

# Indigenous Food Systems, Laudato Si' and UN COP 30 Negotiations: A Youth Learning Exchange

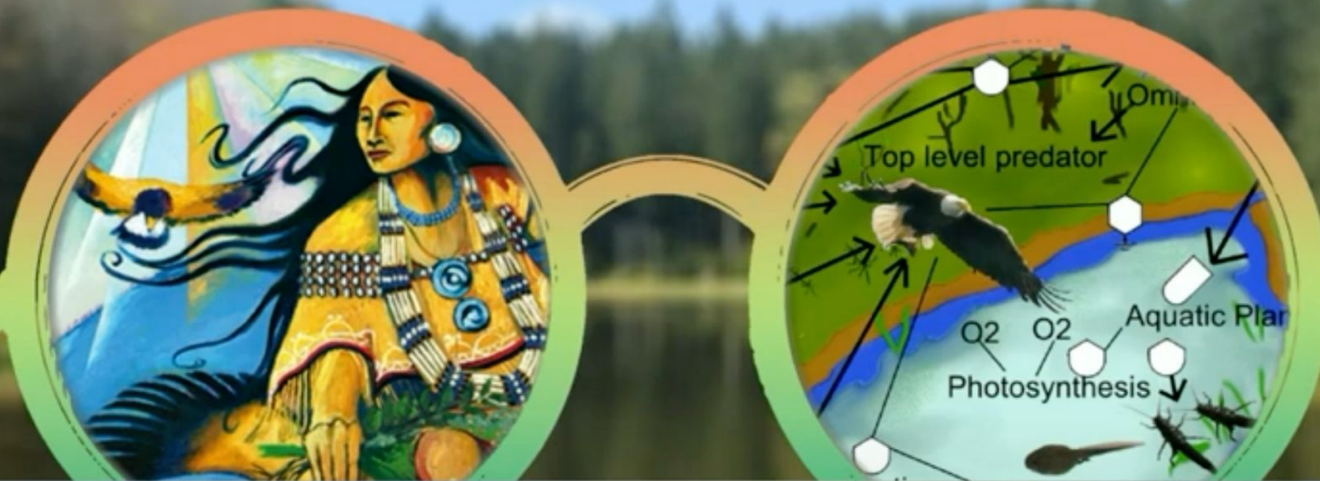
- a. Class and Chris and Pedro introductions - 10
- b. Santa Clara University, the food class presents what they have been learning (10-15 min)
- c. Apu Palamguwan Cultural Education Center (APC) in the Philippines (15 min)
  - i. Agricultural calendar / Food seasonality - Jason
  - ii. Vulnerabilities and hazards of commercial corn -
  - iii. Responses, including indigenous knowledge for the food and water project
- d. Then dialogue (15 min )

*Everyone knows what it is to hope. In the heart of each person, hope dwells as the desire and expectation of good things to come, despite our not knowing what the future may bring.*

*- Pope Francis*



# INDIGENOUS + WESTERN SCIENCE



**How do we learn to see with both eyes?**



This abundance of berries feels like a pure gift from the land. I have not earned, paid for, nor labored for them. There is no mathematics of worthiness that reckons I deserve them in any way. And yet here they are—along with the sun and the air and the birds and the rain, gathering in the towers of cumulonimbi. You could call them natural resources or ecosystem services, but the Robins and I know them as gifts. We both sing gratitude with our mouths full.

- Robin Wall Kimmerer







We give thanks for

*Pope Leo XIV*

**ELECTED MAY 8, 2025**

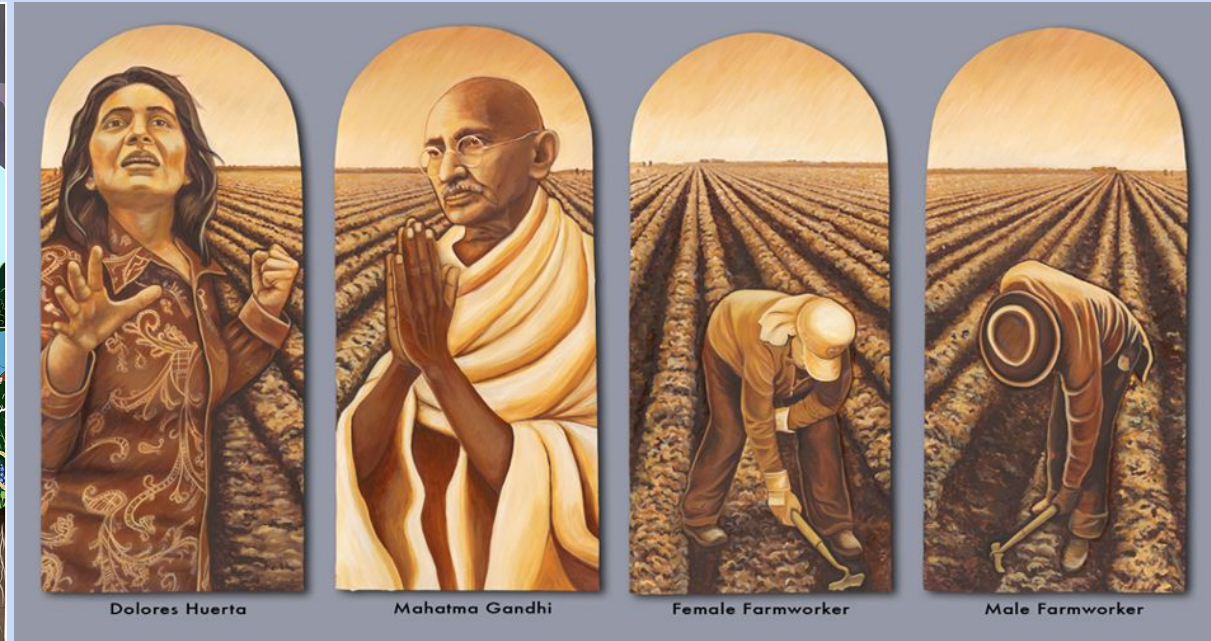
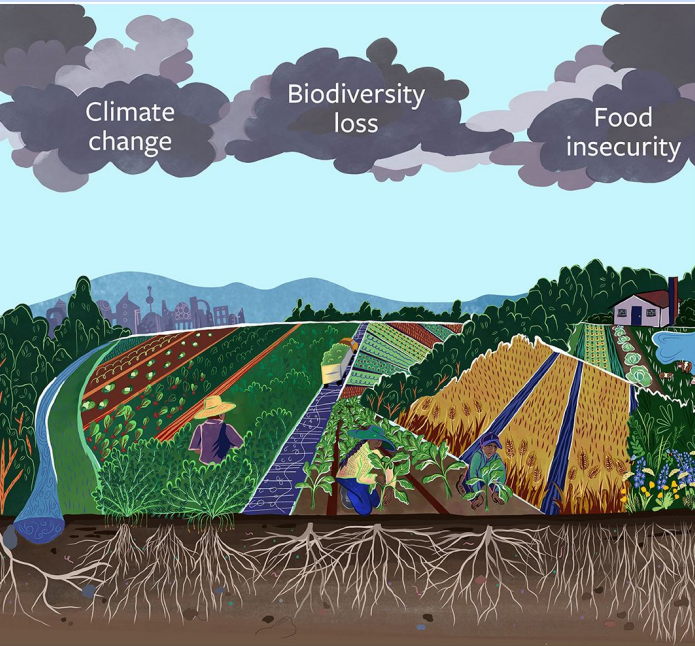


Backing Pope Francis' vision for a Church that cares of creation, Pope Leo stated, "'Dominion over nature'—the task which God gave humanity—should not become 'tyrannical.' It must be a 'relationship of reciprocity' with the environment."

source:

[https://ignatiansolidarity.net/blog/2025/05/08/the-ignatian-solidarity-network-releases-statement-on-the-election-of-pope-leo-xiv/?mc\\_cid=6883817dc1&mc\\_eid=5e420d84ba](https://ignatiansolidarity.net/blog/2025/05/08/the-ignatian-solidarity-network-releases-statement-on-the-election-of-pope-leo-xiv/?mc_cid=6883817dc1&mc_eid=5e420d84ba)

# Food Justice - Spring 2025

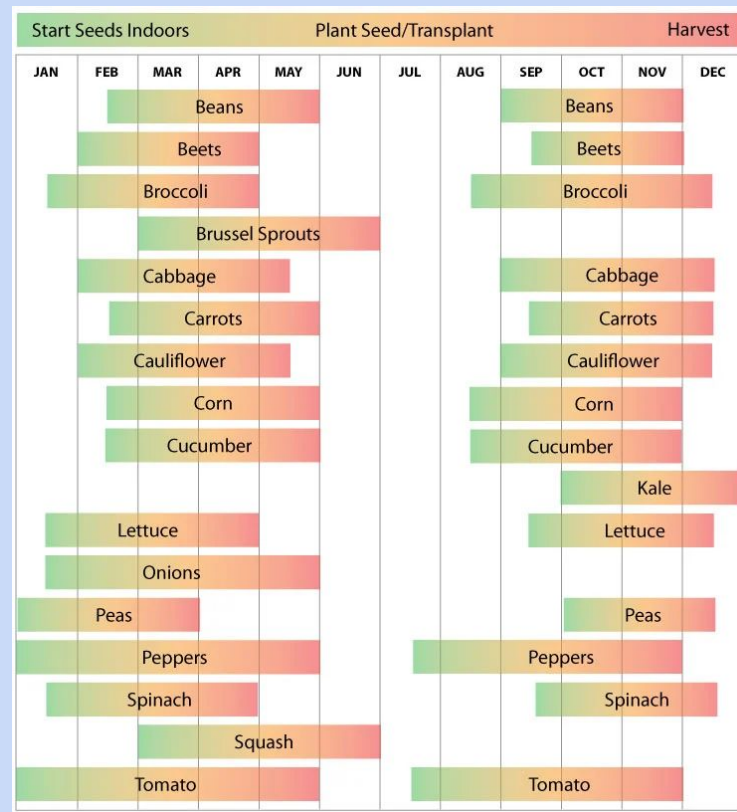
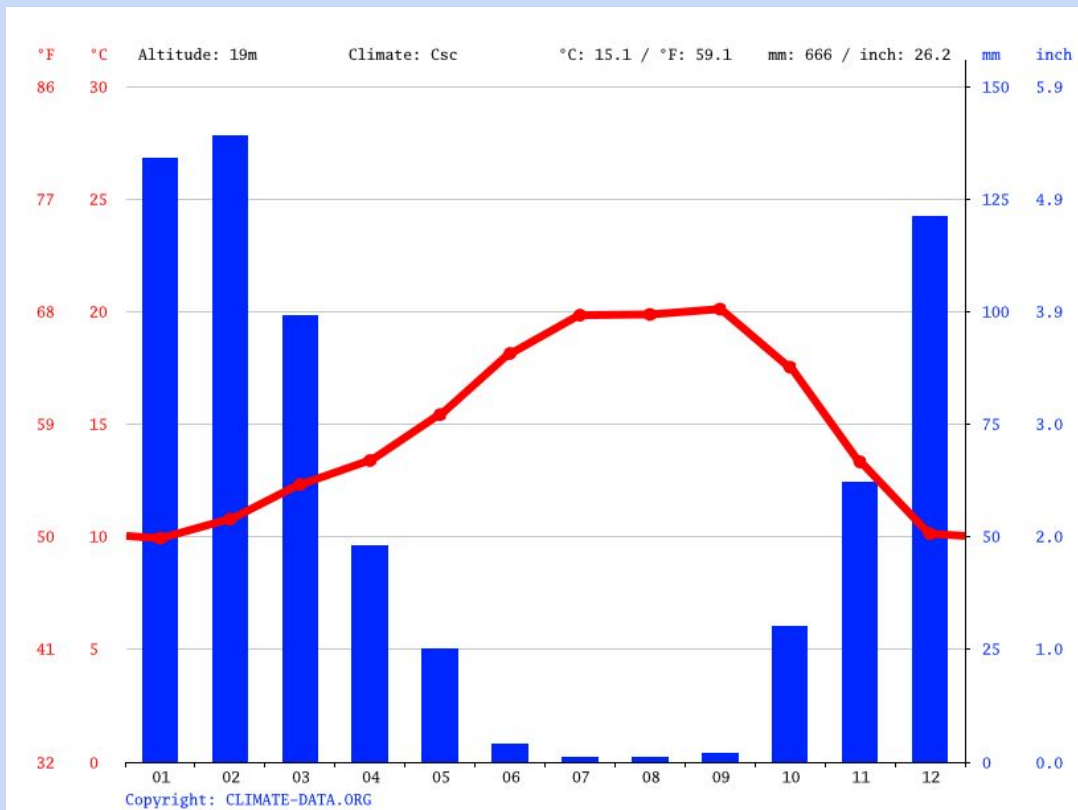


Source: Petersen-Rockney M, et al. (2021) Narrow and Brittle or Broad and Nimble? Comparing Adaptive Capacity in Simplifying and Diversifying Farming Systems. Front. Sustain. Food Syst. 5:564900. doi: [10.3389/fsufs.2021.564900](https://doi.org/10.3389/fsufs.2021.564900)

source: Cesar Chavez Monument at SJSU, San Jose CA by source: <https://www.judybaca.com/news/judy-baca-news/the-cesar-chavez-monument/>

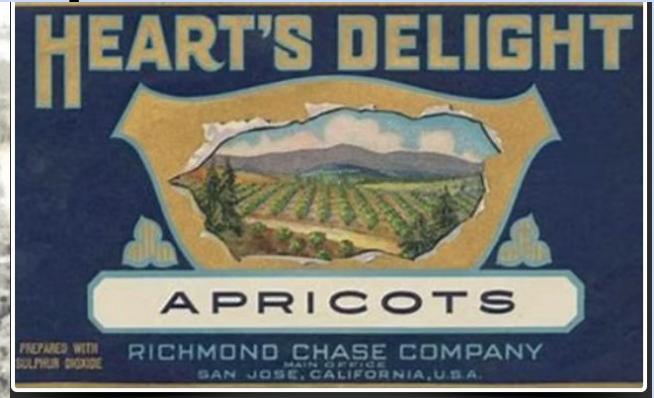
Instructor: Professor Christopher M. Bacon ([CBacon@scu.edu](mailto:CBacon@scu.edu))

# seasonal calendar here





# Agricultural history & present



<https://www.littleitalysj.com/museum-valley-hearts-delight>



In 1948, orchards were all over Los Altos, from downtown to what is now Foothill Expressway. Courtesy Los Altos History Museum.



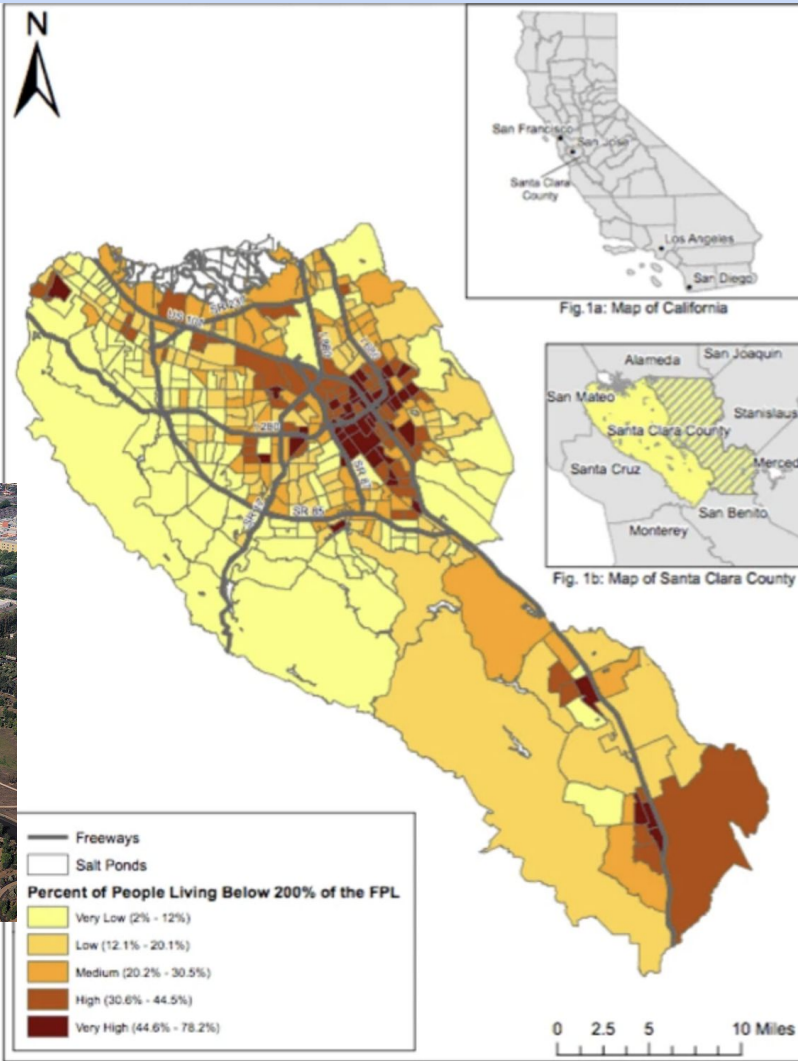
# The Silicon Valley and Bay Area Paradox



Photo: Noah M. Friedlander  
San Francisco, CA



Map at left- Poverty levels, by census tract in Santa Clara County. The map in a shows the location of SCC in California. The large, low-density population area shown in b is omitted from subsequent analysis. (Sources US Census, ACS 5-year estimates 2010–2014) Source: Bacon and Baker 2017.



# Santa Clara University





# Our Class

# Environmental Justice

The right of all people to healthy livable communities.

## procedural element

fair treatment and meaningful involvement of all people regardless of race, color, sex, national origin, or income in shaping environmental policy, and

## distributional element

everyone enjoys the same degree of protection from environmental and health hazards and equal access to healthy environments in which to live, learn, and work.



by New South (Own work)Wikimedia Commons  
Gottlieb and Joshi 2010

# Using the Principles of Agroecology to advance Farm and Food Systems Goals



*The thirteen principles of agroecology linked to their operational principle of sustainable food systems. The inner circles of the figure show the main levers for a succesful transition.*



<https://www.agroecology-pool.org/agroecology/>

# Integrating Arrupe Community-Based Learning

**Arrupe Engagement Community Placement - Spring 2025**

## Sacred Heart Warehouse Clothes Closet and Food Pantry Program

**SACRED HEART**  
COMMUNITY SERVICE

**Program Location:**

- 138 S. First Street, San Jose, CA 95101
- 4.7 miles from SCU

**Program Contact:** Terri Teresi - West  
tteri@shrcwarehouse.org  
Terri will reply to you in 2-3 business days

**About Sacred Heart Warehouse Clothes Closet and Food Pantry**

In the Clothes Closet, families can visit to browse and shop twice per month for high-quality clothing, shoes, accessories, linens, and books that were donated by local community members. Every family member could take home up to 5 articles of clothing—all free of charge.

The SHWC Food Pantry offers two seasonal food programs a three-day supplemental supply of groceries and an assortment of food for families who are currently homeless that requires no prep or cooking. They may come 1 time a week, or 4 times a month.

**Arrupe Students Will:**

SCU students will support the clothes closet by helping organize and prepare clothing for distribution and assisting SHWC members. In the Food Pantry program SCU students will help in organizing and preparing for food distribution and assisting SHWC members.

**Arrupe Engagement Community Placement - Spring 2025**

## Garden to Table

**Program Location:**

- 220 West Taylor Street, San Jose, CA 95101
- Distance from SCU: 2.2 miles

**Program Contact:**

- Trinity: [trinity@gardentotable.org](mailto:trinity@gardentotable.org)
- Kalya: (408) 252-7958

**About Garden to Table**

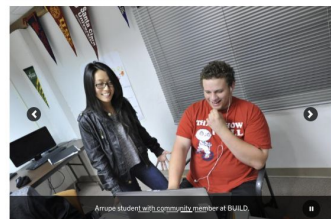
This non-profit organic farm on one acre in downtown San Jose started in 2013. The mission is to provide inclusive educational experiences rooted in connections to nature, community, and regenerative food systems. The ultimate vision is to inspire a more equitable, nutritious, and just food system through community education and engagement. Note: All vegetables in farm are grown by community and for community. Everything harvested is given to volunteers, program participants, and community members in need.

**Arrupe Students Will:**

Support work of garden with guidance of staff and volunteers. This includes but not limited to garden maintenance, educational support with programming and more. The Recovery Cafe program "Seed to Table" is classes with members from Recovery Cafe that focus on farming, nutrition, and food.

## Arrupe Engagement

Rooted in a faith that does justice, the Ignatian Center for Jesuit Education partners with local community organizations whose members and clients serve as co-educators for Santa Clara University students. Informed by and in conversation with Catholic social tradition, the Center facilitates community-based learning opportunities that underscore commitments to the common good, universal human dignity, justice as participation, and solidarity with marginalized communities.



**Arrupe Engagement**

For Faculty  
Community Partners  
Program Values  
Past Arrupe Resources



**SCU in the Community**

This academic year, the Ignatian Center's Arrupe Engagement placed 997 SCU students with 45 community partners, facilitating community-based learning opportunities that underscore SCU's commitment to justice and solidarity with marginalized communities. To learn how those 8 weeks of community engagement impacted the students, read their Arrupe Engagement Reflections.

[Read more](#)



## ENVS 155: Environmental & Food Justice, Spring 2025

### Instructor

Christopher M. Bacon, Ph.D. \*  
[cbacon@scu.edu](mailto:cbacon@scu.edu) \* Please call me *Chris* or *Christopher* or *Dr. Bacon*, and my preferred gender pronouns are *he/him*. Please contact me outside of class by scheduling a meeting during student hours.

### Class sessions

Spring 2025 T/TH 3:50- 5:30 pm. Rm 125 Healey Hall

### Student hours

My student hours are Mondays from 2:00pm – 3:40pm, Fridays 10-11:30am, and by appointment. Please sign up ahead of [time using this system](#). All appointments will be via Zoom, unless otherwise stated. You will receive a Google Calendar invitation with a Zoom link prior to our meeting. If these times don't work for you, you can sign up for other times using the booking system or email me and we'll arrange a better time.

### Course websites and materials

I will post all key assignments, readings, due dates and more for this course on our "[Module roadmap](#)" and [Canvas](#) throughout the course. The modules on the roadmap with a "🟢" are updated and ready to go, while those scheduled for future weeks and still under construction have a "🟡", and are will be updated, before I change the symbol and check them off showing that they ready to go.

- ☐ You must buy this book: Marya, R. and Patel, R. (2021) *Inflamed: Deep medicine and the anatomy of Injustice*. FSG. New York.
- ☐ Your Experiential Learning for Social Justice (ELSJ) core credit will be earned through 2 hours of training + 16 hours of engagement organized with the [Arrupe Engagement](#) Program
- ☐ Please Read this [Important letter from Arrupe Partnerships](#), our class partner supporting your community based learning. Carefully consider the [ENVS 155 Class Placement List](#) which includes all the community engagement opportunities for students to choose from that will fulfill the ELSJ Core Requirement of this class. Create a small list of 1-2 engagement opportunities that you are interested in and will register for during the Arrupe Engagement Registration during week 1.

### Course description



ENVS 155: Environmental and F

### Purpose

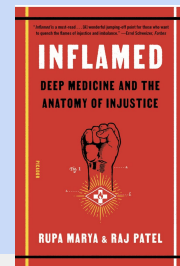
The purpose of this assignment is to synthesize key concepts to develop an environmental justice framework that you then use to analyze a topic that responds to your own interests. You will conduct original research and will write a final term paper that will focus on a pressing food and/or environmental justice issue today. It will be written up as a formal research paper and be based on the best available scientific evidence. Although a formal research paper, we also expect that you will use the first person and include your personal reflections in the appropriate sections. This is a significant term paper, and under regular circumstances I expect its final length to be 8-10 pages (double spaced normal margins + a one page bibliography).

**Skills:** This assignment will help you practice the following skills that are important to your future success as student, professional and engaged environmental citizen:

1. Synthesize complex evidence from different sources into a coherent narrative.
2. Explain environmental justice and sustainability criteria and use them to analyze the consequences of both dominant and alternative approaches addressing pressing challenges.
3. Compare how several social science theories explain continuity and change in food and economic systems.
4. Conduct high quality independent research, analysis, and writing.

**Knowledge:** This assignment will also help you become more aware of the following key content areas that are important for human geography, environmental social sciences, and interdisciplinary approaches to environmental and food justice:

1. Identify several key scholarly journals and authors conducting key research on these topics.
2. Understand key explanatory concepts useful for environmental and food justice analysis.
3. Relate these concepts and the analysis to your own experiences and aspirations.



## Discussion Posts to engage the readings and community-based learning reflections linked to course content.

### Independent research paper assignment



# Seeds in your life

## Home garden

- Corn, maize, (*Zea mays*)
- Guatemalan blue corn, also known as Hopi Maize
- Flint corn.
- Stories and significance



# Bay Area Urban Agriculture Map

A project of University of California Cooperative Extension

Urban farms and gardens

School gardens

Community gardens



1 Alemany Farm



2 Berger Edibles Demo and Teaching Garden



3 Berger Native Demonstration Garden



4 City Slicker Farms



5 Cloverfield Organic Farm



6 Cosentino Family Farm



7 Faithful Farm



8 Family Harvest Farm



9 Farm2Market



10 FarmTECH



11 Garden for the Environment



12 GROW San Mateo



13 Guadalupe Demonstration Garden



14 Guadalupe Historic Orchard



15 Harvest Garden



16 Indian Valley Organic Farm & Garden



17 Insight Garden Program



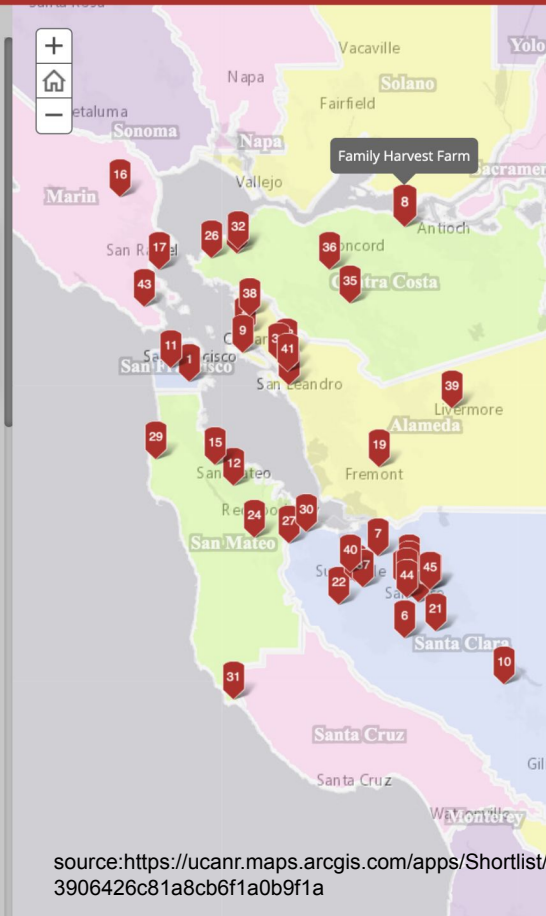
18 La Mesa Verde



19 LEAF C.R. Stone Garden



20 Loaves and Fishes



source: <https://ucanr.maps.arcgis.com/apps/Shortlist/index.html?appid=ef68873e3906426c81a8cb6f1a0b9f1a>



# Community-Based Learning - Urban Farms - Veggielution



1. Who?
  - a. Emily Cole, Olivia Imai, Corey Lee, Robert Lingafelter, Jojo O'Hara
2. What is it?
  - a. Urban Organic Community Farm
  - b. Youth Garden
  - c. Local Produce Supplier (Farm Stand)
3. Goals: Builds community connections, fights food insecurity, collective action, strengthening food systems
4. Tasks: Packed produce boxes, composted, cleared weeds, engage with and educate youth



<https://veggielution.org/our-farm>



# Urban Farms - Veggielution





# Community-Based Learning - Urban Farms - Garden to Table (Will, Julia, And Rosie)

1. Garden to Table is a community garden located in San Jose
2. They're important because they work to facilitate community, provide nutritious food at no cost, and work to provide education about sustainable gardening practices
3. Last week I worked with young children on how to sow seeds, harvest peas, and prune broccoli





# Plants in your life





# Forge Garden Placement: Carmel, Hope, Olivia, & Lindsay



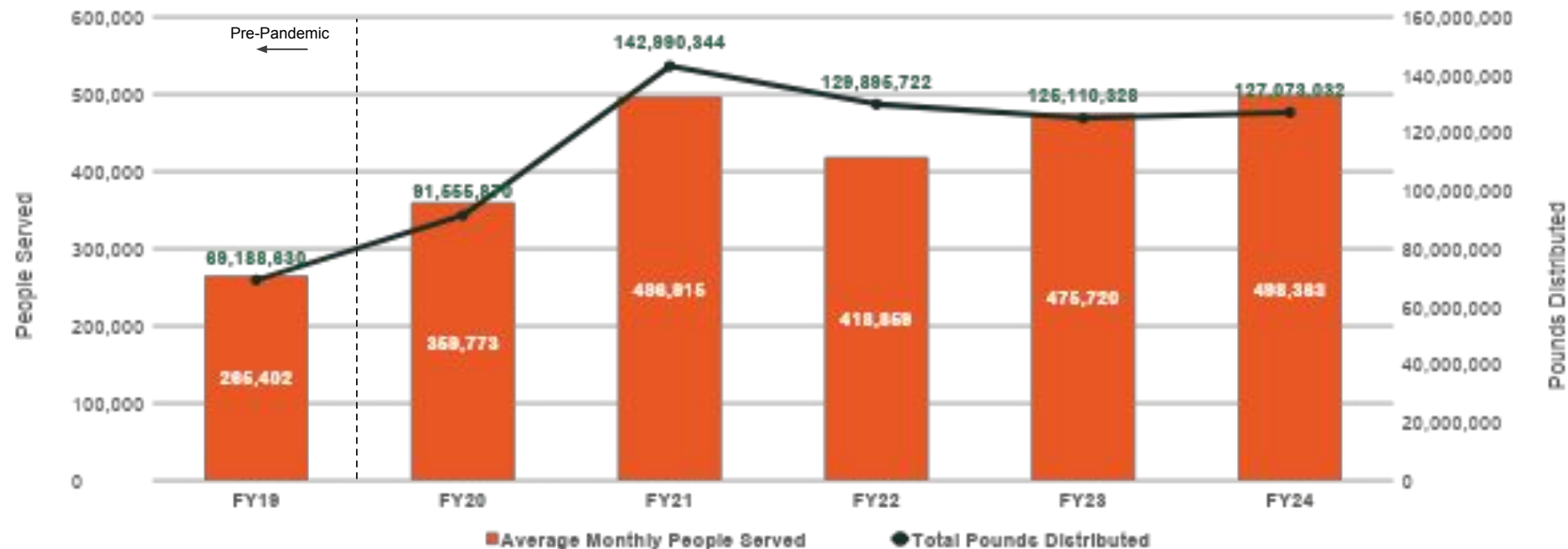
# The Forge Garden

The Forge Garden is a half-acre, organic garden on the Santa Clara University campus.

1. Why is the placement important?
  - a. The Forge Garden gives SCU students and faculty members the chance to engage with the Santa Clara community through our school garden. In our garden, we have the opportunities to learn about food and social justice, agroecology, farming practices, how to cook organic plant based recipes, and learn about native California botany. Additionally, it acts as a reflective space for all.
2. How are you engaging them and what have you learned?
  - a. Harvesting vegetables (kale, spinach, snap peas, etc!) for the Farm Stand, creating compost, going around community lawns and gleaning the trees.

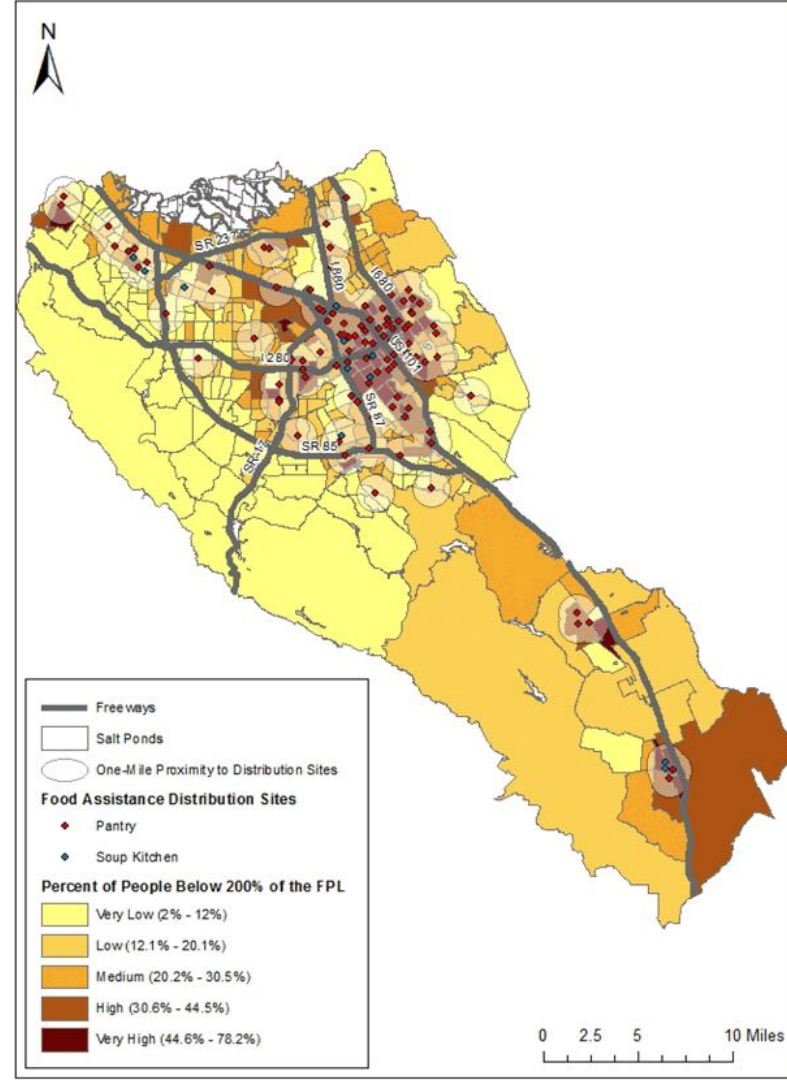
# The Growing Need for Food in Silicon Valley

*Average people served continues to rise even after most of the pandemic-era impact is behind us*



# Food Assistance locations in Silicon Valley in 2015

Source: Bacon and Baker 2017. 2015 Data.





# Bronco Food Pantry

## Austin Snider, Hannah Yonkers-Talz

- The Bronco Food Pantry is a SCU subsidized Food pantry on campus.
- The pantry provides fresh produce, personal care items, as well as nutritious food options for any SCU student in need.
- Our role entails stocking and organizing the pantry, keeping the area clean and neat, as well as breaking down any boxes that the food is shipped in. We've also began a few research initiatives with the purpose of improving the functionality of the pantry, as well as spreading the word about the pantry's existence.



# Food Distributive Services - Gabe and Jasper

Catholic Charities & Salvation Army

- Key support in the local community
  - Provides fresh food support
    - Allows for variety and adequate nutrition
    - Ingredients and full meals
- Large scale operations
  - Helps 750 families/day per location
- Band Aid solution for systemic problem



Download PNG PSD SVG EPS Formats in English  
www.VectorsSeek.com



**Catholic Charities  
of Santa Clara County**

# Loaves and Fishes

1. Loaves and Fishes is a food pantry and sustainable garden that provides food for people in the San Jose area who are struggling with food justice.
2. Why are they important

The garden for loaves and fishes is important due to public service and aspect of community engagement it provides. Gives produce to anyone in need and gives a sense of connection to nature.

3. How are you engaging them and what have you learned?

We have participated in sustainable agro-ecological practices, from planting to weeding and learned a lot throughout. For example, I learned about the advantages of drip irrigation over manual watering for ensuring efficient use of water.



We planted yellow marigolds in the garden beds at Loaves and Fishes to help keep bugs away. Their smell naturally repels pests, which is an agroecological way to protect plants without using chemicals. They attract pollinators and it is a natural way to help the garden.





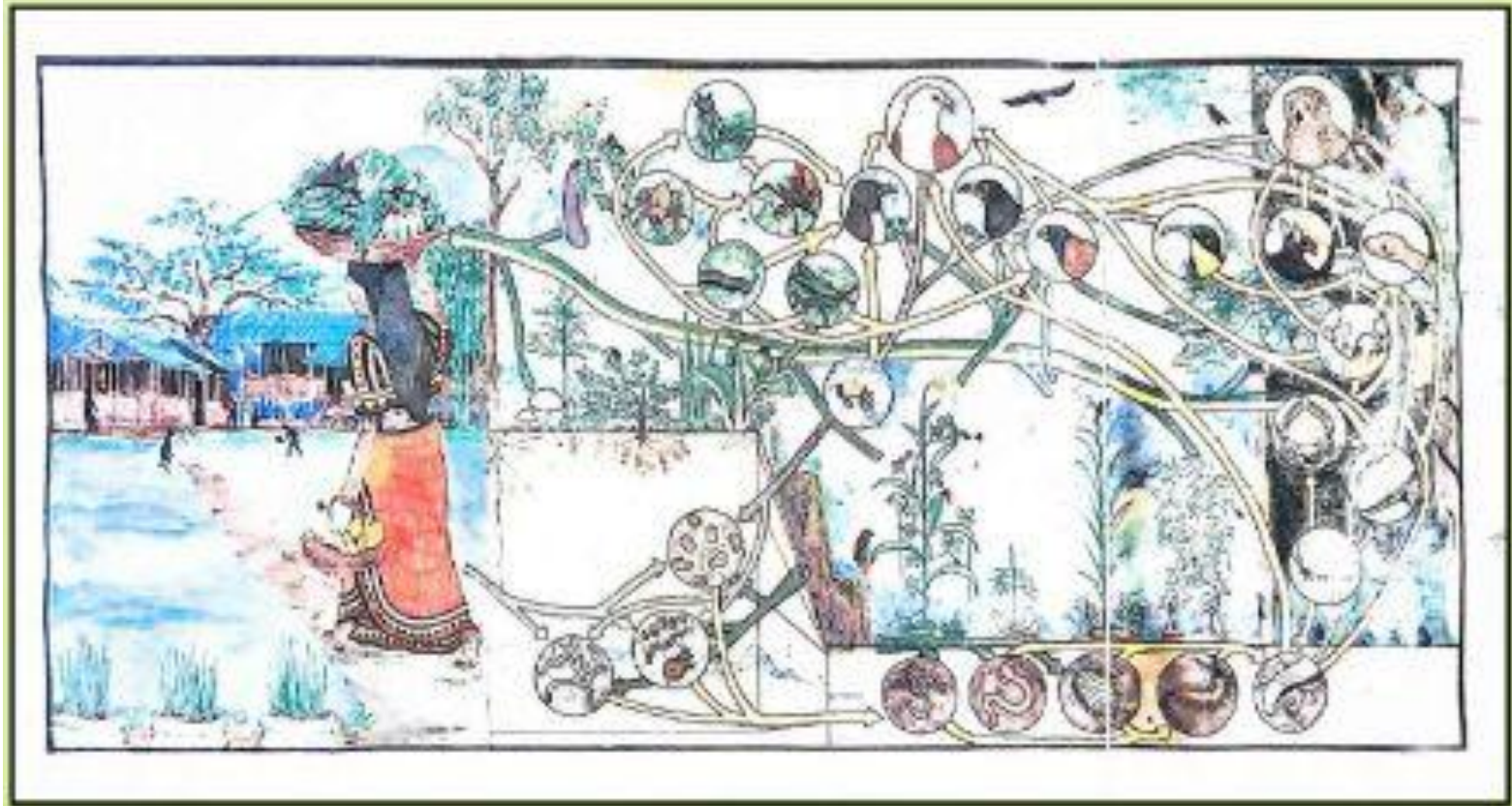
# *Sacred Heart Community Services*

- Drew Rogers





# Indigenous Pulangiyēn Farming and Food Systems





# Indigenous Pulangiyēn Farming and Food Systems

TRADITIONAL FARMING		GARDEN
UMA	TALIGBA / BUNDAY	
More or less 1 hectare	10 to 100 sqm	10 to 100 sqm
An area intended for growing major food crops for several months - Corn, upland rice, adlai, sesame	A patch of land intended for growing food crops like vegetables and root crops - Camote or sweet potato, binggala or cassava, adupa or taro	A small patch of land intended for the production of vegetables or growing a kitchen garden
Scattered planting and intercropping	Scattered planting and intercropping	Plots of 2 to 3 different vegetables

# Indigenous Pulangiyēn Farming and Food Systems

TRADITIONAL FARMING		GARDEN
UMA	TALIGBA / BUNDAY	
Two planting seasons - March to September - October to February	Depending on the growth and productivity of the crop, usually camote or sweet potato, which can be planted several times in a year before switching to a different crop or transferring to a different area	Vegetables are interchanged among the beds

# Indigenous Pulangiyēn Farming and Food Systems

TRADITIONAL FARMING		GARDEN
UMA	TALIGBA / BUNDAY	
Follows a three to five years natural regeneration of soil nutrients	Branches from surrounding trees are used as trellis Surrounding grass, dried leaves, compost, and other organic matter are used for mulching and soil amendments	Use of bamboo trellis  Production of organic soil fertilizer - Vermicast, bokashi, tea manure, concoctions, and extracts, mulching, planting root crops to regenerate the soil
Resumption after 10 to 20 years	Resumption after 2 to 3 years	Resumption every planting season



# Indigenous Pulangiyēn Farming and Food Systems

	MONTHS	JANUARY	FEBRUARY	MARCH	APRIL	
SWIDDEN AREA 1	Land prep.	Brushing	Clearing	Cutting of trees/ removing of	Burns / Lapug	Plant rice/Corn and Aglay
	1-18 months	Weeding			Planting corn and kalabasa balatung	
	18- 24 months	Weeding		Plant aglay	Planting corn and kalabasa balatung	
SWIDDEN AREA 2	Land prep.	Clearing			Burns	
	24-30 months	Harvesting camote			Harvesting corn	Plant
	36- 40 months				Harvesting corn	

## Legend of the crops

	Land preparation
	Planting activities
	Harvesting activities
	Lubas

# Indigenous Pulangiyēn Farming and Food Systems

		BENDUM SWIDDEN MONTH ACTIVITIES						
APRIL			MAY	JUNE		JULY		AUGUST
Lapug	Plant rice/Corn and Aglay	Plant Lunga,dawa, kudyapa,and kandol,balatong and tubo	Make holes and plant root crops	Weeding			Harvesting corn	
	and kalabasa balatung					Harvesting corn	Harvesting kudyapa,balatung and kalab	
	and tung	planting root crops			Harvesting corn		Harvesting ,balatung and kalabasa	
		Planting camote				Make holes		planting root Adupa, labug
		Planting Aglay	Harvesting Adupa and labug					
		Harvesting kalaanan camote and adupa in the previous years						

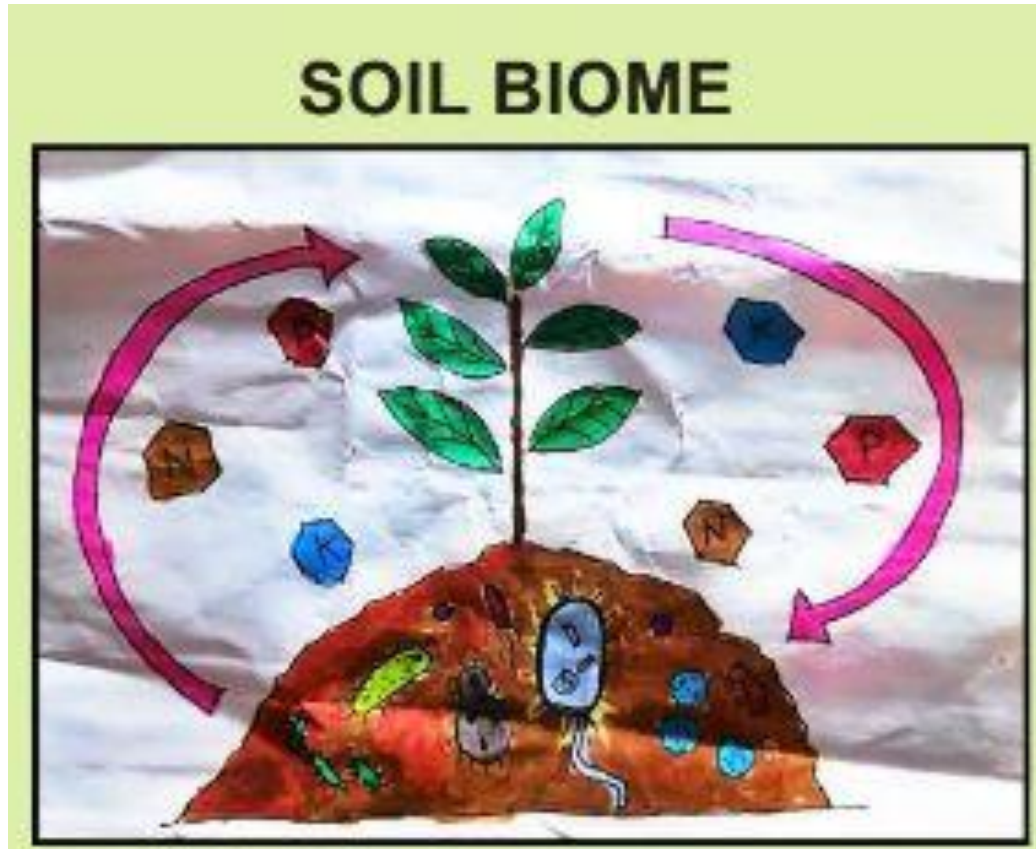


# Indigenous Pulangiyēn Farming and Food Systems

AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
Harvesting corn				Harvesting of rice		Harvesting of Aglay			
Harvesting kudyapa, balatung and kalab		Harvesting kandol and tubu				Harvesting dawa		Harvesting root crops	
Harvesting kudyapa, balatung and kalabasa				Harvesting aglay	Clearing		Planting corn		Planting root
planting root Adupa, labug		Harvesting camote							planting corn
labug					Clearing and planting corn			Harvesting Aglay	
		LUBAS							

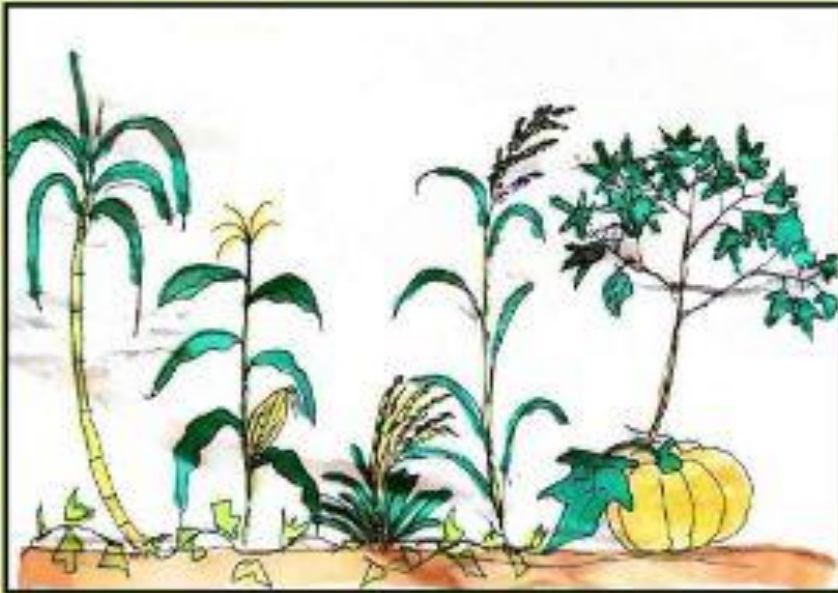


# Transitioning to Agroecology



# Transitioning to Agroecology

**CROP DIVERSITY**



**FOOD DIVERSITY**



# Transitioning to Agroecology





# Transitioning to Agroecology

## **Companion Planting / Intercropping**

### **Uma / Farm:**

traditional corn with upland rice and aglay;

wild cucumber (kandol) with traditional melon; sugarcane with cassava

### **Garden:**

papaya with sweet potato; pechay with chives and bell pepper;

cassava with string or winged beans; tomatoes with marigold

# Transitioning to Agroecology

## **NATURAL INSECT REPELLANTS**

Ginger, Peppermint, Sweet Basil, Marigold,  
Chives, Chili Peppers, Citronella, Mugwort

# Transitioning to Agroecology

## CONCOCTIONS & EXTRACTS

- OHN (Oriental Herbal Nutrient
- INSECT TRAP SOLUTION
- LABS (Lactic Acid Bacterial Serum

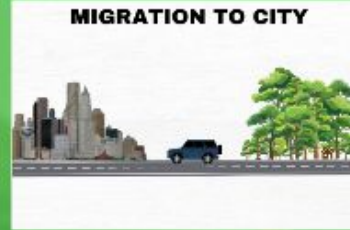
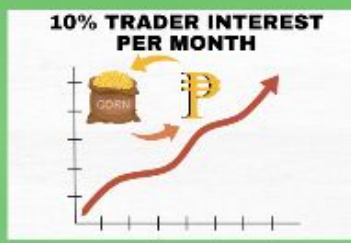


# Transitioning to Agroecology

## PLOT ORIENTATION



# Agroecology in Bendum: Vulnerabilities and the Pulangiyēn Response



# Agroecology in Bendum: Vulnerabilities and the Pulangiyēn Response



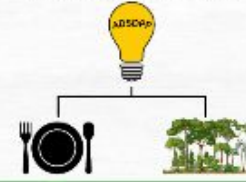


# Agroecology in Bendum: Vulnerabilities and the Pulangiyēn Response

**SUPPORT ROOT CROPS  
(BINGGALA, CAMOTE)**



**MANAGE FOOD & FOREST  
THROUGH ADSOPP**



**ESTABLISH FOREST LINE**



**PROTECT SPRING CONTOUR**



**ROAD MAINTENANCE FOR  
COMMUNITY**



**GRADING OF RAISING  
OF LOSS AREA**

**WATER SOURCE  
REGENERATION**



**LEVEL TRADING POLICIES**



**JOB ORDER FOCUSING  
ON FOREST & WATER  
PROTECTION**



**CATCHMENT MANAGEMENT**



**SUPPORT NON FERTILIZER  
PLANTING (AGLAY, ABACA)**



# Baku Harmoniya Climate Initiative for Farmers

Germany: integrate data, give access to information co-learning for food security

Knowledge platform

Agrifood investment

Norway's 5B to World Bank

Empowerment of farmers: youth and women

Burundi: youth and women-focused programs on watershed development, combating soil degradation

# Questions for dialogue



# Closing quotes