

# CLIMATE ACTION TOOLKIT #10

## Strengthen Local and Regional Food Resilience



PENOBSCOT  
CLIMATE ACTION



HIGH POTENTIAL  
to build community  
resilience

### Description of the Action

Agriculture, which is highly dependent on climate, is expected to face many impacts as a result of changing weather patterns and more frequent and intense weather events (like heat waves, droughts, hard freezes, and severe storms). It will become more difficult to grow crops and raise animals, and will also become more likely that we experience significant food delivery interruptions. Both of these could lead to price spikes that will be especially challenging for those already struggling to acquire affordable, fresh, nutritious, locally-sourced, and/or culturally appropriate food.

Research conducted while developing Penobscot Climate Action has revealed that while there are a great many organizations addressing food insecurity, questions remain. Namely, what is the state of the food system in the Penobscot Climate Action region? And how can the efforts of existing entities be combined for maximum impact?

In co-developing these climate action strategies with the community, it became clear to the Penobscot Climate Action team that municipalities and organizations did not have access to the data they need to meet the needs of community members (food insecure populations and otherwise). Therefore, with the overarching goal of creating a **stronger, more resilient food system** – one that can withstand shocks like crop damage and supply chain disruptions – this toolkit recommends that municipalities take two key actions:

1. Conduct individual food security assessments and generate corresponding food action plans; and
2. Form a regional Collaborative dedicated to regional food system improvements.

Further actions can stem from the results of the municipal-scale assessments/action plans and the synergism generated by the Collaborative, such as more effectively matching food producers to organizations that distribute to food insecure populations, and increasing the prevalence of home-grown and community-grown products, thereby expanding community food options.

### Steps for Implementation

**Note:** It's envisioned that the two components could occur in sequence. Firstly, a small project team from each individual municipality could be formed to lead the Food Security Assessment and Food Action Plan stage. Then, given the results, the Collaborative could be formed. Finally, the first round of goals set by the Collaborative could be determined from the results of the Assessments and Action Plans.

#### COMPONENT 1

#### Municipal-Scale Food Security Assessments and Food Action Plans

This component involves an assessment of where food is already being grown, where there is potential to expand local food production, and where there are opportunities

### How This Action Supports the Goals of Penobscot Climate Action

- ★ **Equity and Environmental Justice.** This action is guided by an overarching goal of ensuring access to affordable, fresh, nutritious, locally-produced, culturally appropriate food for everyone living in the Penobscot Climate Action region and beyond. This action stems from the awareness that those facing financial insecurity and food insecurity often experience concurrent challenges – for example, households that spend over 30% of their income on rents or mortgages are more likely to experience food insecurity and are more likely to be impacted by climate change.
- ★ **Environmental Health.** Increasing local food production, particularly through restorative and regenerative agricultural practices, increases environmental health (such as soil health and air quality) and decreases environmental impacts (such as air pollution from transportation emissions).
- ★ **Community Resilience.** Increasing locally-produced food increases community resilience by providing local food alternatives in the case of supply chain disruptions. Community gardens and agriculture can also provide many resilience co-benefits, including an increase in green space, increase in access to healthy foods, and increase in economic opportunities.
- ★ **Regional Collaboration.** This action aims to build more effective communication and increased impact on the part of food system entities in the region. In this way, entities can share best practices, increase visibility, combine labor forces, and benefit from economies of scale, among other outcomes.

to connect food producers with people experiencing food insecurity – all of which would increase availability of data and understanding of food systems across the region. First steps would include:

**Form a project team** – Form a project team made up of representatives from various sectors, including municipal staff, educational partners, local institutions, relevant businesses, and non-profit organizations and/or community groups, including food banks, farmers’ cooperatives, mutual aid groups, and local land trusts. Ensure your group is

#### KEY PARTNERS

- **Academic food system partners** (e.g., University of Maine Cooperative Extension)
- **Community-based organization food system partners** (e.g., Food and Medicine, Penquis, community gardens, food banks and mutual aid groups)
- **Local institutions** (e.g., colleges and universities, K-12 schools, hospitals and healthcare centers, assisted living facilities)
- **Local agricultural sector** (e.g., farmers, growers, processors, distributors)
- **Local food processing and distribution** (e.g., processors, distributors, storage, grocery retailers)
- **Local governments**
- **Regional organizations** (e.g., Eastern Maine Development Corporation)
- **State agencies and programs** (e.g., Department of Agriculture, Conservation, and Forestry; Maine Climate Council)
- **Statewide nonprofits, networks, and initiatives** (e.g., The Maine Food Strategy, GrowSmart Maine, Mainers Feeding Mainers, Full Plates Full Potential)
- **New England initiatives** (e.g., Food Solutions New England, New England Food Systems Planners Partnership)

reflective of diverse perspectives and experiences from your community – such as age, income, race, gender identity, religion, immigration, and language.

**Assess vulnerability and assets through a data-driven analysis** – Identify community food resources, populations that are experiencing food insecurity, and communities or neighborhoods that could benefit most greatly from expanded access to food resources. Additionally, identify potential regional partners that could provide expertise and resources. **Key indicators of food justice** from other sources, such as the U.S. Census Bureau and other national and local data sources, may include the following:

- Food retail options
- Emergency food providers
- Community garden plots
- Participation in the National School Lunch Program
- Food access points that offer culturally relevant food options (and which cultures are represented)
- Number of persons participating in Supplemental Nutrition Assistance Program (SNAP, formerly food stamps)
- Accessibility of grocery stores/food pantries/etc. (food access points) by set walking distance, driving distance, or by public transportation

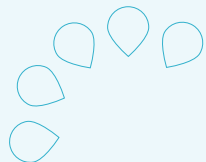
**Corroborate, qualify, or expand on findings with community input** – Leave space for qualitative reporting and first-hand perspectives. Supplement the information gathered in step two with community input. This engagement should include community members, including Environmental Justice and other priority populations, organizations that serve the community, and other social networks and community leaders. Utilize multiple engagement strategies, such as participation in community events, leading workshops with community-based organizations, surveys, and storytelling events. Document

## Connections Across Existing Work and Other Climate Action Strategies

This action begins with municipal-scale assessments that would provide the data needed to most effectively address existing and projected food insecurity in the region in order to build a resilient food system. The **Maine Road Map to End Hunger** envisions little to no food insecurity and its associated trade-offs – like “skipping meals to pay for housing, medicine, or heat, or staying in an unsafe relationship because leaving jeopardizes [one’s] ability to keep food on the table for [their] children.” The Road Map also notes that assessments can be used to identify numerous data points, including the following: gaps in federal assistance programs and how to meet them through state and local resources; the relationship between food insecurity and factors like age and/or race/ethnicity; barriers to employment; etc. Expanded use of technology and better data sharing models will also benefit others located within and beyond the Penobscot Climate Action region.

Additionally, this action could bring together the work being done by individual entities in the region for maximum impact through the implementation of a Collaborative dedicated to increasing food resilience in the Penobscot Climate Action region. For example, there are many programs and offerings provided by the University of Maine Cooperative Extension that could be further amplified through partnerships with food aid organizations, schools, and other institutions.

This action also connects to the Community Hubs for Resilience (Toolkit #9), as education and resources related to food security could be part of the service offerings of the network.



the experiences and recommendations that community members provide.

**Develop a food action plan** – Informed by the results of the food assessment, identify the major vulnerabilities, assets, and goals for the municipality in the form of a Food Action Plan. The plan should be specific to the municipalities’ needs and outline the goals and recommendations that would prioritize community needs. Food Action Plans often aim for the following types of goals: to increase production, sales, and consumption of locally-produced food; to create jobs and improve economic opportunities in food and farming; to protect the land and water needed to produce food; to ensure food safety; and to reduce waste, hunger, and food insecurity.

## COMPONENT 2

### Regional-Scale Penobscot Climate Action Food System Collaborative

This component focuses on building food resilience through enhancing regional coordination and support for local farmers, gardeners, food distributors, institutions, and residents. [Research conducted by The Maine Food Strategy](#) has shown that networks allow groups to organize effectively, advance policies, and maximize programs, resources, and opportunities. First steps would include:

#### Identify a “host organization” for the Collaborative

– The Climate Action Committee will identify a host organization for the Food System Collaborative, that would be responsible for convening and coordinating efforts within the Collaborative. The host organization may be a community nonprofit, a regional organization, an academic center, or another entity that works in the food system space and that has the capacity to facilitate this initiative. The Climate Action Committee would work with the host organization to support the toolkit vision and identify pathways for funding.

**Conduct outreach and conversations** – Conduct outreach and hold conversations with key stakeholders in the region, focusing on priorities, needs, and vision for a resilient food system. Discuss the concept and intent behind a regional Collaborative for Greater Bangor, and gather perspectives on potential opportunities, value, or impact that could be created through coordination. The goal of these conversations is both to coalesce around common themes for building food system resilience, to build relationships within the food system space, and to invite interested stakeholders to join in forming the Collaborative. Continue to expand outreach based on recommendations and introductions from initial conversations.

**Launch the Collaborative** – Launch the Collaborative for the Greater Bangor region. Set the first round of goals and objectives, based on the results of the Food Security Assessments and Food Action Plans of each municipality, as well as any new insight that emerged through preliminary conversations. As a starting point, existing priorities, as identified by Penobscot Climate Action, include the following:

- Create a plan for how to help the community get food during supply-chain emergencies and climate emergencies;
- More effectively match food producers to organizations that distribute to food insecure populations;
- More effectively match local growers, distributors, and other entities with financing models and grants that remove barriers to food generation and food access;
- Increase production and distribution of fresh and local food products;
- Increase prevalence of self-reliance via home-grown and community-grown products;
- Increase availability of food systems jobs, especially in food preparation, as fresh food preparation requires more labor;

## PRECEDENTS

### Food Assessments and Action Plans

- [Central Region, New York](#)
- [Burlington, Vermont](#)

### Food Action Plans

- [Lewiston-Auburn, Maine](#)
- [Unity, Maine](#)
- [Manchester, New Hampshire](#)
- [State of Massachusetts](#)
- [Cambridge, Massachusetts](#)
- [State of Vermont](#)

### Regional Food System Collaboratives

- [Good Shepherd Food Bank](#) - based in Auburn, Maine, works closely with over 600 partner agencies. In one partnership with the Preble Street Food Program, both worked with other organizations to establish a **‘Food Security Hub’** that will be capable of serving 10,000 meals per day. The Good Shepherd Food Bank collaborative model demonstrates the impact of working with a **range of partners**, including local small businesses like insurance companies and breweries; big-box consumer goods stores like Walmart and BJ’s; smaller groceries like Shaw’s and Hannaford; private companies like Bank of America and Poland Spring; and local non-profits; among others. Good Shepard Food Bank also has an **Advocacy Advisory Council**, which meets regularly to identify, then advance advocacy priorities (like focusing on culturally-specific food projects and working with schools with large populations of students on free- and reduced-lunch programs).
- [Cultivating Community](#) - based in Portland, Maine, focuses on urban gardens, community gardens, and school gardens, as well as education for new leaders and farmers.
- [Focus on Agriculture in Rural Maine Schools \(FARMS\)](#) - brings educational programs, local food, and garden-based curricula to school cafeterias.
- [The Maine Grain Alliance](#) - promotes the production and use of locally-grown grains through annual conferences and celebrations where members can share knowledge and best practices.

- Design and propose zoning ordinances that promote, rather than restrict, small-scale agricultural uses;
- Design and propose zoning ordinances that conserve existing agricultural lands; and
- Establish a community entity that processes and packages local food products for distribution to institutions and community members.

**Establish governance systems** – Outline how the Collaborative will work together, including roles and responsibilities, frequency of meetings, and systems for collaborating. Identify ways in which the regional

#### PRECEDENTS (continued)

- **The Merrymeeting Food Council** - is a collaborative of farms, fisheries, businesses, nonprofits, government, and individuals from 14 communities around Merrymeeting Bay, Maine. The Merrymeeting Food Council, among others including Food and Medicine, participate in the [Maine Network of Community Food Councils](#). Many other participating organizations serve numerous towns including rural areas: Good Food Council of Greater Lewiston-Auburn, Local Food Connection of Greater Bethel, and Knox County Food Council of Knox County.
- **Intervale Center** - in Burlington, Vermont is an “ecosystem of farms, community gardens, programs, and recreational spaces.” In 2022, Intervale distributed 12,600 pounds of produce in their Free CSA Program, completed three pollinator projects, and held 27 educational workshops, among other actions and accomplishments. The Intervale Center works closely with [AALV](#), a Vermont-based social services organization dedicated to supporting New Americans and refugees in Vermont, including Bhutanese, Burmese, and Iraqi populations.
- **Center for Agricultural Economy in Vermont** - a good example of a regional body that coordinates and supports a robust food system in Vermont’s Northeast Kingdom. They have various case studies on food processing models and food distributions models.

Collaborative will connect with and/or align with other networks coordinating around food system resilience either in different geographies or broader scales (e.g., The Maine Food Strategy, Food Solutions New England, Maine Network of Community Food Councils, UMaine Cooperative Extension, etc.). Create systems for regularly reflecting on progress, and adapting approaches based on learnings.

#### COST CONSIDERATIONS

- The initial assessment efforts may cost \$50,000 - \$150,000, per municipality, depending upon scope and assuming a planning consultant is engaged to facilitate the process. Subsequent implementation steps can vary widely, depending on the goals of the Collaborative.

#### POTENTIAL SOURCES FOR FUNDING

- **USDA Regional Food System Partnership Grants** - supports partnerships that connect public and private resources to plan and develop local or regional food systems. Funding ranges from \$100,000 to \$1,000,000.
- **USDA Community Food Projects Competitive Grant Program** - supports partnerships and initiatives to meet community food needs related to expanding local food, food access, agriculture, or nutrition challenges.
- **USDA Resilient Food Systems Infrastructure Program** - supports building resilience in supply chains, such as expanding markets to small farms and food businesses.
- **Maine Community Resilience Partnership Grants** – Funding for climate mitigation and adaptation efforts, including capacity building, planning, and implementation projects.
- **Private Foundations**, such as the [Maine Community Foundation](#) and the [New England Food System Resilience Fund](#), can provide support for various climate, community, equity, and related initiatives.

#### RESOURCES TO GET STARTED

- **The USDA** provides resources around conducting [Food Security Assessments](#), such that one could be created for the region with sub-reports for individual municipalities and/or organizations, such as [this one](#) from [Durham, NC](#).
- **What Maine’s Food System Needs Now** - Findings from a study by the [Maine Food Strategy](#) that outlines key recommendations for strengthening Maine’s food systems, with a focus on leadership and strategy.
- **The Maine Food Strategy Framework** - A framework (or organizing tool) produced by the Maine Food Strategy designed to help organizations collaborate across sectors to strengthen Maine’s food systems.
- **Everyone at the Table: Maine’s Roadmap to End Hunger by 2030** - Maine’s plan to end hunger, produced by the Department of Agriculture, Conservation, and Forestry.
- **Food Resilience: A Planning Guide for Local Governments** - This resource, produced by the John Hopkins Center for a Livable Future, guides local governments in building food system resilience in a way that promotes equitable and just food systems.
- **Food Solutions New England** - aggregates a wealth of resources related to building resilient food systems, including [A New England Food Vision](#), a strategic vision for strengthening food systems in New England.
- **New England Food System Planning Partnership** - aggregates a wealth of research and initiatives tied to strengthening food system resilience, including a Food Systems Resilience Assessment Tool that is currently under development (as of January 2024).
- **Sustainable CT** provides a repository of actions that can be conducted by collaboratives and partnerships (see 10.1 – Encourage an Equitable and Just Food System & 10.5 – Support Equitable Food Access and Local Farmers & 10.4 – Develop and Promote Community Growing Spaces).