buildings). Land use planning and policy supports identified through this study include agricultural land use controls (n=6), compliance and enforcement of land use bylaws (n=3), edge planning (n=3), residential land use restrictions (n=3), animal slaughter permitted land uses (n=3), and agriculture permitted land use (n=2).

In 16 of 17 RDs, land use planning featured prominently in supportive agricultural activities, primarily under the roles of protecting farmland from conversion to other uses (e.g., residential, industrial, commercial) and ensuring compliance of permitted uses, through bylaw enforcement and collaboration/ coordination with the ALC. One interviewee noted that: “Whether they're in the ALR or whether they're outside the ALR is irrelevant. If they're actively agriculturally used lands, as per BC assessment, then we do require a 15-metre buffer on the residential portion size, and we require the developer to put industry standard fencing around that area” (Participant 13, 2021).

Of the three RDs discussing compliance/enforcement there was considerable variation in responses. In some cases, the enforcement aspects were identified as ‘downloading’ from the Province. Participants noted that RDs were taking on enforcement roles of the ALC, but with fewer staff and available resources. As explained by one participant: “That workload is being downloaded right on an already taxed base and we want to have good working relationships so that we do what we can. But ultimately, I had an ALC enforcement officer ask if I could deliver one of their notices. That's not my role” (Participant 12, 2022).

Political resistance has also emerged around enforcement of local legislation. As noted by an interviewee: “There is political support for not enforcing the rules and regulations that we do have sometimes just to provide the ease for people on the land” (Participant 5, 2022). In this case, and among other RDs with limited staff for compliance and enforcement. RD support, in this example, is about understanding local priorities and contexts and determining whether enforcement of provincial directives should be pursued and the impact of its pursuit on their citizens/residents (see the Challenges section below for further discussion on this challenge).

Similarly linked to the economic viability of farming, one participant discussed reasons for: “...allowing those uses that aren't farm uses to occur on properties as supplementary income for farmers. When I say livelihood [farmers are] doing other jobs because they can't fully support themselves...particularly on properties that are smaller” (Participant 5, 2022). Permitting and controlling land uses then are subject to the context and discretion of an RD.

In addition to this discretion and context, three RDs established animal slaughter permissions and requirements for agricultural and rural land uses. These arise from changes to the provincial regulations and the subsequent need for more flexible and regional meat abattoirs that can service these scales of production. For two of the RDs studied, participants noted an extension of permitted uses beyond agriculturally zoned areas within rural and residential zones, agriculture is a permitted use.

4.1.3 Direct financial supports for agricultural initiatives

RDs provide funding support for staffing through their respective services, which typically involves planning and development but also economic development. This includes funds used to hire RD staff; all 17 RDs have devoted staff time (and thus, budget allocation) to fulfilling tasks associated with agriculture. Much of reported time is devoted to land use planning functions around development applications and permitting. In addition to supporting staff time, the theme of funding extends to project and grant funding whereby the RD directly allocates funds towards pilot projects and research, including agricultural business and economic development projects (n=7), environmental and climate change research and strategies (n=1), and funding for Indigenous-led agriculture and food projects (n=1).

Some RDs leverage staff time to seek out grants in aid of non-profit and industry organizations. For example, an RD providing grant funding to: "...community groups that... do a lot of great work with regards to farming. They have the cohort up here, which works towards linking agricultural producers to markets and slaughter facilities and, helping them with marketing and promotions" (Participant 12, 2022). Another RD sought and obtained provincial funding, during the COVID-19 pandemic, to convert a campground into seasonal farmworker accommodations that were safe and well-maintained.

RDs are allocating monies for implementation of agricultural planning and as form different projects and needs as they arise. An example of an innovative funding approach is employed by the Squamish-Lillooet Regional District where they use Payments in Lieu of Taxes from BC Hydro to provide annual funding for funding the implementation of the agricultural plan.

Squamish-Lillooet is the only RD, at the time of this study, that is scoping the establishment of a formal RD service for agriculture and food. This approach is being championed by an electoral area Director who has prioritized the scoping and public engagement. The RD activities will include investigation of the financial implications for property owners.

4.1.4 Advocacy and communications supports

Advocacy and communication supports include public education (n=9), communications to the Province (n=5), advocacy to groups other than the Province (n=3), and communications to the Board of Directors (n=1). Five of the RDs provide regular communications and advocate to the Province, typically BCMAFF and the ALC, regarding agricultural issues and challenges facing their regions. These represent specific instances of communicating local issues, for example, one interviewee discussed frequent communications to the ALC related to compliance and enforcement on the ALR.

Three RDs identified advocating for local producers to other provincial governance groups such as the Union of BC Municipalities, as well as supporting the advocacy efforts of other groups such as the Squamish Food Policy Council and the implementation of the Environmental Farm Plan program through the Northwest Invasive Plant Council. Another RD staff advocates to ALC staff to attend to issues elsewhere in the province, noting that they “try to have at least a couple of arguments with land commission staff here and try to get them to see outside of their Victoria, Lower Mainland [and] Okanagan bubble” (Participant 13, 2021). RD engagement with provincial agencies range in tone and approach, ranging from being collegial to conflictual.

One of the most common supports offered by RDs is around public education and outreach, done through RD webpages and other communication channels such as newsletters. One RD is developing a podcast to support producers, and two RDs identified public events as an outreach venue. Two RDs identified the creation of a growers’ guide in both print and online versions. Two RDs have developed brochures/pamphlets directed towards the real estate sector to raise awareness of agricultural properties to prospective buyers and realtors.

Only one RD identified a role in advocating within the RD itself to the Board of Directors about the importance of agriculture. In this case, a conflict regarding RD support existed between municipalities with limited agricultural land and those municipalities and electoral areas with agricultural land and activities. This challenge is described in greater detail below.

4.1.5 Research supports

Across four RDs, participants identified research projects (e.g., feasibility studies, desk research, policy, regulation) being conducted in support of the agricultural sector and to the broader food system. The range of research varies greatly across the RDs, with projects focusing on food hub feasibility (n=2), land trusts for agricultural lands (n=1), soil and fill deposits (n=1), waste regulations for higher-risk materials such as in meat and dairy industries (n=1), and agriculture and climate change (n=1).

Two of the RDs engaged in food hub feasibility studies. Food hubs are a type of food system infrastructure where products can be aggregated and stored for distribution and wholesale within the local area. In the BC context, the BCMAFF defines food hubs as “shared-use food and beverage processing facilities that offer food and agriculture businesses access to commercial processing space, equipment, expertise and resources to support business development and growth”. Under the BC Food Hub Program, the provincial government funded four pilot food hubs (i.e., Vancouver, Surrey, Quesnel, Salmon Arm) and an additional eight are operating or in development (e.g., Kamloops, Port Alberni). It is unclear at this time whether funding for the program will continue.

For the remaining RDs, research supports have covered land trusts for agricultural lands, regulations for soil/fill and risk materials from dairy/meat production, and strategies for addressing climate change. Of note though, many consultants and collaborations with BCMAFF for recent agricultural plans include water demand models, agricultural land use inventories, and detailed background reports on the agricultural sector. While these elements were not commonly identified as research supports, they comprise additional information and knowledge mobilized for the purposes of agricultural planning and development. Furthermore, research roles, where capacity existed, were employed to support municipalities. As one RD planning staff notes that they would: “...encourage and then do studies to help [municipalities]...If they're struggling with something, that was one of my roles. Rather than each municipality doing something on their own” (Participant 1, 2021).

4.2 Regional District Challenges in Supporting Agriculture

A range of challenges and barriers to efforts by RD to support agriculture we identified by the interview participants. In the analysis of these challenges, five themes emerged: governance and organizational challenges, planning challenges, funding challenges, external food system challenges, and economic development challenges.

4.2.1 Governance and organizational challenges

Governance and organizational challenges include political resistance to RDs role in food and agriculture (n=9), lack of staff capacity (n=9), lack of formal mandate (n=8), lack of enforcement (n=6), and other staffing issues (n=5). The challenge of political resistance to having a role in agriculture and food was discussed by multiple participants. As RDs are composed of municipalities, electoral areas, and TFNs, there is a persistent belief in a division of rural versus urban sectors and issues. In some RDs, there is a resistance among member municipalities, generally with limited farmland, of directing RD resources towards agriculture. One example is the benefits arising from agricultural production and activities in one municipality on economic activities occurring in another municipality without agriculture: “You’re a tourism area, the farmer’s market brought in a million dollars for local businesses last year. What’s a farmers’ market? Agriculture. Part of it was showing how agriculture does support municipalities...and getting all the directors on board” (Participant 14, 2021). Member municipalities can have substantial impact on whether an RD takes on a voluntary role for agriculture and food, beyond land use. Similarly, participants tied the lack of formal mandate to political will and limitations with Provincial legislation. As one interviewee notes, speaking to the mandated roles of RD:

Why would [the RD] take on something that they don't need to? There are so many problems around. They got enough to deal with, why would they take on agriculture or food security? ... [the Board of Directors] probably think [agriculture and food] are a provincial responsibility, not a local government responsibility... (Participant 1, 2021).

This political resistance has cascading consequences and is also seen in the governance structure where member municipalities can effectively hinder or advance agricultural support. Differences between directors and meeting the needs of their constituents is challenging as there is no municipal-level consensus around RDs taking on a role in agriculture and food.

As one participant notes: “[It is] really hard in the context of our regional district to set up new regional services because there is not a lot of agreement from municipalities” (Participant 19, 2021). This can be exacerbated with the distribution of farmers across a given region and whether farmers are located in municipal jurisdictions, which have greater resources and tax bases than non-municipal areas.

Two inter-connected challenges are around staffing issues and staff capacity were also identified. Across the studied RDs a common issue of lack of staff to support agriculture in planning design, implementation, economic development, and supporting member municipalities, electoral areas, and TRNs. Two of the less-resourced RDs have no planning or economic development services. Those that do have these services are still challenged with a lack of staff and limited staff capacity. Five RDs identified limitations to RD staff knowledge and skills around agricultural development, legislation, and food systems represent key challenges in supporting agriculture and food. For example, one interviewee states: “You need champions, and preferably you need a champion on staff, who is willing to put in that extra effort because nobody on our staff knows diddle about agriculture, and most of the board doesn't either” (Participant 23, 2021). This is particularly salient given the diversity and complexity of agriculture and food systems.

Where staff capacity exists (such as Metro Vancouver where a full-time position is devoted to agriculture), other staffing challenges remain, such as determining where to prioritize and direct work given the complexity of issues. Additionally, interviewees noted the limited time and ability to retain and recruit staff as they have limited funding. One interviewee commented on challenges around retention, noting that “there is this ‘brain drain’ thing where people don't come here when they have their education, because somewhere else better pays. I'm one of the few people here I know that has a degree in anything” (Participant 11, 2022).

Another area of governance and organizational challenges relates to a lack of enforcement and compliance with local legislation. There is a limited ability of RDs to do both long-term planning for agriculture, engage in agricultural and food system planning and development, and to ensure compliance with regulations.

Six RDs noted a lack of enforcement as a challenge that they are facing. For example, one participant notes: “The ALC has to send in their bylaw enforcement, which they just assigned an officer to our region in the last year. We didn't even have one locally, it was someone from the coast had to come up and check in on all these properties. [The ALC] work in conjunction with our bylaw enforcement officer. But we're not there to enforce their bylaws” (Participant 4, 2021). Such challenges demonstrate the limitations in staff capacity, knowledge of agriculture, and desire to meet local contexts.

4.2.2 Planning challenges

Six types of planning challenges were identified, and these include tensions between provincial legislation and local priorities (n=11), legislated changes are time-intensive (n=8), evaluation challenges (n=5), lack of RGS (n=3), and limited long-term planning (n=3). Tensions between provincial legislation and local priorities can be categorized into two main issues: (1) regulatory changes and a lack of communication, and (2) provincial directives being unsuitable for local priorities and contexts. RDs experience challenges around legislated compliance with provincial regulatory changes and of being on the receiving end of policy. Some participants discussed issues related to communications between BCMAFF and the ALC, and these were associated with legislative changes happening with limited to no consultation or warning. As one participant stated:

Having the regulations change and local governments having to react because we're not really part of the process that the Ministry goes through when they're drafting our legislation... most of our typical rezoning applications are a six-to-eight-month process just because of all the notification requirements you have to do in public consultation. It's hard to get it done under that six-month period, but it really depends because if it is contentious, then you're going to have to do more consultation and the board's going to have a harder time making a decision (Participant 6, 2022)

Furthermore, RDs are tasked with understanding and communicating legislative changes, aligning their own legislation (where required), and determining the extent to which the RD can establish their own standards and criteria (as allowed by the Province). However, as the legislation drops, there is limited time to engage in these tasks as farmers and landowners are continuously seeking development permits, information, and/or responding to issues (e.g., conflicts with neighbours, vandalism). For example, eight RDs identified that simple legislative changes can take anywhere between four to eight months to be adopted by the board. More contentious and challenging legislative changes can take years.

Additionally, three RDs identified the challenge of not having long-term planning and an additional three RDs noted the challenge associated with the absence of an RGS to support coordination and directly state a role/responsibility for member municipalities, electoral areas, and TFN in support of implementing and abiding by the RGS. One participant stated: “I wish that agricultural planning was more holistic in that it did incorporate...what it is we're trying to achieve with it. Are we trying to feed people? Are we trying to feed a market? Is basically the division I hear” (Participant 22, 2021). Another notes the reactive nature of their work: “A report on agri-tech comes up and then all of a sudden it puts the whole economy on spotlight and what agriculture's role is and technology, and so the regional district will more react. They're not going to find things on their own” (Participant 1, 2021). Finally, five RDs noted that evaluation of planning and policy implementation is a challenge given the limited availability of data and its timing. For many RDs, a baseline assessment, and stakeholder and public consultations are conducted by as part of the development of an agricultural plan.

An agricultural land use inventory and water demand model are available to regional and municipal governments, and these tools are vital to contextualizing and characterizing the agricultural system in the region. They are employed to determine progress on achieving goals and objectives of the region. For example, some RDs track number of hectares, number of development applications on ALR properties, etc. However, the timelines for agricultural land use inventories are typically every five years, and reporting for evaluation metrics/indicators depends on staff capacity and Board of Director directions for reporting (e.g., annual reports on plan progress). Timely and responsive evaluations are supportive as they show achievements which can enable further investment of resources and political support, strategic areas in need of support, and planning/policy interventions that were un/successful.

4.2.3 Funding challenges

Funding challenges include those related to establishing an RD service (n=8), lack of implementation funding (n=4), general lack of funding (n=4), lack of personnel funding (n=3), and lack of provincial and federal funding (n=1). Generally, across the RDs interviewed, there was no RD-wide service specific to agriculture and food. Rather, agriculture and food system supports were typically allocated to an established service (i.e., planning, economic development, community sustainability).

Interviews from eight RDs stated that establishing a service function for agriculture and food would be beneficial but represents an immense challenge. The challenge being stated as: “To put any serious money into an area, we have to establish a service, which is a big and big exercise, and we are already under enormous pressure to raise taxes for other things. So, new service establishment is not popular” (Participant 23, 2021).

The Cariboo RD established an RD-wide service under their economic development functions. An aspect of RD governance is that a service can be established for a specific area, which in the case of the Cariboo, became the North Caribou Economic Development Advisory Committee which includes economic initiatives for the agricultural sector (Participant 13, 2021). Similarly, Squamish-Lillooet is exploring the possibility of creating an RD-wide agriculture and food service.

However, the challenge of developing an RD service cannot be understated, as indicated by respondents who highlighted the significant political need. The constraints to establishing a service can be substantial in the absence of direction and being mandated to do so. As noted by an interviewee: “To establish a service, we have to either have a petition from the people who live in that area saying, ‘We want this service’ and then we do it by bylaw, or we have to seek their assistance in a referendum or alternative approval process, which politicians these days are reluctant to use because it's deemed undemocratic. Where we say ‘We're going to do it and we wait for people to object’.” (Participant 24, 2021).

RDs delivery of services is built off a taxation approach linked to population size. Reliance on RD funds from taxation is a challenge, particularly for regions with smaller populations, but larger geographic areas (Appendix A). RDs will need to supplement funding by seeking out grant funds and/or petitioning provincial/federal agencies for funding. As one RD staff states: “[The RD] was trying to advocate to the federal government to help fund regional districts like ours, so we can have equitable services” (Participant 11, 2022). Allocating funds from an RD can be a challenge as well given the previous findings around mandate and political resistance.

Additionally, there are different perspectives in scrutinizing and legitimizing funding allocations for agricultural projects versus other services. In one example, a non-profit organization was seeking RD funding support for farmer engagement and issue identification which had substantial debate and discussion among directors. An RD staff expands on the debate over the agricultural support relative to a recreation facility:

You can get a lot of [Director discussion for] that three thousand dollars, but then on the next item, a \$40 million recreation centre and it's 'OK, good, we're done'. There's not the same level of scrutiny 'Agriculture isn't our responsibility!' That feeling of 'Why are we supporting this non-profit to talk to farmers?' (Participant 4, 2021)

4.2.4 External food system challenges

Participants noted several challenges facing the agricultural sector and the food system more broadly, which have been categorized here as 'external' to the RD as they represent challenges that operate within an RDs jurisdiction but are beyond current mandate and roles. These challenges impact residents, farmers, food system stakeholders, and farmland owners. They included high cost of land (n=6), limited amount of agricultural land (n=4), reliance on food imports (n=3), cost of agricultural inputs (n=2), conflict between agriculture and ecologically sensitive areas (n=2), water availability (n=2), transportation and climate change (n=2), transportation of agricultural inputs (n=2), impacts to water systems from mining and logging (n=1), and reliance on other regions for food processing (n=1).

Top among the external challenges is the issue of the high cost of land. While this was historically an issue in more highly populated and urban areas, RDs across the province are noting this trend. As an interviewee states: "[Urban people] have already come in droves and our housing prices went through the roof for the last year and a half. The average single-family home was maybe four hundred thousand and now it's like seven to eight" (Participant 4, 2021).

Tightly coupled to the issue of high land prices is the limited amount of agricultural land. In BC, less than 5% of the land base is in the ALR. Furthermore, a significant proportion of farmland is under private property ownership. As well, there are demands for lands to accommodate residential, industrial, and commercial uses. Four RDs interviewed noted this issue of tensions with an already limited land base with demands for other uses.

There is an ongoing issue of agricultural operations that are permitted but should be sited on lands that can better serve them (i.e., water availability, electricity, waste management) rather than being sited anywhere within the ALR. Some interviewees explained that putting concrete-based agricultural operations on high quality soils is at odds with the desire to protect high-quality agricultural soils; for example: “[The ALC] needs to re-examine the industrial piece... If it has a completely enclosed cement floor, it doesn't need to be on the high value class one, two, three soils” (Participant 4, 2021). Furthermore, these kinds of facilities are not guaranteed to be viable. As the same interviewee notes in their RD: “We had about six really massive proposals [for cannabis production] that never even got up and running. I think it was pure speculation; there was funnelling of significant funds and investments, and the ones that I'm aware of aren't even running...there are these massive buildings that are just vacant” (Participant 4, 2021).

Participants discussed several additional challenges related to resilient food system and self-sufficiency, such as regions being reliant on imported foods (n=3), the transportation of food (imported and exported) and greenhouse gas emissions, the transportation of agricultural inputs, and reliance on other regions for food processing. Additionally, two RDs noted that increasing cost of agricultural inputs which places additional strain on farmer viability and may impact local food security.

As one interviewee notes about the inter-connectedness of resilient food systems and the challenge facing the RD:

We grow about two percent of our own food, is the best estimate anybody's come up with. Increasing that amount in any serious way would be a real challenge because we don't have the inputs. What you need to grow vegetables is manure, and for manure you need the animals. We have very few farm animals here on the coast and the people who raise the animals, they have to bring in their fodder from off coast truck and ferry. It's expensive as all hell. (Participant 23, 2021)

Participants also noted challenges with water availability and water systems at risk from other industries. For RDs located in areas with limited water availability and with increasing demand for water resources from other sectors, establishing water access for agriculture is a challenge. Furthermore, industries that can have major impacts on water systems, logging, mining, oil and gas, are beyond the authority of local government. Participants speak to the challenge of addressing the fallout of these industries and the inability to coordinate and communicate to meet local needs.

4.2.5 Economic development challenges

Participants in eight of the 17 RDs identified the economic viability of farming as a key challenge. Relatedly, there is no direct role or mandate for RDs to intervene in the economic development of the agricultural sector and broader food systems. These are voluntary roles that an RD can take on as per the LGA. However, research participants identified tensions between supporting the economic viability of farmers and the provincial changes to the legislation; for example:

At the regional level you can't really just focus on agriculture, you have to understand the complexities of [land use]...It's our job to understand the economic and social consequences of these land use planning applications and there sometimes may be projects that local governments are taking on that are more community focused (Participant 6, 2022).

These participants explained that the economic context of their locales is more complex than producing a singular commodity or sector, highlighting the nuanced economic needs of farmers across their RDs. For example: “The ALC stance is very staunch on [events], and it's just not feasible at 10 events a year for someone to be able to construct a \$100,000 plus structure that can be dual purpose farming and events” (Participant 12, 2022). This participant noted that the stipulations and requirements ‘make sense’ in areas like the Lower Mainland and the Okanagan but not in the North where farm parcels can be hundreds to thousands of acres.

A Vancouver Island-based RD staff spoke about the requirements for housing and the initial limits to one house. “[An issue] like affordable housing and if every farmer was allowed to have a second home, that's affordable housing. As a planner does that make sense? There are no transit routes? How affordable is that? You got to own a car” (Participant 24, 2021). Similarly, another RD staff in BC’s Interior notes: “What usually happens is if there's more than one house on a property? Subdivision is the next request. [The landowner will say] ‘Well, we already have two houses. We just subdivide that one’” (Participant, 14, 2021).

The economic viability of farming is linked to secondary forms of income and increasingly to income from short and long-term rentals, agritourism, and events. Additionally, for farmers seeking to add value to their products, two RDs noted a lack of shared facilities for processing and distribution. This is likely linked to the BC Food Hub Program, as one RD had recruited a staff-person to support an application to the Province (which was unsuccessful). RDs allocating staff-time and resources to grant applications can be time-consuming and costly. Furthermore, in RDs where staff and resources are constrained, investment coupled with a lack of success can be detrimental to future support.

5. Discussion and Conclusions

This study explores the range of activities performed and challenges by RDs in supporting local/regional agriculture. The findings from this study demonstrate that RDs across BC are pursuing, where capacity and political will exist, significant agricultural supports. The drivers for these supports stem from investment in identifying and addressing issues and concerns identified by the agricultural sector and from legislated mandates for land use planning and legislation. The intersection of communication channels between agricultural stakeholders and RD staff and directors allows for these issues to be identified. It also has led to the creation of agricultural plans and the integration of agriculture and food into regional policies, such as RGS. These plans and their implementation have generated mixed reactions as to their effectiveness and utility given key challenges around limited staff, limited staff capacity/expertise, limited funding, resistance to taking on an agricultural role, and scalar challenges (e.g., geographic and temporal).

Implementing plans on 20-year time horizons, as well as limited staff and funding for implementation and evaluation, are at odds with the dynamic and complex nature of agriculture. For example, over the past five years, major legislative changes have occurred to the ALCA with implications for local government (i.e., residential house size limits, soil and fill deposit restrictions, permitted uses – vertical agriculture/marijuana).

As noted in the previous section, six RDs have designated agricultural advisory committees (AAC) that support RD planning staff by providing contextual understanding of agricultural practices and requirements to aid planning staff and decision-makers in the needs and issues facing farmers/producers. These supports can be invaluable if properly integrated into broader agricultural development and food system policy. Land use planning controls for the purpose of protecting agricultural lands must operate in tandem with agricultural development and broader food systems integration. Thus, demonstrating how public support for agriculture leads to tangible social (e.g., food security, job creation, cultural food availability), environmental (e.g., climate change mitigation, water quality, habitat protection, riparian protection), and health (e.g., adequate nutrition, reduction of diet-related diseases, reduced health conditions from air and water pollutants) outcomes that are public priorities.

Funding remains a key challenge for RDs. and the structure of (and issues around) RDs of establishing a service is unique to this level of government. The approach used by RDs to allocate budget from other services (typically planning and economic development) can work in contexts where the taxpayer base is substantial enough. Several RDs have approached this problem by investing multi-year funding to hiring agricultural support workers, funding local agricultural organizations, and by convening food and agricultural stakeholders (e.g., ACRD, East Kootenays, Kootenay Boundary, Central Kootenay). This financing can prove effective, particularly as levered towards other grant applications and funding sources.

In RDs where more limited funds are available, different funding supports are identified as needed. This includes increasing funding from granting agencies (e.g., charitable foundations, government, industry) but also in examining the per capita approach to funding allocations and financing that is the de facto approach used for RDs. Considering the vast territories that several RDs are governing, with agriculture constituting significant portions of these regions, population may not be the ideal metric to determine funding allocations in support of food system resilience. Associated with this challenge of financing staff and programs are limitations around food and agricultural planning and development knowledge and skills. Planners are not typically trained in agricultural or food systems, and there are few professionals with these skillsets and expertise.

Across RDs, there is an acknowledgement that local government involvement in food and agriculture will continue. This is evident in the increased recognition of reliance on food imports and of the interconnected nature of agriculture and food systems to other geographical regions, industries, and sectors. For example, the increasing cost of agricultural inputs, processing primary products in other regions then returning for distribution and sale, and the impacts of transportation of foods and agricultural goods and climate change. Divisions remain across RDs with taking on a broader role/responsibility beyond compliance with the provincial legislation (i.e., ALCA, Farm Practices Protection Act, ALR Use Regulations) and aligning local legislation for land uses, zoning, and bylaws. Ultimately the responsibility for food systems and agriculture appears to be shifting towards multi-level governance and residents are being impacted by growing food insecurity and concerns around resilient, unsustainable food systems.

This study is the first to explore the role of RDs in agricultural support and identifying their challenges, to the best knowledge of the authors. We examined 17 RDs and interviewed 24 different RD staff, contractors, and decision-makers across BC. Future work should aim to complement the interviews with analysis of secondary agricultural plans, OCPs, RGSs, and other regional documents. Analysis of these documents would be helpful in identifying the range of supports being offered and the specific issues being addressed. These data would support RDs in assessing, and developing, strategic and integrated options, innovations, and models when updating their own policies, plans, and legislation. Additionally, examination of existing planning and policy implementation and evaluation would supplement the findings here. We also suggest that the perspective of agricultural stakeholders be included in determining implementation and evaluation success of agricultural policy, programs, and projects. This can include farmers, farmworkers, food security organizations, health institutions, and agricultural industry representatives.

It would be invaluable to explore the unique perspective of agricultural and food stakeholders who sit on agricultural advisory committees (and their different iterations) as many were involved in both the design and implementation of agricultural plans and RD initiatives. As much of agricultural support remains general, it would be helpful to understand which agricultural stakeholders benefited most from RD efforts and if there is an alignment with the kinds of agricultural and food system futures with which citizens and stakeholders are concerned.

The prevalent interest in food system resilience is worth noting, as it grows in parallel with increasing food insecurity and attention around the roles of local government in food systems. Exploring local systems issues and approaches to food security can be done through community-engaged participatory research, which develops planning tools (e.g., scenarios, modelling, visualizations), identifies potentially effective planning processes (e.g., food policy councils, roundtables, community engagement), and contributes to just and sustainable future food and agricultural systems. Such applied research can increase public interest and support for RDs establishing food and agricultural services and advocating to senior levels of government on behalf of regional issues of concern.

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Appendices

Appendix A. Regional District Governance & Key Demographics (adapted from Government of BC, 2021)

Regional District ^a	Area (km ²)	Population	Board of Directors	Voting Strength	Voting Unit (population)
Capital (Saanich (5), Victoria (4), Langford (2))	4,864.4	383,360	24	86	5,000
Alberni-Clayoquot (Port Alberni (2))	8,644.9	30,981	14	23	2,000
Comox Valley (Courtenay (4), Comox (2))	2,519.4	66,527	10	47	1,500
Sunshine Coast (Sechelt (2))	5,166.6	29,970	9	20	2,000
Cowichan Valley (North Cowichan (3))	4,355.0	83,743	15	48	2,000
Metro Vancouver (Vancouver (7), Surrey (6), Burnaby (3), Coquitlam (2), Delta (2), Richmond (2))	4,050.9	2,463,431	39	134	20,000
Squamish Lilloet (Squamish (2), Whistler (2))	16,695.1	42,665	10	25	2,000
North Okanagan (Vernon (4))	7,714.7	84,354	14	41	2,500
Central Okanagan (Kelowna (7), West Kelowna (2))	3,136.9	194,882	13	52	4,000
Okanagan-Similkameen (Penticton (4), Summerland (2))	10,556.0	83,137	19	54	1,800
Columbia Shuswap (Salmon Arm (2))	30,085.2	51,366	11	27	2,500
Central Kootenay	23,158.7	59,517	20	35	2,500
East Kootenay (Cranbrook (2))	27,848.4	60,439	15	31	2,500
Bulkley-Nechako	78,266.5	37,896	15	19	3,000
Central Coast	36,733.9	3,319	5	5	1,500
Cariboo	83,106.9	61,988	16	32	2,500
Peace River (Fort St. John (2))	119,846.8	62,942	12	27	3,000
Fraser-Fort George (Prince George (4))	51,895.9	94,506	14	30	4,000
Fraser Valley (Abbotsford (6), Chilliwack (4), Mission (2))	13,913.9	295,934	23	68	5,000
Kitimat-Stikine (Terrace (2))	119,998.4	37,367	12	26	2,000
Kootenay Boundary	8,163.5	31,447	13	19	2,500

Mount Waddington (Port Hardy (2))	27,404.3	11,035	9	22	600
Nanaimo (Nanaimo (8), Parksville (2))	3,187	155,698	19	68	2,500
North Coast (Prince Rupert (2))	65,279.8	18,133	10	15	2,000
Qathet (Power River (2))	6,905.1	20,070	7	13	2,000
Stikine (unincorporated)	122,291.7	740	N/A	N/A	N/A
Strathcona (Campbell River (5))	21,804.4	44,671	13	34	1,500
Thompson-Nicola (Kamloops (6))	45,462.2	132,663	26	52	3,250

^a Municipalities in parentheses are included which have greater than one Director allocated based off population size and voting strength. For example, in the RD of Okanagan-Similkameen, the municipalities of Penticton and Summerland have four and two Directors respectively.

Appendix B. Agricultural Advisory Committees across 17 RDs (BCMAFF, 2021a)

Region	Regional District	RD Agricultural Advisory Commission (AAC)	Active/ Inactive	Scope
Island	Capital	Agricultural Advisory Planning Commission	Inactive	Region-wide
	Comox Valley	Agricultural Planning Advisory Committee	Active	Region-wide
	Alberni-Clayoquot	AAC (1) Agricultural Development Committee (2) Coastal Agricultural Roundtable (3)	Active Active Active	Region-wide
	Cowichan Valley	AAC	Inactive	Region-wide
South Coast	Sunshine Coast	AAC	Inactive	Region-wide
	Metro Vancouver	AAC	Active	Region-wide
	Squamish Lillooet	AAC (1) AAC (2)	Active Active	EA C EA B & Lillooet
Okanagan / Columbia Shuswap	North Okanagan	AAC	Active	Region-wide
	Central Okanagan	AAC	Active	Region-wide
Kootenays	Central Kootenay	AAC	Active	EAs A, B, & C
North	Bulkley-Nechako	Rural/Agricultural Committee	Active	Region-wide
Interior	Cariboo	Agricultural Development Advisory Committee	Active	EAs A,B,C & I

Appendix C – Semi-Structured Interview Guide

Describe your role and position at the regional district (RD).

What are the RD's outcomes/goals/visions of the agricultural system?

How, if at all, is the RD engaging the agricultural sector? What planning processes are used? *This can extend beyond planning (e.g. growth strategy, long-term goals, coordination/networking, discussions with farmers, advisory committees).*

What constrains the RD's ability to support agriculture?

How, if at all, is planning for agriculture integrated to other RD efforts? Are there connections between agriculture and other areas of regional government efforts?

What would you say is outside of the realm of RD planning for agriculture?

How is the RD linked to Provincial agricultural initiatives with the Ministry of Agriculture, Food, and Fisheries?

What are some of the RD's successes with agricultural planning? What made them successful?

What are some of the RD's challenges with agricultural planning? What made them challenging?

Who are the actors that are involved in agricultural planning in a given RD? What positions or roles do they play?

If you could define new rules under the Agricultural Land Commission Act - that would be applicable within your RD only - what might they be?

What do you think is the role of regional government to address food security and supply?

Is the RD considering "alternative forms" of agricultural production (e.g. urban farming, greenhouse production, vertical farming, cellular agriculture) within the jurisdiction? Why or why not?

Anything else that you want to add? Are there others that I should talk to within the RD?

Appendix D - Agricultural Policies, Plans & Governance Groups for 17 Regional Districts

Regional District	Regional Growth Strategy	RGS Policies Re Agriculture
Capital	Yes (2018)	Yes (7 principles; 4 policies) (p. 37-38); additional policies in other areas (e.g. water servicing)
Comox Valley	Yes (2011)	Yes (6 objectives; 21 policies) (p.58-64)
Alberni-Clayoquot	No	N/A
Sunshine Coast	No (Strategic Plan 2019)	N/A
Cowichan Valley	No	N/A
Metro Vancouver	Yes (2011)	Goal 2 – Support a Sustainable Economy (Strategy 2.3) (5 policies – RD) (p.29)
Squamish Lillooet	Yes (2018)	Goal 10 Protect and Enhance Food Systems (11 principles; 12 policies) p.45-47
North Okanagan	Yes (2011)	Rural protection areas Agriculture & Food Systems section (4 goals; 20 policies) (p. 18-21)
Central Okanagan	Yes (2010)	To manage the land base effectively to protect natural resources and limit urban sprawl (1 policy) (p. 10) To develop and enhance a positive business environment in the region to achieve a dynamic, resilient, and sustainable economy (1 policy) (p.12) Support a regional food system that is healthy, resilient & sustainable (7 policies) (p.15)
Okanagan-Similkameen	Yes (2017)	Housing Development (8 policies) (p.18-20) Ecosystems, Natural Areas & Parks (2 policies) (p.24) Regional Economic Development (6 policies) (p.31-33) Energy Emissions & Climate Change (1 policy) (p.38)
Columbia Shuswap	No	N/A
Central Kootenay	No	N/A
East Kootenay	No (Regional Sustainability Strategy)	Policy guidance for development applications
Bulkley-Nechako	No	N/A
Central Coast	No	N/A
Cariboo	No	N/A
Peace River	No	N/A

Appendix E: Agricultural Plans for 17 Regional Districts (BCMAFF, 2021b)

CRD Regional Food & Agricultural Strategy (2016)
CVRD Comox Valley Agricultural Plan (2002)
ACRD Alberni Valley Agricultural Plan (2011)
ACRD Agricultural Implementation Project (2014)
ACRD Coastal Addendum to the Alberni Agricultural Plan (2018)
ACRD Coastal Agricultural Roundtable: Strategic Priorities & Plan (2020)
SCRD Sunshine Coast Agricultural Area Plan (2014)
CVRD Strategic Agricultural Plan (2001)
CVRD Implementation Plan (2013)
MVRD Regional Food System Strategy (2011)
MVRD Regional Food System Action Plan (2016)
SLRD Area B: Lillooet & St'at'imc Agricultural Area Plan (2014)
NORD Regional Agricultural Plan (2015)
CORD Agricultural Plan (2005)
OSRD Electoral Area C Agricultural Area Plan (2008)
CSRD Shuswap Agricultural Strategy (2014)
CKRD Agriculture Plan (2011)
RDEK Agricultural Plan (2014)
BNRD Food and Agriculture Plan (2020)
CCRD Bella Coola Valley Foodshed Analysis Report (2008)
Cariboo RD Agricultural Policy (2016)
PRRD Regional Agricultural Plan (2014)