NORTH AMERICAN FOOD SYSTEMS NETWORK

CARAT

Community & Agriculture Resilience Audit Tool

VERSION 2025

This tool has been developed and offered to the public in collaboration with:

FLFPC Florida Food Policy Council — Leading Florida Food

UF IFAS University of Florida

WIT meets GRIT — The Intersection of Passion + Perseverance

Cornell University Einhorn Center for Community Engagement

Harrisdale Homestead

Ostrom Workshop Food and Agrarian Systems, Indiana University

University of Virginia | Institute for Engagement & Negotiation — Shaping Our World Together

Lyson Center for Civic Agriculture and Food Systems

The North American Food Systems Network (NAFSN) is an association of food systems professionals working together to strengthen local and regional food systems. NAFSN is sponsored by the Thomas A. Lyson Center for Civic Agriculture and Food Systems, a project of the Center for Transformative Action (a 501(c)(3) nonprofit affiliate of Cornell University).

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CARAT Version 2025 includes insights from 2024 pilot participants representing:
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TABLE OF CONTENTS

ABOUT CARAT

What is the Community & Agriculture Resilience Audit Tool?

The Community & Agriculture Resilience Audit Tool (CARAT) is a free, open-source tool for communities to self-assess how they currently utilize the assets of their local food system to achieve a substantial level of community resilience.

You are using the **off-line version** of CARAT.

This is a *downloadable* document that one member of your audit team will manage for your group. This document includes a list of instructions followed by a *fillable* form that is unique to your group when saved with an original name. The CARAT Tool can also be printed if a paper version is preferred. This off-line version of CARAT is *not* saved to the CARAT database.

Find the **on-line version** of CARAT here.

Choose the online version to allow multiple members of your team to contribute to the auditing process by using a shared PIN. The on-line version saves your community's information to the CARAT database and generates additional insights when submitted. CARAT is offered in both on-line and off-line versions to increase accessibility.

Privacy Statement

Your community's data belongs to your community. NAFSN will not share any identifying version of your data with anyone except those specific individuals you invite as collaborators to your audit team.

CARAT
Community & Agriculture Resilience Audit Tool

Inclusivity Statement

CARAT is firmly rooted in equitable engagement. CARAT creates a team approach for auditing community resilience by actively seeking input from a wide variety of individuals with specialized knowledge, deep insight, and/or lived experience, including those most negatively impacted by its food system. Please contact us with your specific questions.

Notes from the Developers

As food system leaders representing a wide range of disciplines, we have observed that the strengths of local food systems contribute significantly to developing and maintaining community resilience.

All too often, people view food systems as simply comprising the linear connections between food production, distribution, and consumption. This perspective fails to consider the fact that vibrant local food systems play multidimensional roles in community resilience, some of which are not intuitively obvious at first glance. These include the role of local food systems in helping communities to:

- better plan for and manage supply chain disruptions;
- reduce the occurrence of household food insecurity;
- advance nutritional and public health goals;
- keep a greater portion of farm-based income and other resources within the local community; and
- increase a community's capacity to address the cultural food preferences of all parts of its population.

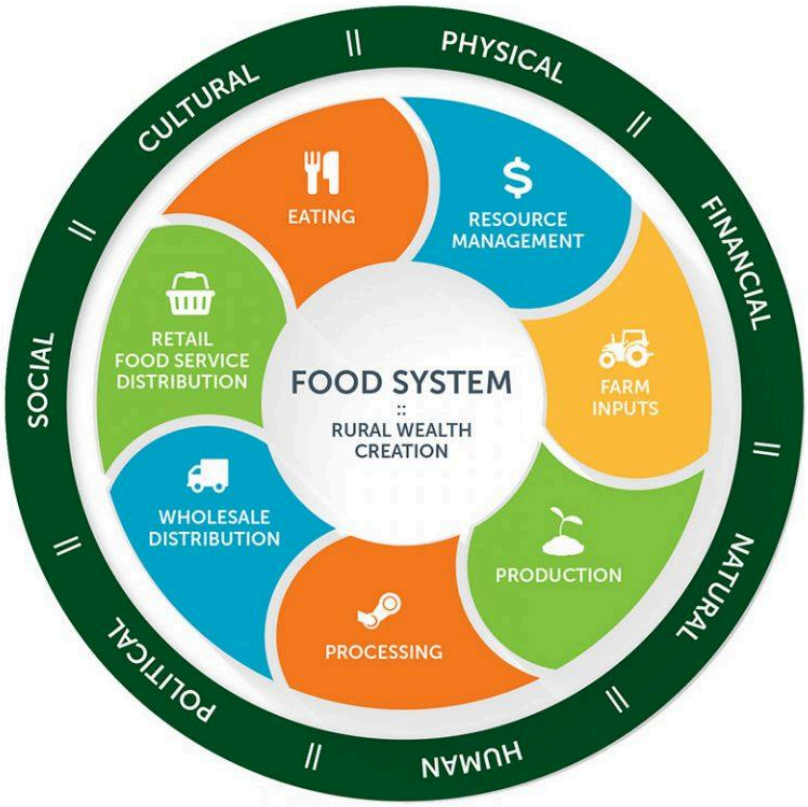


Image borrowed from [Colorado State University, Department of Sociology]

The image above illustrates the complexity and interconnectedness of the food system. The interior circle represents a simplified structural perspective of the food system, primarily focusing on individual stakeholders and their economic contributions. The exterior circle features the seven community capitals developed by Flora and Flora and represents a more holistic view of a food system's impact on community resilience and collective well-being.[1]

By aligning our CARAT tool with a broader-based community capitals framework, our working group — convened by the North American Food System Network — seeks to give local teams more in-depth perspectives of the relationship between developments in their local food system and their community's ability to achieve desired levels of empowerment, self-sufficiency, and quality of life.

The self-assessment process outlined by the CARAT tool will facilitate identifying those elements of your community's current local food system that appear to be

[1] Flora, C. B., & Flora, J. L.. (2013). *Rural communities: Legacy and change* (4th ed.). Westview Press.

advancing it **toward greater resilience**, as well as identifying those areas that may be undermining resilience or may be in need of improvement.

We envision that the CARAT tool can be used by community leaders and members like yourself to:

- prompt and guide engaging community-wide conversations about current resilience priorities and needs;
- identify ideas and potential solutions to increase your community's resilience in the event of unexpected disruptions; and
- assess the extent to which the current resilience of your local food system is optimized to meet perceived community needs.

Our definition of resilience borrows from the RAND Corporation: *Resilience is a measure of the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations.*[2]

By focusing our attention on seven specific areas of community resilience (aligned closely to the seven community capitals framework developed by Flora and Flora), we expect that using the CARAT tool will help you to acknowledge, lift up, and document your community's current assets and areas of strength, while simultaneously help to identify and address existing barriers to resilience.

Obstacles in achieving resilience are often heightened by structural inequities. For this reason, we believe in the importance of focusing on diversity, inclusion, and equity, ensuring that the CARAT process will be fair and impartial to all. While using the CARAT tool to identify and facilitate discussion about your current **policies, practices, and programs**, we hope it will also help you to recognize and tackle equity-related challenges and work toward a more inclusive community food system.

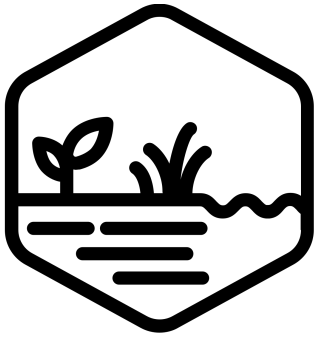
The CARAT tool is designed to be used by all types of communities no matter how much financial or political capital is available. **Ultimately, we are confident that, through collaborative efforts,** significant positive change in any community food system is possible.

[2] Definition from https://www.rand.org/topics/community-resilience.html

Introduction

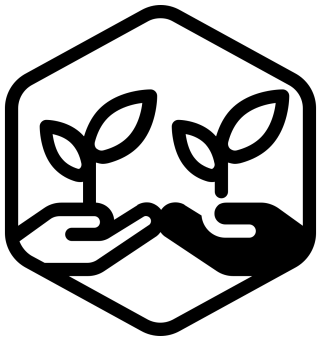
The Community & Agriculture Resilience Audit Tool, or CARAT, gathers community stakeholders together to self-assess how they are currently using the assets of their local food system to achieve a substantial level of community resilience. It measures the resources within a food system via **101 indicators** to determine possible next steps to increase community resiliency and food sovereignty. These indicators revolve around **seven core themes** that address the complex nature of community resilience and require the attention and participation of a diverse group of actors who — together — provide a holistic perspective of how food systems play an integral role in a community's resilience.

These seven core themes are:



Natural Resource Management, Use, Conservation, and Preservation of Ecosystems and Farmland: Creating an environment that is conducive to stimulating local food production by protecting farmland; facilitating access to land for local producers; establishing water quantity and climate action plans; enacting zoning and permitting policies that improve agricultural activities; and promoting the adoption of agricultural practices that promote soil, land, and water conservation.

Community Health and Well-being: Recognizing the social determinants of health; improving citizen well-being through educational programs and activities that facilitate better access to nutritious, affordable, and culturally appropriate foods across all income groups, especially for highly food insecure or medically high-risk groups within the community.

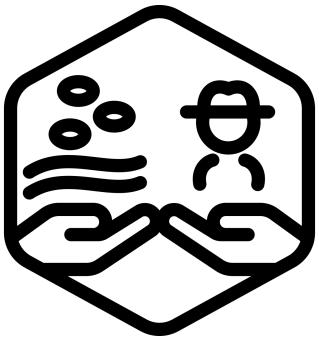


Community Self-Reliance in Food: Enhancing the degree of local influence and control in a community's food system; increasing the community's ability to meet its food needs; and reducing its dependence on external, less predictable supply chains.

Distributed and Democratic Leadership: Providing broad access to leadership and decision-making authority among all stakeholder groups in a community, including those that have been historically marginalized, while demonstrating a strong commitment to public transparency in planning, decision-making, and project implementation.

Focus on Local Farmers, Food Processors, and Food Distributors: Providing expanded opportunities for local farms, ranches, fisheries, and other food producers to profit from their work by developing infrastructure to support robust local/regional food marketing channels that enable producers and food makers to retain a larger share of the consumer's food spending.

Food Sovereignty: Ensuring that the food system is equitable, accessible, and inclusive for all members of society by centering the voices and leadership of those most negatively impacted. As stated in the Declaration of Nyéléni in 2007, "food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems."[3]



Place-Based Economics: Designing and implementing policies, programs, and investments that enhance local resource ownership and the ability of local people to participate in food system work; educating a skilled and capable labor force that can effectively participate in the agricultural or food manufacturing sector and develop relevant infrastructure to support local food production, processing, and distribution.

[3] See https://nyeleni.org/en/declaration-of-nyeleni/

The current situation covered by each of these themes has a substantial impact on community food system resilience and, taken together, the **overall impact should not be understated**. The dominant structure in our food system tends to be organized more to promote business profitability than to promote ample availability of healthful and culturally appropriate foods. As a result, it creates environments that limit consumer choice and have adverse implications for:

- community members' health and well-being;
- preparedness for disruptions in food supply;
- adoption of more socially and ecologically sustainable growing practices; and
- food accessibility for all households, but especially those that are food-insecure.

As such, we have developed the CARAT tool based on the seven themes to help identify gaps in any community's current food system and guide local people toward increasing their community's resilience through food system improvements.

Municipalities, state governments, nonprofits, networks, counties, and other stakeholders are already using community food system assessments to inform new and improved policies, practices, and programs. However, existing assessment tools are either not readily available and/or they examine just one part of the food system, such as agriculture, or food access. What distinguishes CARAT from other community food system assessments is our holistic approach to community resilience and our focus on examining the interconnectivity of distinct themes in our food system.

CARAT helps local collaborators conduct a comprehensive review of their "food system focus area," as they define it. This flexibility allows determining the geographic scope of a project based on the context of the local physical environment, trade patterns, and goals. As a community resilience tool, CARAT is designed to involve food producers, consumers, food sovereignty advocates, municipalities, nonprofits, and all stakeholders interested in local food system resiliency to:

- start conversations focused on identifying barriers to their community's resilience and uncovering underutilized assets;

- establish the baseline resilience status of their community; and

- create potential action steps in local food systems development for improving their community's degree of food system resilience.

Each section of the tool is designed to enable adapting it to your local situation. This helps your community set your own timelines, identify unique, place-based characteristics of your area, and reveal inherent flaws and biases within your specific food systems infrastructure.

CARAT is built for community collaboration. A broader range of perspectives will produce more accurate assessments. The CARAT process will be most effective when assessment teams seek to gather information from a wide diversity of experts in their community. This includes those with diverse food system sector knowledge, work experience, advocacy experience, location knowledge (urban/rural), land and waterway knowledge, and cultural foodways knowledge. It also includes those representing a diversity of perspectives by virtue of their race, ethnicity, socioeconomic status, gender, and age as reflective of your community.

Taking a comprehensive approach will provide many opportunities for discovery and growth. By the end of the assessment process, assuming that an appropriately diverse group of policymakers, supply chain practitioners, and grassroots stakeholders has been assembled, we believe that community participants will have compiled enough practical insights and been exposed to enough information about resources, relevant action steps, and potential funding opportunities to lay the foundation for positive and meaningful change.

Preparing to Use CARAT

1. Identify your lead facilitation team, your collaborators, and your contributors. Plan your approach.

LEAD FACILITATION TEAM - Identify a small Lead Facilitation Team (2-3) of knowledgeable local food systems professionals and/or advocates who can act as the project managers for your CARAT audit. Ideally, these are people who are able to do this work as part of their paid position(s). Our experience indicates that it takes approximately 240 hours to complete a CARAT audit over an average of 9 months.

COLLABORATORS - Identify and engage Collaborators. Collaborators are organizations and agencies that support the goals of the CARAT audit being conducted in their community and contribute to the effort. The Lead Facilitation Team reaches out to potential Collaborators before the audit even begins to establish transparency and build community-wide support for the audit. In some cases, some Collaborators may already be working together in existing working groups or a food policy council. The number of Collaborators for a CARAT audit can range from 2-20 or more, depending on the community. Collaborators help identify, recruit, and engage Contributors.

CONTRIBUTORS - Meet with Contributors. Contributors are community members with specialized knowledge, deep insights, and/or lived experience pertinent to one or more of the specific indicators. These individuals can be those with professional expertise, cultural expertise, and/or lived expertise. Data can be collected from these individuals in 1:1 meetings or in group settings. The number of Contributors for a CARAT audit can range from 15-80 or more, depending on the community.

APPROACH CONSIDERATIONS:

DIVERSITY - Assess and seek diversity from the beginning of the process and at every level of engagement: diversity in the food system sector (e.g., producer, processor, distributor, retailer, consumer), race, ethnicity, socioeconomic status, gender, location (e.g., urban, rural), and levels of power in your community.

EQUITY - Explore ways to create an equal opportunity for contributors to participate. When requesting substantial input from individuals not actively working in jobs that support their time to engage in the process, seek ways to provide fair compensation (money, trade for services, etc).

INCLUSIVITY - Determine how you will listen to, hear from, and create space for participants of marginalized groups, neighborhoods, and individuals in your process. Your active assessment team membership may change throughout the process, because people have varying amounts of time to devote to this project and the need for their contributions will vary. Adjust the scale, direction, and approach of your team as needed over time.

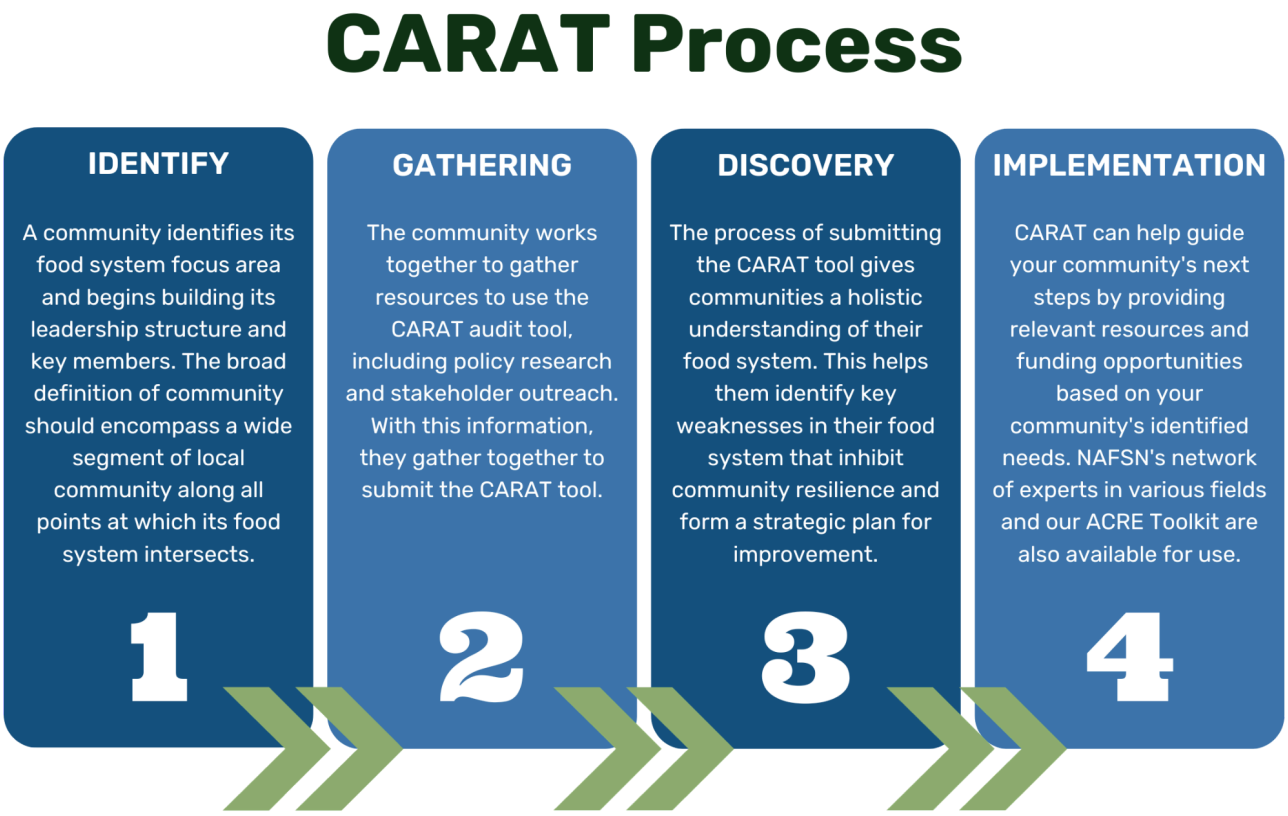
ACCESSIBILITY - Consider ways to make participating in group discussions accessible to all community residents by reaching out to key stakeholders to learn about their situations. Adjust meeting times, provide virtual engagement options, utilize translation services, and provide childcare, compensation, and transportation as needed.

ENGAGEMENT - Assign roles and responsibilities to help ensure that the work stays on schedule and allows future members to pick up from where others left off. The role of the lead facilitation team is critical in organizing this engagement and in providing encouragement and expressions of gratitude to collaborators and contributors.

OUTREACH - Look beyond your own community for information. Some of the functions in your food system focus area may be managed by entities outside of your food system focus area. For example, your food system focus area might be defined primarily by city boundaries but this would not preclude a need to consider water and food regulatory activity managed at the county level. The audit process should reflect a comprehensive illustration of how your food system operates.

2. Determine your timeline.

Fact-finding takes time. Gathering the diverse and potentially diverging voices from the citizenry and the public, private, and nonprofit sectors in a community is challenging, and creating spaces where people can feel heard and safe is necessary. Allow your timeline to be flexible, but set approximate deadlines and goals to ensure the process remains on schedule. Your timeline will be determined by the size and capacity of your food system focus area, although the recommended minimum estimated timeline is at least six months or more.



3. Define your food system focus area.
Think about your *food system focus area* as representing a relatively small ecological niche instead of simply being a part of the global food system. Consider defining your food system focus area along the lines of your "local foodshed" — the geographic location defined by the routes of your food system, including food producers, processors, distributors, and consumers, among others.[4] Expect to include some important considerations as you work through the process of deciding the boundaries of your 'food system focus area.'

Understand the scope of your 'food system focus area':

- Who will be partners in determining the boundaries of your community food system (geographic, political, economic, etc.)? People with different food system "roles" can be expected to have their important insights into the

[4] Definition of "foodshed" from this article:
https://cias.wisc.edu/wp-content/uploads/sites/194/2008/07/comingin1.pdf

workings of particular aspects of your local food system, (e.g., where are vegetables grown in the locality or what are the territories in which local organizations like food banks.) Therefore, the process of identifying and cultivating networking possibilities noted below is important for bringing people with different experiences and types of knowledge to be involved as you propose and then refine the boundaries for your assessment.

- What are reasonable boundaries of a food system focus area? If the area is too small, the results may be too narrow and incomplete to be meaningful. If the area is too large, the assessment may be too difficult to implement. In terms of future policy options, areas defined by political boundaries, (e.g., a city, a county, a city located in two counties, a city and one or more integrated suburbs) may be good choices. Even if your main object for future policy development would be a particular municipality, you could incorporate nearby farmland and food system infrastructure.

- As you refine your local food system focus area definition, continue to consider how narrowing or focusing your boundaries might increase the potential to complete the process and/or drive change?

Identify networking possibilities:

- What organizations could you reach out to for agricultural inquiries?
- What food systems initiatives and leaders are present in your community?
- As you engage with collaborators and contributors, ask them who they would suggest to get involved

Recognize the edges:

- Are historically underrepresented groups included in your focus area?
- Are rural, suburban and urban elements included in your focus area?

4. Plan with the end-goal in mind.
As you work with your team to initially envision your goals and desired outcomes, consider the following:

- Why are you doing a CARAT audit? Why does this matter to your community?

- How do you want your CARAT audit to read and what will it look like?

- With whom will you want to share your CARAT audit results?
- Who is your main audience(s)?
- What would policy makers need to know?
- What would members of the public find interesting and useful?
- When will you be finished with your CARAT audit?
- What will you do with the information gathered in the CARAT audit?
- How might particular types of organizations use the results to advance their goals?
- How might the results be used to stimulate new productive discussions about aspects of your local food system?
- How might the results be used to increase collaboration among local entities like farms, not-for-profit service groups, or food businesses?

Collecting and Organizing the Data

CARAT uses seven themed sections to help community leaders and advocates to:

- identify and document your community's assets;
- engage purposefully with a wide variety food system actors;
- gain perspective from a diverse array of community voices; and
- better understand strengths and gaps in your community's overall food system infrastructure.

For each indicator, collect as much information as you can from individuals with specialized knowledge, deep insight, and/or lived experience. Some of your information will come from online searches, but most of what you'll be looking for can only be found by finding the right people and taking lots of notes. Remember: knowledge exists within your community and awaits being tapped.

The CARAT tool will prompt you to look for three types of information for most indicators:

Policies - For each indicator, look for applicable policies, both government and organizational. Organizational policies are the written and unwritten rules that guide the activities of an organization. For each of the written policies, evaluate the extent to which it is being implemented currently and opportunities for using it to increase the resilience of your local food system.

Programs - For each indicator, look for businesses, nonprofit organizations, institutions, and agencies whose activities actively address its content .

Practices - For each indicator, look for cultural practices and norms that influence people's food system activities related to that topic. These practices and norms may or may not be formally stated and may be unique to your community.

With all the possible variations in community food systems and creativity in how people have pursued the goal of increasing the resilience of their local food system, the CARAT tool is by no means exhaustive. We encourage you to create additional indicators of resilience specific to your unique community.

You can expect that the process of collecting data for the indicators will take up the bulk of your time for the project. We recommend that you get the information for each

of the indicators from all the different categories of people and groups that might have information about that indicator. Because people from different situations will likely have different experiences with the topic of each indicator, they will likely have differing views on its current state. When you find contradicting insights or incomplete information across your sources, take some time to go back to those sources to help gain clarity.

Because what you will learn from evaluating all of the indicators will illuminate how they fit together into a food system, we recommend that you complete all or most of the data collection before you turn to summarizing and reporting your results.

Scoring

Score your CARAT audit as a *last step* of the information gathering process.

For consistency, scoring should be done by a small group of people, ideally the Lead Facilitation Team. Scores should be based on the group's collective information and insights gathered throughout the process. Recording what influenced the score can help provide insight when assessments are repeated.

The CARAT scoring mechanism is not a simple checklist of 'yes' and 'no' activities. Instead, it is a qualitative assessment of how well your food system focus area currently seems to be managing seven primary elements of community resilience.

Keep in mind that the primary objective is to understand where your community stands at this particular point in time, not to achieve a high numeric score. The more context you can provide for each indicator, the more valuable your assessment will be.

We offer this scoring rubric within the CARAT tool, but feel free to create your own if preferred:

X = Does not apply — This response says that this indicator item is irrelevant to our particular community food system, such as those without coastal areas for fisheries.

1 = No — Your team is not aware of any current policy, practice, or program in place, no currently active discussion, and no movement toward developing a pertinent policy, practice, program, or investment addressing the topic.

2 = Being considered — One or more groups within the community is currently advocating for a pertinent policy, practice, program, and/or investment regarding this topic, but no formal plan is yet being implemented.

3 = Being implemented — A pertinent policy, practice, program, and/or investment addressing the problem or opportunity has been newly adopted or adopted for a year or more *without* active support for long-term implementation efforts and/or dedicated funding.

4 = In place — A pertinent policy, practice, and/or program is currently in place with sufficient resources to support its continuation and it is producing demonstrable results.

Using the Audit to Plan Next Steps for Improving Resilience

The CARAT tool is designed to generate scores that can give you a comprehensive overview of the current structure of your community's food system and its relationship to resilience. This includes areas of relative strength as well as areas that may require additional attention and improvements.

The scores are only one foundational step in what hopefully will be a process of discussing potential action steps for addressing any gaps that have been revealed and creating new opportunities for improvement.

To aid in that discussion, we have created a supplemental reference called the **CARAT Resources Archive.** This collection, which includes funding opportunities, services, and model programs, may help leaders in your community make practical, actionable plans. The online version of CARAT automatically generates relevant resources based on your scores.

Above all, however, CARAT is a self-assessment tool that will help in better understanding the state of your community's food system. With that understanding we believe that progress must come from within your own community. Fundamentally, a community food system's resilience is built on the combined strengths of its individuals as collaborators. Encourage your working group to connect stakeholders from different fields and backgrounds and engage the skill sets and experiences of the members in your community. We are confident that you will find a lot of potential in your community, and we hope that the CARAT tool can help you better recognize and make use of those assets and strengths. We also hope that it will help you to create new connections and networks across traditionally siloed groups.

For further information or assistance, NAFSN invites you to contact us. NAFSN is a professional association of people working together to strengthen local and regional food systems. Through our network, we strive to help strengthen yours.

foodsystemsnetwork.org
carattool.org

The CARAT Interactive Tool

Theme 1: Natural resource management, use, and conservation, including protecting the ecosystem and the preservation of farmland

A. Protecting and preserving farmland

Indicators	Scoring	Source of Information	Additional Notes
1. We have policies, practices, and/or programs that protect farmland from nonfarm development. *examples: agricultural conservation easements or development rights programs, agricultural districts, zoning or overlay zones, property tax relief, farmland mitigation specifying permitted, accessory, and conditional agricultural uses in zoning bylaws, urban growth boundaries, farmland loss tracking, reporting*	X		
2. We have policies, practices, and/or programs that match new and/or beginning farmers with farmland available for lease or purchase.	X		
3. We have policies, practices, and/or programs that support water quality, water conservation, and watershed management.	X		

4. We have policies, practices, and/or programs that keep food waste from residences, foodservice establishments, and supermarkets out of landfills through recycling and/or reusing, including by composting.	X		
5. We have policies, practices, and/or programs that keep agricultural waste out of landfills through gleaning as well as recycling and/or reusing, including by composting.	X		
6. We have policies, practices, and/or programs that support “land back” and land reparations for BIPOC farmers and Indigenous lands.	X		

B. Promoting soil health and conservation practices in agriculture

Indicators	Scoring	Source of Information	Additional Notes
7. We have policies, practices, and/or programs that support cover crop adoption or continuation and other tillage practices.	X		
8. We have policies, practices, and/or programs that support the adoption or expansion of crop diversification and rotation efforts.	X		
9. We have policies, practices, and/or programs that support the adoption of windbreaks and their preservation.	X		
10. We have policies, practices, and/or programs that encourage, incentivize and track the adoption of organic/regenerative practices on farms to improve and protect soil structure, soil microbial life, and soil nutrient density. *examples: organic, regenerative, climate-smart, etc.*	X		

C. Preserving natural land resources to reduce soil and land erosion, maintain marine and wildlife habitat, and increase carbon capture for climate change mitigation

Indicators	Scoring	Source of Information
11. We have policies, practices, and/or programs that incentivize or require preserving and/or restoring coastal wetlands. *examples: salt marshes, seagrasses, and mangrove forests to buffer against floodwaters*	X	
12. We have policies, practices, and/or programs that incentivize or require preserving and/or adding new vegetative buffer zones in riparian areas. *examples: using native trees, shrubs, grasses, and plants*	X	
13. We have policies, practices, and/or programs that support the use of pond and/or river fencing to prevent livestock damage.	X	
14. We have policies, practices, and/or programs that facilitate the adoption of agroforestry practices, including those that integrate the management of forested lands with livestock and crop production.	X	

15. We have policies, practices, and/or programs that prohibit or strictly monitor concentrated animal feeding operations (CAFOs), and/or encourage the adoption of practices that promote farm animal welfare.	X	
16. We have policies, practices and/or programs that encourage commercial fishers and/or seafood producers to manage and harvest fish and seafood in accordance with recognized indicators and/or standards of environmental sustainability.	X	

D. Promoting food production and distribution practices aimed at reducing greenhouse gas emissions and fossil fuel dependence

Indicators	Scoring	Source of Information	Additional Notes
17. We have policies. practices, and/or programs that promote the use of renewable energy sources and/or electric vehicles in food transport and logistics.	X		
18. We have policies, practices, and/or programs that promote the use of renewable energy sources for on-farm-energy production and/or use.	X		
19. We have policies, practices, and/or programs that restrict the types or amounts of fertilizers that may be used on commercial farmland.	X		
20. We have policies, practices, and/or programs that restrict the types or amounts of fertilizers that may be used on public or residential properties.	X		

Do you have any other comments regarding policies, practices, or programs in the targeted food system focus area related to natural resource management, use, and conservation, including protecting the ecosystem and preserving farmland?

Theme 2: Community health and well-being

A. Improving citizen wellness through enhanced access to nutritious, affordable, and culturally appropriate foods

Indicators	Scoring	Source of Information	Additional Notes
21. We have policies, practices, and/or programs that provide opportunities for leadership, collaboration, and connections with socially disadvantaged groups to foster equity and inclusion in community, professional, and grassroots contexts, inclusive of those in rural, suburban and urban areas.	X		
22. We have policies, practices, and/or programs that regularly monitor public health indicators to assess food system-related community health.	X		
23. We have policies, practices, and/or programs that enable farm-to-institution procurement programs for schools, daycare facilities, hospitals, or correctional facilities.	X		
24. We have policies, practices, and/or programs that promote retailing healthful local foods through demonstration or pilot projects, marketing campaigns, point-of-sale signage, social media, or other ways of distinguishing such foods and encouraging their consumption.	X		

25. We have policies, practices, and/or programs that provide fresh food access for limited-resource and limited-mobility residents through farmers markets, fresh produce delivery services, SNAP and WIC-enabled purchasing, and cost-share incentive programs.	X		
26. We have policies, practices, and/or programs that provide or enhance transportation to local food market sites.	X		
27. We have policies, practices, and/or programs that subsidize sliding-scale CSA subscriptions to increase accessibility.	X		
28. We have policies, practices, and/or programs that make community-based nutrition education, cooking instruction, and youth education programming widely available.	X		
29. We have policies, practices, and/or programs that assist and promote emergency and supplemental food providers, like food banks and food pantries, to source fresh food from local farmers.	X		

B. Encouraging attention to food production and accessibility in disaster and emergency management and planning

Indicators	Scoring	Source of Information	Additional Notes
30. We have policies, practices, and/or programs in place for specifically addressing food availability and accessibility in the event of a disaster or other emergency.	X		
31. We have emergency and/or disaster plans that are integrated and coordinated with other types of local or regional emergency relief and food access activities.	X		
32. We have emergency plans that include specific acquisition and storage recommendations for household members, food retailers, public agencies, and relevant nonprofit organizations.	X		
33. We have emergency plans that include networks of grassroots and community-led organizations that are able to quickly communicate with underserved and/or isolated communities to distribute emergency food resources as needed, especially in rural communities and in other low-access areas, including those with immigrant and migrant populations.	X		

34. In our community, information about disaster and/or emergency plans, the conditions that would trigger their execution, and their expected impact is regularly and widely shared with local government officials, nongovernmental stakeholders, and members of the public.	X		
35. In our community, a full range of diverse, local stakeholders, including those involved in food production, distribution, and grassroots organizing, have been engaged in disaster and/or emergency management planning, and their feedback is regularly solicited to reduce the chances of overlooking critical information. *examples: planning inclusive of local, county and state disaster/emergency managers*	X		
36. In our community, stakeholder engagement in disaster and/or emergency management planning involves meeting people where they are, through public meetings, interviews, social media, postal mail, and outreach activities conducted at times convenient for them. *examples: planning inclusive of local, county and state disaster/emergency managers*	X		

Do you have any additional comments regarding policies, practices and programs related to community health and well-being in the targeted food system focus area?

Theme 3: Community self-reliance in food

A. Protecting community members against instability in and external threats to the food supply chain

Indicators	Scoring	Source of Information	Additional Notes
37. In our community, land trusts and land developers transparently engage in farmland protection strategies.	X		
38. We have policies, practices, and/or programs that educate and enable people to hunt, fish, and forage for food.	X		
39. We have policies, practices, and/or programs that offer minimal barriers to starting new food production enterprises.	X		
40. We have policies, ordinances, and/or zoning regulations that allow food for local consumption to be commercially grown and sold within the community's boundaries.	X		
41. We have policies, ordinances, and/or zoning regulations that allow food for local consumption to be processed by small-scale cottage or other local processors.	X		

42. We have policies, practices, and/or programs that support affordable access to fresh water, mulch, compost, seeds, and other resources for food growing programs in our community.	X		
43. In our community, local commercial farmers (those with more than $1,000 in annual sales) and/or local food processors produce and sell a substantial amount of food for consumption in households, restaurants, school cafeterias, hospital food service, as well as programs for donating to food-insecure residents in our community.	X		
44. In our community, private household and community gardens produce a substantial amount of food that is consumed in our community.	X		

B. Providing opportunities for additional local food production within the boundaries of the community food system

Indicators	Scoring	Source of Information	Additional Notes
45. We have a substantial amount of unplanted, arable, government-owned land in our community that could be used by current or new farmers for additional production of food for local consumption.	X		
46. We have a substantial amount of unplanted, arable, privately owned land in our community that could be used by current or new farmers for substantial additional production of food for local consumption.	X		
47. We have a substantial amount of unplanted, arable land owned by a nonprofit organization(s) in our community that could be used by current or new farmers for substantial additional production of food for local consumption.	X		
48. We have programs for contacting and engaging absentee landowners to help increase access to potential farmland.	X		
49. We have policies, practices, and/or programs that support development and innovation of urban agriculture.	X		

50. We have policies, practices, and/or programs that support soil remediation measures and/or the construction of raised beds where needed to enable residents to produce food safely.	X		

Do you have any additional comments regarding community self-reliance in food in the targeted food service focus area?

Theme 4: Distributive and democratic leadership

A. Providing broad access to leadership and decision-making authority among all community stakeholder groups, including those which have historically been marginalized

Indicators	Scoring	Source of Information	Additional Notes
51. We have policies, practices, and/or programs that provide educational opportunities for community stakeholders to build their capacity as leaders, champions, ambassadors, or otherwise become more actively and effectively engaged in the local food system. *examples: mentorship programs, leadership training opportunities*	X		
52. We have a local food policy council (or similar established organization) that incorporates the concerns of local food system stakeholders into its work by regularly advertising and hosting open forums, and maintaining the transparency and accessibility of meetings and initiatives. *examples: accessibility through translation services, providing childcare options, creating virtual options*	X		

53. Our local food policy council (or similar established organization) actively seeks and recruits demographically diverse (racially, socioeconomically, lived experience, etc.) leadership to elevate the voices of those most affected by food policy.	X		
54. The membership of our local food policy council (or similar established organization) reflects the demographic and socio-economic makeup of the community.	X		
55. The membership of our local food policy council (or similar established organization) includes a wide range of food system practitioners from across the food supply chain, including farmers and farmworkers, processors, distributors, marketers, procurement specialists, and personnel involved in nutrition assistance, nutrition education, and emergency feeding programs.	X		

B. Building economic resilience and enhancing risk management through cooperation and partnerships that expand local control of food production, processing, distribution, and marketing

Indicators	Scoring	Source of Information	Additional Notes
56. We have policies, practices, and/or programs that help create and grow formal agricultural cooperatives and/or food hubs that sell local food in local markets.	X		
57. We have policies, practices, and/or programs that help create and expand collective marketing networks (other than formal cooperatives). These may include networks that facilitate sharing equipment, packing facilities, distribution routes, and/or transportation expenses among producers involved in supplying locally produced foods to local markets.	X		
58. We have policies, practices, and/or programs that create and support food retail venues that showcase locally grown/harvested foods and seafood. *examples: retail venues that promote socially responsible practices in the food supply chain, and/or provide economic benefits to members, and/or are cooperatively owned*	X		

59. We have policies, practices, and/or programs that encourage food packaging designed to reduce waste through the use of recycled content, ability to be recycled, and/or ability to be reused.	X		
60. In our community, representatives of established local businesses provide mentoring guidance on food business development and operations to new business entrants.	X		

Do you have any additional comments regarding distributive and democratic leadership features in the targeted food system focus area?

Theme 5: Focus on local farmers, food processors, distributors, etc.

A. Focusing on the needs and views of those involved in growing, processing, and distributing food for local consumption by taking them seriously and providing them with the types of support that enable them to be effective and resilient

Indicators	Scoring	Source of Information	Additional Notes
61. We have policies, practices, and/or programs that are structured to effectively and routinely bring concerns of farmers, farmworkers, processors, and distributors into community planning decision-making, including for emergencies.	X		
62. We have policies, practices, and/or programs that direct resources to train aspiring BIPOC farmers and food producers.	X		
63. We have an agricultural advisory board, composed primarily of farm and/or fishery representatives (including farmworkers) that provides guidance to local governments on food producing matters and that is listened to.	X		
64. We have local Cooperative Extension staff who effectively supply farmers and food-makers with critical information about local food production, distribution, and marketing.	X		

65. We protect and support farmworkers and their families by connecting them with local, state and federal resources as well as civil rights advocacy programs. *examples: housing, healthcare, fair pay*	X		
66. We have food business accelerators or food technology programs that provide affordable support for retail product development to start-up and small food-processing businesses. *examples: establishing processing methods, meeting labeling requirements, assessing market feasibility*	X		
67. We have public agencies or nonprofit organizations in the community that individually or jointly conduct distribution programs to provide healthful, fresh food to food-insecure households.	X		
68. In our community, input from marginalized farmers and farmworkers about their safety, needs, and opinions is an explicit part of formulating community food system policies, practices, or programs.	X		

B. Providing financial resources for local food system development

Indicators	Scoring	Source of Information	Additional Notes
69. We have a grant program or low-interest loan fund that provides affordable capital to small or beginning agricultural and/or food enterprises.	X		
70. We have a program that connects farmers to markets for surplus food and imperfect produce.	X		
71. We have policies, practices, and/or programs that invest in new and beginning farmers, small to mid-sized farms, urban farms, and/or BIPOC owned farms or food businesses through direct grants or low-interest loans.	X		
72. In our community, stakeholders from local governmental or nonprofit organizations collaborate with local food supply-chain actors (such as farmers, farmworkers, small processors, local food retailers, local food distributors, food banks, or other organizations) to obtain state or federal grant funding for local projects and initiatives.	X		
73. In our community, public agencies, nonprofit organizations, and businesses have either adopted incentives or relaxed procurement rules that permit a substantial share of local institutional food purchases to be from local sources.	X		

74. In our community, stakeholders from local governmental or nonprofit organizations collaborate with local food supply-chain actors to secure grant funding from private foundations or mission-driven financial institutions for local projects and initiatives.	X		
75. In our community, government agencies or nonprofit organizations identify funding opportunities or assist in writing grants for state or federal funding targeted to new and beginning farmers, small farms to mid-sized farms, urban farms, and/or BIPOC owned farms.	X		
76. We have one or more Community Development Financial Institutions (CDFIs) that provide funding to local food system initiatives, such as financial assistance awards offered by the Healthy Food Financing Initiative.	X		
77. In our community, BIPOC-owned and -operated farms or food businesses receive assistance identifying funding opportunities and support with writing grant applications to foundations or mission-driven financial institutions.	X		
78. In our community, private agricultural lending institutions, such as members of the Farm Credit Council, facilitate lending to small farms and BIPOC-owned and -operated farms and food businesses.	X		

79. In our community, private agricultural lending institutions, such as members of the Farm Credit Council, provide financial support to local food producers or processors.	X		

Do you have any additional comments regarding the focus of existing policies, practices and programs on local farmers, processors, distributors, etc.?

Theme 6: Food sovereignty

A. Acknowledging and addressing inequities and injustice in the food system

Indicators	Scoring	Source of Information	Additional Notes
80. In our community, inequities, injustice, and barriers to food sovereignty in the local food system are commonly and publicly identified and acknowledged at the leadership level through equity statements on food justice, planning documents, laws, policies, and/or staffing decisions.	X		
81. In our community, we have planning and implementation steps to correct inequities in the food system that are based on information from adversely affected stakeholders obtained during public listening sessions in which compensation and accommodations facilitate equitable participation.	X		
82. We have policies, practices, or programs that address the social determinants of health and root causes of inequities in the food system for historically disadvantaged community members.	X		
83. We have policies, practices, and/or programs that empower individuals and organizations from disadvantaged backgrounds to collaborate on and co-create solutions and resources to overcome barriers and address root causes.	X		

84. We have an explicit policy goal to reduce the unemployment rate (especially among youth) by identifying potential local food system job opportunities and matching qualified applicants with openings.	X		

Do you have any additional comments regarding food sovereignty-oriented policies, practices or programs in the targeted food service focus area?

Theme 7: Place-based economics that enhance local control, local food system resource ownership, and the ability of local people to participate fully in food system work

A. Promoting and supporting household-level food production and other informal agricultural sector activities that enhance household and community self-sufficiency, entrepreneurship, and food sovereignty

Indicators	Scoring	Source of Information	Additional Notes
85. Our local leadership and/or food policy council understands and acknowledges the unique challenges of our community's local food system specific to land use, land access, labor, infrastructure, transportation, distribution, education, impacts from climate change, immigration, farmworker rights, economic development, and healthcare.	X		
86. Our local leadership and/or food policy council understands, acknowledges, and has collected data on the social determinants of health in our community and the unique challenges in our area based on demographics, socioeconomics, and location.	X		

87. In our community, public meetings including council meetings, land use planning meetings, zoning meetings, and school board meetings are easily accessible by the general public, hosted near public transportation, provide virtual access when possible, and include accommodations for those with physical impairments as well as translation for ESL residents.	X		
88. In our community, planning departments and/or councils of government have staff with expertise in food systems, farmland, gardening, and/or agriculture.	X		
89. In our community, comprehensive plans include input from food system leaders including farmers and farmworkers, gardeners, local food markets, farmland conservation groups, food distributors, and food access organizations.	X		
90. In our community, community economic development agencies and/or organizations lead, collaborate, or partner with food system organizations to identify and support farming and food system businesses, local food supply chains, and local food infrastructure.	X		

B. Creating local zoning and land use regulations to support local food production

Indicators	Scoring	Source of Information	Additional Notes
91. We have local zoning, licensing, and/or permitting ordinances that allow backyard poultry.	X		
92. We have local zoning, licensing, and/or permitting ordinances that allow farm stands.	X		
93. We have local zoning, licensing, and/or permitting ordinances that allow household composting.	X		
94. We have local zoning, licensing, and/or permitting ordinances that allow vegetable gardens in lieu of lawns.	X		
95. We have local zoning, licensing, and/or permitting ordinances that allow community gardens.	X		
96. We have community land-bank programs that give residents a formal voice and input in determining neighborhood land uses, often with the help of community advisory boards composed of local residents.	X		

C. Developing a skilled and capable labor force that can participate successfully in carrying out functions needed for an effective local agricultural or food sector

Indicators	Scoring	Source of Information	Additional Notes
97. We have public agencies or nonprofit organizations in the community that invest in workforce training and professional development programs to address labor force needs relevant to the local food system.	X		
98. In our community, professional education credits and/or certificates aligned with the local food system labor, skill, and leadership requirements are available to residents through online or in-person programs, such as those offered by land-grant institutions or community colleges.	X		

D. Developing relevant infrastructure in support of local food processing & distribution

Indicators	Scoring	Source of Information	Additional Notes
99. We have policies, practices, and/or programs that develop infrastructure for local/regional food packaging and processing. *examples: shared-use kitchens, co-packing operations, equipment sharing programs, or permanent and mobile meat slaughter facilities.*	X		
100. We have policies, practices, and/or programs that develop infrastructure for local/regional food storage and distribution. *examples: food hubs, food aggregation sites, shared warehouse or cold storage facilities, mobile markets, farmers markets, shared refrigerated trucks & containers*	X		
101. We have policies, practices, and/or programs that distribute and sell local food to restaurants, grocers, and other end-users.	X		

Do you have any additional comments regarding place-based economics features in the targeted food system focus area?

Operational Definitions

Words can mean different things to different people in a diverse working group. For the purpose of this document, our use of the following terms corresponds to the following definitions:

aggregation: the collection of food from multiple growers by an intermediary to meet the volume requirements of wholesale food market buyers.

agriculture: the growing, rearing and/or harvesting of crops, animals, fish or seafood from a farm, ranch or natural habitat for the purpose of producing edible food for human consumption.

climate change: a significant, lasting change in temperature, precipitation, humidity, or other measures of climate.

> The term often refers to the current trend toward higher average global temperatures (global warming) alongside increased frequency and severity of droughts, heat waves, hurricanes, and other weather events (see *greenhouse gasses*).

compost: a dark, crumbly, soil-like material made from decomposed (or decomposing) organic matter, such as animal manure, food waste, leaves, and grass clippings.

> Compost is applied to soil as a nutrient-rich fertilizer for plants (see *composting*).

composting: a managed process by which fungi, bacteria, and other microorganisms decompose organic matter, such as animal manure and food waste (see *compost*).

culturally appropriate food: food that is compatible with the traditions, values, beliefs, taste preferences, and ingredients associated with a particular culture, geography, or religious practice.

ecosystem: a biological community of plants and animals interacting with each other in a given area, and also with their nonliving environments.

The nonliving environments include weather, earth, sun, soil, climate and atmosphere.

equity: all people—regardless of socioeconomic status, geography, race, ethnicity, gender, or immigration status—have access to a food system that aspires to align with the principles of food justice (see *food justice*).

fertilizer: material spread on soil to increase the land's capacity to promote plant growth.

Common fertilizers include animal manure, compost, synthetic (human-made) chemicals, and certain minerals.

food access: the ability of a person or group of people to obtain nutritious, fresh food from local sources, which is often influenced or constrained by affordability, proximity to food markets and retail grocery stores, and transportation availability.

food distribution: the process of sorting, transporting, and delivering food to household, wholesale, retail, and/or institutional customers.

food justice: universal access to nutritious, affordable, and culturally appropriate food for all, while advocating for the well-being and safety of those involved in the food production process.

The food justice movement aims to address and resolve racial and ethnic disparities in food access by examining the sources of structural discrimination in the U.S. food system and taking steps to correct historic injustices

toward BIPOC producers, farmworkers, and food entrepreneurs regarding such issues as farm and land ownership, federal and private lending and investment practices, and workers' rights.

food policy councils: local organizations that bring together a variety of community stakeholders from a specific geographic region — farmers, food market managers, retail and wholesale food buyers and distributors, local government officials and policymakers, representatives of community-based organizations, and other relevant individuals — who work together to enhance the production, availability and use of locally and/or sustainably grown fresh food in their designated region by influencing local food policy, programs, and practices.

Such organizations typically aim for diverse representation in their membership to ensure that all segments of the community are acknowledged and that their perspectives are considered in the development of policy and programmatic recommendations.

food policy: laws and regulations related to the production, handling, storage, transport, and consumption of food.

food processing: the transformation of raw agricultural materials in order to enhance their usability as an edible food ingredient, extend their shelf-life, and/or preserve their quality.

This can involve one or a combination of processes such as washing, chopping, pasteurizing, freezing, fermenting, packaging, heating, milling, extruding, or adding ingredients to foods.

food system: all the elements in a particular area that affect or are affected by how food is grown, distributed, and accessed by people in the community.

greenhouse gasses: gasses that trap heat in the atmosphere; sometimes abbreviated as GHG.

The accumulation of these gasses causes an increase in average global temperature. Greenhouse gasses from human activities and natural processes include carbon dioxide, methane, and nitrous oxide (see *climate change*).

health: according to the World Health Organization, health is a state of complete physical, mental, and social well-being — not merely the absence of disease or infirmity.[5]

institutional food: food that is prepared, and served in institutional settings like schools and hospitals.

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local food: has no formal national definition, but is often considered to be food produced within the same state or up to 400 miles from the point of sale (based on USDA policy for certain programs).

> Individual farmers market by-laws often set a specific geographic boundary for eligible vendors.

public health: the science and practice of protecting and promoting the health of communities, as opposed to focusing on individual patients.

regional food: food that was produced within the region where the consumer lives.

> A region is often defined by geographic, cultural, or political boundaries — for example, the Chesapeake Bay Watershed, New England, or the Northeast — rather than mileage. While there is some overlap between the way that the terms "local food" and "regional food" are commonly used, a regional food system is generally assumed to be a larger geographic area than a single local food system.

soil: the top layer of the earth's surface.

> Fertile soil aids plant growth by providing root support and serving as a reservoir of air, water, and nutrients. It is home to countless organisms — many of them beneficial — including bacteria, arthropods, earthworms, fungi, nematodes, and protozoa.

[5] World Health Organization Constitution. https://www.who.int/about/governance/constitution

supply chain: the people, activities, and resources involved in getting food from farm to plate.

> Major stages along the supply chain include production; harvesting; processing; storage; distribution; direct, wholesale and/or retail marketing; and consumption.

The following definitions provide additional context for some important terms:

community

Community is an important term but has multiple meanings. Thus, we first need to define what we mean by "community" as it relates to the term "food system" in the CARAT process.

The term "community" traditionally referred to geographic areas in which groups of people live, interact with each other in meeting their physical and social needs, and develop an attachment to both the group and the geographic location. These close interactions and relationships eventually spawn a sense of "loyalty" to the "community" and a willingness to cooperate in achieving goals.

In line with urbanization and modern developments in transportation and communication, the meaning of the term "community" has been stretched from its original meaning to apply to social and geographic units that vary from small rural villages to large regions, with larger units encompassing distinct smaller ones (i.e., multiple communities may exist within a larger single community). In this interpretation of the term community, the mutual-needs aspect of traditional community-building is reduced by a growing reliance on long-distance business transactions, which works to diminish personal interactions and undermines a sense of community loyalty and group commitment. At times, the community concept is even extended to refer to non-geographic categories like "community of interest," where the shared concern aspect of community-building is stronger than shared geography or mutual support and interdependence.

Although the CARAT process incorporates a "local" or "regional" lens in geographic terms, we are also attempting to rekindle the notion of community-building in its more traditional sense. We believe that the shared sense of destiny that

this approach implies is a necessary foundation for enhancing food systems resilience. True resilience means more than increasing public awareness of the ways in which residents depend on others to have their needs met. It also emphasizes the importance of people having their needs met *by members of their community who are committed to supporting the advancement of the common good* (as defined by a broad representation of community members) rather than profit maximization alone. This commitment to a shared vision of an enhanced community quality of life, and the development of strategic plans, programs, and policies that seek such an outcome, ultimately provide a stronger and more effective foundation for creating greater food system resilience in the face of climate change, pandemics, and other challenges.

community capitals

The seven primary elements of community resilience identified by the CARAT task force closely resemble the seven "community capitals" associated with successful community development. The Community Capitals Framework was developed and fine-tuned over a span of several years by Cornelia Butler Flora and Jan L. Flora from Iowa State University (2008). The Floras suggest that the lifeblood of any community can be linked to the presence and strength of seven community capitals — resources that can be invested or tapped for the purpose of promoting the long-term well-being of communities.

This table lists the community capitals and describes the most relevant food system assets and provides some examples of each. Some initiatives address multiple community capitals; for example, a farmers market may involve the built environment, social, cultural, and financial capitals.

Community Capital	Definition	Food System Examples
Built	The infrastructure of the community: the basic set of facilities, services, and physical structures a community needs.	Food hubs, distributors, storage facilities, retail, well-drillers, indoor growing, farmers markets, online farmers market, website
Natural	The quality and quantity of natural and environmental resources in a community.	Farmland, water resources, clean water, vacant land
Financial	The financial resources available to invest in local projects or economic development initiatives; efforts to build wealth to support community development activities.	Community foundation, grants and loans, venture capital funds, healthy food access funding, banks and financial Institutions, mitigating food waste, food deserts, consumer ability to purchase food
Political	The ability to influence and enforce rules, regulations, and standards; access to individuals and groups with the power to influence decisions; participation in civic discourse on difficult public issues.	Policy, regulation, food councils, county health departments, city and county governments

Human	Attributes of individuals that provide them with the ability to earn a living, strengthen community, and otherwise contribute to community organizations, to their families, and to self-improvement. It includes access to education and knowledge development, training and skill-building activities, and efforts to build and expand local leadership.	Food education, school gardens, local food events, technical education, 4-H, FFA
Cultural	The values, norms, beliefs, and traditions that people inherit from their families, schools, and communities. Also includes material goods produced at a specific time and place that have historical or cultural significance (such as paintings and books).	Food culture, food values, ethnic foods, regional food demand
Social	Connections among people and organizations that help make things happen in the community, including close ties that build community cohesion (bonding) and weaker ties with local and outside people and organizations that help promote broad-based action on key matters (bridging).	Community involvement in food systems, civic participation, organizations for food, nonprofits, for-profit businesses