

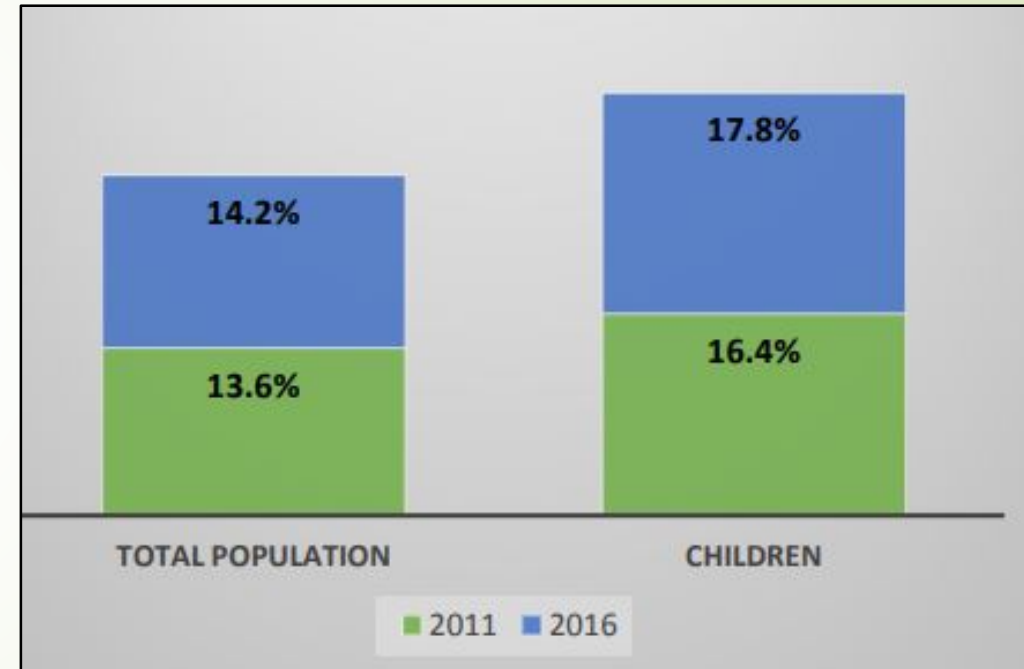
# Seeking connections with nature through community gardens

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Environmental Research and Education**



# Introduction and Background

- **What are community gardens?**
- **Why are they important?**
- Food insecurity, food deserts, poverty, distressed vacant lots (Just Harvest, 2017; Lots to Love, 2019; M'Ikiugu, Kinoshita, & Tashiro, 2011)
- Improved health, environmental protection and social cohesion (Corrigan, 2011; Hartwig and Mason, 2016; Mudu and Marini, 2018; Stewart et al., 2019).
- City reinventing itself as a sustainable city
  - Climate Action Plan, Greater Pittsburgh Food Action Plan

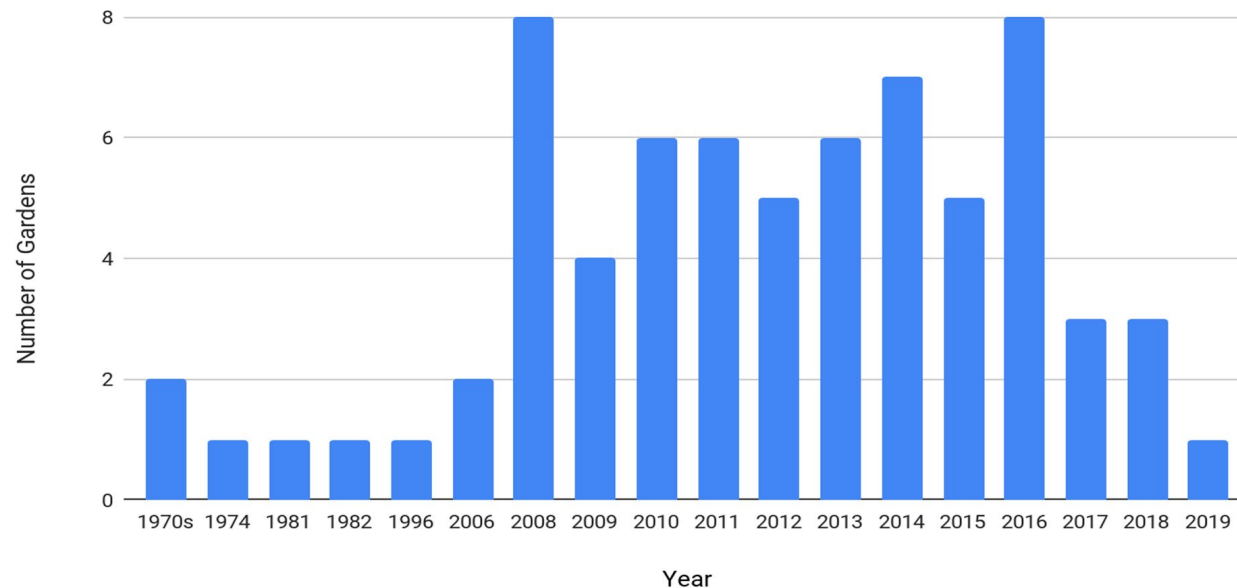


Hunger in Allegheny County (Just Harvest 2017)

# Nature and community gardens

- Humans innate need to connect with nature (Johnson, 2014).
- Nature: what is it?

Number of community gardens established each year

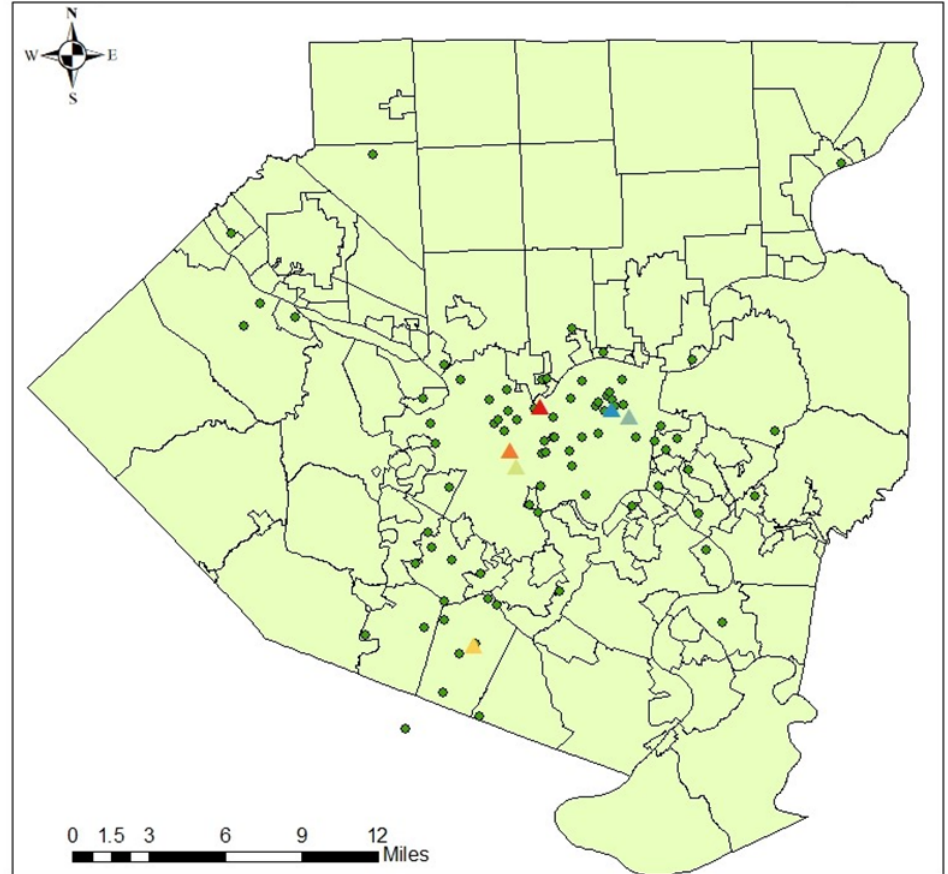


## Gardens and Sustainable Agricultural Organizations

### Sustainable Agriculture Organizations

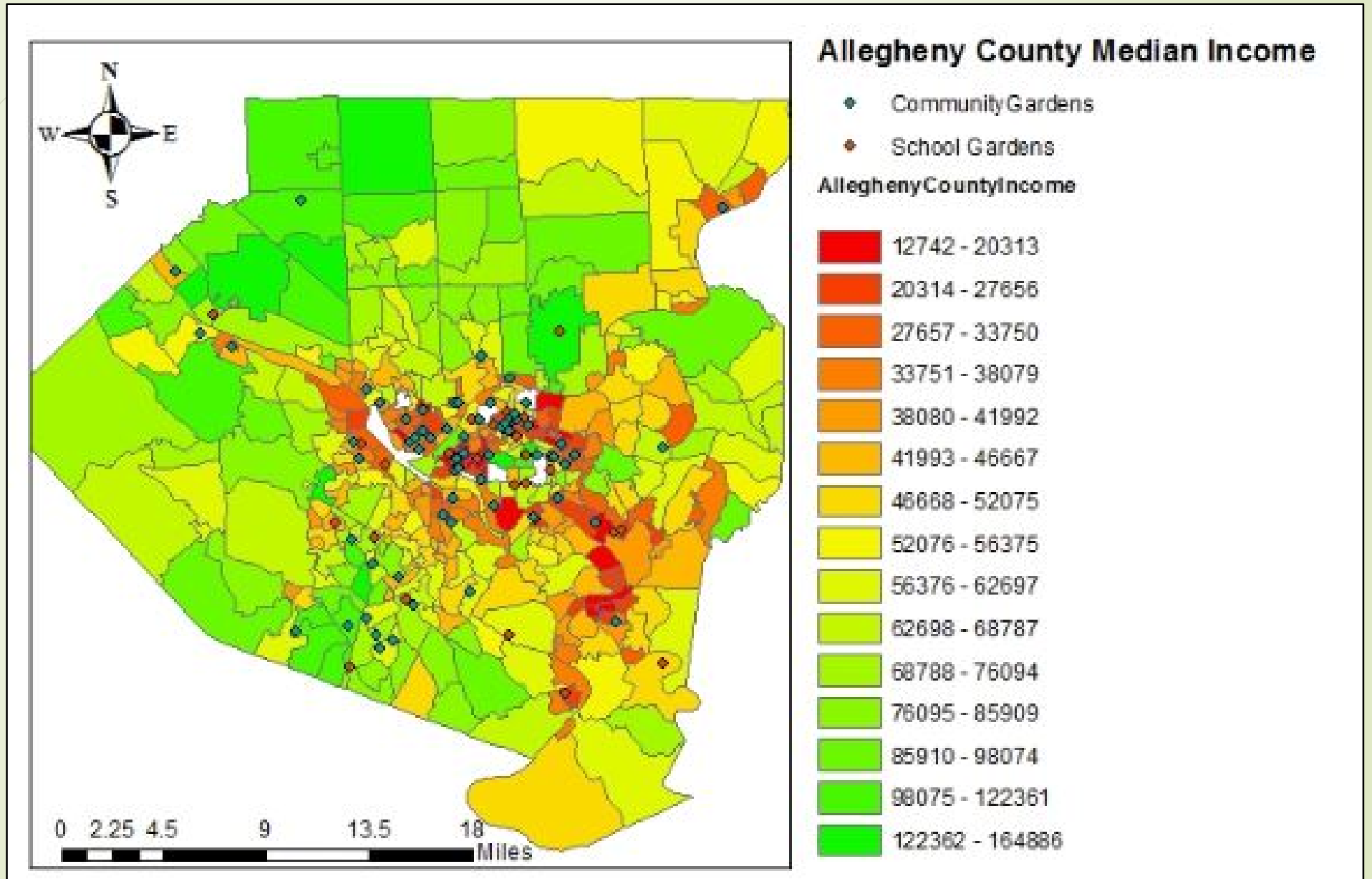
#### Organization

- ▲ 412FoodRescue
- ▲ GrowPittsburgh
- ▲ JustHarvest
- ▲ South Hills Interfaith Movement
- ▲ Sustainable Pittsburgh
- ▲ Western Pennsylvania Conservancy
- Community Gardens





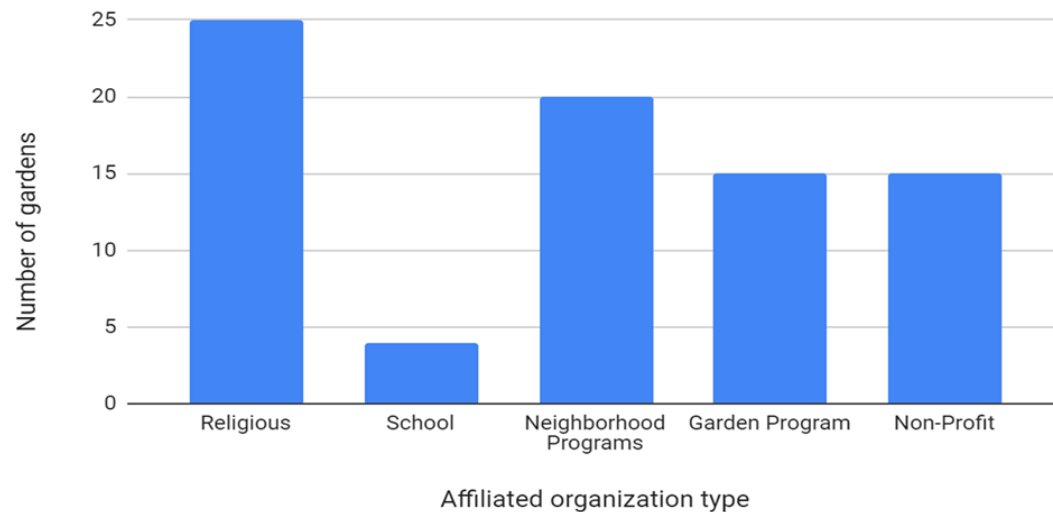
# Median Income and gardens



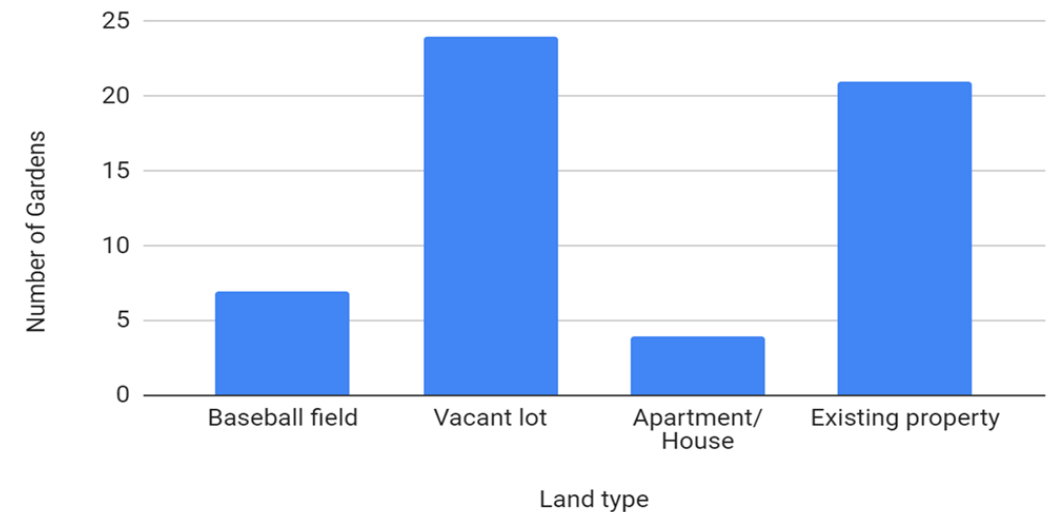
# Community gardens

- Quest to connect with nature
  - People from diverse backgrounds
  - Spaces where community gardens have been established

Garden affiliations

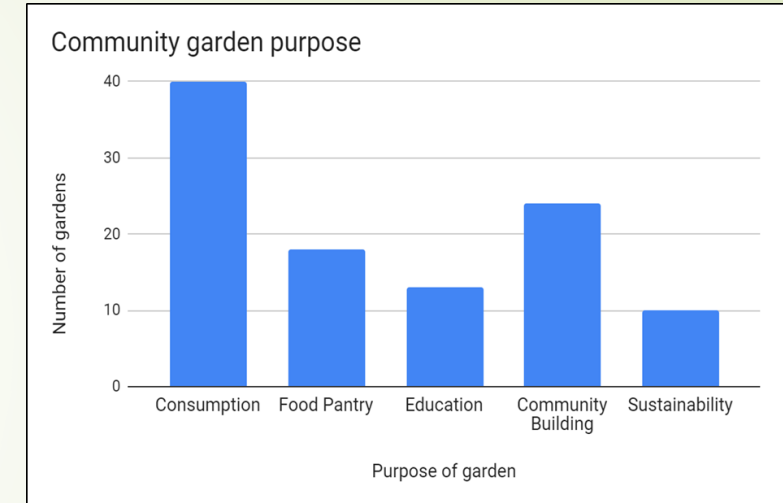


Garden site land history



# How are communities seeking connections with nature?

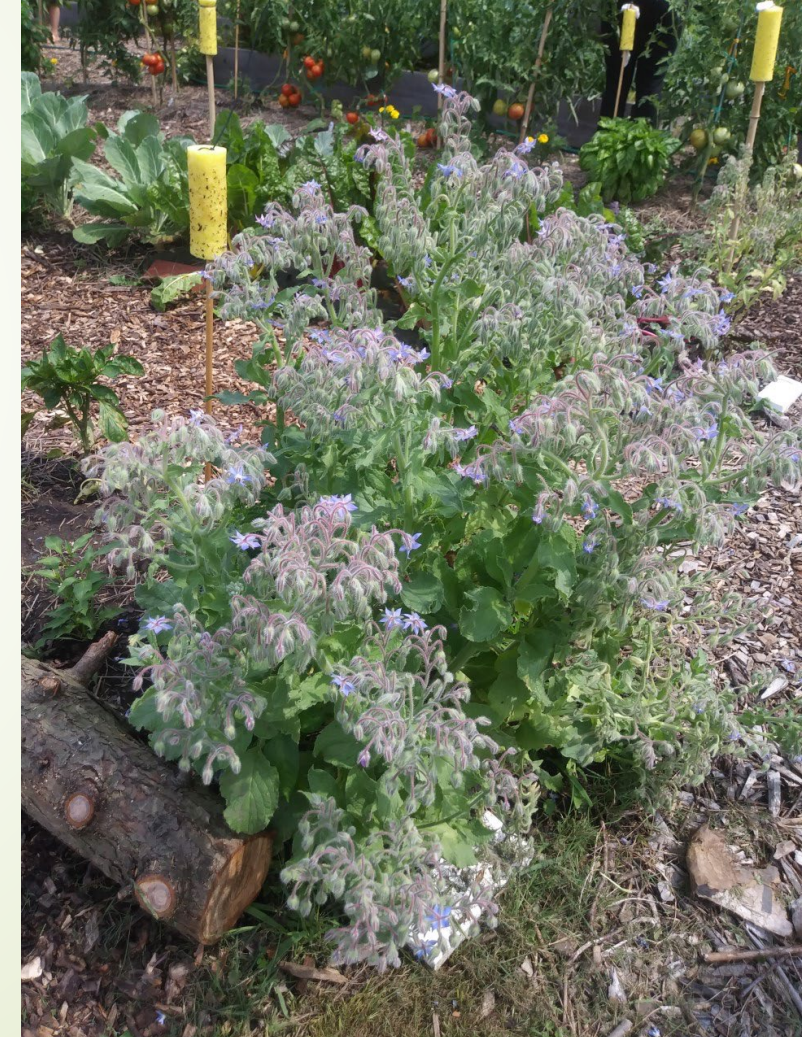
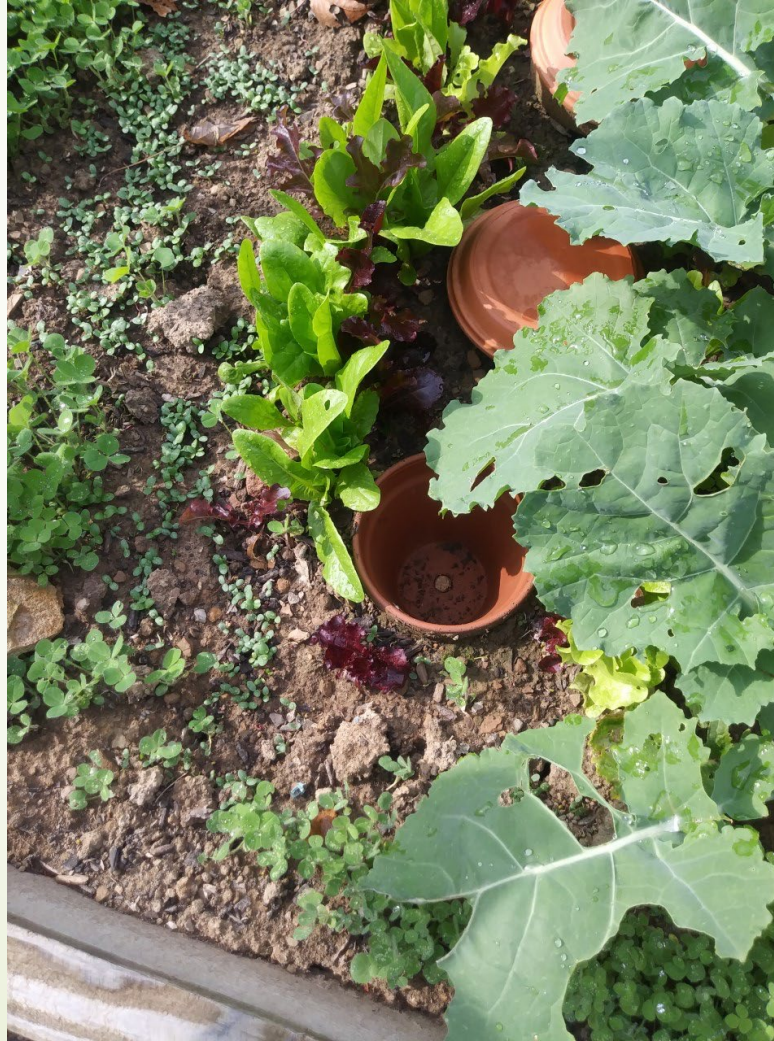
- Goals : **sustainability**, **consumption** (change the way we eat, seeking healthy food choices), **education**, **partnerships** and collaboration with different organizations
- Management practices
  - Reduction of pesticides and synthetic fertilizers= high micro biodiversity (Birol et al., 2005)
  - Pollinators, protect wildlife and flora, water mgt (Daniels & Kirkpatrick 2006)





# Connections with nature through community gardens

- Gardens : hotspots for agrobiodiversity and cultural diversity (Galluzi et al, 2010)
- Genetic diversity from gardens (Galluzi et al., 2010 Bernholt et al., 2009)





# Living laboratories: Themi living garden in Arusha

- Living laboratory for sustainable urban food production; agroforestry, green space
- Managed by women with children living with disabilities ; income generation
- Milan Italy, Arusha Municipality and Nelson Mandela Africa Institute of Science and Technology





# Themi living garden

- Vegetarian organic restaurant
- Native vegetables
- Education on nutrition
  - Shunning traditional foods; meat based diets and refined foods (ECHO, 2018; Chitiyo and Duram, 2017)





# Zimbabwe community gardens

Economic hardships can force people to re-connect with nature through community gardens





# Conclusion

- Community gardens connect people to nature
- Opportunities for expansion:
  - PA farm Bill : devote \$500,000 to urban agriculture grants; community development
  - Pittsburgh Urban Gardens and Farm tour
  - Connections between sustainability and environmental protection
    - Storm water management; green space development
- Applicable to other cities and areas





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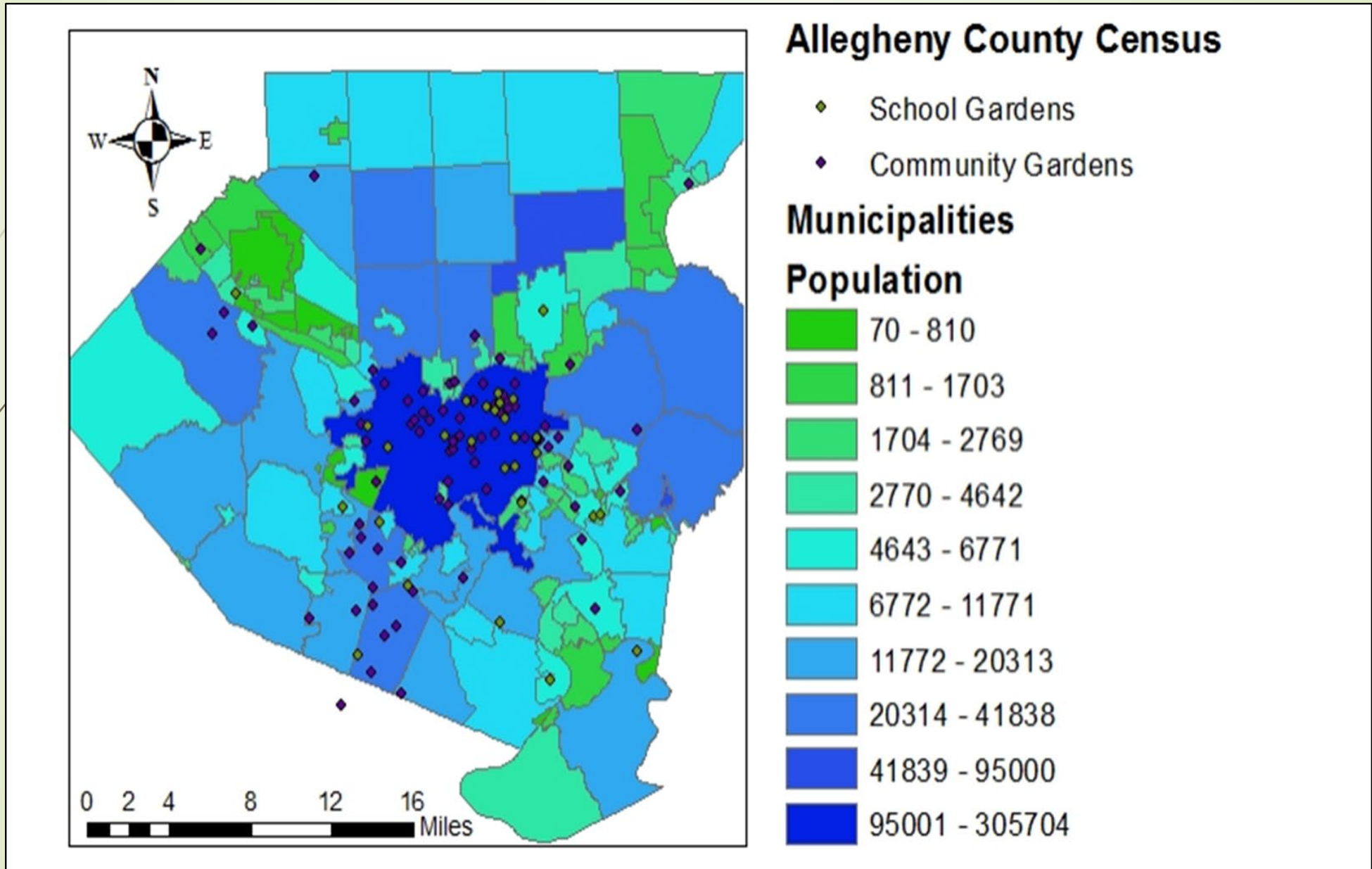
**Center for Environmental Research and Education (CERE)**

# Any Questions ?





# Population and gardens



# Discussion

- 2008 and 2016 saw the largest spike in community garden establishment
  - Grow Pittsburgh founded in 2005; Grow Pittsburgh community garden sustainability fund 2013 (Grow Pittsburgh, 2019)
  - Pittsburgh Food Policy Council 2009
  - Phipps Conservatory's Homegrown Project has established 225 raised beds in households and underserved neighborhoods since its establishment in 2013
  - City adopt a lot program 2013/2014, 114 vacant lots transformed around city first 2 years
- Religious organizations playing an important role to address food insecurity and building relations e.g. race relations.
- South Hills: South Hills Interfaith Movement (SHIM): pockets of suburban poverty
- Within the city limits : proximity of organizations, more community gardens





# Discussion

- Gardens are highly concentrated in low-income, predominantly black neighborhoods in central Pittsburgh.
  - Central Pittsburgh had the highest population and a low median income of \$36,000 to \$44,000.
- These neighborhoods are less likely to have a full service grocery store nearby that offers fresh produce.
- Areas are often called food deserts but many residents use the term “**food apartheid**” linked to systemic racism.

