



How resilient is your city's food system?



We do not really think about how our food gets to our urban plates. Nor do we have a clear picture of what would happen if the supply chain was disrupted. When the City of Baltimore (United States) experienced public unrest in 2015, it realised that its food supply was vulnerable. It therefore commissioned a *Food System Resilience Advisory Report* to feed into its more general *Disaster Preparedness Plan*. The study, carried out by researchers from the [Johns Hopkins Center for a Livable Future](#), provides a good methodology for any other city willing to investigate its food system's ability to recover from shocks.

Here is an overview of key steps any city can follow to assess its own food system resilience.

Step 1 - How well is your food system functioning to start with?

A good first step to understand your city's ability to recover from a shock is to understand how well its food system works now. Look for data that will give you a good idea of the system's ability to bounce back. What are existing challenges regarding food accessibility, availability and acceptability? **In today's challenges you will find the roots of potential vulnerabilities.** For [Erin Biehl](#), who led this work, it is important, here, to look at every aspect of the food system. Too often, she says, people think resilience is only about urban agriculture. Well, it goes far beyond.

For instance, in Baltimore, 1 in 5 inhabitants is food insecure, meaning that they might not be able to stock food, and therefore to prepare for and recover from disruption in the food supply. Many residents do not live within walking distance of a supermarket, leaving them with no access to fresh food if for some reason, such as road disruptions, they cannot use their car or public transportation.

Another challenge in Baltimore's current food system is labour shortage in transportation (more specifically in truck companies): if an event, for instance an epidemic, was to prevent workers to come to work, then it would be difficult to make up for it.

One last example: the concentration of processing activities into big facilities makes it difficult for local food processors to survive. This is a local economic challenge, but it is also a resilience one, for if one big processor gets affected by an event (a storm, a power shortage...), then it may be difficult for another local food processor to quickly take over.

Step 2 - What risks is your food system exposed to? What are the key vulnerabilities?

Once you have a good picture of the existing situation, you should look more closely into the risks that your system is exposed to. What could provoke a food system failure?

A food system failure happens when food is either not:

- (physically or economically) **accessible**,
- **available** (because of supply chain or donation failure) or
- **acceptable** (because it is unsafe or culturally or nutritionally inadequate).

What are the hazards your food system is exposed to? What is the likelihood of them happening? What impacts would they have in the current local context?

Hazards can happen within the city itself, but also outside of its boundaries, where food is grown, processed or transported. The Baltimore report describes two main categories:

- **Natural hazards.** These could be **winter storms, flooding and coastal hazards, drought, extreme heat, or even a pandemic.** In Baltimore, researchers found that only 7% of schools are located close to primary snow routes, i.e. routes that get cleared first. If schools are closed, they cannot serve school meals and perform pantry services. They also stressed that a pandemic could prevent

employees of key infrastructure (schools, hospital...) from performing their job or volunteers from non-profit organisations to carry out their duties. As far as transportation is concerned, the researchers found that the blockage of one key road would make it impossible for a great number of the city food warehouses to deliver to the city.

- **Non natural hazards, such as technological failure, civic unrest or even food contamination.** Evidence from the interviews with food system stakeholders showed that small retailers or not-for-profit organisations may not have backup generators because they are expensive. They are therefore highly vulnerable to a power outage.

Step 3 - What is the existing level of preparedness?

After having mapped key vulnerabilities, you should analyse if people are adequately prepared to face risks. Stakeholder interviews are key to gathering that information. For Erin Biehl, food resilience planning should integrate the views of representatives from actors of the food system, as well as people who have on the ground experience of past disruptions or existing community actions.

In Baltimore, interviews showed that the level of preparedness varies amongst actors. The larger businesses interviewed said they have more resources to dedicate to create an emergency plan, but it may be more difficult for small businesses and non-profits. Many businesses mentioned that it was difficult for them to be fully prepared because of high staff turnover (which means that the information gets lost, or needs to be constantly restated), and the fact that it is difficult to fully prepare for a hazard you've never experienced before.

You should also assess preparedness of the general population: how would they react to an event? What are their existing storage practices?

Step 4 - Establish a strategy

Here is key advice to put together a food resilience strategy:

- **Look for synergies between actions that increase resilience and help tackle existing food system issues at the same time.** For instance, policies that target food insecurity will increase the amount of food households able to store food, and hence their ability to withstand a temporary disruption in supply. Erin Biehl stresses that through this work, she realised how important it was to address existing food access issues to create resilience.
- **Try to build in redundancy in your food system** to avoid being dependent on one single road, processing facility, provider...
- **Support actors that are less able to prepare for, or to withstand, an event.** In Baltimore, it is small businesses and food insecure households. For instance, Baltimore is developing Resilience Hubs to make food and water accessible to households in one location in case of disaster.
- **Build in resilience into food planning, or food into resilience planning.** Depending on the city, policy routes will be different. It is important to have a food resilience plan, but that such a plan can be folded into other city planning documents. It does not have to be a stand-alone document.

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Source

[Biehl, Erin; Buzogany, Sarah; Huang, Alice; Chodur, Gwen; Neff, Roni \(2017\), Baltimore Food System Resilience Advisory Report](#)

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