Community and Sustainability for Urban Gardens in Miami-Dade County

William Hall, Sheila Sutton, Lindsey Nieratka, Liliana Helo, Sean Koester, & Jennifer Matas

Hypothesis & Research Questions

Urban community gardens produce different types of social and ecological communities

1. Types of networks?
2. Governance structure of the garden?
3. Types of plants are grown in the gardens?
4. Influences on plant choice?
5. Garden community?
6. Garden Participation?

Everyday/Real World Importance

This matters to us because of...

- Food deserts
  - Low accessibility to natural/organic foods for all financial classes
- Urban sense of community being lost
  - Communities being formed which otherwise would not exist
- Urban loss of connection with nature
  - Large metropolitan area where nature is second to 'progress'

SOUTH UNIVERSITY PUBLIC HEALTH DEPARTMENT
Buena Vista Garden
New York City 1970s Community Gardens
Haitian Neighborhood
Libertcy City Food Collabora tive
Growing Green Network
Central Garden
Haitian Neighbor Mr. Pierre
Troy Academy Garden
FANM (Haitian Women's Org)
Urban Oasis Project
Miami City
Youth Bike
Emerge- Critical Mass
Venice Beach Garden

Multi-data Research Method

Type of data collected:

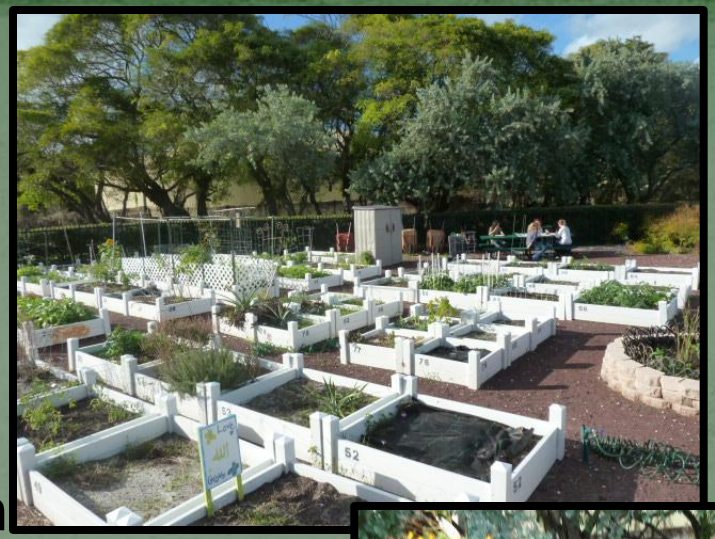
- Semi-structured interviews (5)
  - Garden leaders
  - Garden participants
- Vegetation surveys & observation
  - List of Species Planted in Garden
- Photos
- Landscape Design Layouts
- Participant observation (Field Notes).
- Rules & Regulations

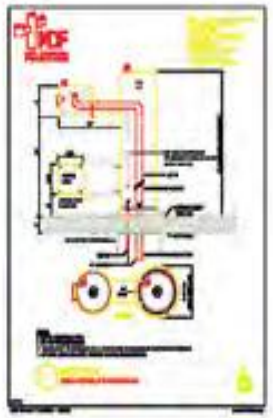
Data Matrix

Community Gardens	Interviews	Vegetation Survey	Photos (Water Systems, Signage, Structures, Style maintenance, plants/beds/plots, group representatives)	Landscape Layouts	Field Notes	Other Materials (Rules & Regulations, Garden Handbooks, Facebook, Website)
NORTH						
	Garden Leader	√	√	√	√	√
	Garden Volunteer					
CENTRAL						
	Garden Leader	√	√	√	√	√
	Garden Leader (2)					
SOUTH						
	Garden Leader	√	√	√	√	√

North Garden

- Upwardly mobile area
- Close proximity to beach and neighborhoods with high property values
- Garden members participate daily
- Fence with lock





Total garden area: 6700 SF
Total Garden Plots: 97
4 - Demonstration garden plots
6 - 24 SF, Full access raised garden plots
7 - 15 SF, Full access raised garden plots
30 - 9 SF, Gardening by the yard plots
27 - 32 SF, Garden plots
23 - 20 SF, Garden plots

LA-1

Central Garden

- Lower property values in neighborhood
- Neighborhood primarily populated with people of Caribbean background
- New/Under construction
- Populated only on work days
- Fence with lock

10"d. Oak tree
17"d. Oak tree
(one story building adjacent)
Tool storage
compost area
Future classroom area
17"d. Oak tree
17
Banyan tree
tamarind
existing slab + future shadehouse
11
12
existing slab
soil, mulch, manure, weed piles
11
10 Alicia
4 Vetiver Remediation
5 Rachel
6"d. Oak tree
avocado
3 Gary permaculture mound
banana circle
1 Mr. Chere
Mr. Sully
herb boxes
well + pump house
6
existing slab
slash pines
9
2
7
lychee
14 Tamara
13
8 Tamara
15 Tamara
16
mango
mango
signs
6"d. tree
9'-6" gate

South Garden

- Situated on University Campus
- About 5 years old
- Predominately worked by students
- Populated mostly on Fridays
- No fence

Compost

Meditation Garden

Bananas

Shade House

Food Forest

Pond

Medicinal Herbs

Class Plots

Class Plots

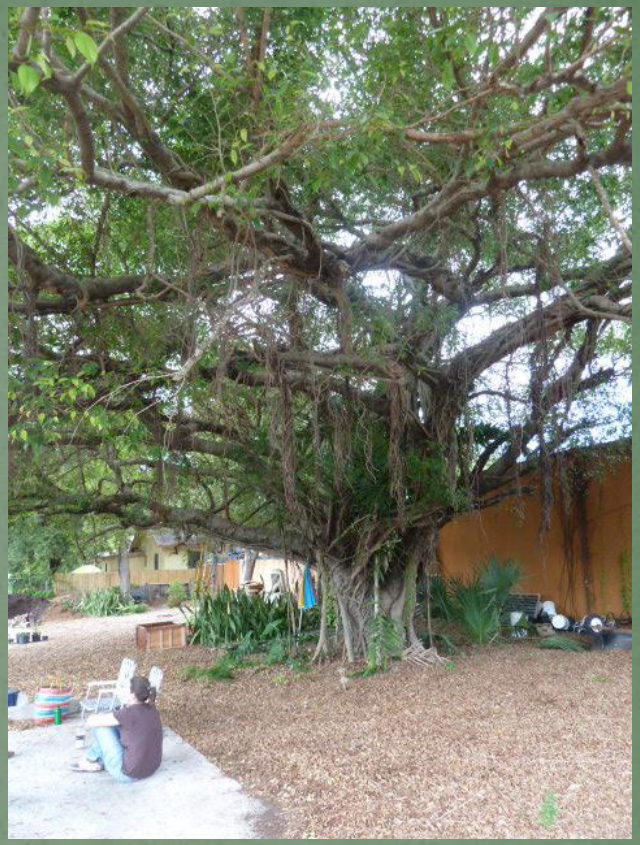
Club Plots

Farmer's Market Plot

Results

1. What types of networks are important to gardens?
   - North
     - Very connected within the city of Miami Beach to other community gardens, educational programs, and non-participating neighbors
   - Central
     - Connected to a broader urban sustainability network and urban progressive politics
     - City-County Institutions of Miami, local schools, Art Basel and local artists, biking networks, local universities, volunteerism
   - South
     - Linked to University agro-ecology program, USDA, Fairchild Botanical Gardens
     - Part of a larger university healthy lifestyle and "green" community
       - Farmer's market, yoga and meditation

2. What is the governance structure of the garden?
   - North
     - External: City of Miami Beach
     - Internal: Garden participants
   - Central
     - Informal
     - "Power of Three"
   - South
     - Multi scale and dependent on terms of participation



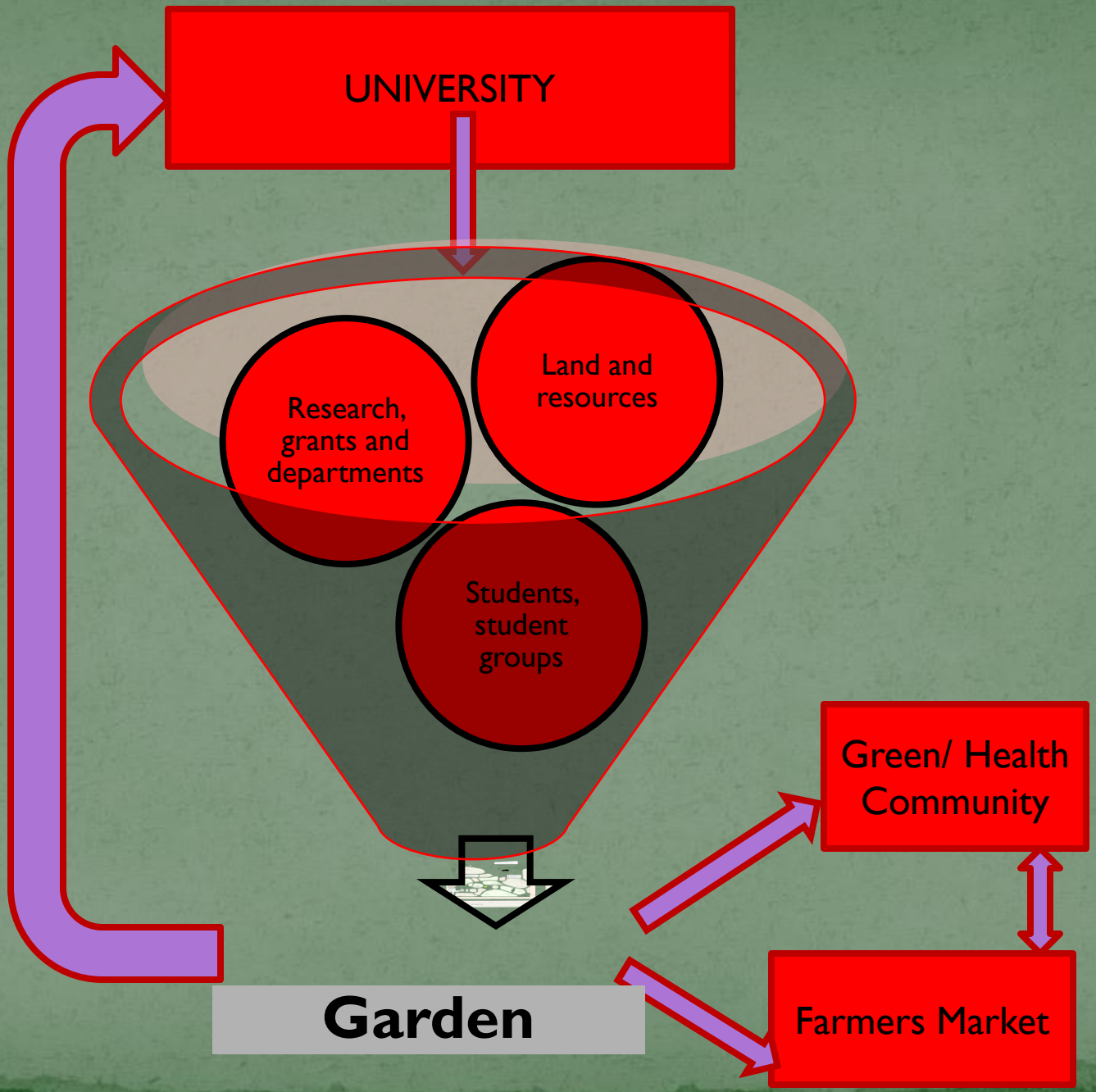
3. What types of plants are grown in the gardens?
   - North
     - Mostly food crops for personal consumption
   - Central
     - Focus on tropicals and vegetables, soil toxicity shapes food choices.
   - South
     - Research driven plant choices

	Common Species				Unique Species		
	Common to all gardens	**North and Central**	**North and South**	**Central and South**	**North**	**Central**	**South**
Food crops	Tomato Okra Beans eggplant	Peas carrots	Potato Sweet potato Peppers Lettuce Squash/pumpkin Cabbage Radish Arugula Cucumber broccoli	Corn Malabar spinach	Peanuts Collard greens Beets Cauliflower Swiss chard Mustard greens Brussel sprouts	Bush Beans Gondules Boniato Chayote Calalou Sugar Cane Onion	Leeks Passion Fruit Wheat grass Soybeans Chickpeas Blueberries strawberries
Herbs	Rosemary Basil Oregano		Sunflowers		Garlic Tarragon	Mint	Sage Thyme Cilantro Peppermint Vanilla Ginger Culantro Anise Lemongrass
Food Trees	Pineapple			Avacado Lychees Papaya Mango Banana	citrus		Plantain Guava Jackfruit Barbados Cherry Mooringa Dragon Fruit Starfruit Cashew

4. How is plant choice influenced by the governance and participant composition of the garden?
   - North
     - Diversity of plots (species and aesthetics) reflects diversity of participants on multiple scale (race, age, origin),
     - Success in one crop results in members sharing knowledge and seeds with other members (benefit to success)
   - Central
     - Focus on culturally important Haitian crops, zone specific plants and non factory farmed varieties-Motivations?
   - South
     - Promoting biodiversity and a focus on research and experimentation
     - Low risk – no cost to participation, no cost for materials/seeds, "nothing to lose",
     - Gain tangible education and research output even if crop fails (benefit to failure)

5. Who participates in the garden and why?
   - North
     - Residents of Miami beach, condo and apartment dwellers without land
     - Families, singles, individuals of all ages and generations
   - Central
     - 25% neighborhood, 75% non-neighborhood with goal to increase Haitian participation
     - Some young urban progressives
     - Currently 2 Haitian members & 2 non-Haitian neighborhood residents
   - South
     - University faculty and students, predominantly undergraduates from Environmental Studies program

6. How is the garden community defined?
   - North
     - Different levels of garden knowledge and transmission of knowledge among participants
     - Focus on social aspects
     - Intergenerational interactions
   - Central
     - Politically connected community
     - Created out of existing social movement, reinforcing and creating new connections within that movement
     - Desire to engage local nearby residents who are Haitian
   - South
     - Community of knowledge gaining sharing and healthy lifestyles and healthy eating
     - Connected to broader University community
     - Transient population/ limited tenure


UNIVERSITY
Research, grants and departments
Land and resources
Students, student groups
Green/ Health Community
Farmers Market
Garden

SUPPORT SYSTEMS

Institutional or Municipal System

North & South Gardens

Central Garden

Social Movement

Financial & Social Capital

Discussion

- Central and North gardens

  Two cities within Miami (Rosol 2010, Gainsborough 2008)
  - North: active civic culture, institution dependent

    "perky engine of commerce"
  - Central: volunteer dependent for civic engagement
    - response to neoliberal government

      "America's poorest city"
- South garden
  - Similar to North garden (institutionally dependent)
  - public research institution: investment & interest in success
    - professors are under pressure to produce published research
    - Students and taxpayers "buy into it"

Future questions:

- How does the quality of the South garden as a temporary garden influence the community formed within it and the plant choices made by participants?
- Why does the central garden choose the plants they are growing?
- How do land tenure issues effect future sustainability of gardens?