RESEARCH ON AGRICULTURAL LAND USE REGULATIONS IN THE CONTEXT OF INDIGENOUS FOOD SECURITY AND SOVEREIGNTY

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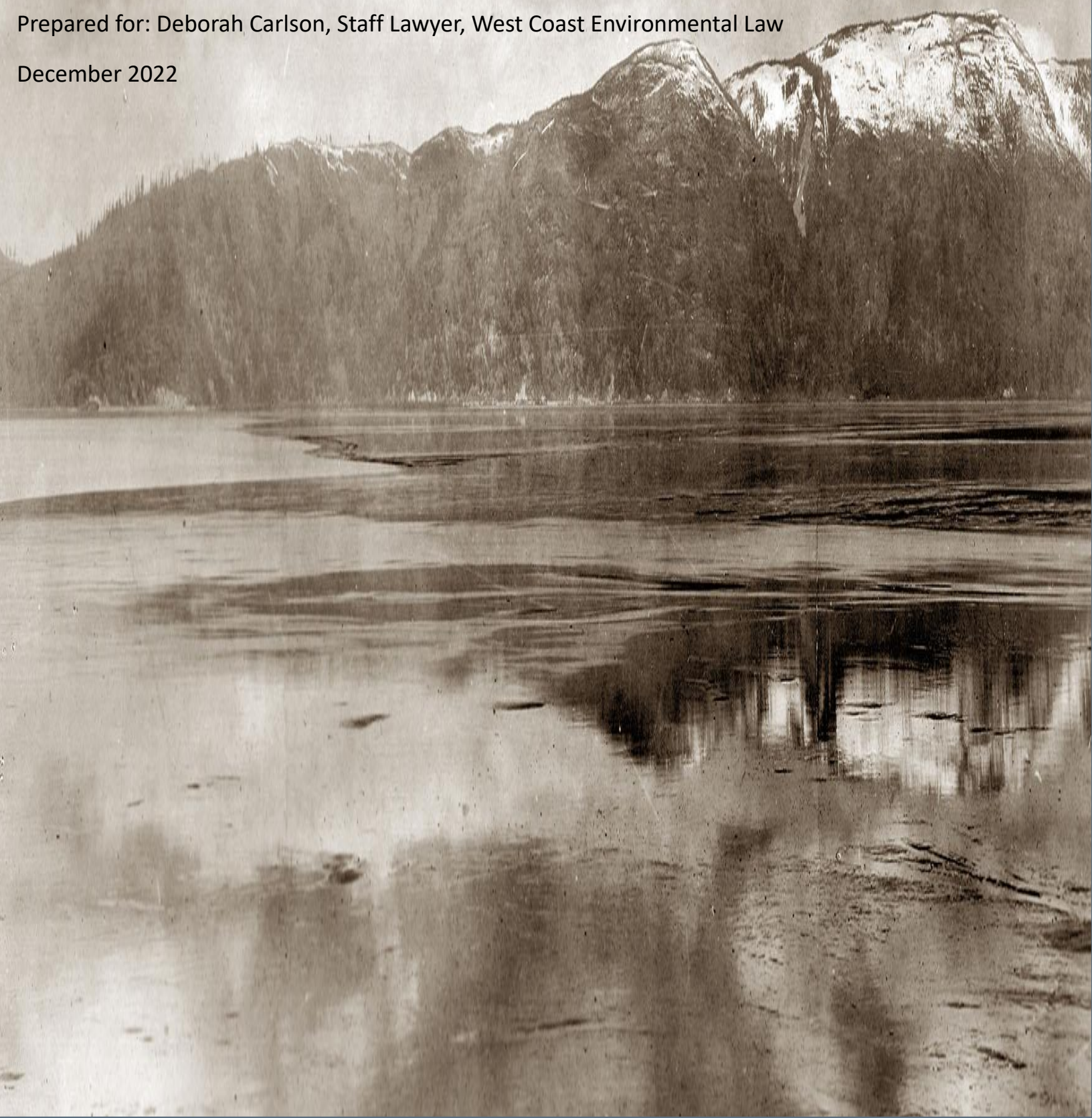

DISCLAIMER

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of West Coast Environmental Law staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of West Coast Environmental Law or the University of British Columbia.

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Thank you to Jared Qwustenuxun Williams for permission to use the “Why are Traditional Foods Important?” pyramid on page 9. Visit https://www.facebook.com/jared.q.williams

Cover photo: Archival photo of Semá:th Xótsa / Sumas Lake p5659 by the reach Gallery Museum here

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Executive Summary

Food is essential in all cultures and communities globally, regionally, and locally. Through the cultivation of food, we have seen our societies build livelihoods, trade, and create employment and culture. The history of food in present-day British Columbia has seen the erasure of Indigenous people's food traditions. This is a result of the colonial legacy and the various tools used; one of these tools is laws. Laws can be used as tools of oppression and liberation; this report aimed to understand how past and present laws and policies can and have been used to erase Indigenous food sovereignty and food security; and how said tools can be used as tools for reconciliation. This was a Sustainability Scholars project, the University of British Columbia Sustainability Hub, and West Coast Environmental Law. This project used a literature review and a case study to identify the laws pertaining to agriculture production, food security, and sovereignty in Canada and British Columbia. Additionally, the project will extend to include conversations with Se:amth Nation and to build relationships and reconciliation further.

It is hoped that the results will help build a foundation for more transparent and inclusive dialogue around 'food security' in the Lower Fraser floodplain, by remembering and understanding the historical underpinnings and existing regulatory framework of current agricultural land use in the region in the context of the rich biodiversity, Indigenous economies, and culture it displaced.

Laws can be developed to foster an inclusive and resilient future for food in British Columbia. Recommendations included expanding criteria and values when developing land use policy extending social and cultural importance to food lands and not limiting food production to only agricultural lands

The next steps involve working with Sumas Nation to validate the recommendations and outcomes of this report. This step is important during relationship building and co-designing knowledge.

Introduction

Food is the foundation of communities globally; locally, food acts as the social glue that brings communities together. Food provides the nutrition needed to build health and wellbeing in nations and communities, opportunities to trade goods in building wealth and economies, and connectedness to Land by contributing to livelihoods and cultural identity (HLPE, 2020).

Canada's food production history has transformed the relationships between culture, economies, and landscapes that existed prior to colonization. Colonizers used physical displacement and dispossession of Indigenous peoples from their territories, combined with regulation or criminalization of food harvesting, production, and distribution practices, to suppress and dispossess Indigenous peoples from their cultures, knowledge, and land, including in relation to food(Kuhnlein et al., 2013; Kuhnlein & Receveur, 1996; Lowitt, 2020). Prior to colonization, what is now often referred to as the Lower Fraser of British Columbia was part of the densely settled northwest coast of North America, where Indigenous food systems were supported by social and ceremonial systems that ensured long-term sustainability and equitable distribution, and included trading networks that reached far beyond the region(Joseph & Turner, 2020). Before settlers arrived, malnutrition, starvation, and chronic diseases were rare or infrequent in indigenous societies, in contrast to current realities.(Kuhnlein et al., 2013; Kuhnlein & Receveur, 1996; Rotz, 2017; Rotz & Kepkiewicz, 2018). Food security for settlers came at the expense of food security for indigenous communities.

When settlers first arrived in British Columbia, they relied on relationships with Indigenous communities for food resources (Reimer, 2018). Before colonization, Indigenous peoples enjoyed a diverse diet based on deep knowledge of plants and animals in their territories developed over millennia, reflected in highly refined resource management practices involving a range of activities undertaken in different locations at different times of the year. For example, in the Lower Fraser region, a Sto:lo survey identified at least 256 species of plants and animals that would be traditionally used for food, medicine and other purposes (Lloyd, 2009). Some Coast Salish management practices included, for example, selective fishing, seasonal use, burning, removal of harmful plant species, and regulating harvests according to natural abundance variations. The effectiveness of resource management by the Indigenous peoples of the Lower Fraser was reflected in the sustainability of large communities and a rich trading economy. (Lloyd, 2009; Reimer, 2018). Similarly, in the interior of BC, in Kamloops, the Secwepemc harvested deer, moose, elk, caribou, many smaller mammals, and many varieties of salmon and fish. They gathered over 135 species of plants for food, medicine, ceremonial, habitation, and technology (Kamloops, 2015).

In the Lower Fraser and southern Vancouver Island, the establishment of food security for settlers involved rapidly occupying and altering large areas of land in the floodplain, and modifying that landscape as needed so that it was compatible with the production of domesticated crops and livestock-associated with European agriculture. By 1871 it was estimated that the lands cultivated in this way in the colonially designated districts of New Westminster and Victoria totalled 13,384 acres(Cail, 1956). The harvest consisted of potatoes, turnips, grain, and fodder for cattle. Colonial laws and policies promoted this type of farming and criminalized and excluded traditional ways of harvesting, gathering, hunting, fishing, and growing (Begg, 2007; Cail, 1956).

Settler agriculture not only occupied but also vastly altered the landscape in the Lower Fraser. Farmland was created by clearing vegetation and by diking and draining of wetlands, including even the large waterbody of Sema:th Lake, whose minimum extent was estimated to be 11,600 ha (Brown, 2002; Reimer, 2018). It should be noted that loss of habitat and degradation of aquatic habitat has resulted from both larger-scale diking and draining projects, and also from continued and ongoing initiatives to improve drainage to agricultural lands, which has been supported by federal, provincial and local governments, as well as regular maintenance activities such as channel cleaning to remove vegetation(M. L. Rosenau et al., 2005). Agriculture also relies on fertilizers and pesticides that affect groundwater and waterways (Hall & Schreier, 1996). As well, increasingly, formerly 'marginal lands', which often represent remnants of floodplain habitat, are being converted to agricultural production in response to evolving agricultural technologies and high land prices(M. L. Rosenau et al., 2005). There is also ongoing pressure to convert agricultural lands to industrial and urban development uses, note, e.g. Expansion of western farmland in Abbotsford and Surrey South Development plans (CBC News, 2022; Olsen, 2020).

With over 75% of the Lower Fraser floodplain having been converted for settler agricultural practices, (M. L. Rosenau et al., 2005) it is impossible to consider Indigenous food security without taking into account the landscape now occupied by agriculture. Agricultural practices have clearly harmed and continue to negatively impact the food security of Indigenous nations. For example, the pollution of aquatic ecosystems and loss of habitat associated with the conversion of land to agricultural uses have had and continue to have profound and negative impacts on salmon. It is timely to consider the legacy and continuing impacts of agricultural land use given the November 2021 flood events and ongoing dialogue about long-term resilience and planning for communities in the floodplain, including Indigenous communities (Finn et al., 2021).

Food production has been used as a tool for colonization; however, there is the potential for food to be a powerful tool for reconciliation, by supporting and reviving indigenous food systems through legal reform and financial resources (Lowitt, 2020). In 2019 British Columbia passed the Declaration on the Rights of Indigenous Peoples Act(British Columbia, 2019). This is intended to

implement the Provincial Crown adoption of the United Nations Declaration on the Rights of Indigenous Peoples. A brief summary review of some of the articles particularly relevant to this work includes:

- Article 18: The right to participate in decision-making that could affect rights
- Article 19: Free, Prior and Informed Consent relating to legislative or administrative measures that may affect them.
- Article 20: Right to maintain and develop their political, economic, and social systems or institutions including the right to engage in traditional and other economic activities. Right to redress if deprived of means of subsistence and development.
- Article 24: Right to the highest attainable standard of physical and mental health, through traditional medicines, maintain their health practices, including the conservation of their vital medicinal plants, animals, and minerals.
- Article 25: Right to maintain and strengthen their distinctive spiritual relationship with their occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard.
- Article 29: Right to the protection and conservation of land and resources.
- Article 32: Free, Prior and Informed Consent regarding developments affecting lands in Indigenous territories.
-

In thinking about how to move forward with reconciliation in a landscape like the Lower Fraser that has been greatly altered by settler agriculture, it is useful to look critically at the existing framework of Crown laws and regulations that legitimize current agricultural practices and the historical appropriation of the Lower Fraser floodplain for agricultural uses and make this the unquestioned status quo, largely at the expense of Indigenous food security.

The overall objective of the report is to assess and synthesize using an indigenous food security and sovereignty lens, how colonial laws have been used to colonize, displace, and criminalize indigenous food and Indigenous food security from the perspective of agricultural land use in the Lower Fraser floodplain. This will include:

1. Defining food “security/ sovereignty” - western vs indigenous food security/economies, what are the indicators/characteristics.
2. Agriculture and Land – how have laws and policies enabled the occupation and transformation of land for agricultural uses;
3. Survey of ‘environmental’ regulation of agricultural land use;
4. Identify some trade-offs embedded in the existing patterns of agricultural land use in the current context of pollution and resilience to climate change.)

Food Systems: Indigenous vs Canadian settler state

Indigenous food systems

Humans cultures everywhere work with the land, sometimes transforming landscapes completely, to produce food, fibre, and energy (Kanianska, 2016). Land is a basis for food production, be it collecting wild foods, fishing on inland wetlands, hunting in the plains or cultivating crops (Rabbinge, 1993). Throughout human history, land stewardship to produce food has evolved in many ways in different parts of the world; these changes have occurred either voluntarily through adaptation, innovation and change or violently as a means of colonizing territories (Pryor, 2004). The latter is evident in British Columbia as colonial laws and practices introduced settlers with specific European agricultural practices that involved planting large crops of a few domesticated, non-native species and eradicating existing native vegetation, and using large tracts of land to support domesticated animal production, primarily cattle and chickens, and then staying in one place year-round to manage their farms. This European style of agriculture and land transfer to settlers came at the direct expense of forcibly dispossessing Indigenous peoples in the Lower Fraser from their territories, and reshaping the landscape in a way that made it difficult or impossible for Indigenous food production. European forms of food production were imposed on indigenous people, punishing, and criminalizing their traditional ways of food production, allowing them only to depend on subsistence farming. That has continual effects on policies pertaining to food production and negative health outcomes for indigenous communities(Joseph & Turner, 2020; Turner & Turner, 2008).

Indigenous cultures portray their food systems holistically, including spirituality, life, and culture, as well as biotic and abiotic components in the ecosystem and the interconnections between them. The food systems of indigenous peoples involve a combination of human agencies (knowledge, strategies, techniques, values, sharing) to produce, generate, utilize, access, make food available and stable, and manage food that is nutritious, culturally and spiritually fulfilling, and sustainable for future generations see Figure 1(FAO, 2021).

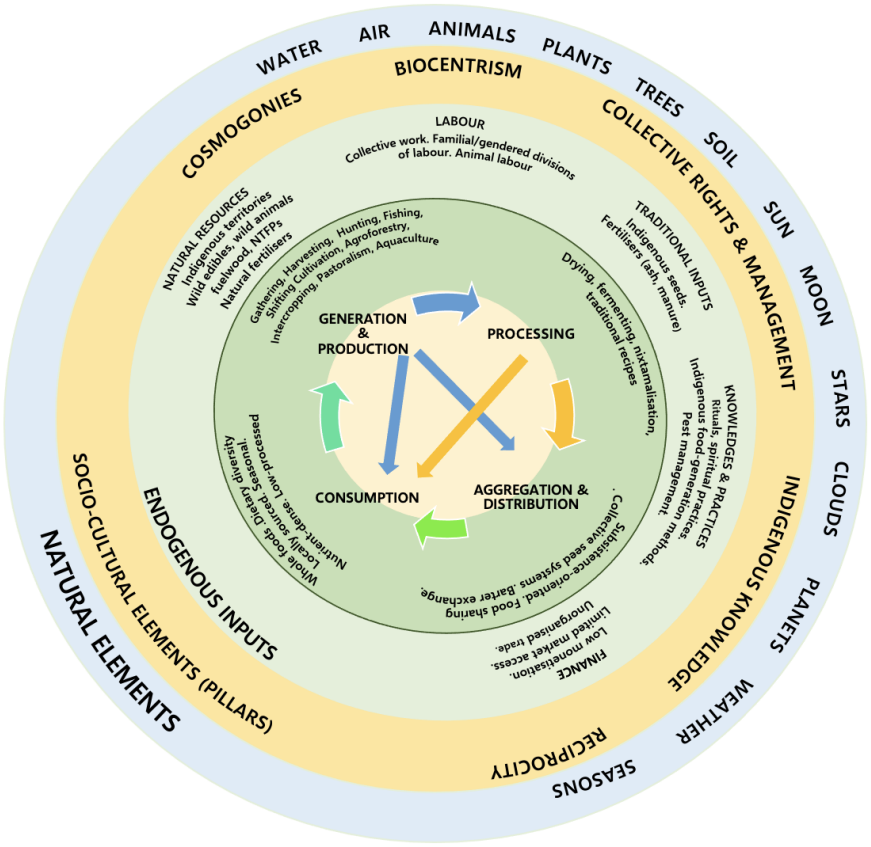


Figure 1 A food systems wheel for Indigenous Peoples' food systems (FAO, 2021)

Traditional food systems remain foundational to First Nations. Traditional food has multiple core values for First Nations. These include cultural, spiritual, and traditional values, enhanced nutrition and health, food security, ways of knowing and an ongoing connection to Land and water (Kuhnlein & Chotiboriboon, 2022; Kuhnlein & Receveur, 1996). Traditional food systems are also part of Indigenous economies see Figure 2. The loss of Indigenous traditional knowledge is also connected to the loss of traditional food sources and the practices associated with them, and the fact that many of these natural sources of food have been exploited or harmed. These practices have led to poor health outcomes(Kuhnlein & Chotiboriboon, 2022; Kuhnlein & Receveur, 1996).

Figure 2 "Why is Eating Traditional Foods Important?" pyramid. By Jared Qwustenuxun Williams

Numerous reports indicate that indigenous people in Canada have the region's highest rates of food insecurity; those have been documented (Elliott et al., 2012; Robin et al., 2021; Soma et al., 2021). While some efforts have been made to understand Indigenous food systems and how indigenous people relate to food, a missing piece is how current regulations still perpetuate colonial rule, particularly when it comes to land, and the impacts on food systems (Blue Bird Jernigan et al., 2021; Elliott et al., 2012).

Example of holistic land management: The Secwepemc practiced intensive land management regimes, which ensured a sufficient supply of needed items, not only for present needs but to ensure the resources were available for future generations. One example is landscape burning to provide better and more plentiful root crops. Survival was also dependent on ecological knowledge and cultural skills being passed down by oral tradition to the following generations.

Aya talks about her community and food:" In my culture, when the tide went out, dinner was served because that's where the food is. And now, with all the resource raping of our Earth, when the tide goes out, now we got to worry about red tides, we have to worry about whether or not our food sources can get through the rivers, whether or not that we can actually go down to the beaches and actually forage the food that we're so used to being able to do. So, as far as when I grew up and the food was there, we used what we had, and it was very healthy for all the people that were around us. And now, with all the stuff that is changing, our food source is leaving us. It's not there for us anymore and we're getting sicker from eating the food because of all the chemical dumps. The fish can't go up the Fraser River right now to spawn, and salmon is one of the most important things in native culture because the salmon spawning is our main food source." (Soma et al., 2021)

Canada settler state food production systems

From a global perspective Canada is the world's fifth highest total exporter of agricultural and food commodities and is a leading producer of high-quality, safe agricultural and food products (Agriculture and Agri-Food Canada, 2018). Canada is party to several international agricultural organizations, including the following:

- World Trade Organization (WTO)
- Food and Agriculture Organization of the United Nations (FAO)
- International Plant Protection Convention (IPPC)
- Office International des Epizooties/World Animal Health Organisation

Despite these statistics about its agricultural exports, Canada reported that 9.6 per cent of all Canadians had experienced food insecurity in 2020 over the previous 12 months (Government of Canada, 2022). Even more notable is the statistic that most of those experiencing food insecurity are indigenous peoples (University Of Ottawa et al., 2021).

Table 1 highlights several federal Canadian regulations, guides, and policies

Table 1 Regulation for food security in Canada

Name	Description
Food and Drugs Act	The FDA outlines laws on food labelling, advertising and claims; food standards and compositional requirements; fortification; foods for particular dietary uses; food additives; chemical and

	microbial hazards; veterinary drug residues; packaging material; and pesticides
Department of AAFC Act	The Act created the Department of Agriculture and Agri-food, providing for its mandate and functions. This Act becomes the Department of Food and Food Security Act.
Ministry of Agriculture and Agri-Food (Federal & Provincial)	These ministries provide resources for identifying and accessing appropriate agricultural organizations and programs.
National Food Policy Council of Canada Act (The federal government has proposed creating a National Food Policy Advisory Council, with no indication at this point that it will be formally created by legislation)	The objects of the Council are to provide sound advice and research to the Government of Canada on food policy issues in the interrelated fields of agriculture, health, education, social policy, economy, labour force development, environment, transport, fisheries, and any further field deemed applicable, and to ensure the implementation of the right to food as specified under the *International Covenant on Economic, Social and Cultural Rights*.
Safe Food for Canadians Act	An Act respecting food commodities, including their inspection, their safety, their labelling and advertising, their import, export and interprovincial trade, the establishment of standards for them, the registration or licensing of persons who perform certain activities related to them, the establishment of standards governing establishments where those activities are performed and the registration of establishments where those activities are performed
Health Canada	This Act is responsible for setting standards for the nutritional quality and safety of all foods sold in Canada. The Food Directorate, within the Health Products and Food Branch, manages food products' health risks and benefits by evaluating scientific evidence to develop and implement requirements under the FDA and its associated policies and standards. They exercise this mandate under the authority of the FDA, and its regulatory mandate is pursued under the FDR.
The Canadian Food Inspection Agency (CFIA)	Agency is responsible for enforcing health and safety standards outlined in the FDA and its associated regulations. The CFIA's main concern is to mitigate risks to food safety, and the Agency is

	also responsible for administrating non-health and safety regulations regarding packaging, labelling and advertising.
Food Guide Canada	Canada's Food Guide is an eating plan created by Health Canada to help Canadians make healthy food choices.

While it is not the primary focus of this report, it must be observed that the federal government caused further harm to Indigenous peoples in Canada from a food security perspective through the Indian residential school system, by taking children from their homes, families and cultures. Further, the federal government failed to ensure basic nutrition within the residential school system, and it has been shown that this is also directly linked to public health issues experienced by Indigenous nations today. It has also been revealed that Canada's Food Guide, which was originally called "Canada's Official Food Rules" has its origins in a series of horrific 'experiments' carried out by a Canadian public health officer (Mosby, 2013; Mosby & Galloway, 2017)

As described above, federal laws and regulations concerning agriculture are focused on public health, safety, and international agreements and international and interprovincial trade. According to the Canadian Constitution, s. 95, jurisdiction over agriculture is shared between the federal and provincial governments. The Province of BC regulates farm practices, land designation for agricultural use, rules about its acquisition, and provincial marketing (Ministry of Agriculture and Food, 2022).

The rest of this report focuses primarily on agricultural land use regulation in Crown/colonial law in BC as well as the related narrative of colonial food security it supports.

Food Security and Food Sovereignty?

According to Food Secure Canada (Food Secure Canada, 2013):

Food security is a goal, while food sovereignty is a means to achieve food security.

- Food sovereignty: highlights the need for a democratic food system that involves inputs from citizens and producers.
- Food security: is concerned with the protection and distribution of existing food systems.

At the Tlaxcala meeting in 1996, members of La Via Campesina proposed an alternative paradigm towards "food security" called "food sovereignty" as a concept and framework that both challenges the foundations of the current agri-food order and proposes a set of concrete

alternatives for both theory and practice(Carlile et al., 2021; Hannah Wittman, 2011; Patel, 2009). It critiques industrial food production methods, market-based strategies, and food security programs(Carlile et al., 2021; Hannah Wittman, 2011; Patel, 2009).

While sovereignty is a complex concept, it primarily focuses on the related concepts of self-determination and self-governance (Carlile et al., 2021; Hannah Wittman, 2011; Patel, 2009). Food sovereignty prioritizes local and national economies and markets and empowers peasant and family farmer-driven agriculture, artisanal fishing, pastoralist-led grazing, indigenous food systems and food production, distribution and consumption based on environmental, social and economic sustainability. For broader understanding of definitions see annex 1

Food security initiatives adopt limited concepts of justice and rights, which are grounded in distributive justice(Noll & Murdock, 2020). In contrast, food sovereignty movements are characterized by a more holistic approach. In order to effectively combat food system inequality, it is critical to look at these distinct approaches(Noll & Murdock, 2020). Food sovereignty's justice framework has been suggested to encompass and entail a series of justice claims that can help guide the process of creating food security projects (Noll & Murdock, 2020).

Food systems have evolved in Canada. Our paper focused on indigenous food security in Canada through the lens of indigenous food sovereignty. The policy making framework uses food security as the frame to tackle food related issues; however; indigenous peoples insist on the centrality of food sovereignty(FAO, 2021). It is from this perspective that we can begin to gain a better understanding of the power relations that underlie decisions about food security(Hannah Wittman, 2011; Noll & Murdock, 2020; Patel, 2009).

How is food security defined and measured?

Food security, as defined by the United Nations Committee on World Food Security, means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life (FAO, 1996).

In other words, food security is having consistent, reliable access to safe, nutritious food. Food security, according to the UN definition, is determined by four components (FAO, 2008):

- Availability: “Does food exist near me?”
- Access: “Can I get to food easily?”
- Utilization: “Will this food contribute to my health and wellbeing?”
- Stability: “Will food be available tomorrow, next week, or next month?”

Different tools are used to characterize, assess, evaluate, and provide direction on the state of food systems and what it means for a community's food security. This includes assessing the production of agricultural products produced and imported, as well as surveys to determine the consumption of food, e.g. The Household Food Security Survey Module (HFSS). Relying on this approach, which does not directly acknowledge Indigenous peoples' connections to their territories, and the cultural identity embedded in Indigenous food systems means that traditional or 'country' foods are often overlooked when discussing food systems and food security(Elliott et al., 2012).

In Canada, Food guide Canada 2019 is the first time the guide highlights the importance of traditional/country foods for indigenous communities in diets and the health and wellbeing of people(Canada & Health Canada, 2019). While the Agriculture Census is still tracking a range of food metrics (ha of land grown to grow crops/ animals slaughtered etc.), there are still a number of aspects of food that are not being captured; among them are traditional foods produced from natural resources (land and water). This excluding indigenous food economies.

Indigenous nations have been actively fighting for food sovereignty for years and have developed indicators of food sovereignty used to support their communities (Blue Bird Jernigan et al., 2021). A paper by Blue Bird Jernigan et al., 2021 highlights seven indicators that communities can use and explore to better understand their food sovereignty see Table 2. These indicators should be incorporated into current policies to capture food security in the province.

Table 2Food sovereignty indicators (Blue Bird Jernigan et al., 2021)

Indicator 1: Access to Resources
Sub-indicator question/statements used for discussion and to operationalize the indicator: Our community has access to enough farmland, water sources, and natural resources to ensure the production of culturally appropriate foods for the entire community. *The costs allow for small farms to develop and sustain food production in our community.* *Culturally significant wildlife is present in our community and protected from overuse. In our community water sources are kept pollution free and used for long-term agricultural production.* *In our community, there is access to seeds for culturally significant crops that are easily accessible by local farmers. Individuals in our community have the knowledge and skills to grow crops and tend to wildlife.*
Indicator 2: Production
Sub-indicator question/statements used for discussion and to operationalize the indicator: *There are enough food producers within our community to maintain adequate production for the community.* *Food production, from farm to table, is controlled and regulated by the community.*
Indicator 3: Trade

Sub-indicator questions/statements used for discussion and to operationalize the indicator: In our community food prices are fair and affordable for all community members. *Food markets are profitable enough to maintain long-term success.* *There is a balance of food items that are coming into the community and going out of the community.*
Indicator 4: Food Consumption
Sub-indicator questions/statements used for discussion and to operationalize the indicator: *In our community, we maintain sufficient access to affordable healthy foods and minimize processed food and fast-food consumption.* *All community members have sufficient food access, and food distribution systems are in place to provide for low-income individuals.* *In our community, adequate food options are available to all community members to ensure the health needs of each individual are met.*
Indicator 5: Policy
Sub-indicator questions/statements used for discussion and to operationalize the indicator: *In our community, policies are in place to ensure local farms are able to access the resources needed to maintain production, and the over-use of natural resources are regulated.* *Policies are in place in the schools in our community to ensure school menus are nutritious; the schools are making efforts to provide healthy and traditional foods to children.* *Our community has policies in place to ensure sustainability of food resources, wildlife, and natural resources that are culturally significant.* *Food councils are in place within the towns in our community to investigate food production, food security, and health.*
Indicator 6: Community Involvement
Sub-indicator questions/statements used for discussion and to operationalize the indicator: *Our community has many knowledge holders, such as elders, who are able and willing to pass on knowledge.* *In our community, we provide pathways to transfer food knowledge and restore traditional food practices. Educational activities and programs are in place to pass on traditional knowledge, nutrition, and food practices to youth in our community.* *Our community supports women's rights and equality to promote wellbeing and traditional agricultural practices among youth.*
Indicator 7: Culture
Sub-indicator questions/statements used for discussion and to operationalize the indicator: *Culturally appropriate foods are prioritized in our community.* *The crops and wildlife needed for cultural foods and traditions are available and affordable to all in our community.* *There are adequate opportunities for traditional ecological knowledge to be shared amongst the community.*

Compared with the UN definition of food security above, it can be seen that the indicators of food sovereignty in this example address the connections of Indigenous peoples to the lands and waters in their territories, their capacity to produce culturally appropriate foods for the entire community, the critical role of traditional knowledge and knowledge-holders, as well as the importance of having direction over policies that assure access and sustainability of resources from the land and water. While the indicators in this example have not been developed by Indigenous communities in the Lower Fraser, and so do not necessarily reflect their own specific economic, cultural, environmental and public health objectives related to food security/food sovereignty, the point to be made here is that there are a range of key considerations about food security that are not addressed in the UN definition but that are likely of significant or even central importance to Indigenous communities.

In June 2019 the federal Ministry of Agriculture and Agri-Food launched Canada's first-ever food policy in Montreal (Agriculture and Agri-Food Canada, 2019). The policy includes the development of a framework for cross-governmental action. The priority outcomes for this policy are (Agriculture and Agri-Food Canada, 2019):

- community resilience,
- connections among food actors,
- health, sustainability,
- *self-determined Indigenous food systems* [emphasis added] and
- inclusive economic growth

It is unclear how the new food policy will work within the current federal and provincial regulatory framework. As described below, current regulations not only favour European-based food systems, but essentially erase Indigenous food systems and practices from the landscape.

BC has currently defined food security and the indicators it is using to evaluate food security in accordance with the UN definition. In 2006 it established a working group on "Indigenous food sovereignty" that appears to primarily support information sharing among Indigenous communities. It is not mentioned in the overarching policy framework around food security or sovereignty for the Province(Ministry of Health British Columbia, 2014)

Food production and Food Security in British Columbia

Food and agriculture – how BC defines its mandate

The Ministry of Food and Agriculture supports and encourages agricultural development in British Columbia. It is responsible for over 40 pieces of legislation and involves a wide range of services, economics, marketing, extension, and resource management, see Table 3. Farming is seen as

contributing to the well-being and economic stability of local communities(Ministry of Agriculture and Food, 2022). (

Planning for Agriculture has been seen for (Ministry of Agriculture and Food, 2022):

- Necessity of food – BC has a responsibility to ensure the security of its local food supply;
- Food security must be founded on the sanctity of our 'food land' and resources and responsibility to have supportive policies
- Sustainability of Land

In general Province of BC policy emphasizes the scarcity of land available for agriculture in the Province, the importance of protecting land from demands for urban, industrial and other uses, and the Province's role in protecting farm practices that might otherwise be restricted by local governments as nuisances from the perspective of neighbouring residential areas (Ministry of Agriculture, Food and Fisheries, 2020).

Table 3 Regulations for food production B.C

Name	Description
Agricultural Land Commission Act (BC)	Responsible for administering the Agricultural Land Commission and managing the Agricultural Land Reserve. The goal is to preserve agricultural land; encourage farming in collaboration with other communities of interest; and encourage local government, First Nations, and the provincial government to enable and accommodate the use of agricultural land for farming
Farm Practices Protection (Right to Farm) Act	Protects farmer's right to farm and not be subject to urban sprawl, as well as protection from nuisance complaints (odour, flies, dust, noise, chemical spraying) from neighbouring residents, . "Farm operations" include: ● Growing, producing, and raising animals or plants ● Clearing, draining, irrigating, or cultivating land ● Any agricultural activity over agricultural land ● Plantations for speciality wood crops ● Turf production ● Aquaculture ● Raising or keeping game ● Processing or direct marketing by a farmer of own products
Livestock Act	Includes a process for establishing livestock districts-areas where livestock may be at large, and pound districts – areas where livestock at large are

	subject to capture. The Act also outlines when a livestock owner may be liable for damages and issues regarding trespass.
Range Act	Regulates the use of range lands in the form of grazing licences, grazing permits, hay cutting licences and hay cutting permits.
Milk Industry Act	The Milk Industry Act and Regulations require that dairy products be produced in dairy plants that conform to the provisions of the legislation, including being in possession of a valid operating licence.
Animal Health Act	Aims to protect the health of domestic farm animals destined for human consumption. It applies to both domestic and wild animals. However, in practice, it applies overwhelmingly to domestic animals.
Prevention of Cruelty to Animals Act	Outlines required standards of care for animals. Under the PCA Act, it is an offence for a person responsible for an animal to cause/permit it to be in distress.
Code of Practice for Agricultural Environmental Management (regulation under the Environmental Management Act)	Regulates the storage and use of manure, other agricultural by-products, and materials in agricultural operations. The AEM Code applies to all agricultural operations in British Columbia, from small hobby farms to large commercial operations. An agricultural operation includes raising or keeping livestock, poultry, or insects or growing and harvesting agricultural products on non-residentially zoned land. It also includes the activities associated with these operations.
Natural Products Marketing (BC) Act	Provisions relating to the marketing of natural products.

The Province of BC has promoted some aspects of environmental management for agricultural lands, but this has largely been through voluntary programs like the Environment Farm Plan, with limited regulation such as the Code of Practice for Agricultural Environmental Management, which largely deals with requirements for liquid and solid waste management.

Colonial origins: Designation of land for agricultural land use in British Columbia to assure settler food security

In the late 1850s and 1860s, then-Governor James Douglas was struggling to develop the new colony of British Columbia as a self-supporting entity, and to attract the kind of settlers that would fulfil his vision(Begg, 2007). The Fraser gold rush, beginning in 1858 had attracted around 30,000 miners, primarily Americans, but for Douglas the miners were a disruptive force, creating conflict with Indigenous peoples in the region and raising the specter of American annexation. “The regular

settlement of the country by a class of industrious cultivators is an object of the utmost importance to the colony which is at present dependent for every necessity of life, even to the food of the people, on importation from abroad."(Mikkelsen, 1950) The fact that colonization was in the process of disrupting and devastating the Indigenous economies and food systems that had sustainably supported much larger Indigenous populations in this region and along the Pacific Northwest coast for thousands of years was absent from this narrative (Kuhnlein & Receveur, 1996; Trosper, 2009). Douglas had already begun the process of confining Indigenous communities to reserve lands, and the reserves were greatly reduced in size by Joseph Trutch, who became Chief Commissioner of Lands and Works in 1864(Harris, 2022).

Canadian policy in Ottawa also saw an intrinsic connection between civilization, generally, and European-style agriculture, meaning that Indigenous peoples should 'stay in one spot' and adopt 'agricultural pursuits' (Carlson & McHalsie, 2010).In practice reserve lands and conditions in BC, as elsewhere, were often not conducive to agriculture, and there were legal and practical barriers for Indigenous people who wished to farm outside reserve lands, in contrast to the advantages available to settlers(Carlson & McHalsie, 2010). Thus, Indigenous peoples were dispossessed of the lands and waters that had previously assured their food security, and then restricted from finding ways to adapt to colonial rules and practices.

From a crown legal perspective, the Land Proclamation of 1859 made by Douglas had asserted Crown ownership of all the land in British Columbia and established procedures for parcels to be transferred to private owners. To speed up the occupation by settlers and conversion of land to farming, an 1860 Proclamation introduced "pre-emption" as an alternative to selling land to settlers. Instead, a settler could eventually obtain title to 160 acres of land if they farmed it for a prescribed time and established a homestead(Begg, 2007; Cail, 1956). When Indigenous people began to make use of this provision to pre-empt plots along the Fraser River, the regulation was revised so that pre-emption by Indigenous people could only occur with the express consent of the Governor. There is no evidence that the pre-emptions by Indigenous people that did occur were ever formalized with Crown grants of land(Cail, 1956).

By 1871 it was estimated that settler pre-empted lands being cultivated in the colonially designated districts of New Westminster and Victoria totalled 13,384 acres(Begg, 2007; Cail, 1956). The harvest consisted of potatoes, turnips, grain and fodder cattle(Cail, 1956). In contrast, colonial laws and policies criminalized and excluded Indigenous harvesting, gathering, hunting, fishing, and growing (Joseph & Turner, 2020; Robin et al., 2021). Pre-emption laws were eventually superseded by the BC Land Act and the Agricultural Land Reserve, but these laws retained and entrenched the system of private farm ownership and colonial agriculture, and maintained, to the present, the

colonial narrative of food security being not only assured, but only possible through the use of the landscape in this way.

In the Lower Fraser, settler agriculture occupied and also vastly altered the landscape, from both a terrestrial and aquatic perspective. Farmland was created by clearing vegetation and by diking and draining of wetlands, including by 1924 the large water body of Sumas Lake, whose minimum extent was estimated to have been 11,600 ha (Brown, 2002). The many creeks and streams of the vast Lower Fraser floodplain and delta, which once formed a vast network, were also disconnected(Finn et al., 2021).

Timeline of laws that formed Agriculture land use in BC from 1858 – 1970

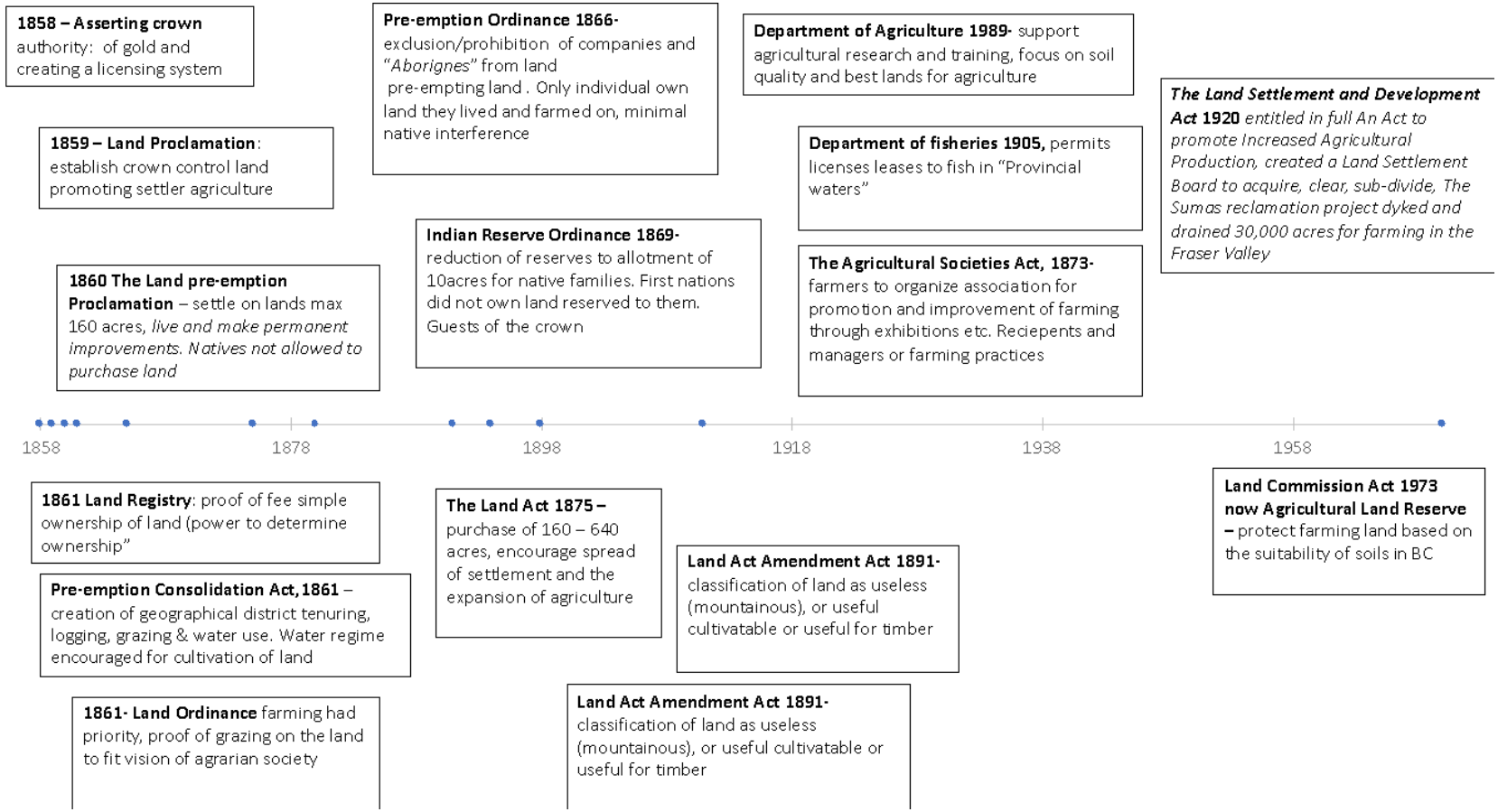


Figure 3 Timeline of regulations agricultural practices in BC 1858-1970

(Begg, 2007; Cail, 1956)

The Agricultural Land Commission & Agricultural Land Reserve (ALR)

By the 1970s approximately 6,000 ha of agricultural land was being lost to urban development in BC each year, with much of this in the Lower Mainland(Obidi, 2020; Runka, 2006).

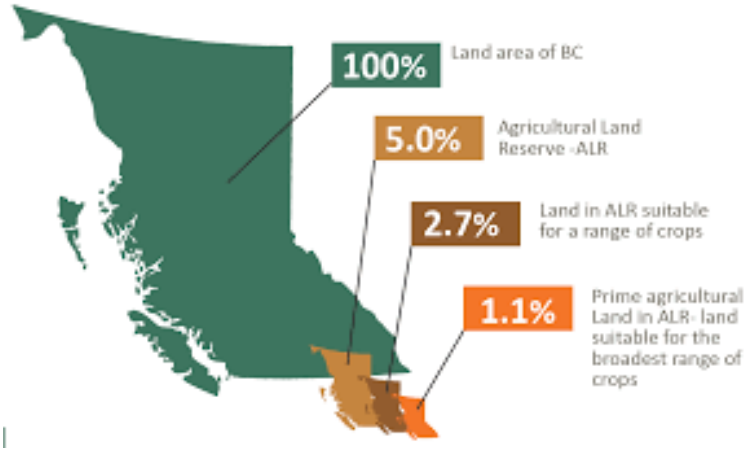
The Land Commission Act of 1973 was intended to preserve and protect existing agricultural land from urbanization. It involved designating land for agricultural purposes (the Agricultural Land Reserve) across the Province, establishing a set of regulations specifically for ALR lands, and creating a Commission charged with their management.

To assist in designating land for the ALR, the provincial Ministry of Agriculture prepared maps using the Canada Land Inventory and its assessment of the "natural" characteristics of the land, primarily its soil and the climate. The designation was meant to be objective, looking at technical characteristics of the land itself rather than variables related to market and other socioeconomic conditions (*ALR History - Provincial Agricultural Land Commission*, 2022)

The technical criteria that determined which lands were to be included in the ALR were based on a snapshot of existing conditions in relation to typical settler agriculture practices. Areas, where wetlands had been drained, had soils that were characterized as highly suitable, without considering the colonial history or practices that may have produced these conditions, or measures that might be needed to maintain the conditions going forward, such as diking, draining and irrigation. There was no assessment of how the land came to be used as agricultural land, and ways that the land might have been managed previously, and productively, by Indigenous peoples. Further, the lands that were included in the ALR were considered to need protection from other settler activities including urbanization and industrialization, but the vulnerability of the same lands to natural events, such as flooding, were not considered.

The vision for the ALR reflects the colonial view that 'agriculture', with its reliance on a small number of domesticated animals and plants, is essential, and in fact the only way, to secure food security for both British Columbia and its export markets, echoing the formulation first advanced in the region by Governor Douglas. Thus, the designation of the ALR lands "limits the use of land within the Reserve to agriculture and other uses that do not diminish the capability of the land to produce crops."(B.C. Land Commission, 1975).The Agricultural Land Reserve Use Regulation specifies that there can be "non-farm uses" on ALR lands, such as parks, recreation sites, wildlife management areas (ss. 16), and these uses are permitted within the ALR, but not in any way required, and they occupy only a small portion of ALR lands.

The ALR in the Fraser Valley and elsewhere includes lands that are important for freshwater and coastal ecosystem health, and species like salmon that depend on those ecosystems. By protecting the conversion of lands to urban and industrial uses, the ALR has indirectly provided "ancillary" (and unintended from the perspective of the regulatory regime) benefits to aquatic ecosystems within its boundaries and beyond, through waterway connections(D. M. L. Rosenau & Angelo, 2009; M. L. Rosenau et al., 2005).Yet these benefits are eroding over time, due to a lack of regulatory oversight combined with changing agricultural practices. In some cases, ALR lands are regulated to a lower standard of environmental protection, than adjacent urban lands. For example, the Riparian Protection Act requirements for riparian setbacks do not apply to ALR lands. As well, the incidental, ancillary benefits of the ALR for ecosystems has lessened over time with the intensification of industrial agriculture practices that lead to greater use of pesticides and fertilizers and more comprehensive cultivation of land(Hall & Schreier, 1996; D. M. L. Rosenau & Angelo, 2009; M. L. Rosenau et al., 2005).



ALR maps were based on soil surveys, the Canadian Land Inventory (CLI) agricultural capability data and proposed urban expansion areas on lower capability lands.

Figure 4 ALR reserves in BC*(Harmer, 2020)*

Table 4 Soil Classification ALC

Soil Class based on CLI	Description of class
1-4 (highly suited for Agriculture)	If not already developed these areas were included in the ALR, both Crown and private land;
5-6	Areas where land use patterns indicated that such Land could effectively be used for agriculture in conjunction with Class 1 to 4 land,

	such as spring and summer grazing ranges in ranching areas of the province:
7	Areas not suitable for agriculture but where exclusion of such Land might have allowed undesirable intrusion or incompatibles uses into agricultural areas

The management of ALR lands is overseen by the Agricultural Land Commission (ALC). Section 6 of the ALC Act states the core functions of the ALC:

1. **The following are the purposes of the commission**	a. to preserve the agricultural land reserve b. to encourage farming of Land within the ALR in collaboration with other communities of interest: c. to encourage local governments, First Nations, the government and its agents to enable and accommodate farm use of Land within the ALR and uses compatible with agriculture in their plans, bylaws and policies.
2. **The commission, to fulfil its purposes under subsection (1), must give priority to protecting and enhancing all of the following in exercising its powers and performing its duties under this Act:**	a. the size, integrity and continuity of the land base of the ALR; b. the use of the ALR for farm use.

Today there is around 72,000 ha of land in the ALR in the Fraser Valley Regional District, including the lake bed of Sumas Lake, and approximately 43,000 ha of that land was being farmed or used for related purposes as of 2013 (Ministry of Agriculture (BC), 2013).

While food security is the underlying justification for the ALR system, there is nothing in the regulatory scheme itself that requires monitoring or assessment of whether the regulations are achieving this aim, from a colonial perspective or otherwise. At the same time, it has been noted that the Lower Fraser region has significant levels of food insecurity, higher than the levels for Canada as a whole(Kowalski et al., 2021).

Following the November 2021 floods there was an understandable emphasis on recovery for farmers and farms that had been affected, but the examination of colonial land use regulation in this report, and the assumptions about food security upon which it rests, suggest that a more nuanced conversation about the long-term management of the ALR lands is needed for future planning and regulation in the region.

Food Security in BC – Do other laws and policies compensate for the lack of consideration of food security in ALR law and regulation?

In BC, food security coordination efforts are under the Ministry of Health (Ministry of Agriculture and Food, 2022), (Ministry of Agriculture and Food, 2022)with the main goal of Healthy Living and Healthy Communities, through increased food security for the population of B.C. This includes legislative and policy direction based on the following (Ministry of Health British Columbia, 2014), which are only indirectly linked to the management of ALR lands:

- Public Health Act
- Food Safety Act,
- BC's Guiding Framework for Public Health,
- The Food Donor Encouragement Act.

In addition to the Ministry of Health:

- The Ministry of Agriculture's role – The BC Agriculture Strategy lists health as a priority area.
- The Agricultural Land Commission – to preserve agricultural land

Other important Ministries highlighted by Ministry of Health with respect to food security are (Ministry of Health British Columbia, 2014):

- The Ministry of Education
- The Ministry of Environment and Climate Change Strategies
- The Ministry of Finance
- The Ministry responsible for housing
- The Ministry of Social Development and Social Innovation
- The Ministry of Children and Family Development
- The Ministry is piloting community poverty reduction strategies.
- The Ministry of Transportation and Infrastructure

It is evident that ideas about food security reflected in laws and policies from the 1800s persist today. Agriculture is promoted as the primary way to produce food, and other food production systems have limited or no support from any Ministry. A more holistic consideration of how food is produced and consumed would involve several ministries working together to create legislation and programs. For example, exploring opportunities to E.g. Ministry of Sports and Recreation is to be included in the list of ministries working toward eradicating food security in B.C., ensuring that fishing permits differ for recreation vs food security. Looking for case studies that work in different regions to ensure the resources work or all in B.C.

B.C.'s Local Government Act makes provision for municipalities and regional districts to develop official plans for portions of their jurisdictions – often referred to as neighborhood or local area plans. The Agricultural Land Commission (ALC) and Ministry of Agriculture actively support local government initiatives to develop Agricultural Area Plans.

An Agricultural Area Plan focuses on a community's farm area to discover practical solutions to issues, identify opportunities to strengthen farming, and ultimately contribute to agriculture and the community's long-term sustainability. These plans are often referred to as an Agricultural Area Plan or Agricultural Area Strategy.

The ALR has been successful in preserving and controlling urban sprawl. However, in 2022 it is essential to look at expanding the law beyond just preservation. For instance, what makes land classified as agriculture or food, and for whom (BC residents, exports)? Should the criteria include soil properties, or should this also expand to climate and economic limitations, cultural importance, ecological importance, inland water bodies for food (e.g., wetlands) and nutrient/food secure foods?

Semá:th

The introduction of livestock in the Lower Fraser Valley by white settles in the late 1800s resulted in the conversion of the landscape(Reimer, 2018). The economic, environmental, and social costs are incomprehensible and cumulative adverse effects of these changes(Carlson & McHalsie, 2010; Trosper, 2009).

This report will examine the Semá:th Xo:tsa also known as Sumas Lake located in Abbotsford – The lower Fresher Valley. This lake was important Semá:th nation, part for the Stolo. Carlson & McHalsie, 2010; Reimer, 2018 have documented food sources that have been lost, diminished in numbers, and urgently need restoration, rehabilitation, conservation, and preservation.

Semá:th Xo:tsa

Over 8,000 years ago, receding glaciers formed Semá:th Xo:tsa. Semá:th Xo:tsa filled the area between Sumas Mountain and Vedder Mountain. The Sumas had been inhabited by humans since 400 BC by the Sema:th people, with a large community living there in 1840.

Sema:th First Nation territory extends from Mount Baker to the Fraser River, encompassing the watershed of the Sumas River, Nicomen Island and Deroche on the opposite bank. The primary village of Quqwe'uk (Kilgard) was strategically located to provide a refuge from summer floods due to its location on high ground overlooking the lake. Two smaller sites were located along the Whatcom Trail and at the mouth of the Sumas River, the Old Village.

Semá:th Xo:tsa wetland environment provided a diverse array of resources, including salmon, sturgeon, waterfowl, elk, and deer. The Stó:lō following holistic land stewardship practices such as, picking berries, and harvesting roots, through selective burning, fishing sturgeon, salmon and hunting ducks, waterfowl, and other game. See figures below and Annex 2 for fauna and flora found in this ecosystem.

[1]

Figure 5 *Indian Potato Sagittaria* Latifolia (Wapato)

Figure 6 White Sturgeon

[1] Image of flower https://nativefoodsnursery.com/indian-potato/ and image of Indian potato https://centeroftheweb.ecrater.com/p/16394507/wapato-duck-or-swamp-potato-arrowhead,;White Sturgeon https://seahistory.org/sea-history-for-kids/white-sturgeon/ ; Ruddy Duck: https://naturecanada.ca/discover-nature/about-our-birds/the-ruddy-duck/

Figure 7 Ruddy Duck

The draining of the lake a timeline (Reimer, 2018):

- 1878: The Sumas Dyking Act was passed after farmers threatened by regular flooding of the lake and surrounding rivers pressured the government to resolve the issue.
- 1907: The British Columbia Electric Railway plans to lay railroad tracks between New Westminster and Chilliwack. The railway favors draining the lake because it would enable the railway to lay tracks on level ground.
- 1917-1918: The land settlement board proposes a system of canals, pumps, dams, and ditches to drain the lake.
- 1920: A $1.5 million project is approved by the provincial government. This increased cost was borne by farmers through increased taxes, which resulted in a cost of $3.7 million-nearly double the initial estimate.
- 1923: The Fraser River is pumped with water from Sumas Lake by means of newly built canals and pumps.
- 1924: Sumas Lake became Sumas Prairie when the lakebed dried out, resulting in 33,000 acres of farmland.
- 1924-25: Land is sold by the government, but prices deter potential farmers; a marketing campaign is initiated.
- 1981-83: Construction of a new pump house and dam, which continues to prevent flooding on Sumas Prairie.

A long and costly process of draining the lake led to expensive agricultural land being purchased by companies for the purpose of growing hops and tobacco, not food products as originally promised, for small-scale farmers(Reimer, 2018).

Today, the Sumas prairie former Semá:th Xo:tsa is currently farmland,. this land area is protected by the ALR and is a big contributor to the GDP of Abbottsford and BC(Ministry of Agriculture (BC), 2013). Though drained the lake is still part of the watershed and the agriculture practices occurring have direct and indirect negative impacts on fish habitats. High levels of metals, pesticides, and other contaminants of concern, and lower levels of life-giving dissolved oxygen were documented by water analysis carried out on the plains after the flooding (Ross et al., 2022).

The table 5 below highlights some of the farms currently located and the images below give an indication where the lake would have been and what is currently being farmed. It is also during the flooding as indicated by Figure 11 as a result of failed pumps lake was forming once again.

Table 5 Farms found on drained Semá:th Xo:tsa

Farm Name	Type of Farm/ Activities.
Graham Dairy Farms	Dairy
Sahota Farms	Fruits Vegetables
Stateview Farms Ltd	Crops
Poplar Farms Ltd.	Poultry Farm
Ripples Estate Winery	Winery, Event Venue, Garden, Tourist Attraction, Wedding Venue
TNT Hay Sales	Hay
Lakeland Flowers	Flowers
U Pick Tulip	Flowers
Bos Sod Darms	Sod (Turf)
Sandhu Produce	Strawberries, Zucchinis, Blackberries, Blueberries And Peas.
Bright Meadow Farms	Poultry And Eggs,
Ritchie-Smith Farms Ltd	Livestock
Wisbey Farms	Fruit And Vegetable Markets, Nsk
B.C. Blueberries Farm Ltd	Berry Crops

There have been discussions of lake back/ lake resurgence by the nations after the flooding that occurred in Nov 2021(Gies, 2022; Government Of Canada, 2021; Luymes & Hoekstra, 2022; Martin et al., 2022; Olsen, 2022). These are important calls for reconciliation. It is important to note that indigenous communities are calling for peaceful co-planning on the way forward. As recently quoted by Chief Dalton(Olsen, 2022)

"We don't want to do it in such a way that would force people from their homes," Semá:th First Nation Chief Dalton Silver told The Current. Silver, though, thinks there may be support for at least a partial restoration of Sumas Prairie.

Planning with and not against floodplains and water bodies have been proposed. Nature-based solutions, not technical barriers such as water pumps and diking, are cost-effective and have numerous benefits, such as mitigating floods and co-existing with wildlife. These are some of solutions proposed and policies and laws will be needed to support such a transition.

Figure 9 visual of the Lake today if it existed

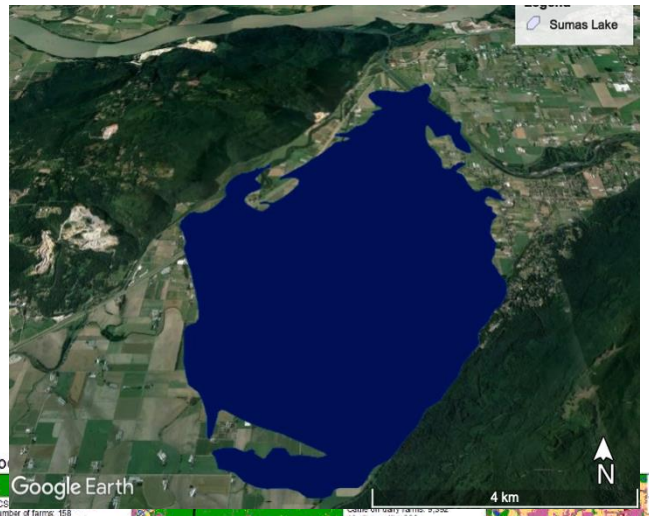
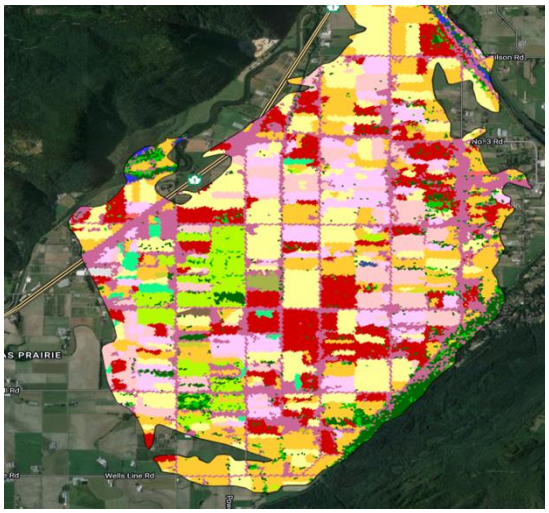


Figure 8 Sumas prairie

Figure 10 **Land Use Classfication of farming activities**



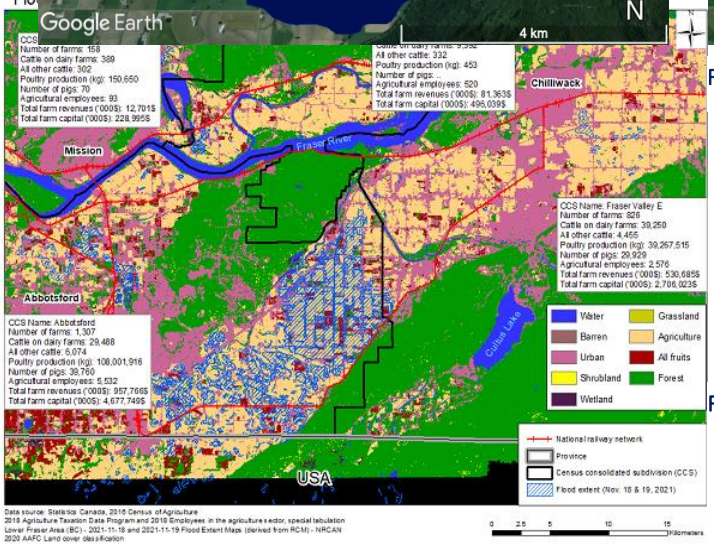
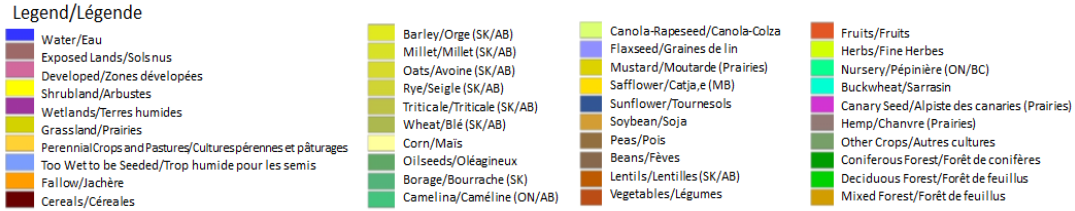


Figure 11 1 Flood extent in the Lower Fraser Valley

BC(Government Of Canada, 2021)



[2] https://dges.carleton.ca/courses/IntroSAR/GUEST-lecture4a_Fisette_Aug2019_CropInv_v3.pdf legend for Agriculture Land Use from satellites

Conclusion & Recommendations

The laws, regulations and policies governing food production in British Columbia and in particular the Lower Fraser carry the legacy of colonization into the present, and understanding their origins, embedded assumptions, and current application is highly relevant in 2022 in the context of reconciliation with Indigenous peoples who have been harmfully affected. These laws and policies dispossessed Indigenous peoples of their territories and transferred them to settler farmers. Ultimately the Agriculture Land Reserve legally entrenched settler "farm uses" on lands in the Fraser Valley (and elsewhere in BC) at a landscape scale. While this designation had some benefits from an environmental perspective and prevented the conversion of these lands (and waters) to urban and industrial uses, it has embedded the settler vision of food security in law and practice in a way that simply equates food security with existing farm practices. This is not helpful in exploring what food security means in the context of decolonizing dialogue and practice around food security, nor is it helpful in the related investigation of food security in a changing climate, where existing farm practices may not be sustainable.

Further, mainstream definitions of food security also focus on access to food in an unqualified way, without investigation of the type of food or where it comes from, and cultural practices and connections to the land and water and helps to avoid looking more deeply at the current laws and policies related to agriculture, including in the Fraser Valley.

The report also notes how laws have not just displaced, but actively criminalized traditional ways of food production, trade, and consumption, up to the present.

While the ALR system has entrenched colonial ways and thinking in relation to food security in laws and policies governing land use, its relatively self-contained legal framework also offers opportunities, now, for significant change. In line with the Declaration on the Rights of Indigenous Peoples Act (British Columbia, 2019), we suggest that new directions for laws pertaining to food, including the ALR could consider:

- Shifting the management of agricultural lands and the ALR to the management of "food lands" and including criteria to include indigenous ways of knowing—noting the co-location of ALR lands with lands that are important for food security from an Indigenous perspective;
- Recognizing the structural causes of food insecurity by addressing causes through policy change within government and promoting more holistic approaches across provincial ministries;
- Integrating indigenous food security into land use planning objectives at the local and regional level to implement DRIPA and also improve environmental sustainability, through the participation of Indigenous governments in related planning and decision-making;

- Actively restoring agricultural lands to food lands including riparian areas, reconnected and restore waterways, and water bodies such as Sema:th Lake.
    -

We hope that these suggestions open a door for conversation and designing and planning for food systems that are equitable, diverse, healthy, and sustainable.

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Annex 1: Food systems definitions clarified

Table 6 .Food sovereignty relation to Agroecology, Right to food, and Food justice (Carlile et al., 2021; Hannah Wittman, 2011)

	Food security	Food sovereignty	Agroecology	Right to food	Food justice
Widely used definitions	When all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.	The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.[14]	The integrative study of the ecology of the entire food system; A science, practice and movement[31]; an approach to farming that maximizes ecological processes and does not degrade the natural resource base.	The right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear.	The right of communities everywhere to produce, process, distribute, access, and eat good food regardless of race, class, gender, ethnicity, citizenship, ability, religion, or community.[32]
Background and context	High level meeting in 1996 (World Summit) used to address food hunger	Originated amongst small-scale farmers, primarily in the global South, and draws on a history of peasant agrarian political action. First declared on the global stage at the 1996 World Food System summit.	Developed as a science primarily in the USA and Europe in the early 1900s, and as a movement and practice in the global South in the late 20th century. Particularly	Though it was recognised in 1948 in the Universal Declaration of Human Rights, the right to adequate food, which aligns more with the FSM, surfaced with the position of the United	Emerged in urban contexts, primarily in the USA, and builds on racial justice movements and urban community organising.

			Latin America, building on existing practices of smallholder farmers.	Nations Special Rapporteur on the Right to Food in 2002, which reports to the Human Rights Council and to the UN General Assembly.	
Approach	Food access/security through intensive production based on principle of comparative advantage and distributed through market mechanisms. Increase positive trade balances through increased exports of agricultural commodities. Economically successful communities will invest in infrastructure to improve community wellbeing (e.g., hospitals, schools).	Aims to transform, rather than work within, political economic structures; Takes a flexible, rights- based approach, highlighting the rights of 'peoples, communities and nations', and particularly of 'rural peoples and producers', Prioritises 'bottom-up' and democratic ways of organising; Engages in political campaigns to influence global trade and agriculture policies; Speaks out against political, economic and social injustice; Promotes environmentally sustainable food production, primarily through use of agroecology.	Agricultural production practices to increase their control over their own production and livelihoods (e.g., cover crops, green manure, intercropping, agroforestry, biological control, resource and biodiversity conservation), by allowing them to reduce their dependence on global markets for the purchase of external inputs; Share knowledge through farmer-to-farmer teaching.	Primarily enforced and implemented in a 'top--down' manner by international actors and focuses specifically on individual rights; Has also gained traction amongst community food activists.	Examines the structural roots of economic and racial disparities that impact disparate health outcomes and access to resources including land and credit; Prioritises local level practice- oriented work to ensure better access to healthy food for minority urban communities.

Relation to 'food sovereignty'	An alternative paradigm		Seen as a 'twin pillar' and the practical method for achieving food sovereignty at the scale of the farm[10] and the food system.[33]	Definitions are closely aligned; however FS proclaims rights of 'communities and nations', not only individuals, and points towards particular vision of food system by proclaiming right to 'safe, healthy and ecologically sustainable production'.	Emerged in different context and prioritises local or regional, rather than global-scale work, but largely seeks to defend similar principles to FSM.
Membership	FAO, Governments, Cooperation's	Peasants; family farmers; landless people; rural workers; migrants; youth; fisherfolk; pastoralists; Indigenous Peoples; environmentalists; women's organizations; trade unions; NGOs.	Farmers, farm labourers, activists.	All individuals (in theory).	Marginalised urban communities; Black and minority ethnic groups; Indigenous peoples; Food system labourers across the supply-chain.

Annex 2: Mamele'awt Indigenous Education Centre; Indigenous Centre 2019[3]: Some Traditional and Contemporary Uses of Plants found on Stó:lō Territory

Tree / Plant	Part of the tree or plant	Uses
Alder (xéyth'elhp) 	Wood	The tree was cut in the spring or summer while the wood was still green –smaller pieces of the wood were carved to make eating utensils (spoons, bowls etc.). Alder wood was cut and allowed to dry for four months before it was used to cook salmon.
	Bark	In the spring, bark was stripped from the Alder tree. One of the uses for the Alder bark was to boil it with the fish net until the net turned a dark red. When this was done, the fish would not be able to see the net in the water.
		When Mountain goat wool was boiled with the Alder bark the wool turned red. The now red wool was used for weaving blankets for respected leaders (Siya:m).
	Leaves	Were stripped from the tree in the spring and used as dye for bark baskets When cherry bark was soaked with alder leaves for 6 months, the cherry bark turned black. This black cherry bark was then used to weave the family's pattern on baskets.

[3] https://indigenous.abbyschools.ca/sites/default/files/1.%20%20Stolo%20Plant%20Uses_0.pdf

Blackberries (trailing) (skw'ő:lmexw) 	Berries	The berries were picked in early fall. The berries were eaten fresh or dried in the sun to eat in the winter or during a long journey.
	Leaves	Leaves were picked in the summer. The leaves were dried and used in a tea when people had a stomach ache.
	Roots	Roots were dug up in the fall and boiled with the vines to make a tea when people suffered with diarrhea.

Bracken Fern (ptákwen) 	Shoots	The shoots were steamed and boiled to eat.
	Fronds (triangular with the "leaves" growing in rows from the stem)	In the summer and fall the fronds were used to clean fish and to line cooking pits. Sometimes the fronds were used to make soft mattresses.
	Roots	In the fall roots were dug up and roasted in coals. When they were cooled, the roots were peeled and the inner part was pounded to a fine powder to be used on soup and stews.
Broad Leaf Maple (q'emő:lhp) 	Wood	Wood was used to carve paddles, and make cooking utensils (bowls, ladles…) The leaf of the Broad Leaf Maple looks like the leaf on the Canada Flag.

Cattails (sth'á:qel) 	Seed balls	Cattails grow in ponds or marshes. They have long thin hollow leaves. In the summer the brown flowers bloom at the end of a long, thin stock. In the fall the seed ball was collected to use as fire starters.
	Leaves (thin and hollow)	Leaves were collected in the fall. Leaves were woven together to make baskets for food or storage. Leaves were woven into mats that were used for sitting or for temporary walls in the longhouse, shelters at fish or hunting camps.
	Flowers	In the summer, brown flowers bloom at the end of the long stalk.
Cedar (xpa:yelhp) 	Bark	In the spring, bark was stripped from the cedar tree and the soft inner bark carefully removed. The inner bark was rolled and allowed to dry. Later the inner bark was soaked and pounded to break the bark into long thin strips. The inner bark strips were woven into many things (fishing line, rope, clothing, mats, baskets and temporary shelters). Appearance of the "leaves" of the cedar tree look like they are braided.
	Roots	Roots were dug up in the fall. The roots were soaked and split into long thin pieces that were woven to make cooking pots that hold water.
	Trunk	The cedar tree was, and still is, an important tree for the Stó:lō people. The wood was used to make

		paddles, canoes, planks for the longhouses, and house posts. Wood from old cedar trees were used to carve masks.
	Boughs	The boughs of the cedar tree were used like a towel to clean the body when bathing in the river. Today, cedar boughs are used for ceremonial brushing or cleansing.
	Saplings	Wood from young cedar saplings was split into thin strips. The strips were steamed, rolled and stitched to make drum frames and slat baskets.
Crabapple (qwe'ó:pelhp) 	Fruit	The fruit grows in long stemmed clusters. The fruit was picked in the summer before it ripened and turned purple red. The green fruit was stored in bags made of cattail leaves to ripen. Ripe crabapples were eaten fresh or cooked.
	Wood	The green wood of the crabapple tree was used to make many tools (spear tips, fish hook barbs and axe handles). The wood was cut in the spring after the sap started to flow inside the tree.
Devil's club (qwó:pelhp) 	Stems (Devil's club is a shrub that grows 2 to 3 m. high. It has broad leaves and sharp needlelike spines on the stems.)	Devil's club stems were picked in the winter and boiled to make a tea. The tea helped relieve the pain of sore joints and arthritis. The stems were also used in traditional ceremonies.

Red Elderberry (sth'íwéq') 	Stems (Elderberry leaves have 5-7 sharp points)	Stems were picked in the summer. The soft centre of the stems was removed and then cut to make beads.
	Fruit	The fruit was picked in the summer and cooked before it was eaten. Elderberries were eaten as medicine to cleanse the digestive system. Some red elderberries were cooked and dried for winter. Dried red elderberries were eaten to strengthen the immune system and prevent illness.

Fireweed (xáts'et) 	Seed fluff	Seed fluff was collected in the fall and added to the mountain goat hair to be woven into blankets
	Stock (red/purple flower with 4 petals – flowers grow together in a triangle shape at the top of the stock)	The stock was collected in June or July before the flowers bloomed. The stock was peeled and dried to make twine and fish nets. The rope and twine gets tighter and stronger as it dries.
Hardhack 	Branches (shrub with long straight brown branches)	Branches were cut in the fall and used to hold salmon fillets open when they were cooked over an open, smoky fire. Salmon was preserved by this "smoking "process.
Hazelnuts (sth'í:tsem) Hazelnut bush grows about 2-5 m	Nuts	Picked in the fall and eaten after the hulls had been cracked open.

high 	Husks	Were boiled with mountain goat wool to dye the wool brown.
	Roots	Roots of the hazelnut bush were boiled with bark, grass or tule to dye them blue for basket designs.
Horsetail (xémxém) 	Stock (grows as a long jointed stem with feathery leaves growing at the joints)	The stock was picked in the fall and dried. The stock was used to polish wood and stone.
Indian Plum (mélhxwel) 	Fruit	The fruit is the size of the nail on your little finger. The fruit is dark blue when ripe in the middle of June. The fruit was eaten fresh.

Kinnikinnink (tl'íkw'el)	Berries	The red berries taste like green beans The berries were picked in the fall and eaten fresh.

(Indian Tobacco) 	Leaves (Low evergreen shrub with red bark and oval green leaves)	The leaves are picked all year long and dried. The dried leaves were crushed and used in a pipe during ceremonies as a way of saying “Thank you”.
Licorice Fern (tl’asip) 	Rhizomes (plant area between the stalk and the root)	Grows in the moss of old trees, especially broad maple trees. Licorice fern is picked in the fall. After the woody covering was removed, the soft inside was eaten like licorice candy or chewed to relieve coughs, asthma and sore throats.
Mountain Ash (qwiqwelh) 	Berries (the boughs have 7-11 small leaflets)	The berries grow in big clusters. Berries were picked in the early summer. The fresh berries were rubbed on the head to get rid of head lice and dandruff.
Oregon Grape (th’ő:lth’iyelhp) 	Berries (holly-like leaves)	The deep blue berries were picked in the summer. The berries were boiled and mashed with other berries then dried to eat in the winter.
	Roots	The roots were dug in the fall and boiled to make a tea for people suffering with diabetes or leukemia. When Oregon Grape roots and sticks were boiled with mountain goat wool the wool turned yellow.

Plantain (pipehomá:lews) 	Leaves	Plantain grows close to the ground and has long thin leaves or round frog shaped leaves. Leaves were picked from spring until fall. The leaves were used fresh to apply to open wounds to help them heal. The leaves were also boiled to make a tea for people with stomach problems.
Salal (t'áqe) 	Berries	Salal is a low bush with waxy, oval evergreen leaves. The dark blue salal berries were picked in the fall then cooked and dried for winter

Salmonberries (elile) 	Berries	The berries were eaten fresh or cooked and dried for winter. The Salmonberries ripen in the spring. Ripe berries are the colour of fresh salmon and are ready at the same time as the salmon are coming up the Fraser River.
Skunk Cabbage (ts'ó:kw'a) 	Leaves	The flower is bright yellow. And the plant grows in swampy areas. The large leaves of the skunk cabbage are an oval shape and very waxy. The leaves were picked in the spring, summer or fall whenever they were needed. The tough centre spine of the skunk cabbage leaves were removed. The leaves were then used to line the cooking pits or used as a platter to serve food. The leaves were boiled to make a steam bath for people suffering from arthritis.

Stinging Nettles (th'éxth'ex) 	Shoots	Stinging nettles grow on long thin stocks and have round leaves that come to a point. Stinging nettle shoots were picked in the early spring and boiled. The first water was brought to a boil then thrown out. A tea was made after the shoots were boiled again in fresh water. The tea contained many vitamins and minerals that are good for the blood.
	Stems	The stems of the stinging nettle were rubbed on sore joints so the stings would warm the skin and muscles and relieve some aches and pains.
	Stocks	Stinging nettle stocks were picked in the fall, split open and dried. The dried inside of the stock was gently picked off leaving long thin fibre threads which were used to make strong thin twine. One of the uses for the twine was fishing line.
Sword Fern (sthxá:lem) 	Fronds	The frond (leaf) on the sword fern stands straight up and is shaped like a feather. Sword Fern fronds were used as tissue paper and used to make a soft mattress.
	Roots	Sword Fern roots were dug in the fall and boiled with mountain goat wool to dye the wool black.

Thimbleberries (t'qwém) 	Leaves	Thimbleberry bushes have large leaves that look like fuzzy maple leaves. They were cut in the late summer and fall, after the fruit was picked. Clusters of thimbleberry leaves were used to clean the fish before it was cut for wind drying.

	Berry	The berry was picked in the spring and eaten fresh or dried for the winter.
Tule (wő:l) 	Leaves	Tule usually grows in clumps, in marshy areas. The leaves are like long hollow straws. They are picked in the summer and used to weave baskets or to decorate cedar bark baskets.
Vine Maple tree (sí:ts'elhp) 	Branches	The branches of a vine maple are small and thin. The branches were used to make dip nets for fishing in the canyon. The branches were also used to put across the hot rocks in cooking pots.
Wild Rose (qá:lq) 	Hips (fruit of the rose plant)	Wild rose hips were picked in the fall after the petals fell off the flowers and the hip turned orange red. The hips were eaten fresh or dried to use as vitamins during the winter months.