

Appendix A – Explaining the terms

Regenerative Agriculture

- Regeneration is a fundamental characteristic of life, from single celled organisms to entire ecosystems, life regrows, renews and restores itself after a disturbance. The process of renewed growth after a dramatic change is a key mechanism that enables life to adapt to major disturbances.
- At the ecosystem level, regeneration operates primarily through the process of succession, which is the sequential evolution of an ecological community through specific phases, where each phase sets the stage for the next community of species to live. The general pattern of succession is towards higher complexity, diversity and biomass as time proceeds, until a stable, 'climax' stage is reached. Eventually a disturbance will disrupt the ecosystem and the composition of species will be shifted to an earlier stage in the successional timeline.
- The process of succession is important to agriculture for a number of reasons. Agricultural landscapes are usually highly disturbed as compared to their wild counterparts. The garden beds and fields that make up agricultural landscapes are a very early successional stage, one that has to be maintained at that stage in order to cultivate crops. As the pattern of nature is to regenerate disturbed land to a more mature state, nature is usually trying to move agricultural systems to a different stage in the successional timeline. The constant struggle to keep weeds out of garden beds is because weeds are nature's method for beginning the regeneration of the bare land that has been disturbed to grow crops in. Without the constant disturbances of tilling, planting, weeding and harvesting, agricultural land would regenerate to a state similar to the native ecosystem.
- Disturbed ecosystems, i.e. agricultural lands, usually have compromised functions. Reduced mineral, water and energy cycling and low biodiversity are all common features of agricultural land. In order to maintain crop productivity in these disturbed environments, farmers resort to applying external inputs like fertilizers, irrigation & pesticides.
- Out of this understanding of the patterns of nature, regenerative agriculture emerged as a system of farming that aims to:
 - o increase crop production by working with, rather than against, the natural patterns of ecological succession
 - o decrease the need for external inputs by minimizing disturbances to the land and restoring ecosystem functioning
- Some of the positive effects of regenerative agriculture include:
 - o increased carbon sequestration in the soil & above ground plant biomass
 - o increased soil fertility (healthy soil food web, increased nutrient cycling, increased organic matter), increased biodiversity, reduced need for irrigation, fertilizers, biocides, fossil fuels

Resilient Agriculture

- Resilience is the capacity of social or ecological systems to absorb (or withstand) perturbations and other stressors, such that the system remains within the same regime, essentially maintaining its structure and functions; it describes the degree to which the system is capable of self-organization, learning and adaptation (Holling 1973, Gunderson & Holling 2002, Walker *et al.* 2004).
- Feeding humanity in the face of the combined crises of climate change, resource depletion and ecological collapse poses significant challenges for agriculture and humanity. Building resilience

into agricultural systems is a key strategy to help us adapt our food systems to the uncertainty ahead of us.

- The following are design principles for building resilience into human systems:¹
 1. Resilience transcends scales
 - Strategies to address resilience apply at scales of individual buildings, communities, and larger regional and ecosystem scales; they also apply at all time scales—from immediate to long-term.
 2. Resilient systems provide for basic human needs
 - These include potable water, sanitation, energy, livable conditions (temperature and humidity), lighting, safe air, occupant health, and food; these should be equitably distributed.
 3. Diverse and redundant systems are inherently more resilient than specialized, single provider systems.
 - More diverse communities, ecosystems, economies, and social systems are better able to respond to interruptions or change, making them inherently more resilient. While sometimes in conflict with efficiency, *redundant* systems for such needs as electricity, water, food and transportation, improve resilience.
 4. Simple, passive, and flexible systems are more resilient
 - Passive or manual-override systems are more resilient than complex solutions that can break down and require ongoing maintenance. Flexible solutions are able to adapt to changing conditions both in the short and long term.
 5. Durability strengthens resilience
 - Strategies that increase durability enhance resilience. Durability involves not only building practices, but also building design (beautiful buildings will be maintained and last longer), infrastructure, and ecosystems.
 6. Locally available, renewable, or reclaimed resources are more resilient.
 - Reliance on abundant local resources, such as solar energy, annually replenished groundwater, and local food provides greater resilience than dependence on nonrenewable resources or resources from far away.
 7. Resilience anticipates interruptions and a dynamic future.
 - Adaptation to a changing climate with higher temperatures, more intense storms, sea level rise, flooding, drought, and wildfire is a growing necessity, while non-climate-related natural disasters, such as earthquakes and solar flares, and anthropogenic actions like terrorism and cyberterrorism, also call for resilient design. Responding to change is an opportunity for a wide range of system improvements.
 8. Find and promote resilience in nature
 - Natural systems have evolved to achieve resilience; we can enhance resilience by relying on and applying lessons from nature. Strategies that protect the natural environment enhance resilience for all living systems.
 9. Social equity and community contribute to resilience.
 - Strong, culturally diverse communities in which people know, respect, and care for each other will fare better during times of stress or disturbance. Social aspects of resilience can be as important as physical responses.
 10. Resilience is not absolute
 - Recognize that incremental steps can be taken and that *total resilience* in the face of all situations is not possible. Implement what is feasible in the short term and work to achieve greater resilience in stages

¹ <https://www.resilientdesign.org/the-resilient-design-principles/>

- Applying these principles to agriculture specifically, some examples of actions that enhance resilience are:
 1. grow crops at multiple scales: home gardens, hobby farms, community gardens, large farms
 2. grow crops that provide for a diversity of human needs: food, medicine, fiber, fuel
 3. grow a diversity of crops, ensure that critical functions, can be supplied by more than one source
 4. chose human scale equipment and infrastructure that can be fixed by hand and repurposed
 5. chose quality equipment and infrastructure that will last a long time and stand up to stresses
 6. chose locally available materials, hire local farm-workers, use locally available energy
 7. expect the unexpected in terms of weather, pests, markets
 8. use nature as a guide for how to operate
 9. invest in people: educate, empower and support community agriculture
 10. create a farm community resilience plan, implement it in stages over time

Relocalized Agriculture

- Relocalization is a strategy to rebuild societies based on the local production of food, energy and goods, and the local development of currency, governance and culture. The main goals of relocalization are to increase community food and energy security, to strengthen local economies, and to improve environmental conditions and social equity.²
- Shifting towards a more localized society is important because:
 - o globalization has eroded local communities and cultures (big box stores & the monoculture society);
 - o globalization has weakened local economies, subjecting local economies to the mercy & volatility of global markets;
 - o globalization has increased the scale and distance that negative environmental and social externalities can be outsourced to different parts of the world, to the point that it is very difficult to understand the impact our consumption has on the people and places where the production happens.
- Relocalizing agriculture provides us with a direct way to:
 - o strengthen our community & culture around the importance of food;
 - o strengthen our local economy around the community food system;
 - o ensure that the food we eat doesn't contribute to environmental degradation or social oppression in other parts of the world.
- Relocalizing agriculture is a practical and effective way to create positive change as the community is the most available and effective level of scale at which to intervene in human systems.
- Strategies to relocalize agriculture:
 - o community supported agriculture and farmer's markets
 - o community gardens
 - o local currency & similar incentives to shop and invest locally
 - o food sharing programs: gleaning, harvest swaps
 - o local food culture: potlucks, themed dinners, farm to table restaurants, agri-tourism
 - o local food security & sovereignty: instead of the "100 mile diet" the 'Salt Spring Diet'
- is about meeting our needs in ways that supports the local ecology & culture

² <https://www.postcarbon.org/relocalize/>

Appendix B - Community Ideas for Sharing Knowledge

Topics area for knowledge sharing resources

For Farmers and Growers:

- Create/find resources & offer training in: water conservation techniques, regenerative agriculture including wildcrafting and permaculture techniques, GIS and other technological tools for farming, pest and disease management, opportunities that climate change may bring for new crops trials.
- Program for new farmers to visit established farms to learn about what works & what doesn't work.
- Distribute information on sales and marketing for new farmers, what to grow on SSI, how to use farm machinery, composting guides, and information profitable production techniques.
- Share resources for funding sources for various agricultural programs and initiatives.

For Consumers:

- Create a resource for consumers that answers the following question: 'why should we buy local?'; include knowledge of whole supply chain and the impact of foods coming from off island; link consumers with knowledge on how food contributes to climate change and how local food reduces climate change impacts.
- Partner with community kitchens for workshops to teach food preservation for consumers (e.g. The Root).
- Build knowledge on local foods, for example; a seasonal calendar of local foods, including Indigenous foods; bring farm stories to consumers; information on what products are available at what time of the year and where on SSI.
- Include youth: create knowledge sharing resources for youth about local food systems and growing, continue to bring local food system knowledge into the elementary, middle school, and high school curriculums.

For SSI Food Buyers (e.g. restaurants, grocery stores, institutions):

- Create a resource answering the questions: 'why should we buy local?'
- Determine barriers for purchasing local foods and resources to overcome those barriers.

For Landowners:

- Create a resource for agricultural landowners who aren't farming explaining why it is important that their land be brought into production
- Encourage landowners to consider leasing land to farmers

Online platform for building local knowledge

Potential to create an online network of resources: for example, the "Salt Spring Island Agriculture and Food Online Network and Inventory." Use the Farm Plan website, or create a dedicated website, to further share resources related to food and agriculture, such as:

- Farmer to Farmer Resources
 - area with Q&A devoted to farming issues
 - area with work exchange (barn-raising) event information
 - area for skill-sharing/re-skilling events
- Agricultural Job Board
 - trusted directory with people who want to work on farms

- “human library”; a bank of people who consent to be contacted for the purpose of sharing their knowledge/skills

- Consumer Resources

- area where consumers can see what produce is available each week and where to get it; map of where to buy local foods (farms and retail outlets)

- Landowner to Farmer Resources

- inventory/map of landowners willing to rent land to farmers

- Land and Crops on SSI

- inventory of all agricultural land and current crops growing on SSI

- inventory of water sources and licences

- overlay with climate change impacts to crops

Appendix C – Funding Opportunities

In order to implement the recommendations presented in the AFP, funding will need to be sourced. Sources of funding have been identified to support specific initiatives within the implementation plan. Information on current funding opportunities is provided below. Note that funding programs are continually evolving and will need to be monitoring on a regular basis.

Investment Agriculture Foundation of BC (IAF)

The Investment Agriculture Foundation (IAF) strategically invests federal and provincial funds to support innovative projects that benefit the agri-food industry in BC. IAF offers a wide range of funding for industry groups and municipalities in funding categories such as animal industries, plant industries, processing industries, environmental issues, emerging sectors and other. Specific funding programs are available within each category to deal with specific industry issues and enhance the sectors.

Current Funding programs include:

Buy BC

Buy BC Partnership Program Cost-Shared Funding is available to applicants to undertake sector/product specific marketing and promotional activities to increase consumer demand and sales of BC agrifood and seafood products within the Province.

Canada-BC Agri-Innovation Fund

The fund allows industry, academia, value-added food processors, retailers and others to access funding for projects involving late-stage research; pilots and demonstrations; as well as the commercialization and adoption of innovative products, technologies and practices for the agriculture, food or agri-products sector.

BC Agrifood & Seafood Market Development Program

The B.C. Agri-food and Seafood Market Development Program helps B.C. agri-food producers, agri-food and seafood processors, co-operatives and associations to identify, assess, target and develop market opportunities to increase their sales outside of B.C.

Farm Adaptation Innovator Program

Delivers funding for farm-level, applied research projects that help producers adapt to the impacts of climate change. Program delivered by the BC Climate Action Initiative.

Agri-Food Futures Fund

Funding helps both established and emerging agricultural and food processing sectors to pursue opportunities and develop solutions.

Bee BC Program

Supports small scale regional/community-based projects to research, explore, field-test and share information about best management practices associated with bee health.

B.C. Agri-Business Planning Program

The B.C. Agri-Business Planning Program supports producers and processors to access the following types of business planning services:

- Business Structures: identification and evaluation of potential business structures
- Production Economics: development of production systems and/or strategies
- Business Strategy: development of a strategic plan
- Financial Analysis: development of financial analysis
- Value Added Ventures: development of a business plan for a new value added venture
- Risk Assessment and Mitigation: assessment and development of a business and financial risk management system or strategy
- Human Resources: development and implementation of a strategic Human Resource Plan
- Succession/Transition Planning: development and preparation of a Farm Succession Plan

Eligible applicants can access up to \$5,000 for individuals and up to \$30,000 for groups for business planning services from a Qualified Business Consultant.

More information here: <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/programs/agri-business-planning-program>

BC Climate Action Initiative

The BC Agriculture and Food Climate Action Initiative develops tools and resources to enhance agriculture's ability to adapt to climate change. The Initiative was developed in 2008 by the BC Agriculture Council to enable a proactive and pan-agriculture approach to climate change issues. The Initiative is supported by the BC Agricultural Research and Development Corporation and the Investment Agriculture Foundation with funding provided by Agriculture and Agri-Food Canada and the BC Ministry of Agriculture.

Two programs are currently managed by the Initiative:

Regional Adaptation Enhancement Program

The ability of agricultural producers to adapt to climate change is often linked to physical resources and decision-making processes that are beyond the individual farm. Some of the most significant issues affecting future food production in BC include: water management (water supply and storage, drainage and ditching); emergency planning; land use practices; and regional infrastructure). The planning process for developing *Regional Adaptation Strategies* brings local governments and agricultural producers together to identify strategies and actions for addressing climate change impacts. Building collaboration to address agricultural adaptation issues is an important underlying goal of the process. The types of strategies and actions identified reflect the specifics of local climate change impacts, as well as the adaptive capacity and adaptation challenges and opportunities facing local agriculture.

Farm Adaptation Innovator Fund

The Farm Adaptation Innovator Program (FAIP) seeks to build adaptive capacity and encourage the adoption of effective farm practices to help mitigate impacts related to climate change by supporting projects that:

- Promote innovation in farm practices, approaches and technologies that support climate change adaptation
- Demonstrate farm practices that reduce weather related production risks, and identify new production opportunities
- Develop informational and knowledge sharing resources and support increased organization capacity to support adaptation

Project types supported through the program include applied research, pilots, demonstrations and adoption facilitation. Projects may be local, regional or provincial in scope. The resulting knowledge, practice, technology or approach must be applicable at a farm-level scale.

The Indigenous Agriculture and Food Systems Initiative

Agriculture and Agri-Food Canada has developed the Indigenous Agriculture and Food Systems Initiative which supports Indigenous communities and entrepreneurs who are ready to launch agriculture and food systems projects and others who want to build their capacity to participate in the Canadian agriculture and agri-food sector. The objective of the Initiative is to increase economic development opportunities for Indigenous Peoples by building their capacity to participate and succeed in the Sector. Projects under the Initiative must be for the benefit of Indigenous Peoples and communities in Canada, as well as the Canadian agriculture and agri-food sector. The maximum AAFC contribution to a project will normally not exceed \$500,000 per project, per year or a maximum of \$2.5 million over five years.

Examples of agriculture and food systems projects that may be eligible for funding through the Initiative include, but are not limited to:

- Supporting an approach to producing fresh food within an Indigenous community, and helping to plan and design the means in which that agricultural production can occur.
- Developing a food system within an Indigenous community to access healthy food, while also providing an opportunity for Indigenous Peoples to share their agricultural knowledge and experiences, and market and sell their agriculture products.
- Providing skills training that will help an Indigenous community or organization establish or scale up an agriculture operation.

More information here: <http://www.agr.gc.ca/eng/programs-and-services/indigenous-agriculture-and-food-systems-initiative/guide/?id=1544123669824#a1.1>

Real Estate Foundation of BC (REFBC)

The Real Estate Foundation of BC (REFBC) is a philanthropic organization based in BC that supports land use and real estate practices that contribute to resilient, healthy communities and natural environments. The grant program supports non-profit organizations (charities, societies, NGOs, universities and colleges, local and regional governments, First Nations) working to improve BC communities and natural environments through responsible and informed land use, conservation, and real estate practices. Grants support projects, initiatives, and sustainable solutions that address current land use challenges and help communities to plan for the future.

General grants are focused on the following interest areas:

- Sustainable Land Use
- Built Environment Sustainability
- Freshwater Sustainability
- Local and Sustainable Food Systems

There are two intakes per year and applications are open to any non-profit organization doing work related to land use and/or real estate in BC. Local and regional governments and First Nations are eligible to apply.

REFBC is most likely to fund projects that:

- Target real estate and/or land use professionals and planners, policy makers, decision makers, and/or key public audiences
- Encourage best practices
- Address a current or emerging need
- Increase the capacity of an organization, sector, or community to improve real estate and/or land use practices
- Have clear, achievable objectives and identified deliverables, including well-developed implementation and communication plans

REFBC funds up to 50% of the cash portion of a project budget. Application deadlines are generally in the late winter (February) and early fall (September).

More information and past projects can be found on REF's grants website at <http://www.refbc.com/grants>.