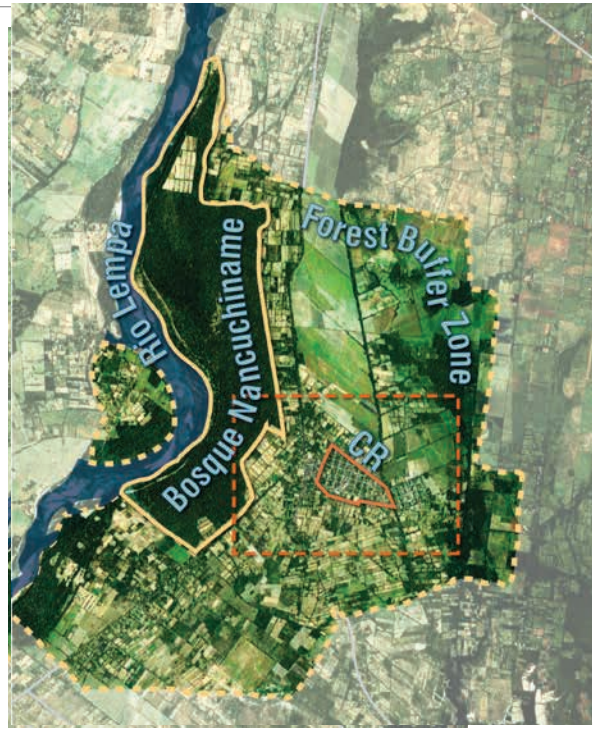
TAKING ROOT

FOSTERING COMMUNITY RESILIENCE THROUGH A NATIVE MEDICINAL GARDEN

Ciudad Romero, Bajo Lempa, El Salvador

AFFILIATION: University of Washington Urban Design and Planning
CLIENT: ECOPA
CONTRIBUTION: Individual student project
MEDIA: GIS, AutoCad, SketchUp, Illustrator, Photoshop



REGIONAL ISSUES

CONSEQUENCES OF UNSUSTAINABLE LAND MANAGEMENT

- Increased deforestation
- Exacerbated Flooding
- Diminished water tables & polluted water
- sources
- Damaged local crops from pesticide drift Kidney deficiency and respiratory ailments

FOREST RESOURCES

ENVIRONMENTAL SERVICES

- Carbon sinks
- Flood buffer
- Biodiversity

ECONOMIC + CULTURAL RESOURCES

- Tourism
- Edible & medicinal plants
- Raw materials

HEALTH CONCERNS

In 2008, El Salvador registered the world's **HIGHEST** mortality rate from **KIDNEY FAILURE**.

In the village of Ciudad Romero, almost **EVERY FAMILY** has at least one member dying of **CHRONIC KIDNEY DISEASE**.

ETHNOMEDICINE

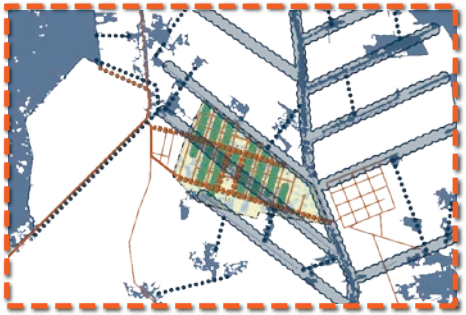
A Survey in Ciudad Romero and two neighboring villages showed that **64%** of adult residents use **MEDICINAL PLANTS**

21% of residents obtained medicinal plants from the **NANCUCHINAME FOREST**

This project targets Ciudad Romero, a rural resettlement community in El Salvador adjacent to the Nancuchiname Forest. The community is located in an area rich in environmental resources that is being rapidly destroyed by unsustainable land practices. The residents lack economic resources and their subsistence depend directly on their surrounding environment. The destruction of the land is not only damaging to the long term viability of the community, it is also causing detrimental health problems to communtiy members reflected in its high rates of kidney disease. This studio examined ways to create viable and sustainable community economic development strategies that could also strengthen the social fabric of the struggling town. My project uses a native medicinal garden to catalyze community development and symbolize resilience.

COMMUNITY SCALE STRATEGY

SUPPORTIVE GREEN NETWORK



Vegetating along canals
Identifying large forest patches
Connecting large patches
Better road access
Enhancing Streetscape
Network of backyard orchards

UNIQUELY USULUTAN

Ornamental garden
Permaculture garden
Edible garden
Medicinal garden

COMMUNITY CONNECTIONS

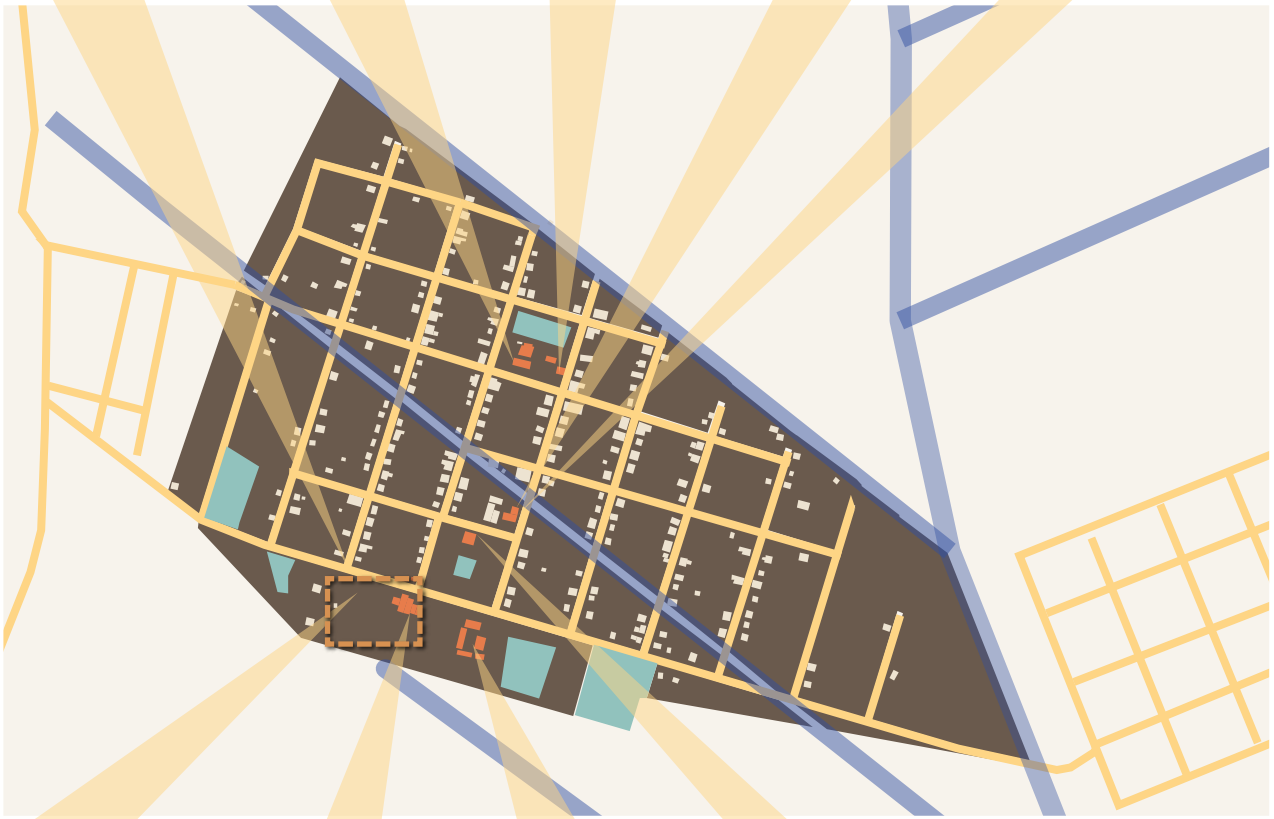
BUS STOP
Supports medicinal garden as a destination for regional foot traffic

LA COORDINADORA
Provide human resources and training to guide programming & management for capacity building

GREEN HOUSE
Can be used to grow seedlings and propogate medicinal plant species for garden

WOMEN'S CENTER
Organize herbal medicine and garden training programs for women at medicinal garden

CAFETERIA
Harvest and use culinary herbs from medicinal garden



MEDICINAL GARDEN
Provides herbal medicine from native plants for use or to sell at markets while offering educational, leadership and technical programming opportunities to targeted populations.

CLINIC
Use plants for alternative medicine, garden as healing space for patients, families, and staff

K8 SCHOOL
Use medicinal garden as a resource for environmental education & technical training for youth

MARKET
A place for residents to buy & sell herbs and added value products from medicinal garden

HOUSEHOLDS
Attain cuttings or seeds from medicinal garden to grow at home, increasing access to herbal medicine

OPPORTUNITIES

ENHANCE LOCAL ECONOMY
- Creates added value products
- Increases trade at local market
- Supports local businesses

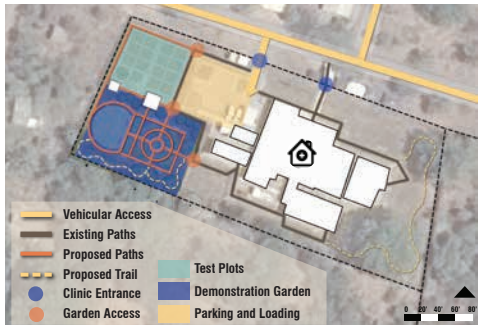
SUPPORT ECOLOGICAL FUNCTION
- Native plants create habitat
- Preserve local biodiversity

EQUITY THROUGH PROGRAMMING
- Provide accessible medicine
- Environmental education
- Technical training to women & youth

PRESERVE CULTURAL PRACTICE
- Local plant knowledge
- Highlights local landscape aesthetics
- Serves as regional attraction

TECHNICAL TRAINING
- Medicinal plant identification and usage
- Sustainable garden management
- Preparation of raised beds
- Planting and transplanting techniques
- Production of organic fertilizer
- Production of organic pesticides
- Production of added-value products

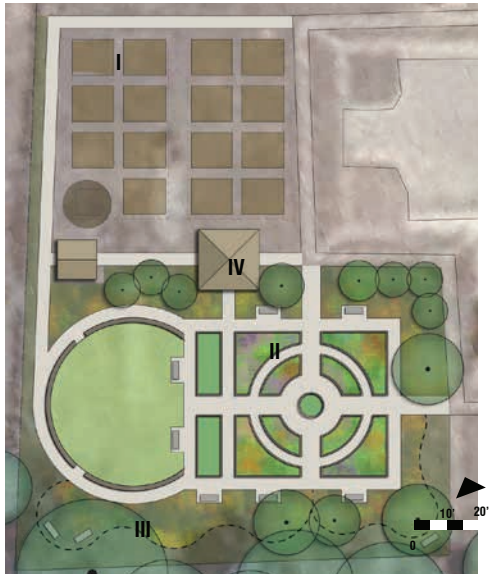
SITE DESIGN



DESIGN CONCEPT

The garden embodies the local landscape with native plants that have historical and cultural vallues. The design layout considers accessibilty, providing resting places and allows for different forms of healing.

SITE PLAN & PHAISING



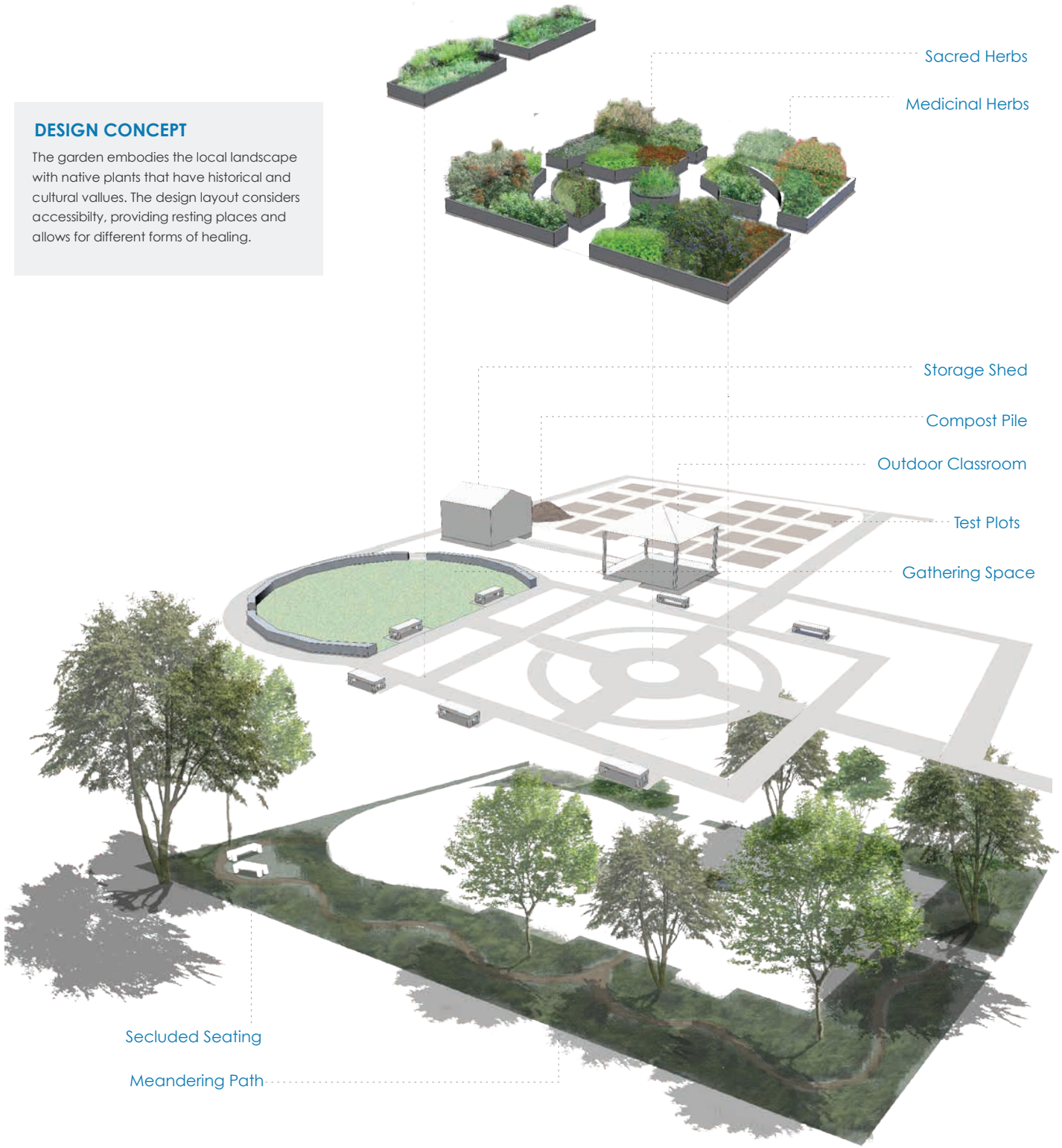
Due to the economic constraints of the community, a rudimentary phasing plan was laid out to outline a more feasible sequence of implementating the garden.

PHASE I: Seed collection + plant propagation

PHASE II: Formalized demonstration gardens

PHASE III: Trees + peripheral planting

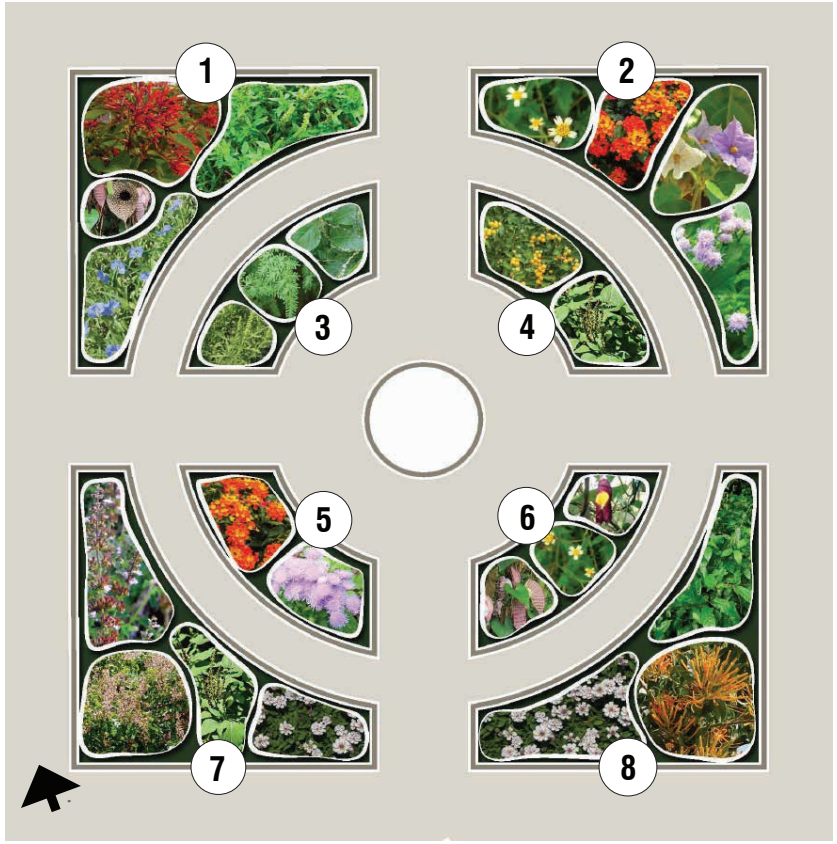
PHASE IV: Shade structure/outdoor classroom



MEDICINAL GARDEN PLANTING DESIGN & PLANT PALETTE

All of the selected species were reported to have been collected by locals from the Nancuchiname Forest3: They are native plants with medicinal properties that are known and valuable to local community members. The preservation of these plants as well as the local knowledge regarding their properties are critical for the resilience of the natural and cultural landscape, and the health of the community.

The medicinal garden is an example of a small-scale project that can be extended into households and replicated throughout the community as well as in other communities. It provides a model of how local actions can begin to have a regional impact on the health of the people and the environment.



1 Dermatology

Amaranthus spinosus
Aristolochia grandiflora
Commelina erecta
Hamelia patens

Treats skin conditions & infections, eczema

2 Infectious Diseases

Ageratum conyzoides
Tridax procumbes
Solanum myriacanthum
Lantana camara

Treats bacterial, fungal & viral infections

3 Diabetic/ Metabolic

Ambrosia cumanensis
Lygodium spp.
Petiveria alliacea

Supports kidneys & metabolic function

4 Anti-Cancer

Amaranthus viridis
Solanum diphylum

Contains anti-cancer properties

5 Respiratory

Ageratum conyzoides
Lantana camera

Treats cough & respiratory infections

6 Immunitiy

Aristolochia anguicida
Aristolochia grandiflora
Petiveria alliacea

Supports immune function, anti-inflammatory

7 Gastrointestinal

Amaranthus viridis
Hyptis mutabilis
Lippia spp.
Machaerium riparium

Treats digestive problems

8 Cardiology

Lippia spp.
Psittacanthus calyculatus
Petiveria alliacea

Treats hypertention & cardiovascular diseases