

# Presenter



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# Feeding the City in an Uncertain World

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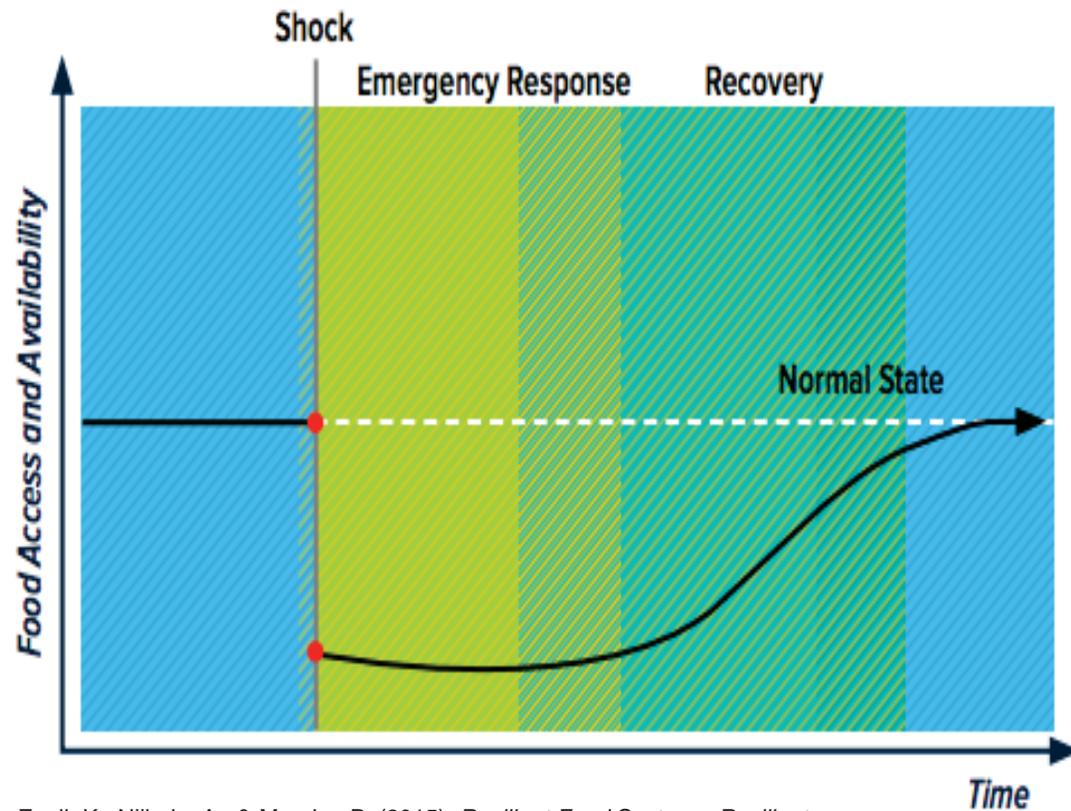
(With: Erin Biehl,  
Baltimore City  
colleagues)



# Defining Resilience

*The ability to absorb, respond to, recover from and adapt more successfully to adverse events (IOM)*

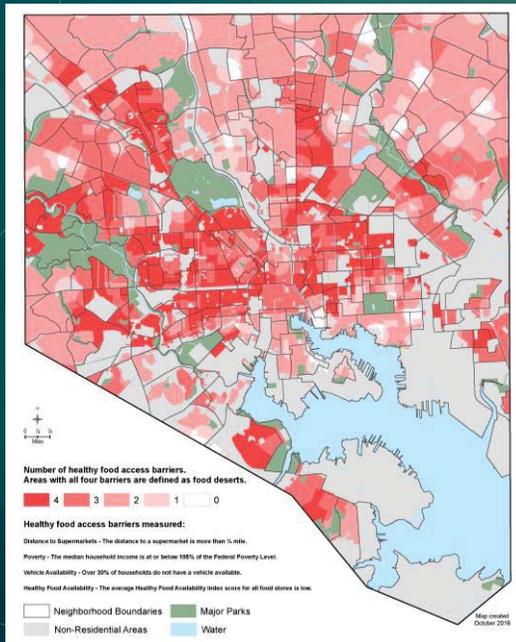
**Figure 1: Resilience Timeline**



Zeuli, K., Nijhuis, A., & Murphy, P. (2015). *Resilient Food Systems, Resilient Cities: Recommendations for the City of Boston*. Retrieved from <http://www.icic.org/research-and-analysis/resilient-food-systems>.

# Baltimore Food System Resilience Assessment

- ▶ State of system (food access, availability, utilization, government policy, social capital)
- ▶ Hazards
- ▶ Impact and vulnerability assessment
- ▶ Existing preparedness and response



# Climate Change → City Food System

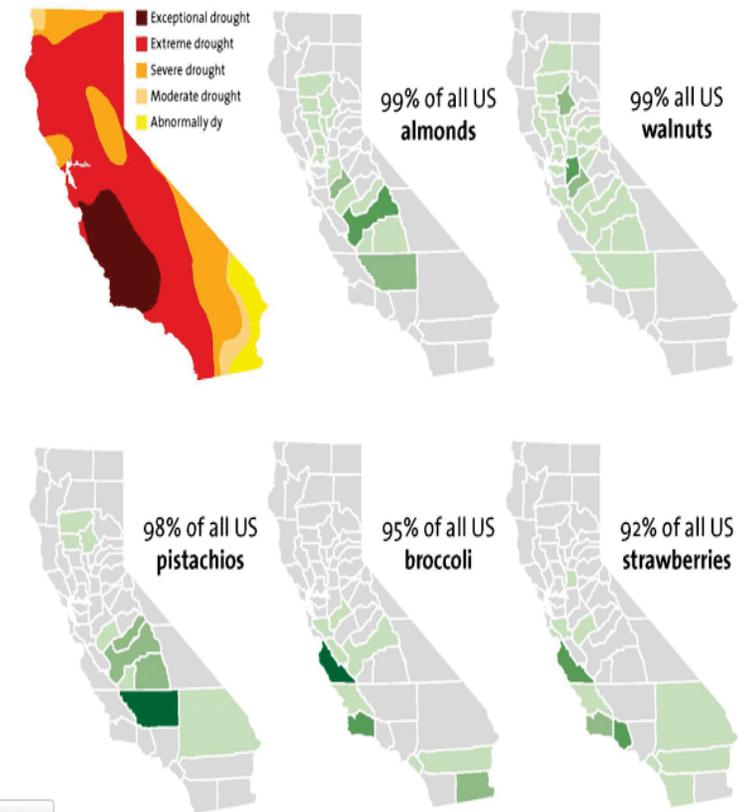
- Extreme weather
  - Building & road damage, closures
  - Loss of electricity, communications
- Precipitation, weather patterns change, conflict
  - Short- and longer term food availability/affordability/quality
- Broader economic/systemic effects linked to food system
- Exacerbate Inequities

## Where Does Your Food Come From?

California's drought affects the whole country's fruits, veggies, and nuts.

Percentage of Total US Production by County

<10% 10-20% 20-30% >30%



# Challenges in Supporting Food Security in Face of Crisis or Disaster

- ▶ People with lower incomes – may face challenge in storing emergency food supplies or easily restocking
- ▶ Grocery stores, benefits, credit rely on computers, electricity
- ▶ Public schools provide lunch to 60,000
- ▶ Public transit lacks reliability, redundancy
- ▶ Need diversity of food sources with different scales, locations; local food system not sufficient
- ▶ Small businesses, non-profits lack resources to prepare adequately

# Challenges for Smaller Businesses & NGOs

"For you to have a generator that can actually run the refrigeration in the store costs about a half million dollars and then you've got to pay about \$10,000 of your service contract. So I usually take the other position... I generally buy insurance and try to cover my loss with insurance instead of trying to plan around it with a generator."

– *Independent grocery store owner*

"If the volunteers can't get here, then we can't do the food pantry...And 90% of the volunteers are seniors."

– *Church leader*

# Assets, Preparedness

“In a black community, and in other communities of color, and in poor communities, a lot of times we are already in states of emergency, even before the weather happens. So we figure out ways to be resourceful and to lean on one another to ensure that the community is fed”

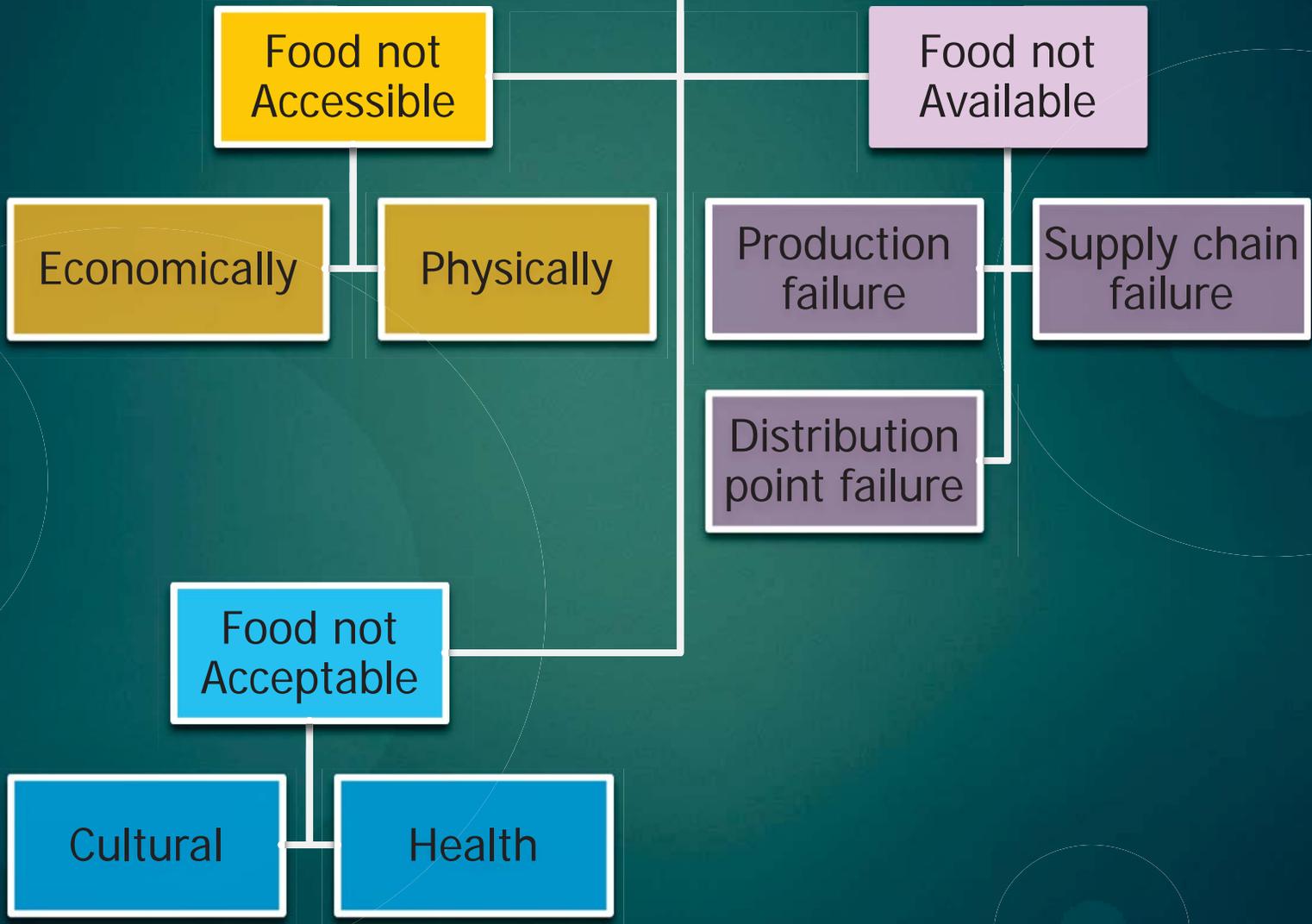
– *NE Baltimore community member*

“Your bigger players, like the [other large chain stores], they have similar plans too. They have too much at risk if they don't.

– *Corporate manager for supermarket chain*

# Fault Tree

Pathways to Food System Failure





# Strategies for Improving Resilience

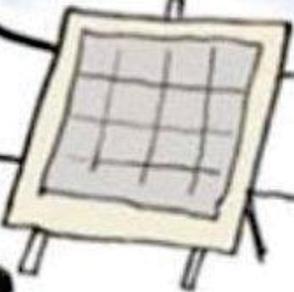
- ▶ **Enhance redundancy & diversity** in food supply chain
  - ▶ Backup- community based food storage
- ▶ Support small food business and nonprofit **preparedness** capabilities.
- ▶ Build **community resilience**
- ▶ Connect to broader **planning for resilience**, transportation, waste removal, etc.
- ▶ **Involve stakeholders from all levels** – such as community-based organizations, businesses, food assistance and disaster recovery organizations, policymakers
- ▶ **No regret actions: address existing limitations** in economic and physical food access; strengthen food system generally



# CLIMATE SUMMIT

WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?

- ENERGY INDEPENDENCE
- PRESERVE RAINFORESTS
- SUSTAINABILITY
- GREEN JOBS
- LIVABLE CITIES
- RENEWABLES
- CLEAN WATER, AIR
- HEALTHY CHILDREN
- etc. etc.



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# Project Partners & Funding



- ▶ Holly Freishtat, Sarah Buzogany, Kristin Baja, Alice Huang



- ▶ Erin Biehl, MS (lead), me, Gwen Chodor, MS RDN; other CLF staff



- ▶ Kristin Dawson



- ▶ Judith Mitrani-Reiser, PhD
- ▶ Xilei Zhao, PhD

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