

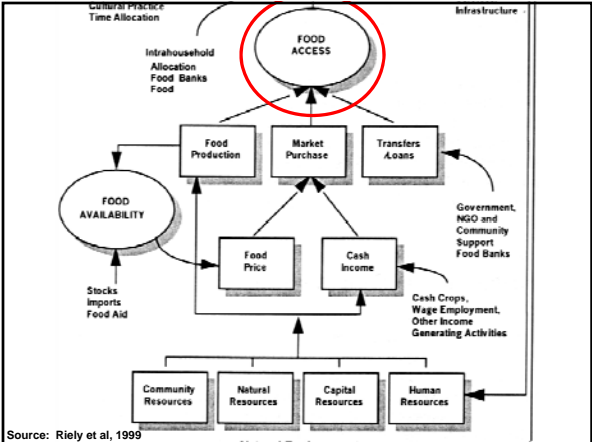
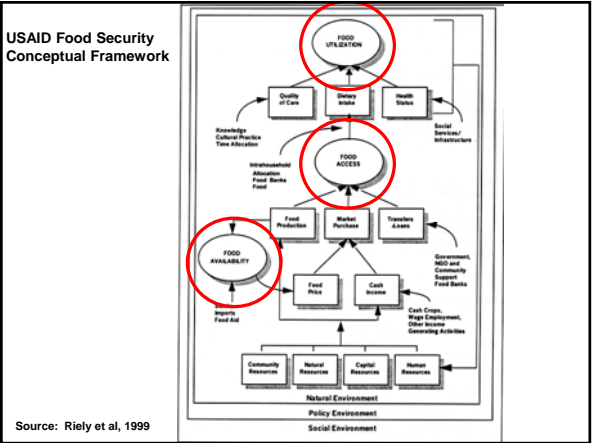
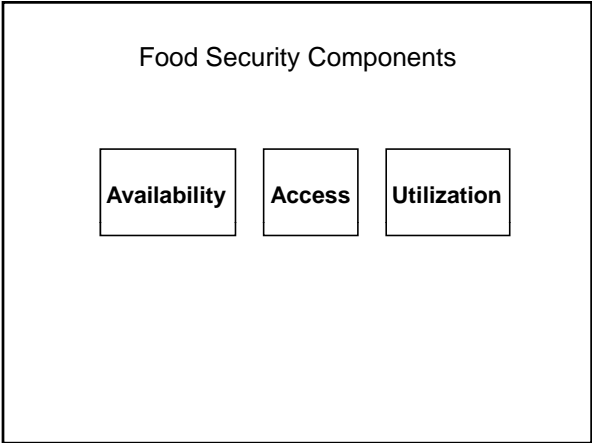
**Conceptualizing Food Access  
in Urban Neighborhoods:  
Just Deserts?**

**Diego Rose, Nick Bodor, Chris Swalm,  
Janet Rice, Tom Farley, Paul Hutchinson**

School of Public Health & Tropical Medicine  
Tulane University

Access to Affordable and Nutritious Food: Understanding Food Deserts  
USDA-Economics Research Service Workshop  
Washington, DC, October 9, 2008

- Outline
- Background
  - Neighborhood food environments
  - Assessing low food access
  - Just deserts?



- Food security definitions
- Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active and healthy life.
    - FAO, World Food Summit, 1996



### Food security definitions

- Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious foods to meet their dietary needs and food preferences for an active and healthy life.
  - *FAO, World Food Summit, 1996*
- Access by all people at all times to enough food for an active healthy life and includes at a minimum:
  - Safe and nutritionally adequate foods
  - Acquired in socially acceptable ways (*LSRO, 1990*).

### Access issues in high-income countries

- Household economic situation
- Neighborhood food environment

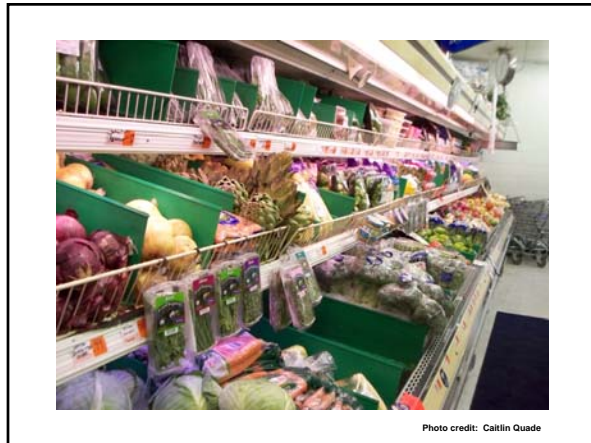
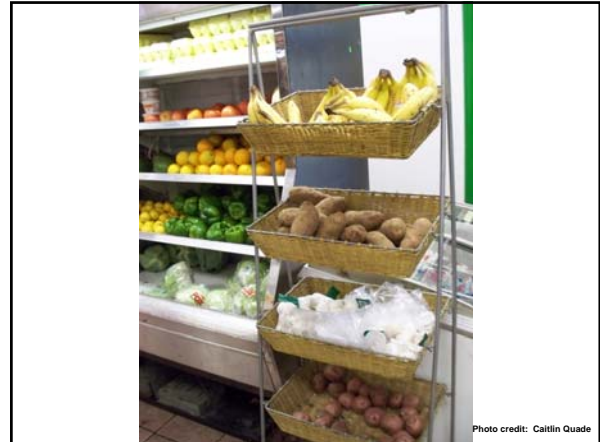
### What is a Neighborhood Food Environment?

- The landscape of outlets that provide food
  - Supermarkets are key



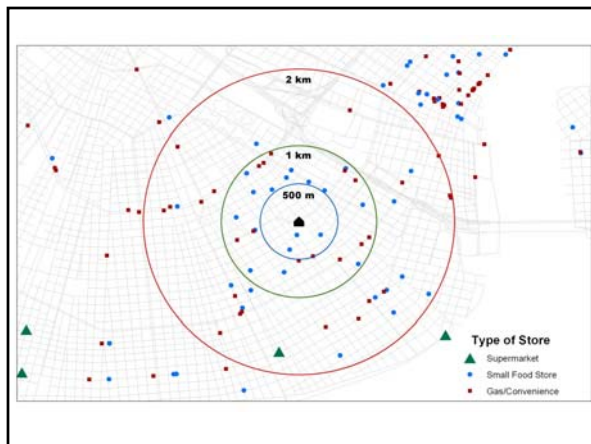
## What is a Neighborhood Food Environment?

- The landscape of outlets that provide food
  - Supermarkets are key
  - Other stores also important



## What is a Neighborhood Food Environment?

- The landscape of outlets that provide food
  - Supermarkets are key
  - Other stores also important
- The distances from these outlets to people +
  - Car ownership
  - Public transportation infrastructure
  - Neighborhood safety



## What is a Neighborhood Food Environment?

- The landscape of outlets that provide food
  - Supermarkets are key
  - Other stores also important
- The distances from these outlets to people
  - Car ownership
  - Public transportation infrastructure
  - Neighborhood safety
- The specific food contents inside these outlets

Rolatape, Model 112



Mean fruit shelf space by store type

	Fresh fruit shelf space in feet	Total fruit shelf space in feet
Supermarket	80.5	109.3
Mid grocery	8.7	16.4
Small grocery	5.4	10.2
Convenience	1.5	3.6
Drug store	0.0	4.1
General Merch	0.0	11.5

Source: Data from NOLA Foods, 2007

### What is a Neighborhood Food Environment?

- The landscape of outlets that provide food
  - Supermarkets are key
  - Other stores also important
- The distances from these outlets to people
  - Car ownership
  - Public transportation infrastructure
  - Neighborhood safety
- The specific food contents inside these outlets
- Food prices

### Outline

- Background
- Neighborhood food environments
- **Assessing low food access**
- Just deserts?

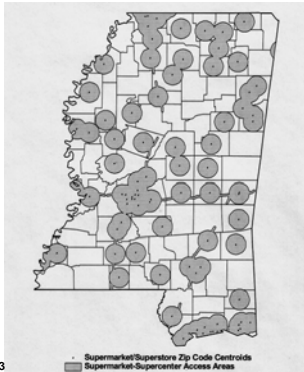
### Assessing low food access

- Distance measures
  - Food deserts

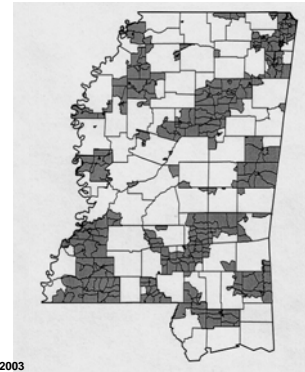
### Food Deserts

- Economically deprived urban areas with little or no retail food activity
- First described by researchers and activists in the U.K.
- Early U.S. application -- rural Mississippi

### Supermarket service areas Mississippi, 1999

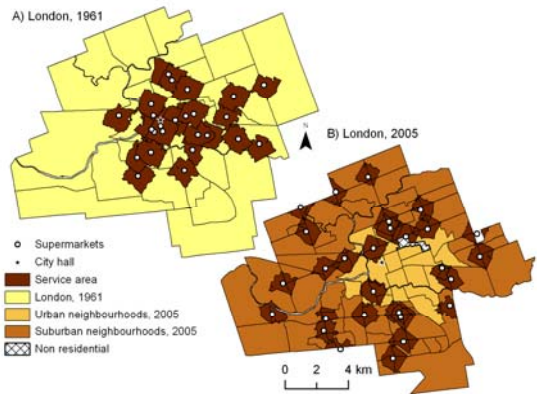


### Low supermarket access areas Mississippi, 1999

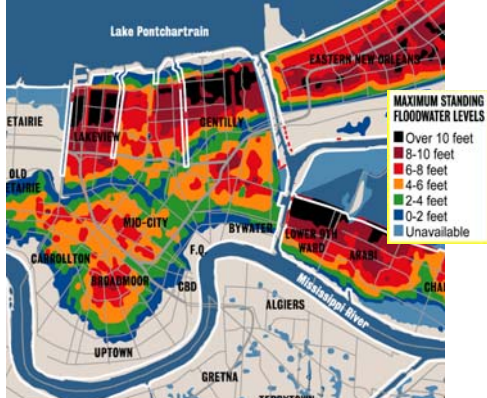


### Food Deserts

- Economically deprived urban areas with little or no retail food activity.
- First described by researchers and activists in the U.K.
- Early U.S. application -- rural Mississippi
- More recent applications in Chicago, Detroit, Montreal, other North American Cities



### Flooding in New Orleans – September, 2005



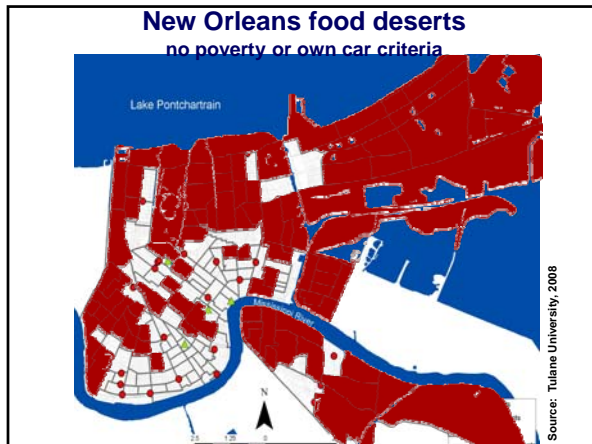


### Examples of food desert definitions New Orleans, pre-Katrina

Criteria	#1	#2	#3
Distance to nearest super or mid-sized grocery	> 1.0 km	> 1.0 km	> 1.0 km
Poverty rate	> 25%	> 20%	--
No car rate	> 25%	> 20%	--
Number of tracts	35	45	92
Percent of tracts	19.4	25.0	50.8

Source: Data from LANECS, 2005; Census, 2000





- Assessing low food access
- Distance measures
    - Food deserts
  - Cumulative availability measures

**Cumulative availability of fruits & vegetables**  
Shelf space within 1km of tract centroid  
New Orleans, pre-Katrina

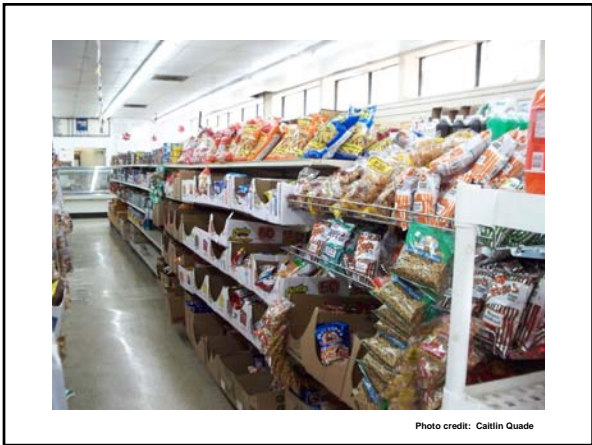
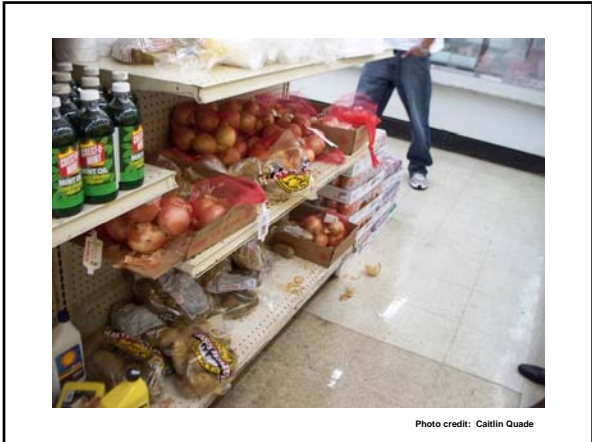
Shelf space (ft)	Food desert type #1	Other tracts
Fruits	11.7	69.0
Vegetables	29.1	100.7
Fruits + Vegetables	40.8	169.7

Source: Data from LANECS, 2005

- Assessing low food access
- Distance measures
    - Food deserts
  - Cumulative availability measures
  - The cost of foods
    - Purchase price of bundle of foods
    - Procurement cost

- Outline
- Background
  - Neighborhood food environments
  - Assessing low food access
  - **Just deserts?**

- The problem with focusing on just deserts
- Food deserts important for influence on consumption, nutritional outcomes
  - Most prevalent nutritional problems in U.S. related to excesses not inadequacies
  - If environment influences consumption, excesses in the environment matter



**Cumulative availability of fruits & vegetables**  
Shelf space within 1km of tract centroid  
New Orleans, pre-Katrina

Food group	Food desert type #1	Other tracts
Fruits + Vegetables	40.8	169.7
Salty Snacks	332.6	444.7
Cookies, Pastries	266.1	422.7
Candy	247.8	371.4
Sodas	452.5	559.0
Total high-calorie snacks	1299.0	1797.8

Source: Data from LANECS, 2005

**The problem with focusing on just deserts**

- Food deserts important for influence on consumption, nutritional outcomes
- Most prevalent nutritional problems in the country related to excesses not inadequacies
- If environment influences consumption, excesses in the environment matter
- Swamps are as worrisome as deserts

**Acknowledgments**

- **People**
  - LANECS enumerators: Erica Alarcon and Catherine Haywood
  - NOLA Foods enumerators: Frieda Brown, Ransome Eke, Lauren Futrell, Hidemi Hashimoto, Catherine Haywood, James Lewis, Sammy Mack, Caitlin Quade, Andrew Wallace
- **Funding**
  - National Cancer Institute
    - PA-05-009: Economics of Diet, Activity, Energy Balance
  - USDA
    - National Research Initiative: Human Nutrition and Obesity