Southern Gulf Islands Food System Assets and Priority Actions

Prepared by
Roz Kempe representing the Gulf Islands Food Co-op (GIFC)

2021-10-15 (original draft)
2022-03-14 (revised)

Prepared for
SGI Community Economic Sustainability Commission (CESC)

The "Southern Gulf Islands Food System Assets and Priority Actions" report was prepared as the final deliverable of an agreement with the Southern Gulf Islands Community Economic Sustainability Commission (CESC) to prepare an inventory of food system assets and a prioritized list of actions to improve food system resilience. A key driver was to update the 2017 Southern Gulf Islands Food and Agriculture Strategy with specific actions.

The following is a synthesis and interpretation of data gathered between January and July of 2021 by the Gulf Islands Food Co-op team, with key contributions from the Galiano Community Food Program and Mayne Island community leaders.

Summary

- A 'resilient' food system has been defined as one that can withstand shocks and stressors such as global climate change, economic downturns, and the COVID-19 pandemic, all of which result in food supply and distribution problems.

- Although these global issues may seem far away from the Southern Gulf Islands, we have experienced enough drought and disruption in the last few years to value the importance of a resilient local food system.

- As one step towards increasing understanding of our current food system, the Food Asset Inventory lists existing assets on Pender, Mayne, Galiano and Saturna Islands, including food growers, retail and commercial food businesses, community food organizations, and businesses that provide services or supplies to food growers.

- Two online mind-maps were prepared collaboratively to describe some interconnections in our food network, and to share perspectives of key impediments to achieving greater food resilience.

- A key project deliverable was to use the data collected in the Inventory to identify specific priority actions that our communities can take to achieve greater self-reliance.

- The following report is considered a launching point for more discussion and is not intended as a 'complete' picture of our islands' food system but begins to characterize the key issues and provides a framework and process to gain further input from islanders and Indigenous communities.

- Sixteen (16) Priority Actions are grouped under five (5) themes: Strengthen the Network, Diversify Sales Options, Fill Information Gaps, Share Skills and Knowledge, Support Community Events and Projects.

- The value of the Inventory would increase if more details from all islands are added, and if it is kept up to date annually.

- Far more attention is needed to gain understanding of an Indigenous view of food systems based on values including respect and reciprocity for all living beings.

- Readers are invited to comment. Please contact info@gulfislandsfoodco-op.org.

Table of Contents

INTRODUCTION

Project Development and Outcomes

The project to create an inventory of food assets on the Southern Gulf Islands (SGIs) was proposed by the Community Economic Sustainability Commission (CESC) to determine a way to update the SGI Food and Agriculture Strategy (Masselink, 2017) with concrete priority actions to improve food resilience. It was agreed that there were major information gaps: how many growers were on each island; what they were growing and where they were selling; how many restaurants were serving locally grown product; what the challenges and successes of our community food organizations were; and essentially who is doing what on each island.

An inventory of the current 'assets' including growers, organizations, and food-related businesses, was identified as an immediate need. The Gulf Islands Food Co-op (GIFC) was tasked with collecting data and creating a list of priority actions within a budget of $4,500.

We assumed that it would be a fairly simple process of documenting well-known entities on each island related to our food system, and doing some analysis of what is working well, and what the major gaps are. This would then logically lead to a prioritization of actions needed to improve the resilience of our challenged food system on the islands.

However, it was not long into the development of a spreadsheet, that the complexities of what we were attempting became apparent - this was not a simple project at all. What evolved were numerous long conversations with partners about how to organize layers of information, what level of granularity was possible to collect, how to protect privacy of individuals, and how to 'accurately' describe a food system that is deeply entwined and interconnected with everything from personal values to global economics.

The result is a collection of deliverables: an inventory in the form of a series of spreadsheets, two mind-maps, and this summation report that includes a table of Priority Actions. It is not considered a 'complete' picture of the islands' food system but is instead an approximate 'snapshot' in time of entities that make up the system, and a high-level view of how they are interconnected.

Suggestions for Priority Actions are based on analysis of the data collected, many conversations and interviews with several commercial growers on Pender Island, discussions with the Galiano Community Food Program (GCFP), as well as perspectives gleaned from attending meetings and conferences with regional organizations. They are also consistent with the 16 broad recommendations made in the SGI Food and Agriculture Strategy.

The value of the project would be greatly improved by keeping the inventory reasonably well updated, so that it becomes an evolving and "living" document that serves as a tool for answering questions about our system and to help prioritize actions. It is not particularly useful as a static report and as such requires support for development into a database and ongoing upkeep. Upgrading to a database would also protect private information, thereby enabling select data to be shared with other organizations.

The report includes an analysis of the data in the inventory, noting major gaps and challenges with how our food system operates, as well as corresponding opportunities that could address some of those challenges – the ones that are within our sphere of influence in our region.

Since the most complete dataset in the inventory is for Pender Island, analysis of Pender is used as a template or prototype that other islands can build upon. Some region-wide solutions are also identified. Although each of the islands has a unique culture and distinct needs, all four islands have some challenges in common that could be addressed collectively.

The GIFC sees its most important role as building networks across the islands – building relationships with Indigenous communities without whom we cannot hope to have a sustainable food system; increasing connections and understanding between sectors (e.g. growers and restaurants); creating opportunities for relationship building and knowledge sharing among food growers (e.g. the upcoming soil health program) and among food organizations.

When individuals and organizations are better connected, leaders are better equipped to identify what projects are needed to improve our food system. There is no one group that can implement all the project ideas that arise, but we can co-operate on projects that lead to concrete improvements. This asset inventory and report are tools to help this process.

Colonial, Indigenous, and Resilient Food Systems

A notable absence to this team was an Indigenous perspective or representation, even though we recognize that Indigenous foodways and knowledge are essential to the future well-being of human sustenance, especially in the context of the urgent climate crisis. This gap in the GIFC is being addressed through the slow process of building relationships with the WSANEC, Penelakut and other Coast Salish communities, as well as making the effort to learn about the devastation of colonialism through personal research and listening.

A definition of a food system from the Institute of Sustainable Food Systems is *"an interconnected web of activities, resources and people that extends across all domains involved in providing human nourishment and sustaining health, including production, processing, packaging, distribution, marketing, consumption and disposal of food"* (Mullinix, 2020). However, this definition is not as holistic as an Indigenous view of a food system. The recently published collection of articles "Indigenous Food Systems – Concepts, Cases, Conversations" (Settee and Shukla, 2020) explains what colonial food systems have been desperately lacking – the respectful connection to lands, waters, and other living beings.

It defines the concept of Indigenous food systems as *"inclusive of land, air, water, soil and culturally important plant, animal and fungi species that have sustained Indigenous peoples over thousands of years…[Indigenous foods are] cultivated, taken care of, harvested, prepared, preserved, shared, or traded within the boundaries of our respective territories* ***based on values of interdependency, respect, reciprocity and ecological sensibility****."* (Settee and Shukla, 2020, Page 61, emphasis added).

In the same collection of articles, Leslie Dawson says *"Simply put, food is more than nutrition. Food is a social phenomenon and is both reflective of and informed by cultural values, social relationships, and*

identities… food is not simply what we eat, but how and why we eat it and more importantly what it means. Our attitudes about food, and our practices and rituals around eating, reflect our most basic beliefs about the world and ourselves" (Settee and Shukla, 2020, page 85).

A 'resilient' food system can be defined in different ways but is essentially one that can withstand shocks and stressors - on a global scale these arise from climate change, conflict/civil unrest, economic downturns, market disruptions and the recent COVID-19 pandemic, all of which result in food supply and distribution problems (Piters, 2021). Although some of these global issues may seem far away from our Southern Gulf Islands, we have experienced enough disruption in the last two years to recognize the importance of a resilient local food system.

There are also unique stressors on island communities that are so reliant on ferry transportation and that have a small population. However, our island communities have unique strengths including a powerful drive to make change - right here, right now!

ASSET INVENTORY & ANALYSIS

The GIFC has prepared an inventory of food system assets on Galiano, Mayne, Pender and Saturna Islands in the form of a series of spreadsheets described in more detail below. Essentially, these spreadsheets list each island's growers, community organizations, commercial and retail entities, as well as key businesses that sell products and supplies necessary to food growers. There is also a sheet that lists various Indigenous contacts, organizations, and publications specific to the SGIs.

Entries were made by the GIFC team and the GCFP just from knowledge of our respective islands, which is likely not complete but considered 'good enough for now'. Growers were not necessarily contacted to ask permission to share their information and so GIFC is keeping all spreadsheet data private at this time. It should be noted that information about ocean harvesting practices or issues has not been included, and this report does not address food distribution channels. However, the distribution sector is being researched by the *Closing the Supply Gap* team as a broad region-wide effort.

To increase confidence in the data, it is recommended that more in-depth interviews (and other tools such as surveys) be conducted across all sectors to gain a better understanding of operations, goals, successes, challenges as well as more detailed information where it is useful. Interviews also serve to build relationships and strengthen the Network of food-related entities.

Many conversations have been occurring over the summer of this year at the GIFC Information Table that has rotated among the islands at each of their Saturday Markets. Information gleaned from these events will be summarized separately from this report.

Growers

This spreadsheet lists all known food growers on all islands who sell their food in some capacity even if minor or intermittent. To make the list manageable it generally does not include home gardeners who

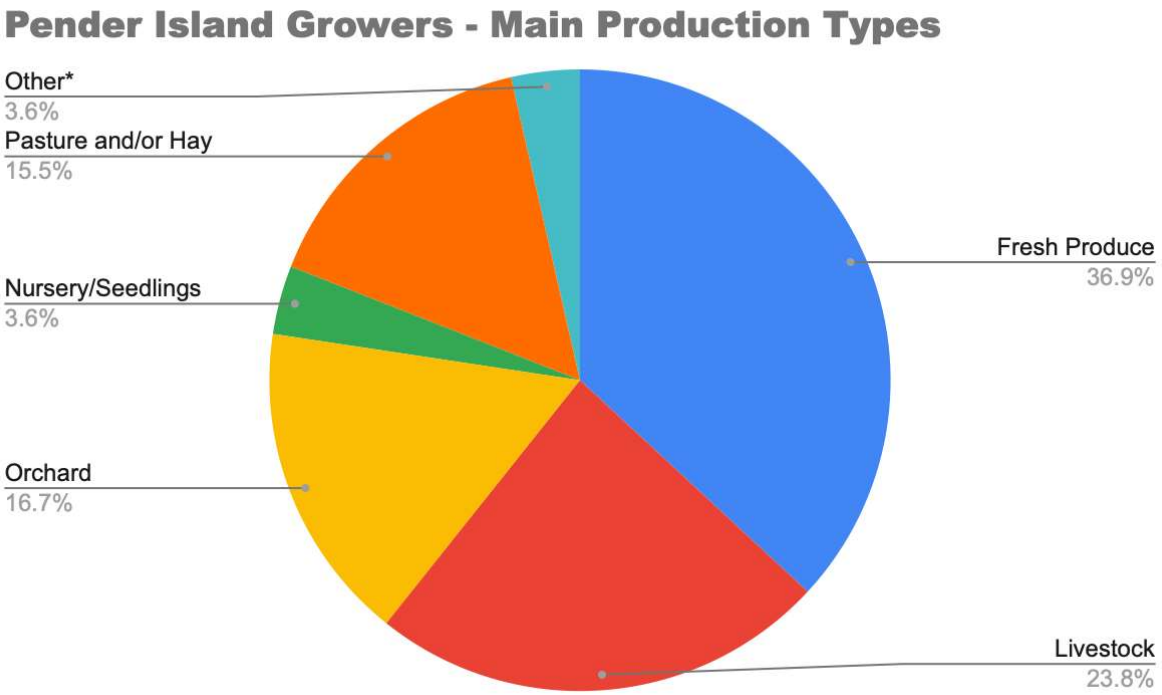
do not sell their products. Home food growers are still a vital part of the food system in terms of local food security, but this level of detail is not practical to capture or maintain.

In a few instances some growers were included who do not make sales but are significant in other ways, for example a grower who has decades of practical knowledge and teaches food growing skills to the community is an asset to the community and so is included in the growers list.

The column headings in the sheet are:
Entity Name, Island, Scale of Property (<1ha, 1-5ha, >5ha), **Scale of Production** (Small, Medium, Large definition to evolve), **Main Type of Production**, **Tags** (30 different categories e.g. Fruit, Vegetables, Pigs, Poultry, Eggs, Nuts), **Sales - Where** (Farmers Market, Direct, Farmstand, Grocer etc.), **Sales – When** (season), **Website and/or Social Media**, **Contact Information** (if publicly available or specifically given).

Using Pender Island as an example, the data has been summarized along themes that increase understanding of our food system and will therefore be useful for broader planning purposes such as the SGI Local Area Food and Agriculture Plan (LAFAP).

What is being grown on Pender Island?



*Other refers to hops, vineyard and seeds

NOTE: These percentages are calculated based on the number of growers, and is NOT based on land area, in which case there would be far higher percentages for pasture and hay than fresh produce.

There are 45 Pender Island growers listed who make sales. Of these:

- 92% directly market their products to consumers

- 69% have properties 5 hectares or less, and most (84%) are small to medium scale producers. Of the few larger-scale producers, about half are producing for beer, wine or cider
- 11% provide some year-round supply – others are primarily summer sales
- 7% grow and sell nuts, while 27% produce and sell eggs
- 4% sell to restaurants and 4% sell to grocers
- The most common proteins supplied are eggs and lamb.

Although not quantified, it can be seen from roadsides that there is arable land on Pender Island that is not being actively 'farmed', some of which is simply unimproved pasture with occasional grazing or is providing some value for wildlife. Since farming on the islands has little economic return, exacerbated by an aging demographic and lack of labour, it is understandable that some larger properties with arable acres are not being used to their full agricultural potential.

What are the gaps on Pender Island?

Production related gaps:

- Minimal supply of locally grown seeds, although there is a new public seed library
- Lack of soil amendments on island
- No suppliers of locally raised chicks or pullets
- Insufficient hay production for existing livestock
- Animal breeding stock is not quantified
- Wild harvesting of plants and deer, and ocean harvesting of fish, shellfish and seaweed is not quantified
- No fruit tree, berry or native food plant nursery stocks

Processing related gaps:

- No meat processing on the island and poor access to off-island meat processing facilities
- Limited sales of value-added products from locally grown produce

Consumer related gaps:

- No public sales of poultry as meat (3 growers for home consumption only)
- Only 1 of the 4 pork producers sell their meat
- Limited sales of winter storage crops (e.g. potatoes, squash)
- No sales of greens and fresh vegetables during winter months
- Customer demand for local produce not quantified, nor their preferred venue for sales.

Many of these gaps noted above are common to all the islands, but not all of them, reflecting different cultures and priorities on each island.
For example:

- lack of meat processing is a common challenge on Galiano, Mayne and Pender Islands, but Saturna has a Class A facility with cut and wrap service. Ferry transportation limits access from the other islands, and the facility has limited capacity for different livestock.
- Pender, Mayne and Saturna growers sell very few root crops for winter storage, whereas Galiano has a dedicated storage crop market in October called "Stock Up Market".
- transportation is a common issue for all islands, affecting all sectors of the food system and needs to be addressed at the regional level, likely needing provincial support.

- Galiano and Mayne Islands have native plant nurseries but Pender and Saturna do not.

The Galiano Community Food Program 2021 report "A Wider Lens – SGI Food Resilience" describes needs and opportunities on Galiano Island, and many of the gaps noted above are consistent with their findings, including the recurring theme that all sectors want more communication and collaboration. Some specific information about Galiano's growers is provided in their report e.g. "Galiano's farmers are mostly small operations, on 5+ acres, practicing organic, regenerative, or other methods of farming. Most farmers are over 55 years of age and have been in operation for over 10 years. There are some young farmers as well—four of the respondents are between 35 and 54 years of age. Most earn under 15% of their incomes from their farms."

What are some key opportunities for Pender Island growers?

Some opportunities are presented below, based on a logic model (included as Appendix A) that names possible root causes of the issues, and shows that many are controlled by global forces. Nonetheless, there are still some significant actions that can be taken at a regional or island-specific level.

Community resilience rather than just economics is the emphasis behind the ideas offered below:

- **Attract new growers** to the island, and connect to unused arable lands e.g. the Young Agrarians farm matching program. This appears to be already starting to happen in response to Covid-19 and global crises, with at least three new food growing enterprises started since 2020. Success will depend on resolution of land affordability and housing issues which require provincial and federal action.
- **Connect growers regionally via training opportunities** e.g. implement a series of ongoing Farm Field Days on many different topics with university extension support.
- **Extend the growing season** to fill consumer demand for year-round fresh vegetables and create additional revenue for growers e.g. new greenhouses, or co-operative use of existing ones that are not being fully used.
- **Diversify sales venues** e.g. the Pender Island Farmers Institute began a pilot program in 2021 to test the viability of a mid-week produce market, which was successful for growers and consumers alike; the Pender Growers Collective has succeeded in providing a way for small growers to sell together at the Saturday Market and share costs; perhaps a CSA box program could be trialed next, or new pop-up markets, or online sales platforms. Galiano growers have specifically requested support with marketing products co-operatively (2021 GCFP, A Wider Lens).
- **Save locally grown seeds** and share with the seed library, thereby adding to our source of locally adapted seeds, as well as increasing skills in seed saving, cleaning and proper storage.
- **Diversify and increase amount of protein crops** such as pulses and nuts to improve self-reliance in protein e.g. the Bean Collective successfully trialed a collaborative and very low-cost way to grow bulk drying beans at Highgrove Farm & Commons.
- **Explore wild foods harvest in a regenerative and non-extractive way**, and with respect and collaboration with Indigenous knowledge keepers e.g. there is potential for resurrecting a disused nursery space to propagate native food plants with the WSANEC community; there has been some interest in 'farming' kelp and edible seaweeds; and the Penelakut elders are already sharing their knowledge for harvesting and processing deer on Galiano Island.

- **Learn regenerative practices to improve soil health** and reduce the need to import soil amendments e.g. the Healthy Soils Program (in winter 2022) was successful in engaging 64 island food growers to learn about soil health. This project was supported by Kwantlen Polytechnic University's Institute of Sustainable Food Systems, and was funded by Vancity. More programs like this could improve soil health on island farms over the long term.

Other opportunities related to lack of services for growers are provided in the section "Services and Supplies for Growers".

Commercial and Retail Businesses

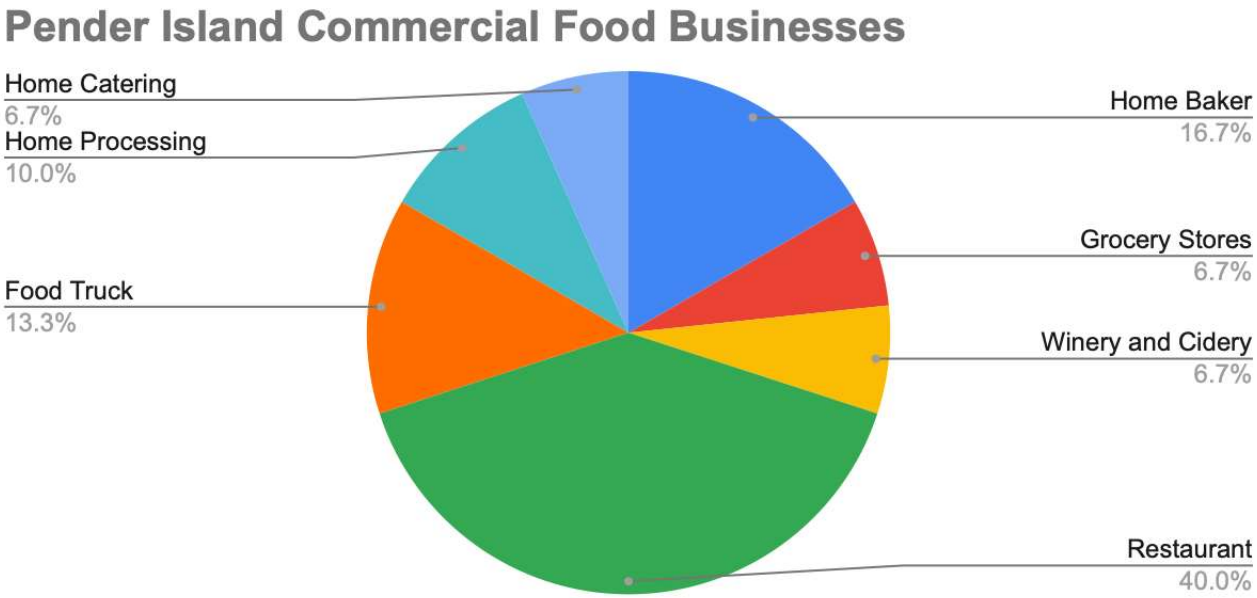
This spreadsheet lists all known food retailers, restaurant/cafes, commercial bakers, and processors on all islands. The column headings in the sheet are:
Entity Name, Island, Type of Business (12 categories including Grocery Store, Restaurant, Food Truck, Home Baker, Food Waste Services)**, Operating Season**, **Operating Details** (e.g. retail store, family dining, homestand etc.), **Tags** (13 different items e.g. Groceries, Coffee, Meals, Preserves), **Website and/or Social Media**, **Contact Information** (if publicly available or specifically given).

Again, Pender Island data is analyzed as a prototype and some observations and opportunities are noted below. More data needs to be collected about Galiano, Mayne and Saturna Islands and many more interviews need to be done to better understand this sector. A few general observations: compared to other islands there is reasonable diversity of operations on Galiano and less so on other islands; Galiano has 5 grocery outlets (Pender has 2) and 14 restaurants (Pender has 12); Saturna has fewer businesses reflecting the lower population, but is still well served by their iconic general store and pub; Mayne Island has a Tru Value grocery store as an anchor, plus the Farm Gate Store which has been essential for sales of local produce, preserves and more. Galiano has distributed a "Galiano Grown" label in retail stores and restaurants to showcase supporters of local produce which has been highly successful.

Twin Island Cider on Pender provides an important case study in terms of their business model that is embedded in the local community. Apples from old orchards are rescued and fermented to create unique high-value cider, which is a form of food preservation. Their business model is notable as they provide skilled orchard care and pruning on many properties from which they harvest apples across the islands. This kind of reciprocity with the trees is often missing in community gleaning programs where fruit is harvested, but the skills and labour to manage the orchard may not be available.

When farmers or orchard owners with little income don't have means for infrastructure improvement, it is not reasonable to expect a harvest for the long term. Another successful model for addressing orchard care, is the "Adopt a Tree" program at Corbett House, where old apple and pear trees are 'adopted' by community members who prune and tend the tree in exchange for the harvest. This provides long term investment and care for valuable old fruit trees, as well as a unique point of connection for community.

What food businesses are on Pender Island?



NOTE: Percentages are calculated based on the number of businesses, not economic value.

What are some gaps on Pender Island?

- Several old orchards would benefit from skilled tree pruning and care in exchange for fruit harvest.
- Under-used commercial kitchens on Pender and over-supply of some produce at different times of year.
- Businesses can be challenged to stay viable during the non-tourist seasons.
- Most growers are not supplying retail/commercial businesses, and collectively do not currently produce enough to meet restaurant demand.
- Food waste from restaurants and residents is collected and taken to Vancouver Island for composting - this could instead be kept on-island as a valuable resource for growers.
- Grocery items that are close to their 'best-before' date or expired are thrown out – although some of this food is captured for feeding pigs on the island, there is still food wasted that could be rescued.
- During extreme weather events leading to power outages the island's grocers have been challenged to provide enough supply to residents.

What are some key opportunities on Pender Island?

- **Adapt the "*Galiano Grown*" label** to showcase businesses using local produce as well as provide visibility for growers.
- **Identify the barriers to local food processing** and sales on the island e.g. is it lack of equipment, or markets, or facilities or other?
- **Make a business case for a food processing social enterprise** using existing commercial kitchen facilities and equipment**.**

- **Purchase equipment** for community use and self-reliance e.g. production equipment, processing equipment, storage equipment.
- **Install storage facilities** to help the community withstand crisis events that may increase in frequency due to climate change e.g., grains and pulses can be safely stored for long periods.
- **Increase sharing of skills and knowledge** of food processing for residents to enable better use of high production seasonal items, reduce food waste, and increase food security.
- **Create a Nut-Network** to glean established hazels and walnuts from old orchards, potentially a small business opportunity.
- **Replicate the Meet-Your-Maker event** that was successful on Galiano, to enable better connections between growers and restaurants etc.
- **Partner with the South Island Farm Hub** for sales of produce off-island (i.e. Victoria and Saanich) as well as value-added items that have a longer shelf-life and year-round sales potential.
- **Conduct a food waste audit** to know type and volumes of waste that could be rescued for human use or processed into animal feeds.
- **Create small-scale decentralized compost facilities** for food waste and other organic materials on-island. Attempts to establish a larger facility on Pender revealed that regulations and costs are a significant barrier.

Community Organizations

This sheet lists all known community organizations that have some connection to the islands' respective food systems. Examples from each island are the Galiano Community Food Program, the Saturna Food Bag Program, the Mayne Island Food Bank, and the Pender Island Farmers' Institute. There are a total of 59 active organizations listed at present.

The column headings in the sheet are: **Entity Name, Island, Primary Purpose, Key Successful Projects/Systems, Facilities, Spaces & Infrastructure, Equipment & Tools, Main Contact's Name, Website and/or Social Media, Contact Information.**

Community organizations are the backbone of a resilient community in many ways, usually operated by hard-working volunteers. With so many small organizations across the islands with some connection to food, it is no wonder not all of them are well-connected. Communication and connection are key to avoiding duplication of effort, and necessary for supporting each other to maximum benefit for all.

The Food Resilience Alliance (FRA) was created as one tool for encouraging such collaboration between island food organizations, starting with a joint grant application in which far more funds were secured collectively than each organization would have secured separately. This past summer, the FRA hosted several "Roundtable" discussions on topics chosen by participating groups that could be discussed in depth e.g. Food Banks, and Hay supplies. This has been a successful forum and we recommend that it continue. Some of the information gleaned can be entered into the spreadsheets as new layers of detail are discovered.

Again, because data in our spreadsheets is most complete for Pender Island, we have focused analysis on Pender, but we are keen to learn more about the other islands as community leaders have time to share data and do some deeper analysis.

What are some successful programs on Pender Island?

- **Pender Fall Fair** – the Fall Fair has been going (with only a few interruptions) for decades and is operated by the Pender Island Farmers Institute (PIFI) which started in 1924. COVID-19 has prevented the Fair from taking place for the last two years, and its continuation depends on future COVID-19 status.
- **Wednesday Market** (operated by PIFI) is a new mid-week opportunity for growers to sell produce, meat, preserves, baked goods; enhanced by new commercial fridges and freezers it has been a huge success for growers and local customers.
- **The Bean Collective**, in which a group of people share the labour of growing a bulk amount of drying beans on one property. FarmFolkCityFolk (FFCF) provided threshing and cleaning equipment and expertise, as well as a seed-saving workshop for 25 participants.
- **Friday Soup Lunch**, in which a weekly soup program (despite COVID-19) enables some community building as well as a dignified way to obtain low cost or free meals for anyone who, for various reasons, may not be able to access sufficient healthy food.
- **The Crisp** apple festival, in which a full day of apple-related activities come together with music and guest speakers. Apple gleaning and processing using a community apple press has been occurring on and off for many years depending on available volunteers.
- **Youth and Agriculture** programming at the Community Hall, in which youth are hired to develop creative programming for the community around food security and food growing.
- **Food Bank**, in which volunteers collect and store donated foods and then provide to anyone in need each Wednesday year-round.
- **Pender Growers Collective,** in which produce from multiple growers is sold at a single table at the Saturday Market, providing a unique way of connecting small-scale and home-scale gardeners to customers in a collaborative spirit.

What are some key opportunities for all islands?

- **Sharing information** among organizations, what has worked well and can be replicated/adapted for other islands; document successful programs.
- **Identify under-used facilities and equipment** and match with people looking for same. On Pender this would include community kitchens, an outdoor wood fired oven at the school, orchard ladders, apple press, pressure canner and food dehydrator.
- **Combine efforts for Regional and Provincial advocacy** as a unified and strong voice e.g. advocate for CRD and Islands Trust to enable small-scale composting for community use; BC Ferries to make hay and livestock transport more manageable; BC government and Islands Trust to enable housing for temporary farm workers.
- **Learn from successful organizations** (e.g. Galiano Conservancy) as to how to create self-sustained economic support for food organizations, ultimately enabling a stable and secure local food economy.

Services and Supplies for Growers

This sheet lists all known businesses that provide services and supplies to growers. The column headings in the sheet are: **Entity Name, Island, Description of Service or Supply, Main Contact's Name, Website and/or Social Media, Contact Information.**

Services for growers include veterinary, heavy machinery operation, abattoir, hauling, and internet connection. Supplies for growers include seeds, soil amendments, aggregates, seedlings, building supplies and hardware. When these services and supplies are available on the island it is a huge time-saver for growers, given the alternative of travelling to Vancouver Island or the Mainland. A simple list was created to identify all major materials and services that food growers and livestock producers would generally need, and then checking off whether they were available and sufficient.

For Pender Island, many essential services and supplies are available but generally insufficient in volume and diversity, and some are completely absent. The economics of providing supplies to a small population is challenging.

What are some gaps in Services and Supplies on Pender Island?

- **Large-animal vet** is not able to practice due to prohibitive cost of insurance.
- **Abattoir and cut and wrap service** is not available.
- **Agricultural extension services** from BC government are not available.
- **Poultry chicks and pullets** are not available for sale on-island.
- **Fruit tree, native plants and berry nursery stocks** are not available for sale on-island.
- **Animal feeds supply** (hay, pig and poultry feed) is insufficient.
- **Vegetable seeds, irrigation supplies, market-garden supplies** (e.g. crop protection) are insufficient.
- **Soil amendments, manures, straw and mulch materials** are insufficient.
- **Slow or non-existent internet connection** may seem like a trivial issue, but it does impact on-farm efficiency where time is so precious, and lost opportunities occurring due to lack of internet connectivity should be a non-issue by 2021.

These services and supplies are either absent or insufficient for the existing level of agriculture and food growing being practiced right now – there is a greater challenge if/when new growers and livestock producers start up additional enterprises.

There is also greater stress on global supply chains; for example, DuBois Agrinnovation is a major supplier for many agricultural needs across Canada, but they were unable to keep up with demand in 2021 due to COVID-19 and climate disasters in the US and Mexico. This is a clear indicator that the Southern Gulf Islands need to become more self-reliant in supplies and services where possible.

What are some opportunities related to Services and Supplies?

- **Share or contract out large equipment** such as chipper, mulcher, bed shaper.
- **Share skills and knowledge among growers** to address challenges such as unpredictable weather, soil and crop health, livestock care etc.
- **Collaborate to schedule veterinary visits** and share costs.
- **Obtain on-farm slaughter training and licenses** under new BC regulations.

- **Advocate for Salt Spring Island abattoir** upgrade to accommodate livestock from the outer islands.
- **Apply for funding to purchase equipment** to share e.g. poultry incubator, hatcher and brooder equipment (an attempt was made via the Federal Local Food Infrastructure Fund but was unsuccessful).
- **Advocate for broadband upgrades across all islands** – this is already underway via the CESC.

Indigenous Resources

This sheet lists the key Indigenous nations and organizations related to the SGIs e.g. WSANEC Leadership Council, Penelakut contact information, and some food related contacts such as the PEPAKEN HAUTW native plant nursery, and Woodwyn Farm now owned by W̱JOŁEŁP (Tsartlip) Nation. Some critically important published resources specific to the islands are referenced such as "The Saltwater People" and "Reclaiming the Reefnet Fishery". As our own understanding increases around Indigenous knowledge, we will add to this list of assets. The GIFC has started to build relationships with Indigenous communities and is committed to the long-term work of decolonizing our organization.

MIND-MAPS

A mind-map is a way of visually linking key concepts using images, lines, and links. It is especially useful when trying to understand non-linear and complex concepts – such as a food web. The spreadsheets created for the Asset Inventory are necessarily linear, but this format does not help to understand the inter-connections of a web-like food system.

Two types of digital mind-maps were created for this project. One is a representation of an 'ideal' community food system with all sectors functioning well and showing a myriad of potential interconnections – an aspiration of how a food system could function as a natural ecosystem of interrelated and cooperative parts. It was created by Ben Dunsmuir in an online application called "The Brain" and is intuitive to use and build. A series of notes and ideas are included in this thorough and detailed visual map.

This 'ideal' food system enables us to compare and chart our current (challenged) regional food system. The second mind-map is a high-level representation of our current food system using the "Miro" application. This is easy to build and develop in an online team environment. Two sessions with participants from Galiano, Mayne and Pender (Saturna representatives were invited but unable to attend) were led by a professional facilitator to create a high-level depiction of a complex system and discuss our varying perspectives on how it all connects.

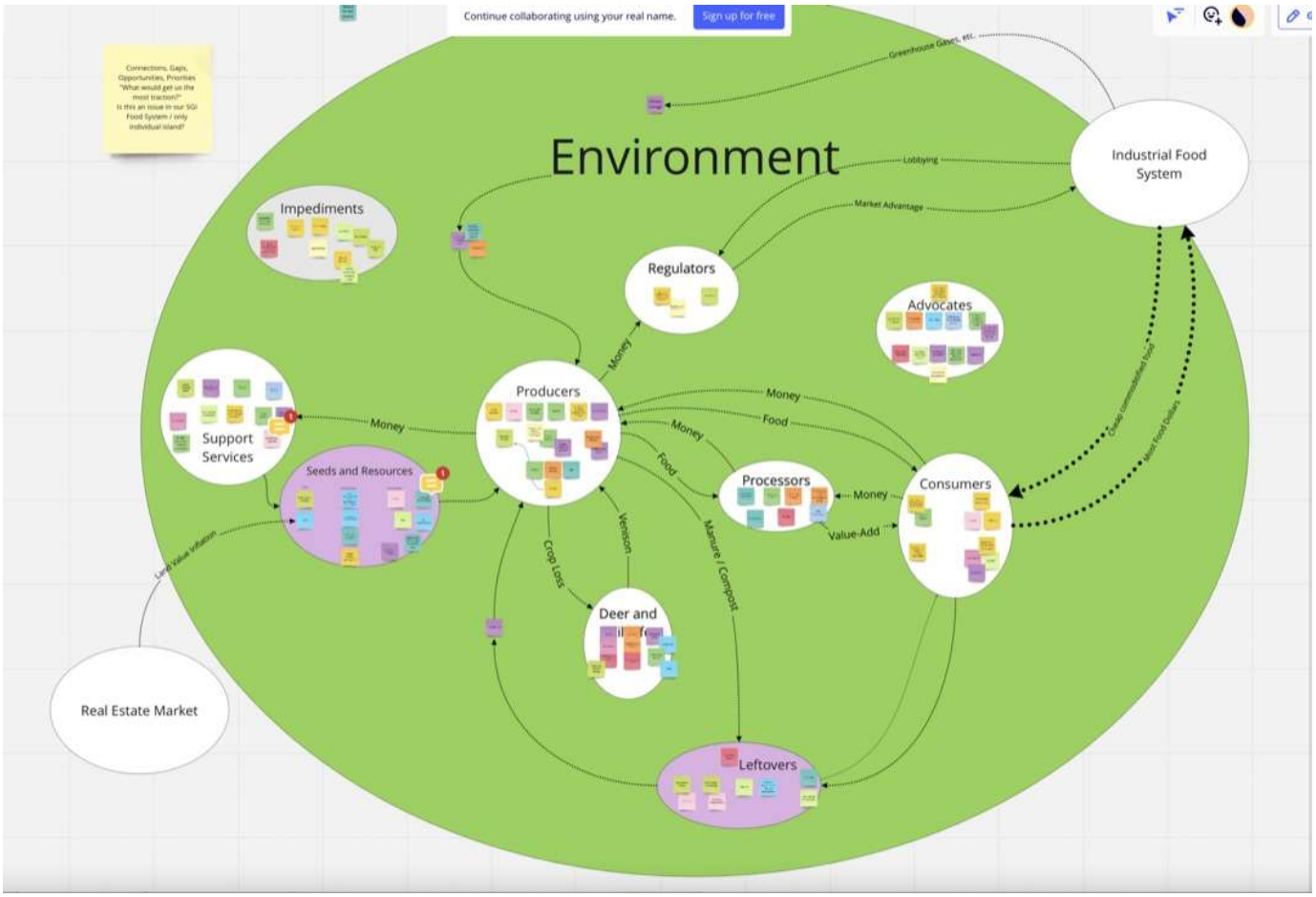
A limiting factor in doing this more detailed analysis is the time required and limited resources from volunteer community leaders. Another challenge with this work is the highly subjective viewpoints and experiences of what is important in a food system, as well as the many layers of complexity, and different scales (global to backyard) of influence.

The mind maps are tools for discussion, and not an endpoint in themselves. The conversations that took place in creating the “Miro” map were more valuable than the map itself and informed many of the ideas and recommendations in this report. Links to view each mind map are below.

An ‘ideal’ community food system
https://bra.in/7pdMzV

A simple map of our current food system
https://miro.com/app/board/o9J_lLytfFQ=/

A Mind-Map created to show the current food system on the SGIs



CONCLUSIONS & PRIORITY ACTIONS

Each of the gaps in all sectors described above exist because of complex challenges in global markets and supply networks; federal, provincial, and regional levels of governance; consumer desires and habits; geography and geology of our archipelago; and our rapidly changing climate bringing greater unpredictability and instability. The task of providing so-called ‘solutions’ to these challenges is

therefore extremely complex, and likely why no-one has yet claimed "what it's going to take" to bring food security to our communities. That said, there are still some clear steps that can be taken at the regional and island-specific level to make improvements. The table in **Appendix B** captures potential actions to address challenges experienced in our food system.

The suggested actions are based on many conversations and interviews with advocates, growers, restaurant owners, several commercial growers on Pender Island; perspectives gleaned from Galiano's Meet Your Maker event; and attending meetings and conferences with regional organizations (the Capital Region Food and Agriculture Initiatives Roundtable (CRFAIR), Closing the Supply Gap (CSG), and the South Island Farm Hub (SIFH) in Victoria).

Many more conversations are needed to flesh out and revise the proposed draft ideas. We hope this report will be a springboard for discussion. There are assumptions behind the recommendations that have not necessarily been articulated or challenged, hence the value of continued conversations on these topics.

Process for Prioritizing the Actions

The Inventory provided a way to ask different questions of the data. We asked questions such as 'what percentage of growers provide protein crops'; 'what percentage of growers sell direct to consumer'; 'what key services and supplies are missing'?

Then, a further line of enquiry created the table in **Appendix A** where root causes of our food system challenges were noted along with recognizing the level of control for that issue (e.g global or regional), followed by an attempt at identifying what actions could be taken at a regional or local level. This table highlights the fact that many of the challenges that we experience locally are controlled by global forces, such as climate change and industrial markets.

The next line of enquiry was to consider all the identified regional and local actions, arranged by themes such as Land, Markets, Waste, Social Networks and more, and then apply a time scale, level of effort, and expected return for each action as a way to prioritize the actions. The "Expected Return on Effort" in **Appendix B** was developed with a very simple 3x3 grid (Low, Medium, High). There are other ways of prioritizing which would reveal different results.

Grid	LH	MH	HH
	LM	MM	HM
Y - Return	LL	ML	HL
	X - Effort		

This grid indicates that actions requiring low effort but provide a high return (or value) are tagged GREEN as a high priority. Oppositely, actions that require high effort for little return would not be worth pursuing, tagged in RED. Other colours indicate a simple scale of lower to higher priority.

This method would ideally be applied by a team with differing perspectives and experiences, and the results may well be different. We do not see this report as static but hope it will be used to ask new questions, apply different criteria when needed, and develop new priorities as projects are completed and new information about our food system is revealed.

Current Priority Actions

The author applied the above prioritization method and arrived at the following 16 actions as highest priority; most are applicable to all islands. Various groups and individuals (not just the GIFC) would be needed to implement the actions below.

Strengthen the Network

1. Connect with Indigenous communities and identify suitable supports and projects.
2. Create opportunities for food-related community organizations to connect and discuss successes, challenges, and solutions e.g., via the FRA-Roundtable.
3. Enable growers to coordinate veterinary services for livestock, hay transportation and storage, share equipment, knowledge, and seeds.
4. Apply for funding to purchase shared equipment for growers.

Diversify Sales Options

5. Pilot new direct-sales options such as CSA box programs, pop-up markets or online platforms.
6. Continue the Co-op Sales Tables, and mid-week Farmers Markets.
7. Promote better use of existing food processing facilities and equipment to create value-added shelf-stable items for sale.

Fill Information Gaps

8. Interview interested landowners to understand their needs, challenges, and possibilities for expanding agricultural use.
9. Identify needs, barriers, and opportunities for a potential food processing social enterprise.
10. Resolve regulatory issues that prevent farm-worker housing.

Share Skills and Knowledge

11. Expand the Healthy Soils Program for growers (by university educators).
12. Develop a series of Farm Field Days led by experienced growers and ag extension scientists on topics chosen by growers.
13. Enable “Slaughter-Right” training on islands where there is demand and apply for Farmgate and Farmgate-Plus licenses.

Support Community Events and Projects

14. Replicate Galiano’s Meet Your Maker event on other islands.
15. Continue support for food festivals, art shows, community skills, gleaning programs, and Seed Libraries.
16. Support awareness, stewarding and planting of native food plants on private and public lands.

RECOMMENDATIONS to the CESC

The GIFC has created a framework for collecting data about our SGI food system, and we have created a process for analysing and interpreting that data such that Priority Actions can be discussed and identified on a continuing basis. What is needed next is the financial and administrative support to enable the community groups and individuals to improve our food system.

1. Support regular FRA-Roundtable sessions on varying topics identified by community groups.
2. Source funding to upgrade spreadsheet-based inventory to an online database (e.g. AirTable).
3. Source funding to enable islands to add more data to the inventory, and apply some analysis e.g. develop surveys, in-depth interviews, enter data, analyze data, and revise Priority Actions annually.
4. Keep abreast of funding opportunities and apply collaboratively where possible to ensure best value for all.
5. Advocate to CRD, Islands Trust, BC Ferries, and provincial ministries to resolve specific regional issues.

REFERENCES

Galiano Community Food Program (GCFP), 2021; *A Wider Lens – SGI Food Resilience*
A Wider Lens - SGI Food Resilience

Masselink, 2017; *SGI Food and Agriculture Strategy*
Summary of Main Recommendations
2017 SGI Food and Agriculture Strategy - Recommendations only
Full Report
2017 SGI Food and Agriculture Strategy - full report

Mullinix, 2020; *The Future of our Food System – Summary of the Southwest BC Bioregion Food-system Design Project.* Institute for Sustainable Food Systems, Kwantlen Polytechnic University.
KPU - BC Bioregion Food System Design Project

Piters, 2021; *Food system resilience - Towards a joint understanding and implications for policy.*
Wageningen Economic Research Policy Paper (Netherlands)
Food System Resilience

Settee and Shukla, 2020; *Indigenous Food Systems: Concepts, Cases and Conversations*
Indigenous Food Systems: Concept, Cases and Conversations.

ACKNOWLEDGEMENTS

The following individuals made significant and generous contributions of their time and expertise to the project:

Emma Davis – Galiano Community Food Program
Alison Colwell - Galiano Community Food Program
Ben Dunsmuir
Ben Kadel
Russ Anthony
Ed Andrusiak – Food Resilience Alliance
Nancy Goodman – Gulf Islands Food Co-op
Kristine Webber – Gulf Islands Food Co-op
Zorah Staar – Gulf Islands Food Co-op
Erika Preece – Gulf Islands Food Co-op

APPENDICES

APPENDIX A - Logic model to identify issues, causes and actions to improve food resilience on the SGIs

What is the local challenge?	Why?	Root cause	Level of Control	Regional action	Island-specific action
Lack of produce being grown on island compared to demand/need	Unused arable land	Farming is not profitable and so farmland is under-used	Global	CRD policy to support food growing	Inventory unused arable land
	Lack of access to arable land parcels	Land is expensive and farming is not profitable	Global	CRD policy to support food growing	Interview landowners with unused arable land
	Lack of skilled labour	Farming is not profitable and not appealing as a career	Global	Develop a Food Growing elective at Gulf Islands Secondary School	Advocate teachers to use the Valley Home Farm and School Garden for food growing awareness
	Lack of housing for temporary farm workers	Building codes and regulations prohibit affordable temporary housing options	Provincial, Regional	Advocate for amending building code requirements	Identify specific housing needs
	Lack of good soil	Geology of our islands - Class 2 at best	Local	Obtain funding for education on soil building practices	Growers to connect and share their soils knowledge/experience
	Lack of amendments	Not much livestock (manure source); food scraps are taken off island; very little non-coniferous wood waste	Regional	CRD support to enable community scale food waste composting on-island	Advocate for community scale composting
	Infrastructure is expensive (water, fencing, season extension)	Raw materials are getting more expensive all the time; global supply chain problems	Global	SGI Food Resilience Alliance to apply to governments and foundations for grants; find benefactors or public support	Define exact needs for equipment
	Low market prices for produce - farmers can't make a living	Industrial food system sets low prices without cost of externalities; economics favour large scale industrial producers and economy of scale	Global	Region-wide promotion of the necessity for locally grown foods and explain reality of food prices	Make local growers more visible and valued
	Lack of supplies and services for growers	Small population makes business economics difficult; transportation is expensive	Global	Advocate BC Ferries for discounts	Growers can collaborate to purchase items in bulk and share transportation costs
	Lack of plant proteins being grown	Low market price of pulses as long as supply chains function; lack of knowledge/experience with these	Global	Obtain funding for education on how to grow pulses and nut trees in this climate	Expand the work of the Bean Collective; expand nut tree plantations; form a Nut Network to glean from old nut trees that

		crops; infrastructure to fence, water and establish nut trees to maturity is expensive			are not currently harvested
Few livestock being raised	Lack of slaughter options	Lack of access to Salt Spring and Saturna Islands facilities	Provincial, Regional	Advocate for SGIs to be considered in the SSI abattoir expansion; support new on-farm slaughter licenses and training	Identify on-farm slaughter needs
	No large-animal vet	Insurance costs prevent the Pender vet from practicing on large animals; other islands do not have a vet either	Provincial	Livestock owners across the islands to collaborate on sharing vet visits and costs	Livestock owners to meet with Pender vet to explore options
	Lack of hay	Transportation, storage, and inconsistent production on islands	Provincial	Livestock owners to create plans for collaborating on transportation, storage, and production	Each island's livestock owners to more clearly identify where collaboration could make sense
	Lack of poultry chicks/pullets	Past experience of supply of chicks and pullets was not economically viable	Provincial	Apply for funding for incubator and hatching supplies	Identify incubator and hatching supplies needed
Food is wasted	Over-restrictive 'best before' dates on grocery items; culture of waste	Food culture based on industrial food system; health authorities restrict use of imperfect foods	Global	Advocate for safe food rescue; educate on ways to reduce food waste through all sectors	Conduct a food waste audit to identify easy-fix areas
	No fruit gleaning program on Pender	Lack of a champion and funding	Local	Learn from successes at Galiano and Mayne Islands	Support the new Pender Apple Crisp festival; ensure gleaning programs include pruning and orchard care
	Perishable food spoilage	No long-term food storage	Local	Research community food storage options and costs; advocate for funding best options	Determine storage needs
Lack of Indigenous foodways leads to less resilience	Local settlers often have little understanding of Indigenous culture or world view	Colonialism	Federal, Provincial, Regional, Local	Learn what it means to decolonize, and find opportunities to build relationships with Indigenous people and culture; obtain funding for local workshops and support	Make efforts to connect with WSANEC and Penelakut communities; Start to propagate and grow native food plants in gardens
Increasing summer drought and heat; unpredictable seasons	Climate change	Extractive global economy, dependence on fossil fuels, capitalism, colonialism	Global	Food growers to learn from Indigenous peoples' knowledge, and connect with each other to share resources, ideas on mitigation and	Individual actions to reduce consumption of fossil fuels; protect and plant trees; increase food production using regenerative practices; learn and practice respect and connection with the

				adaptation to climate change	Earth.

APPENDIX B – FIRST DRAFT Road Map of Priority Actions

(with invitation to discuss and refine with actors across the food network).

Theme	What's the problem to solve?	What can be done at a regional or local level?	Who could potentially do it?	What timeframe?	Expected Return on Effort	Effort	Return
Land	Unused arable land	Interview landowners to understand their needs, challenges and possibilities; quantify unused parcels possibly for use	GIFC, PIFI, GIFI, GCFP	Mid-term		M	M
		Connect landowners with Young Agrarians land matching program if appropriate	Interested Landowners	Long-term		L	M
		Advocate to CRD for agricultural infrastructure grants (Community Works Fund or other funds) for fencing, water storage and land improvements	CESC	Long-term		H	M
Farmers/ Growers	Not enough of them, and the ones we have can't make a living, or can't find a place to live.	Advocate School District 64 to develop increased food growing and agriculture education at schools; get Ag in the Classroom program on the islands	CESC	Long-term		H	M
		Discuss how to solve lack of housing for farm workers	All	Long-term		L	M
		Find supports for any growers wishing to extend their growing season; match unused greenhouses to willing growers	FRA, GIFC	Mid-term		M	M
		Continue to support Seed Libraries across the islands to improve self-reliance and local provenance	GIFC	Short-term		L	M
		Promote the value of local food and farmers to consumers e.g. promotion campaigns, food festivals, public food forums	CRC	Mid-term		H	H

Services and Supplies for Growers	Limited or no availability and high costs of most services and supplies (e.g. vet, hay, soil amendments)	Enable Growers to collaborate (e.g. coordinate vet visits, hay supply and storage), share equipment (e.g. chipper, bed shaper), share knowledge (e.g. crop health, livestock care etc.), save seeds	Growers, PIFI, GIFC	Mid-term		M	H
	Lack of slaughter facilities	Obtain "Slaughter-Right" training and apply for Farmgate and Farmgate Plus licenses where appropriate	PIFI, GIFI, FRA	Mid-term		M	H
		Advocate Salt Spring Island abattoir to accommodate outer islands in their upgrade plans	PIFI, GIFI, FRA	Short-term		L	M
	Lack of capital to purchase equipment	Apply for funding to purchase shared equipment e.g. poultry incubation and hatching, market garden equipment etc.	PIFI, GIFC, GCFP, FRA	Done		L	H
Transportation	Costly to transport feed and supplies on BC Ferries, and scheduling issues with transporting livestock and other goods between islands.	Advocate BC Ferries to make hay and livestock transportation more manageable	CESC	Long-term		H	M
		Purchase hay in bulk and share among livestock producers	PIFI, GIFI, FRA	Mid-term		L	M
Markets/ Customers	Differing demands - some want more locally grown produce while some shop off-island for cheaper prices and more variety	Continue to fund the Co-op Sales Tables and Info Hub Table at Saturday Markets	GIFC	Short-term		L	M
		Support continuation of the PIFI Wednesday market	PIFI	Short-term		L	M
		Diversify sales venues for local growers that also match consumer needs e.g. pilot box programs or pop-up markets; create a “Pender Produce” label (same as Galiano Grown)	PIFI, GIFI, GIFC, SIFH	Mid-term		M	H
		Partner with the South Island Farm Hub to diversify sales to off-island markets, and/or to make use of online sales platform for on-island sales	GCFP, FRA, GIFC	Long-term		M	M

	Lack of connection and understanding between Retail/Commercial and Growers	Continue "Meet Your Maker" event on Galiano, and expand to other islands if desired	GCFP, FRA, GIFC	Short-term		M	H
		Support the proposed Microgreens workshop for Galiano growers to supply restaurants; assess applicability to other islands	GCFP, FRA	Short-term		M	H
Food Processing & Storage	Lack of value-added processing of locally grown produce	Identify needs, barriers, and opportunities for a potential food processing social enterprise	GIFC, FRA	Long-term		M	H
		Increase knowledge-sharing of food processing skills among each island's community	CRC	Mid-term		L	M
		Promote use of existing facilties e.g. community kitchens, food processing equipment	GIFC	Short-term		L	M
		Implement community gleaning and processing workbees, while also ensuring tree pruning and orchard care	CRC	Mid-term		L	M
	Lack of food storage and availability when crisis events occur (e.g. week-long power outages, possible future global crisis events)	Explore viability of a storage facility, or other solutions e.g. pulses and grains can be stored safely for long periods	FRA, CESC, CRC	Long-term		L	L
Waste Reduction and Recovery	Food is wasted in all sectors of the system	Conduct a food waste audit to know type and volumes of waste that could be rescued for human use or processed into animal feeds	CRD	Mid-term		H	H
		Determine viability of community-scale composting facility to keep organic waste on Pender	CRD, Islands Trust, FRA	Long-term		H	H
		Support education of homeowners' backyard composting skills	CRC	Mid-term		L	L
Social Networks	Lack of connectivity, communication, and collaboration within and across islands, and within and	Develop a series of Farm Field Days to address topics of common interest to growers, with guest speakers and agriculture extension scientists	FRA, GIFC	Long-term		M	H
		Strengthen and leverage connections with off-	FRA, GIFC	Short-term		L	M

	across all sectors of the food system	island food and agriculture organizations such as CRFAIR, SIFH, Sandown Regenerative Farm, FFCF, Universities					
		Create opportunities for community organizations to connect and discuss successes, challenges, solutions	FRA Roundtable	Short-term		L	H
		Support food festivals e.g. The Crisp, Mayne Apple Festival, art shows, and explore new events such as a food conference	CESC, FRA	Short-term		M	M
Ecosystem Health	Climate change is impacting growers with unprecedented and unpredictable weather extremes. Mitigation and adaptation measures are needed globally and locally.	Advocate MAFF to prepare a water supply and demand model for the islands; funding support for water storage (ponds, tanks)	CESC	Long-term		H	H
		Advocate for funding support to maintain (and/or increase) on-farm ecosystems such as forest, hedgerows, bird and pollinator habitat, ponds and creeks, native species.	FRA	Long-term		H	H
		Secure funding for regenerative practices that improve soil health and sequester carbon; collect baseline soil health measures	GIFC has confirmed a pilot Soil Health program; more funding needed for baseline quantification and program continuation	Short-term		M	H
Culture	Lack of understanding of Indigenous world view and foodways; those who are trying to build bridges find it difficult to overcome cultural barriers.	Develop connections and support collaborative projects e.g. remove invasive weeds and plant native species under Indigenous leadership	Galiano, Mayne and Pender Conservancy Assoc's are already working on this; GIFC could partner on projects with a 'food' emphasis	Mid-term		L	H
		Community organizations to meet and identify specific ways to decolonize, and build relationships with Indigenous communities	CESC-FRA Roundtable	Short-term		L	L
		Support awareness, stewarding and planting of native food plants on private and public lands	Indigenous communities,	Long-term		L	H

			Galiano, Mayne and Pender Conservancy Associations with support from FRA and interested landowners				
		Explore wild foods harvest in a regenerative and non-extractive way e.g. native food plants nursery	PICA, GIFC with WSANEC	Long-term		H	H