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DEFINING LINES

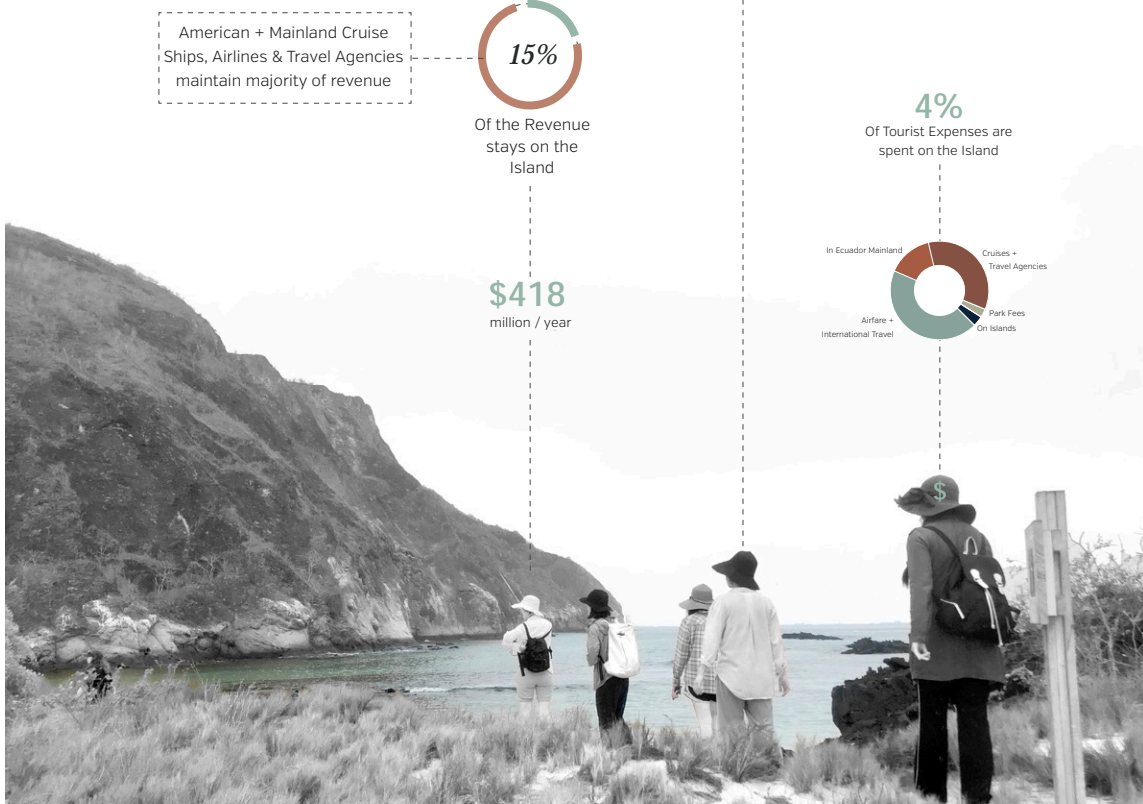
Dorothy Jacobs

The boundary between the National Park and the inhabited areas of San Cristóbal has created a divide which unfairly prioritizes certain areas of the island, leaving the inhabited areas neglected. The island's preservation and local economy is dependent on the revenue brought in by tourism. However, the nature of the tourism industry in the archipelago reinforces the divide within the island. The reliance on water-based tourism has caused the land within the Highlands to be disregarded, leading to abandonment and widespread invasive coverage. The creation and construction of an expansive trail network in the Highlands will begin to mend this division and draw more tourists into the Highlands. The three distinct trails connect visitors across the Highland's rich ecologic, geologic, and cultural features, expanding visitors' expectations and understanding of the island. These trails will function as a way to puncture the psychological barrier that exists around the park and serve as a protective line through the trail's maintenance and management. In addition, the process of constructing the trail will encourage more collaboration between the different governing institutions and provide more job opportunities for the island's growing population.

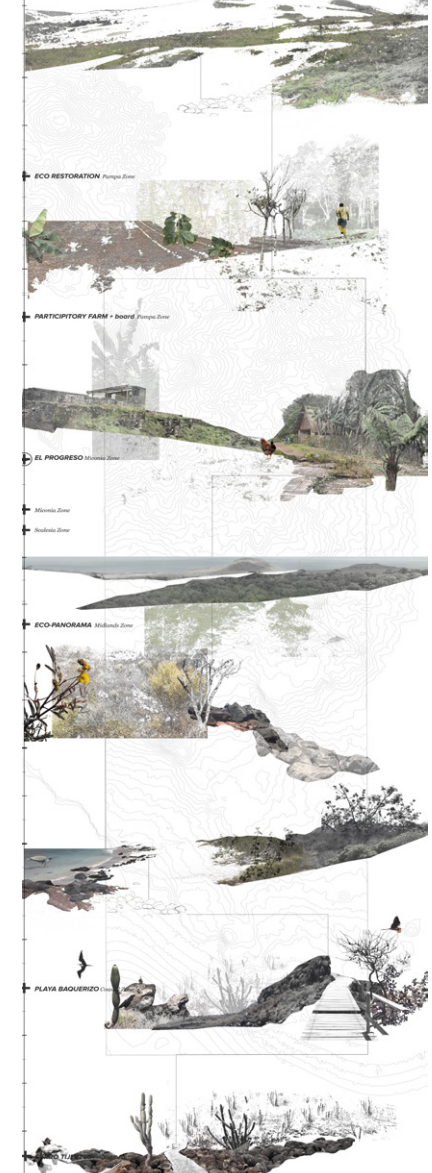
SITE ANALYSIS

Water-Based Tourism

On these excursions, tour operators show visitors a curated vision of the islands as the epitome of Pristine Nature. In order to uphold this vision of untouched islands, the boat tours are managed in a way that visitors are not supposed to see another tour boat. This almost mythical view of the islands promotes a vision of a place without inhabitants that leads to a staggering inequality in the overall revenue brought in by tourism.



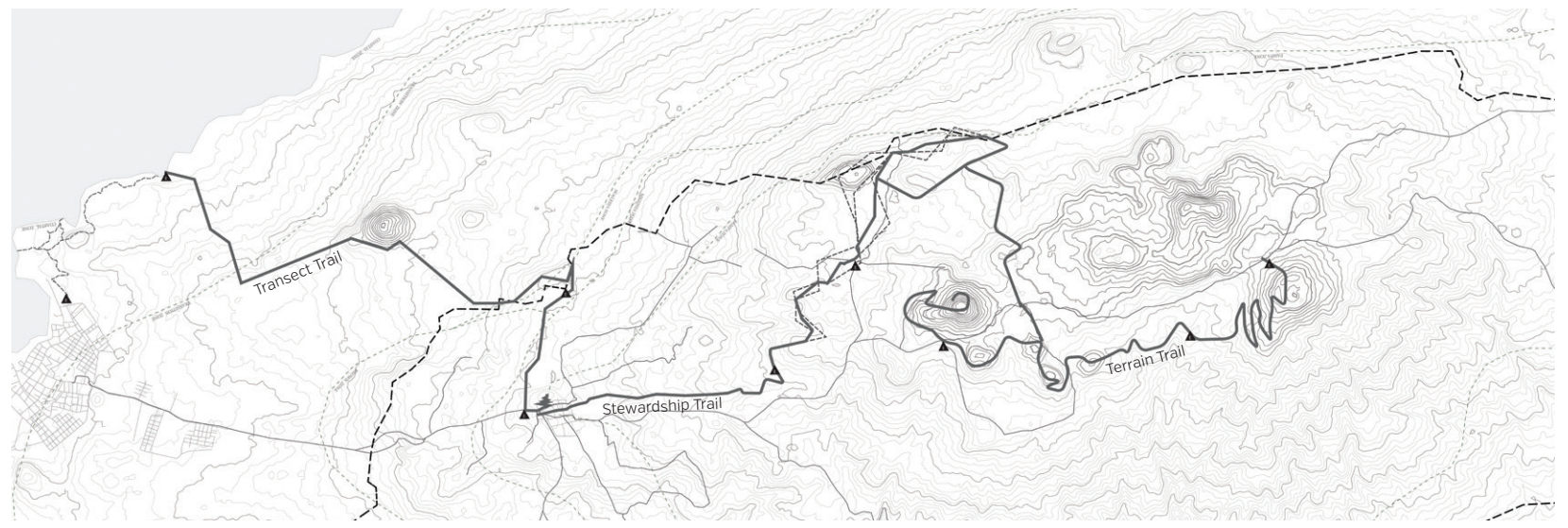
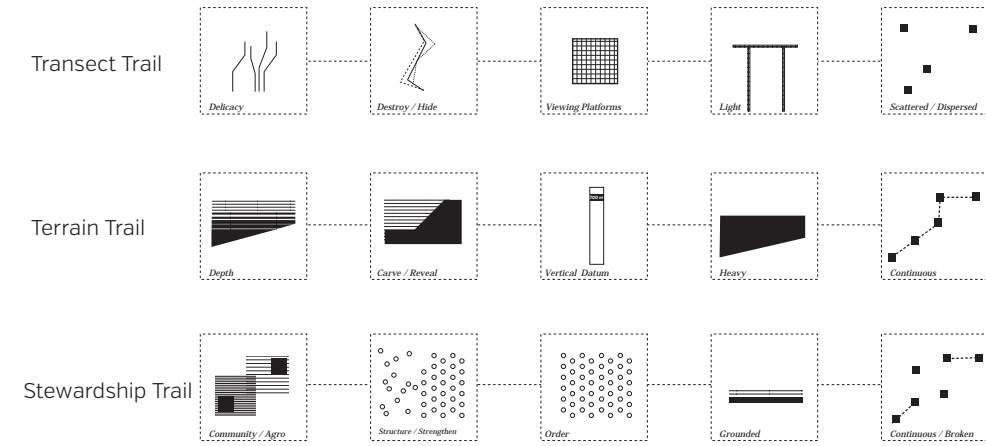
Highland Diversity



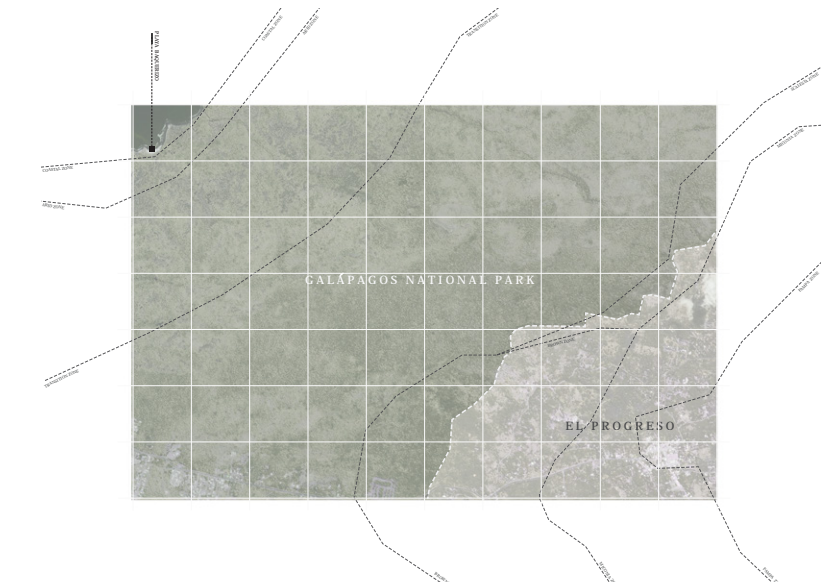
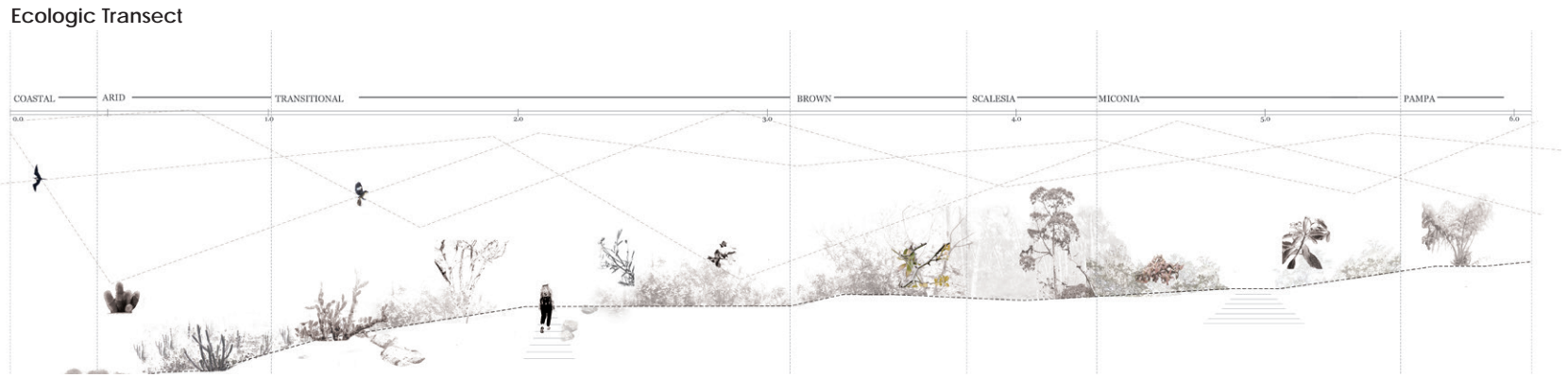
TRAIL PROPOSAL | HIGHLAND ACTIVATION

Trail Strategies & Operations

In order to highlight the unique ecological, geological, and cultural features in the Highlands, the proposed trail network is comprised of three distinct trails. Each trail is accessible.



TRANSECT TRAIL



Divided Landscape | Connected Ecosystems

While the island maintains a diversity of connected ecosystems and ecological conditions, the park's border rigidly defines and divides the systems as protected and unprotected. This not only prioritizes certain ecological zones, but it leaves others vulnerable. The Transect Trail connects users through all seven of the island's ecological zones, highlighting the uniqueness of each zone through a series of viewing platforms.

DELICACY AND DISPERSAL

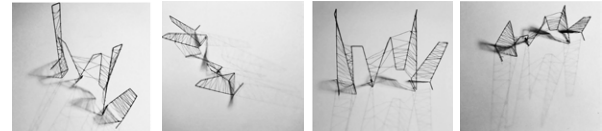
Viewing Platforms

Across the trail, visitors will approach seven distinct platforms that correspond to each of the seven ecological zones. Each platform is meant to make visitors pause and appreciate the unique landscape.

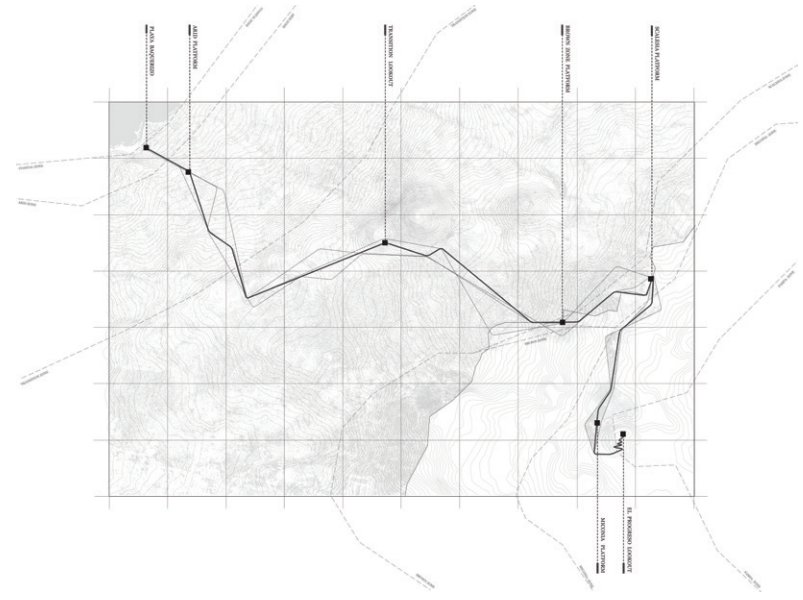


El Progreso Lookout

Delicacy Studies



Scalesia Platform

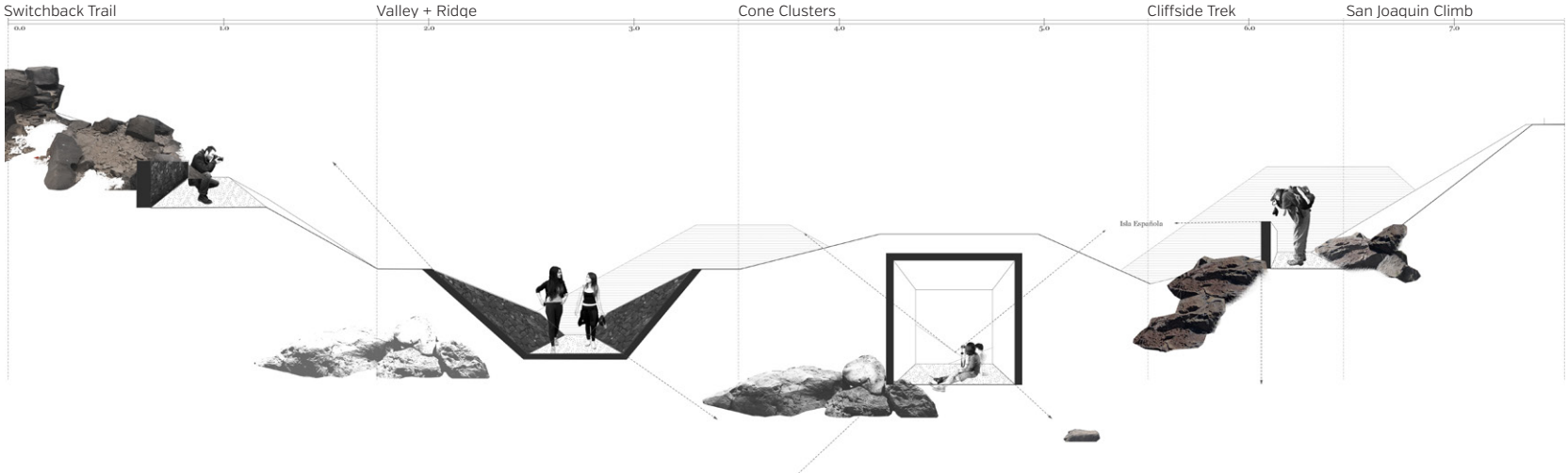


Dispersal

Because the Transect Trail passes through such delicate ecosystems within the National Park, the trail is meant to shift throughout time. As one trail begins to become degraded, park managers can stake out a new trail or decide to make certain routes entirely inaccessible. This would mean that certain viewing platforms would be temporarily unreachable.

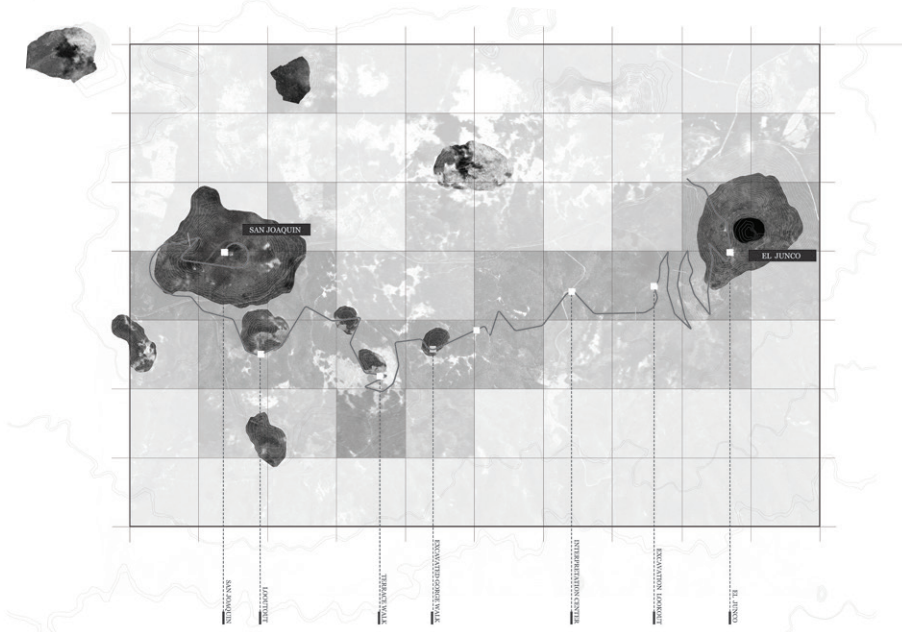
TERRAIN TRAIL | DEFINING

Trail Experiences



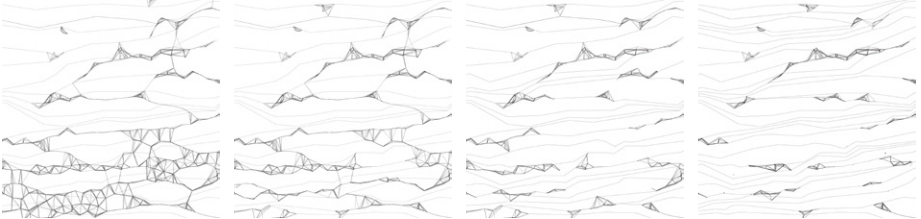
Experiential Terrain

The Terrain Trail connects visitors to the island's largest volcanic cones, El Junco and San Joaquin, while reclaiming portions of the island that have been overrun with invasive species. Along the trail, visitors will go through various topographic conditions unique to this part of the island. The trail carves into the land in order to reveal the island's rich volcanic layers.

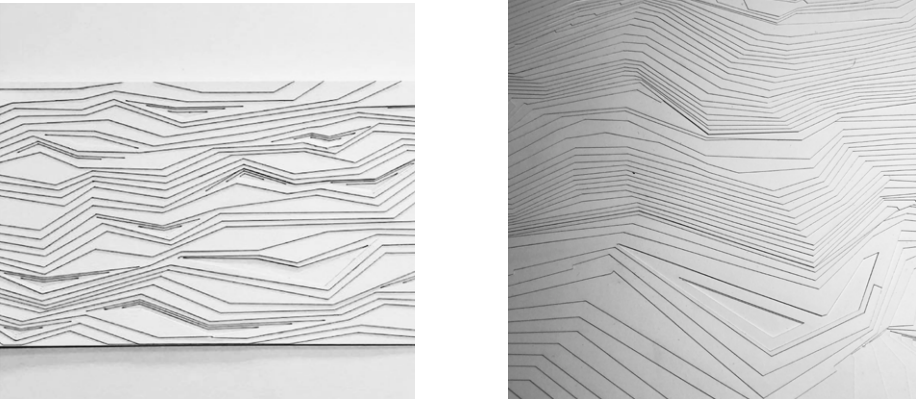


CARVE AND REVEAL

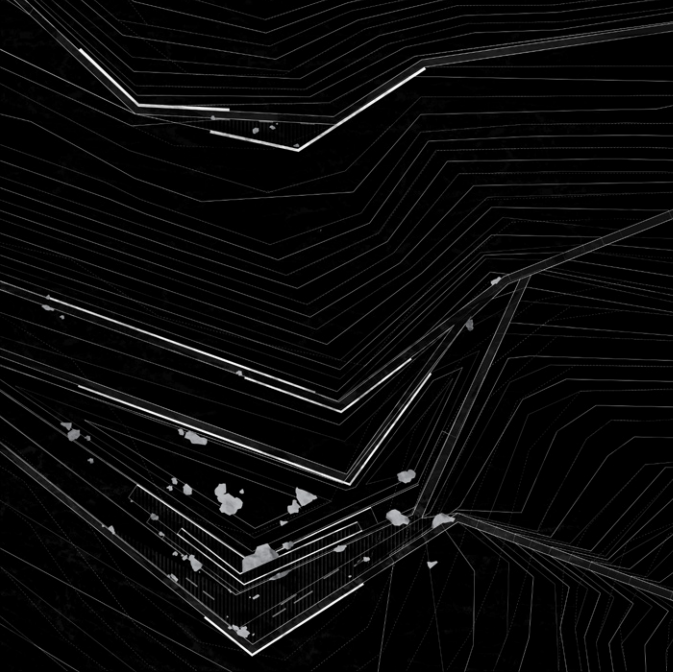
Drawing Studies



Topography Study



Design Application

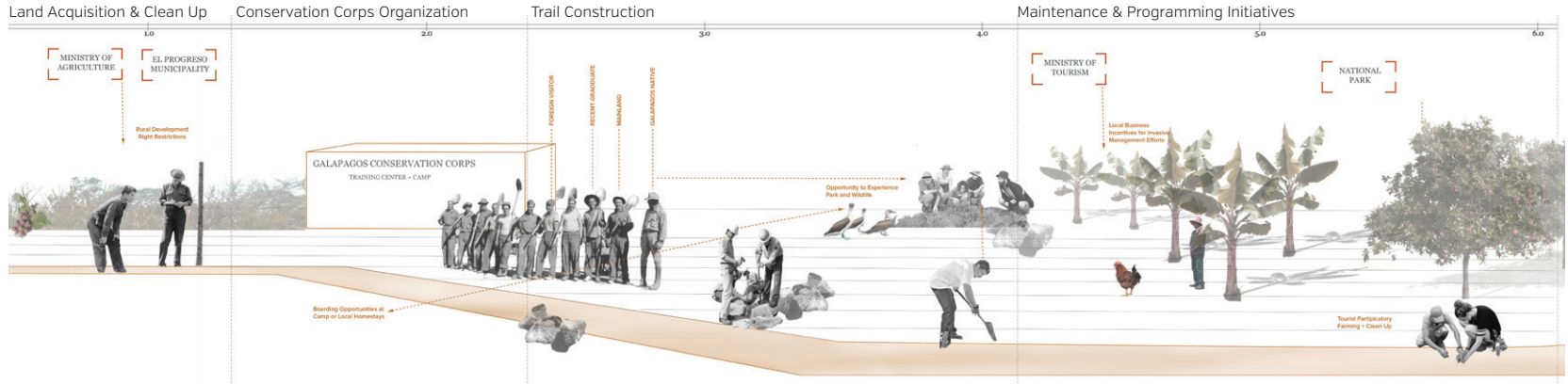


Volcanic Rock Reveal



STEWARDSHIP TRAIL | DEFINING PROTECTION

Galápagos Conservation Corps



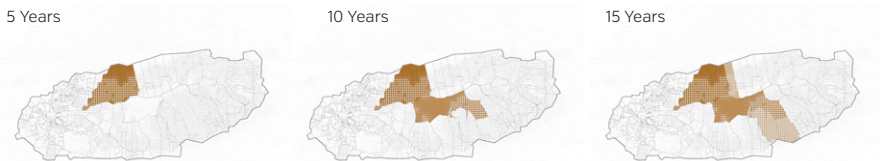
Galápagos Conservation Corps

The formation of this new organization would connect the existing governing institutions behind the shared purpose of protection. The Conservation Corps would provide more job opportunities to young workers on the island and on the mainland, and give them the opportunity to experience the National Park in a different way.



Purchasing Feasibility

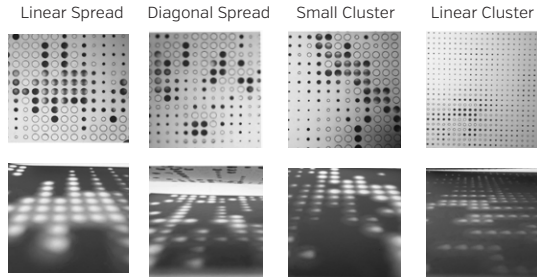
$$250,000 \text{ Tourists / Year} \times \$5 \text{ Entrance Fee} = \$1,250,000 \text{ Restoration + Trail Budget} \rightarrow 125 \text{ Purchased Highland Hectares / Year}$$



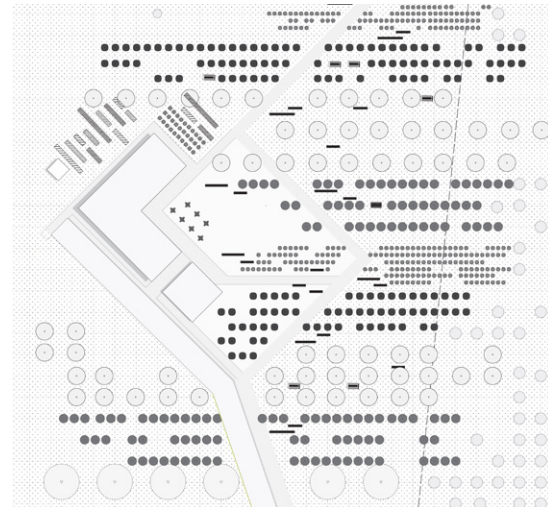
STRUCTURING BORDERS

Canopy Shadow Studies

The structure of the canopy along the trail will serve as a marker for the trail. This maintained border will serve to protect the park from parts of the Highlands that are still overrun with invasive species.



GCC Training & Education Center



Local Business Opportunities



ELEVATING TOURISM IN THE HIGHLANDS

Zhoufei Zhu

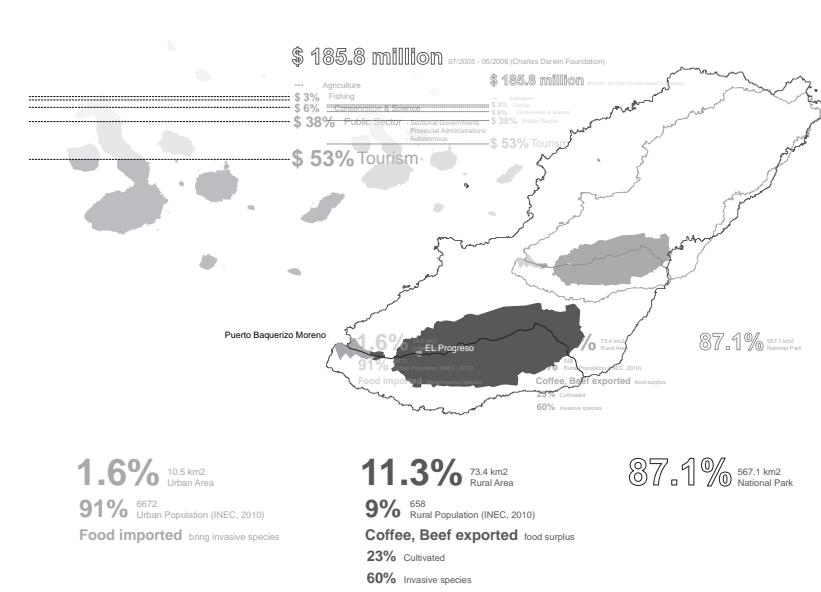
The small highland town of El Progreso was the first place on San Cristóbal Island to be settled, as access to fresh water in the highlands made farming possible. Today, approximately ninety-five percent of San Cristóbal's residents live in the waterfront town of Baquerizo Moreno, and most of them rely on tourism for their livelihood. As residents abandon farming and the highlands, invasive species have more opportunity to take root – only twenty-three percent of the former farmland is cultivated, but sixty percent of it is overrun by introduced and invasive species, which threaten the unique ecosystem. The National Park employs eradication strategies for invasive species within the conservation area, and has cooperated with farmers near the park boundary. Cultivating the land for farming would help with invasive species control. However, for residents, the highlands and farms are less profitable than the waterfront, and for tourists, the highlands are a pass-by spot along the main road. Although the San Cristóbal government has expressed a strong concern about developing the rural area, no official plans have been produced [as of October 2017].

This project aims to highlight the value of the highlands using agricultural-tourism to draw people's attention to the farmland and hopefully to help with the land management of it. In distinction to the current small-scale and spontaneous projects like wall painting or farmers' restaurants, I believe that the government should develop agriculture-tourism as a systemic strategy.

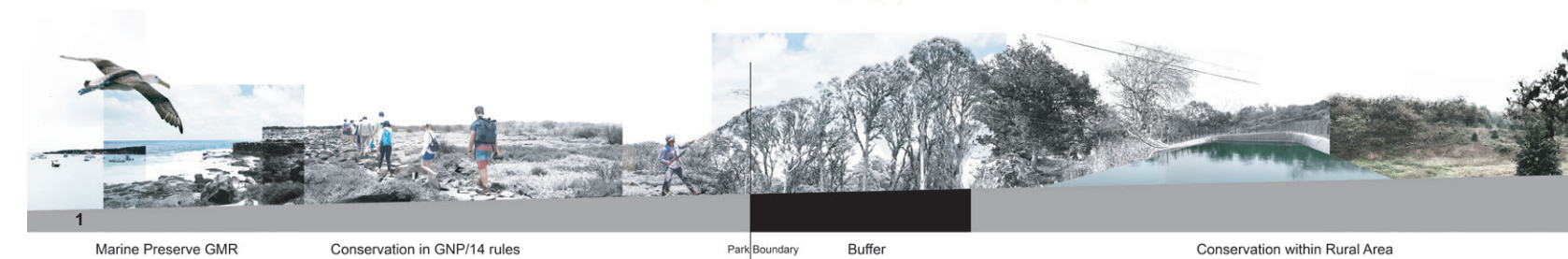
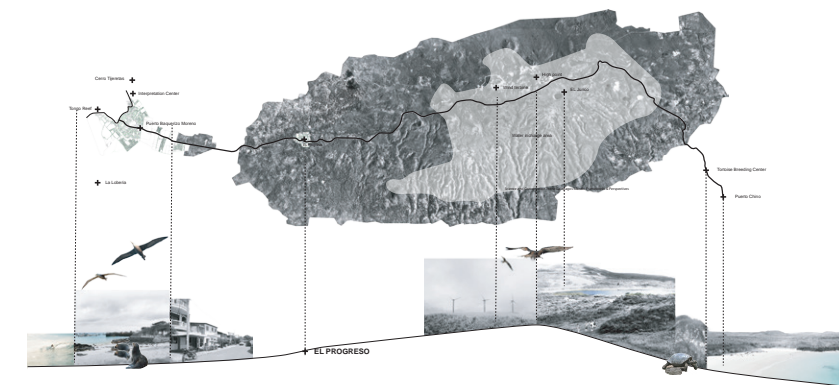
Site Analysis



Potential & Opportunity



- + The town of El Progreso is within the rural highlands and not subject to the same rules as the National Park
- + "Buffer" zone, the Scalesia Forest can only be found in the Galápagos
- + Featured farms with water conservation, coffee, fruit production
- + Sugarcane Mill relic indicates the history of the highlands



Trail System



Trail Network

Agriculture Tourism Concept Consist of 3 Aspects

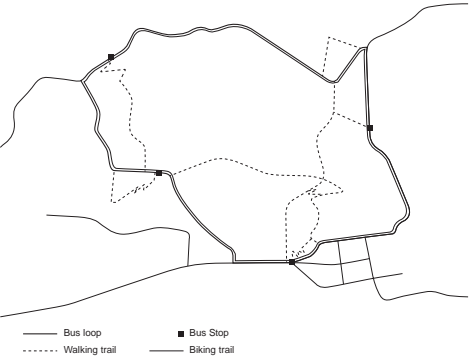
- + Sugarcane Mill Relic as an Agriculture Tourism Interpretation Center, capitalizing on the farming and human history from 1879 - 1904
- + The trail network brings people to the featured destinations
- + The featured destinations (featured farms open to the tourists)



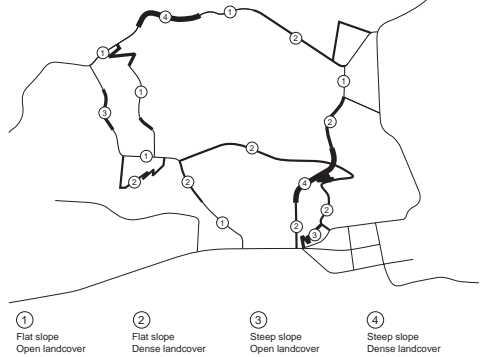
Existing Road & Proposed Road



Transportation

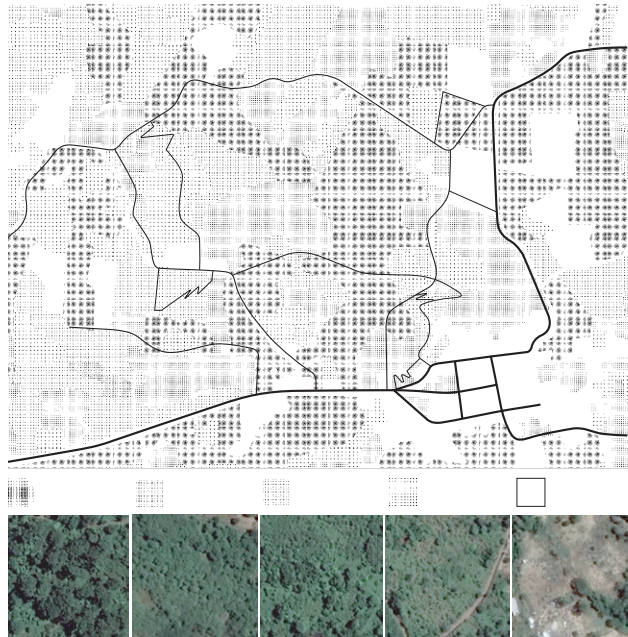


Trail Experience Category

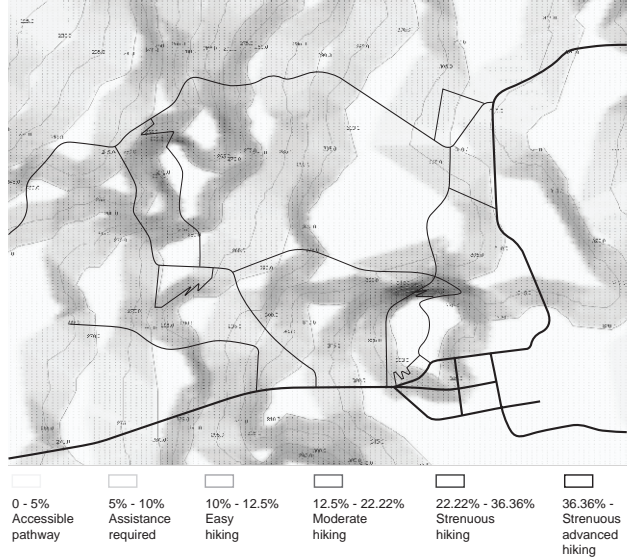


Trail Network

Existing Land Cover Category



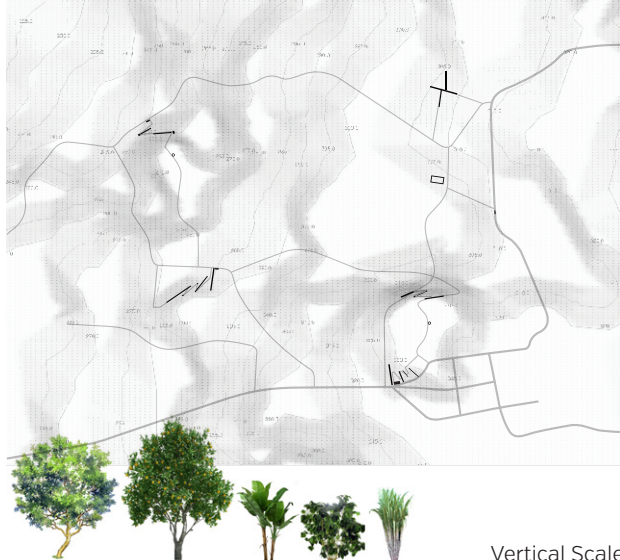
Slope Analysis



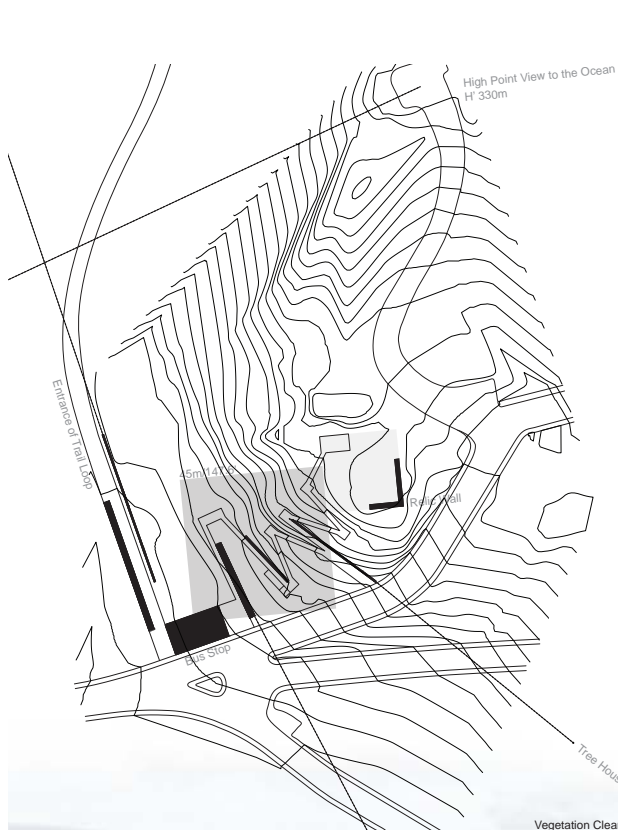
Clearance & New Planting



Retaining Wall & Way Finding



Interpretation Center



Trail Experience



View Point to the Ocean



View Point to the Ocean



Walking Trail



Walking trail

Trail Experience



Water Conservation



Water conservation



Harvesting Tour



Harvesting tour

Future Growing Opportunities

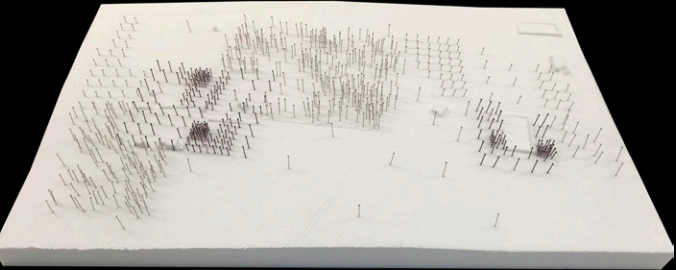
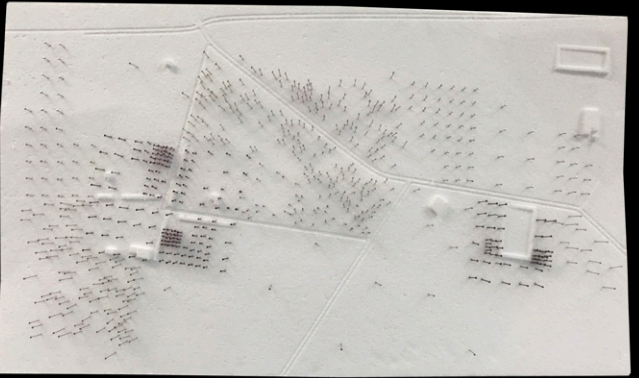
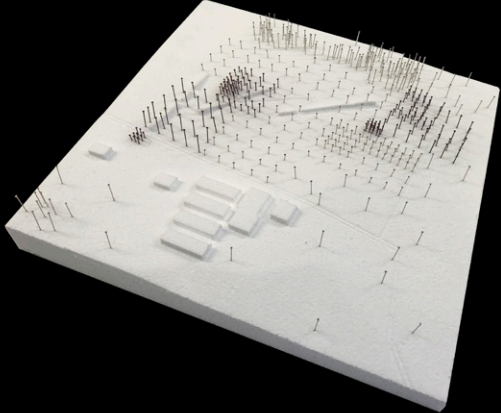
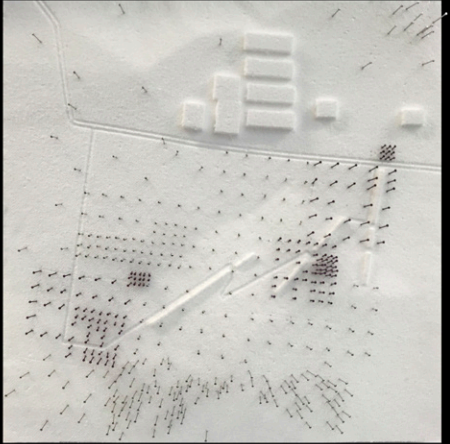
Expansion from EL Progreso



Multiple Centers



Study Model



FEEDING THE HIGHLANDS

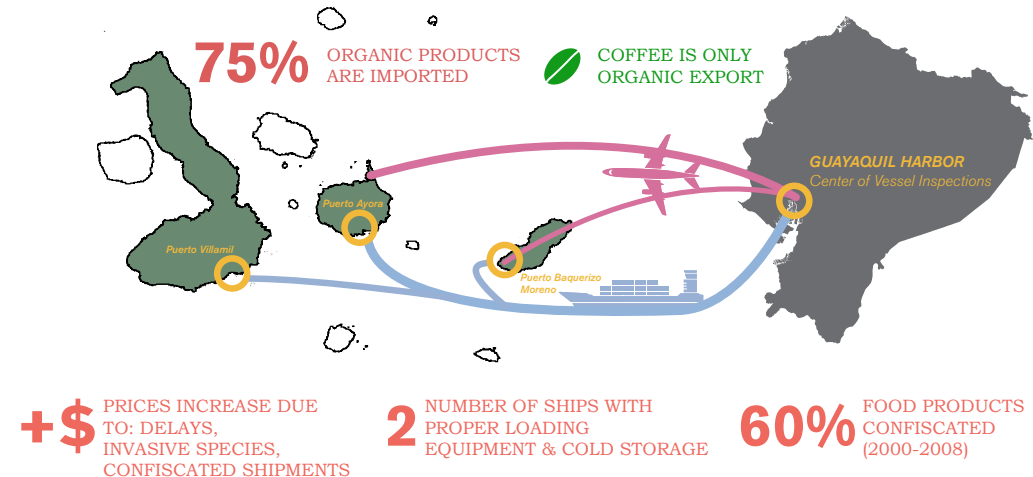
Stefan Molinaro

The Highlands of San Cristóbal Island are 8306 hectares and, historically, provided food for islanders when agriculture was the primary source of sustenance with the founding of El Progreso in 1866. As the islands have shifted to an urban and touristic economy, the agricultural region, like much of the world, has faced increasing neglect culturally, economically, and environmentally. This project presents a conservation land-use framework based on a careful reading of the highland topography, soils, and hydrology.

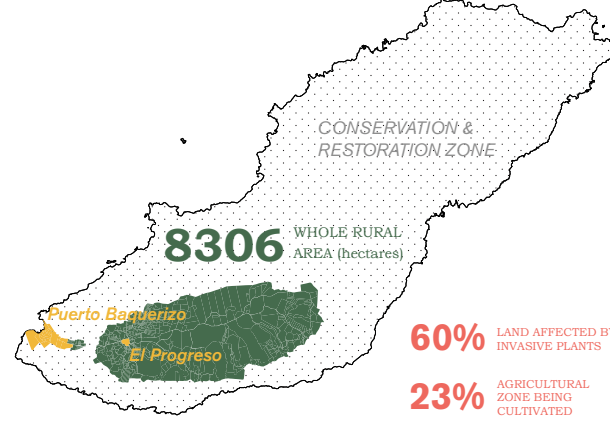
The island is becoming increasingly reliant on expensive and slow processes to cope with population and tourism growth. This proposal outlines a land-use framework focused on cultivation as a unique asset for food and tourism. Within the regional scale, it relies on a land-use plan that is driven by analyzing areas most conducive to conservation, agriculture, and tourism in contrast to the very generalized development/ agricultural plan developed by the government. This proposal also provides a vision for how parcels or hamlets could be reorganized based upon a conservation and cultural agenda.

Systems of Conflicts

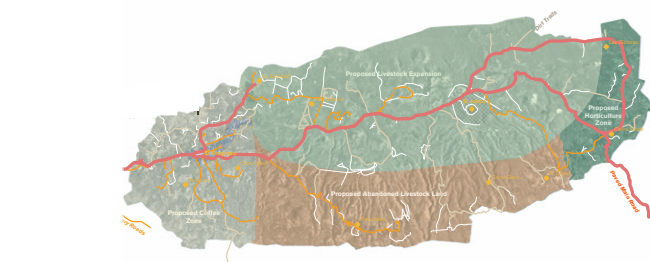
Galápagos Islands' Food System



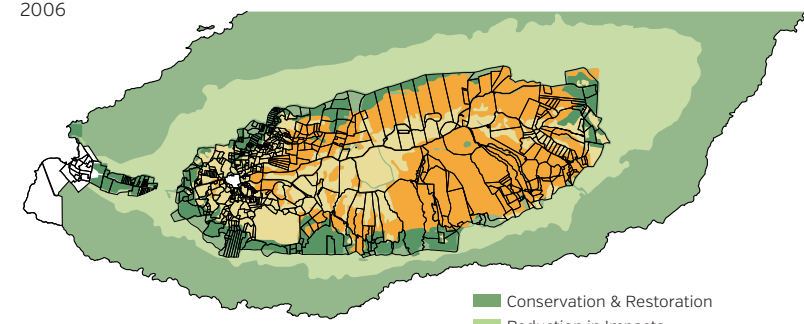
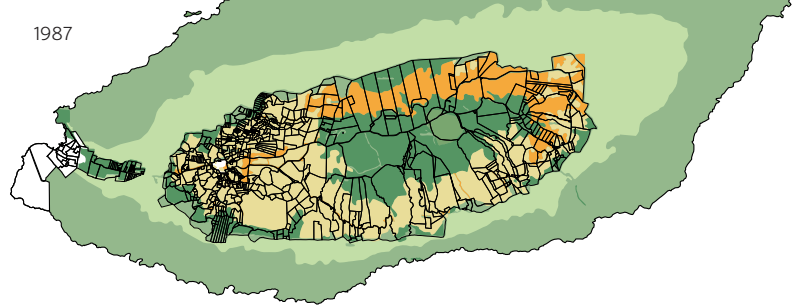
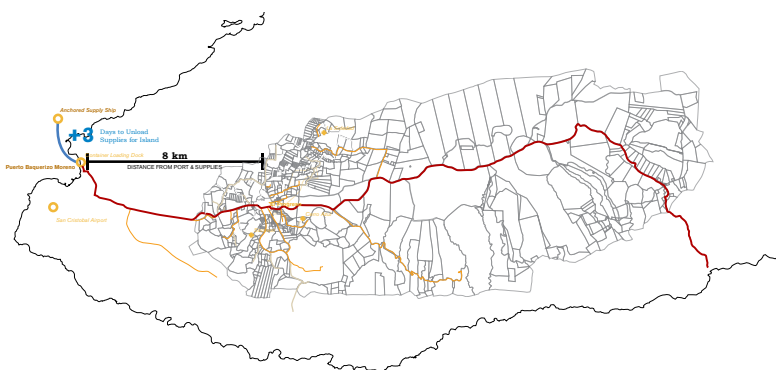
Invasive Plant Growth



Generalized Future Land Use Plan



Waterfront to El Progreso Supply Chain



- Conservation & Restoration
- Reduction in Impacts
- Crops
- Introduced Vegetation / Invasive Species
- Natural Vegetation w / Populated Areas

Land-Uses Through Conservation Methods

	STRICT NATURE RESERVE	WILDERNESS AREA	NATIONAL PARK <small>Current Land Management Practice</small>	NATURAL MONUMENT OR FEATURE	HABITAT/SPECIES MANAGEMENT AREA	PROTECTED LANDSCAPE/ SEASCAPE	PROTECTED AREA WITH SUSTAINABLE USE OF NATURAL RESOURCES
Primary Objectives	<ul style="list-style-type: none"> - Conserve large-scale ecosystems and geodiversity - Protect biodiversity - Strict control of limited human interaction - Preserved for scientific objectives 	<ul style="list-style-type: none"> - Protect large-scale ecological integrity - Protect biodiversity - Strict control of human habitation and scientific interactions 	<ul style="list-style-type: none"> - Protect large-scale biodiversity - Protect associated ecological processes - Promote education and recreation - Contribute to local economies through tourism 	<ul style="list-style-type: none"> - Protect small natural features - Protect associated biodiversity and habitat - Protect natural sites with associated spiritual/cultural value 	<ul style="list-style-type: none"> - Maintain, conserve, restore specific species or habitats - Protect fragments of habitat - Develop public education and appreciation - Provide urban residents access to protected area 	<ul style="list-style-type: none"> - Protect important areas with constant human interaction - Maintain balance interaction between nature and culture - Encourage conservation of agro- and aquatic biodiversity - Provide natural products, environmental services, socioeconomic activities 	<ul style="list-style-type: none"> - Protect natural ecosystems while extracting resources - Promote socioeconomic benefits to local community - Facilitate recreation and tourism - Facilitate scientific research and environmental monitoring
	Urwald Rothwald Austria	The Everglades Florida, USA	Galápagos Islands (Land Cover)	Victoria Falls Zambia/Zimbabwe	Bon Secour National Wildlife Refuge Alabama	Apo Island seascape Philippines	Galápagos Islands (Marine Area)



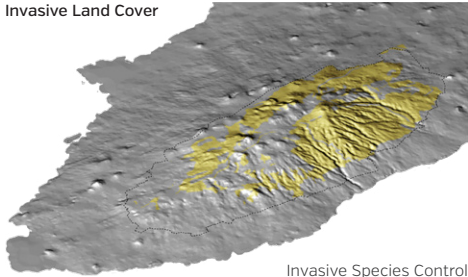
Site Analysis

The site analysis is split into environmental and built aspects of the region and prioritized per programmatic category.

Conservation Priority_Typology of Land Management

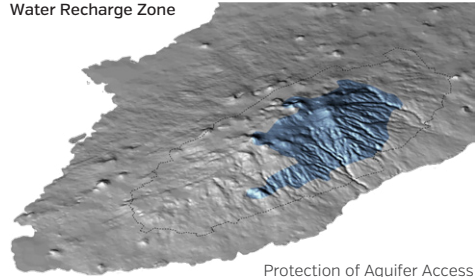
The National Park is the only method of conservation the islands practices surrounding the highlands. My framework prioritizes which land to practice different types of conservation within the highlands to preserve and promote the land, ecology, and identity of the Highlands.

Invasive Land Cover



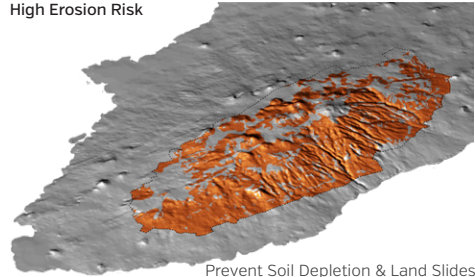
Invasive Species Control

Water Recharge Zone



Protection of Aquifer Access

High Erosion Risk

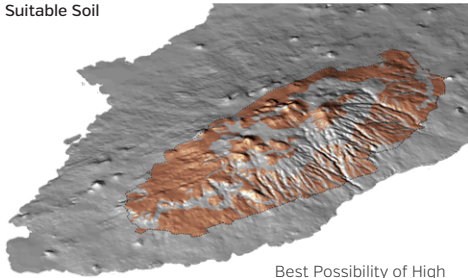


Prevent Soil Depletion & Land Slides

Cultivation Priority_A Typology for Land Management and Identity

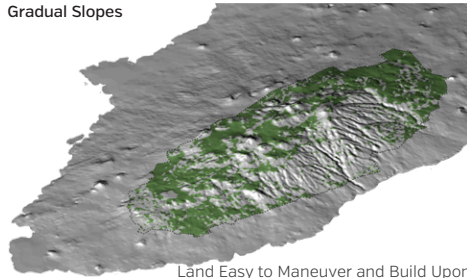
The island used to rely heavily on the crops and livestock that were harvested in the Highlands. Urban life and tourism have moved people and the workforce to the Port. My framework places harvesting as a method of conservation through prioritizing land suitable for agriculture.

Suitable Soil



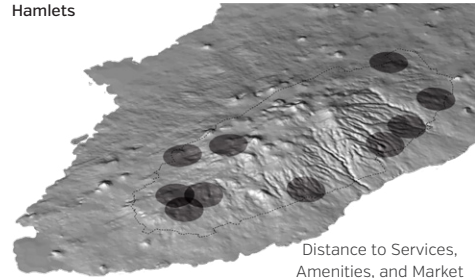
Best Possibility of High

Gradual Slopes



Land Easy to Maneuver and Build Upon

Hamlets

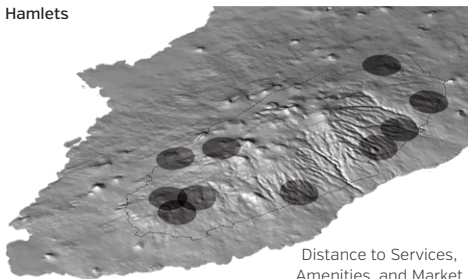


Distance to Services, Amenities, and Market

Tourism Priority_An Economic Driver within Land Management

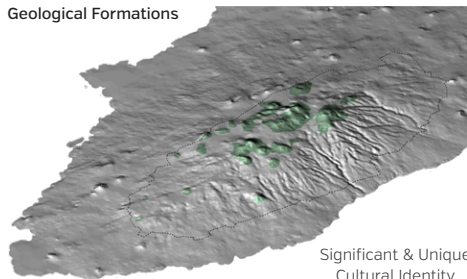
Ecological and Marine Tourism is a growing economic pressure that the city increasingly moves to rely on. Tourism moves through and around, but does not land within the Highlands. My framework prioritizes land and interventions where tourism can fall within the Highlands.

Hamlets



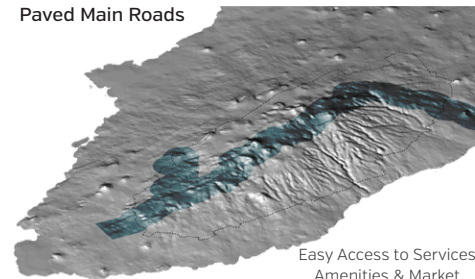
Distance to Services, Amenities, and Market

Geological Formations



Significant & Unique Cultural Identity

Paved Main Roads

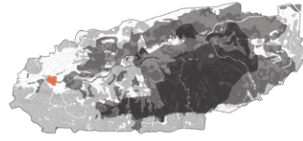


Easy Access to Services Amenities & Market

Prioritization Scheme

Through a layering of the analysis elements, prioritized land is identified for each conservation land use: Habitat Management, Protected Landscapes, and Natural Monuments.

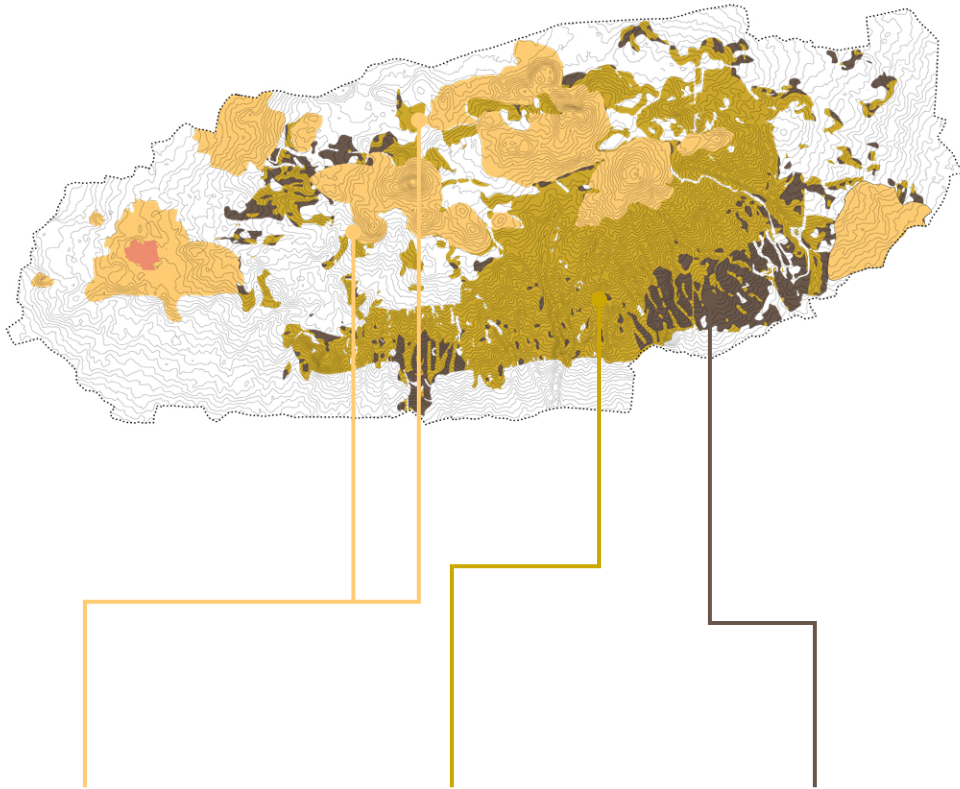
Conservation Priority



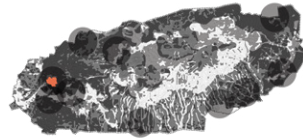
Ideal Land for Conservation



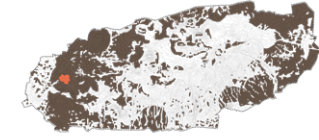
New Land Use Through Conservation Methods



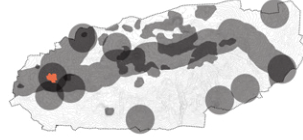
Cultivation Priority



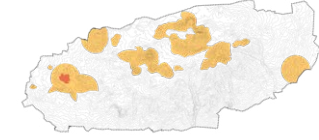
Ideal Land for Cultivation



Tourism Priority

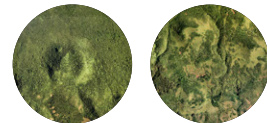


Ideal Land for Tourism



NATURAL MONUMENTS

Associated Plots with Inactive and Sunken Volcanoes



HABITAT MANAGEMENT

Managed and Protected Land - Unoccupied with Light Tourism Access



PROTECTED LANDSCAPES

Cultivation Associated with Agro- and Ecotourism

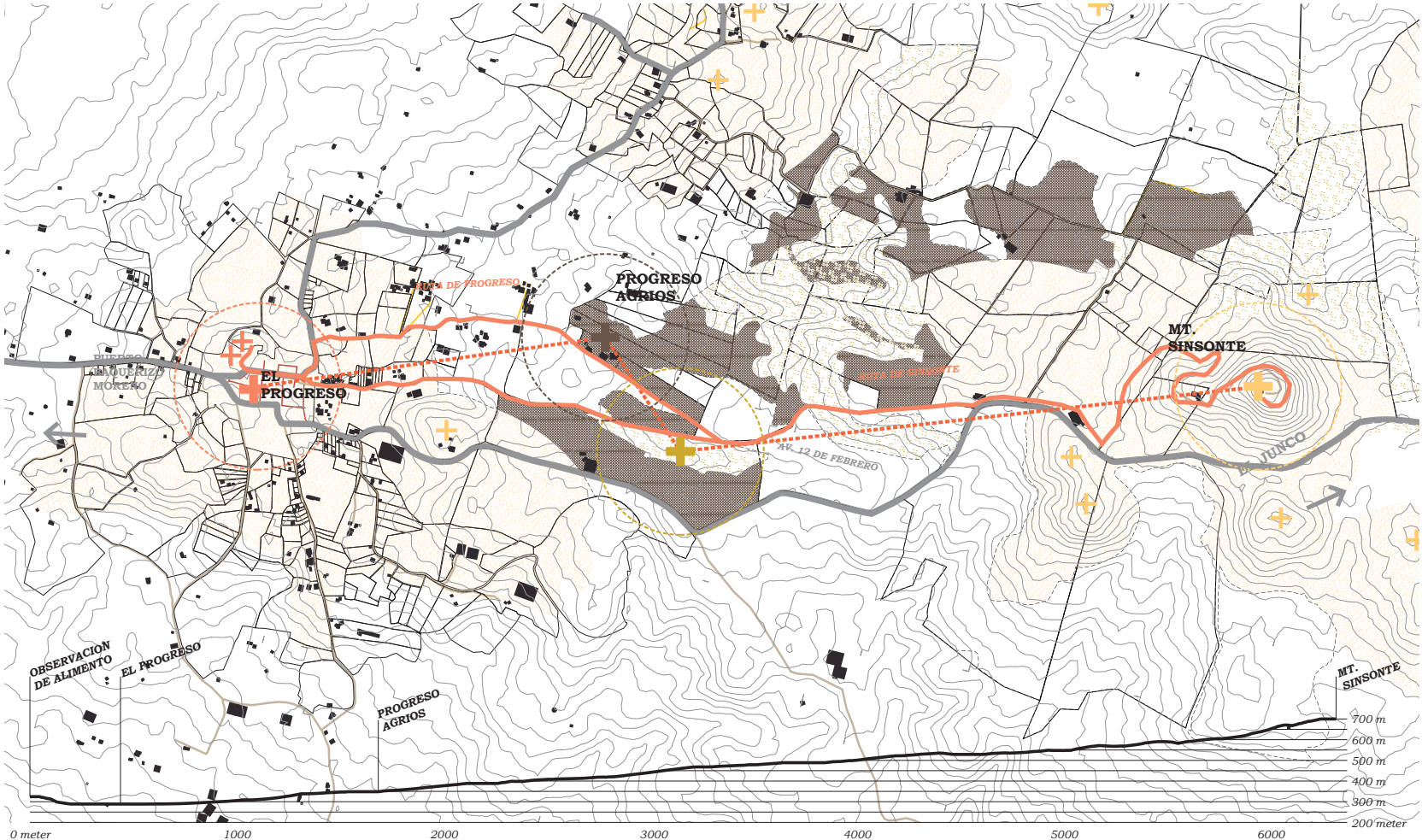


LAYERING OF PRIORITIES

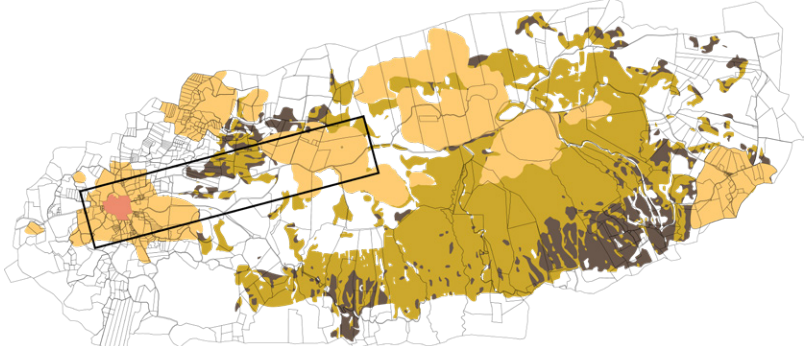


Parcelization Through Conservation Boundaries

Through reparcelization from the conservation land use boundaries created, the region can be redesigned to provide touristic, agricultural, and habitat conservation programs.



Advertising the Highlands



- Existing Parcel Boundaries
- Leftover Parcel Boundaries
- Natural Monument
- Habitat Management Area
- Protected Landscapes (Cultivation)
- El Progreso
- Paved Road

Now SAN CRISTOBAL is more fun than ever!

Here's the vacation you've hoped for plus new, added attractions.

This large, detailed map of San Cristobal features several callouts and text boxes describing new attractions and activities. The map includes a scale bar at the bottom and a small illustration of people at the bottom. The callouts are:

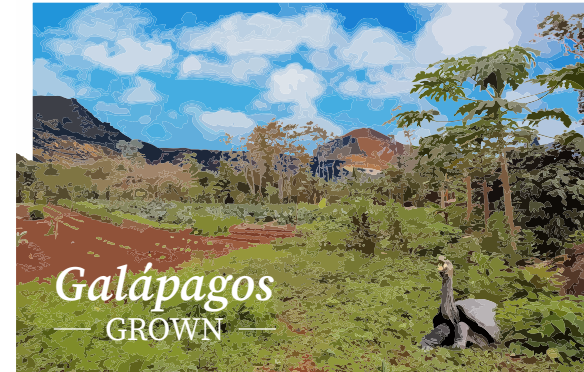
- NEW SMALL VILLAGES TO SEE**...historic and cultural sites, restaurants, local shops, new and improved accommodations to fit any purse.
- NEW OUTDOOR ADVENTURES TO EXPLORE**...hiking, biking, and equestrian trails, education centers, tour routes, and much more have been added to the agenda for visitors to experience.
- NEW FARMING RESORTS**...several farms now provide unique learning and participatory experience for visitors to cultivate coffee, bananas, oranges and lemons, pineapple, techniques founded by island's creation.
- NEW HABITAT MANAGEMENT**...several hectares of unused land can now be managed for habitat restoration, research, and exploration for visitors to help the island maintain its beauty and identity.
- NEW OUTDOOR ACCOMODATIONS**...never before has the island provided the closest experience to nature than with its new campsites and local housing accommodations.
- NEW VOLCANOES**...now the rugged terrain can be explored, climbed, and seen through new views of the island never seen before.



Galápagos
— GROWN —



Galápagos
— CAUGHT —



Galápagos
— GROWN —



Galápagos
— GROWN —

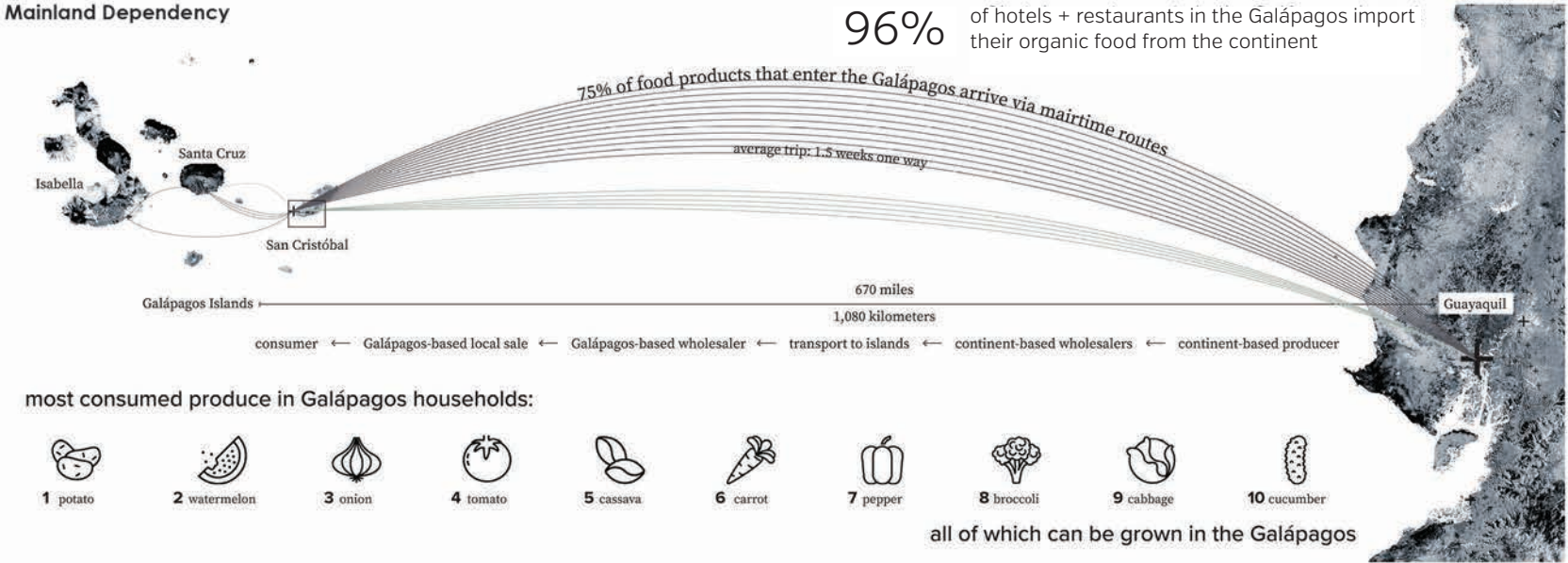
CULTIVATION ISLAND

Anna Darling

The native ecosystem of the Galápagos Islands is being threatened by the introduction of invasive species. Farmland on the island of San Cristóbal has been abandoned, primarily because farmers are seeking better wages in the tourist industry in Puerto Baquerizo Moreno. This has resulted in over half of the farmland being covered by invasive species such as blackberry. At the same time, the majority of the produce consumed on the island is brought in from the mainland, creating an avenue for invasive species, increasing food prices, and decreasing food quality. This project aims to bolster the food culture of San Cristóbal Island to increase its autonomy from mainland Ecuador. To do so, this project focused on shaping the food culture in Puerto Baquerizo Moreno at three scales: structuring new development, reworking the central park, and crafting deployable structures that can be used as shade and market stalls. Through these interventions, the project aims to shape the tourist-local interface, promote individual growing capacity, and create community food space. These design interventions capitalize on existing innovators, while promoting cooperation among the municipality, the National Park, the Ministry of Tourism, and the Ministry of Agriculture in order to stem the flow of invasive species to the islands and increase the availability of local quality produce for both locals and tourists.

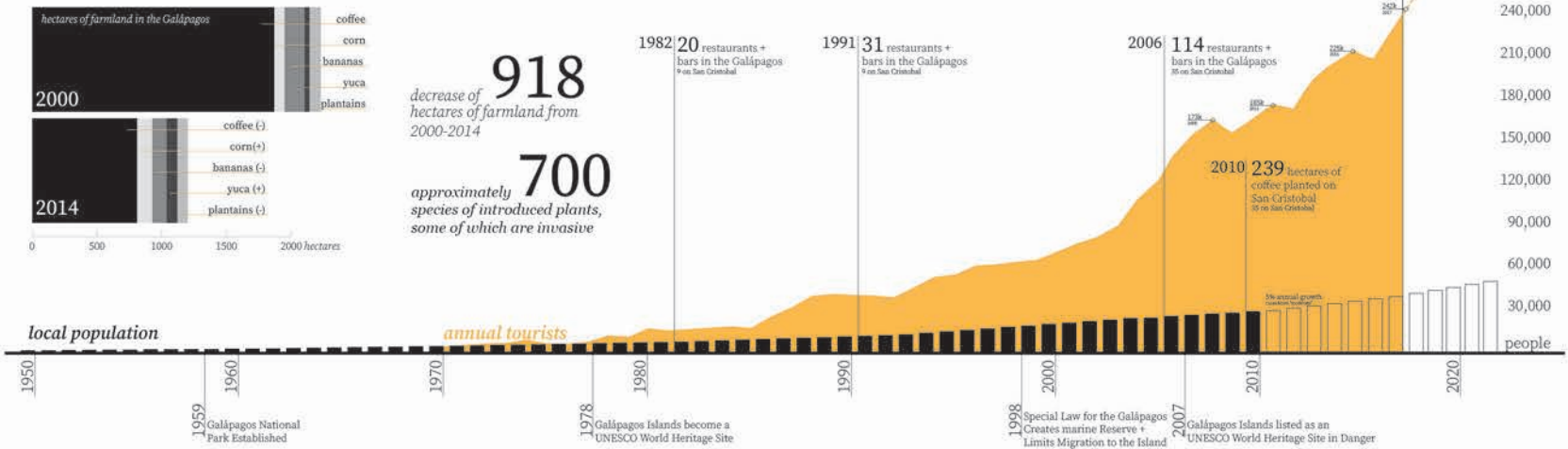
Resource Dependency In San Cristóbal

Mainland Dependency



Increasing Demand

"Agriculture represents a very small part of the economy, but more activity in this sector is critical to lessen the islands' dependence on imported produce"



Hectares of Farmland Source: Bulletin Integral Galápagos 2018. Ministerio de Agricultura y Ganadería. <http://sioa.agricultura.gob.ec/index.php/agricola-integral-territorial/boletin-integral-galapagos/2018>

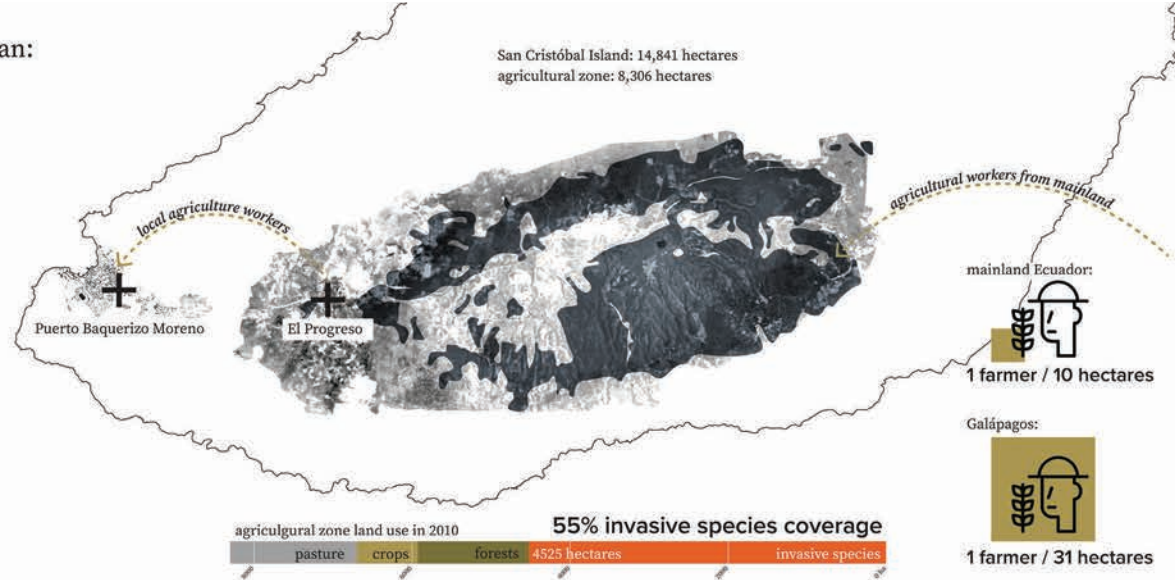
Economy and Population Source: Tourism, the Economy, Population Growth, and Conservation in the Galápagos. Charles Darwin Foundation. 2007. <https://www.galapagos.org/wp-content/uploads/2012/01/TourismReport2.pdf>

Drawings by Anna Darling

Farmland at Risk

Goals of Galápagos Bioagriculture Plan:

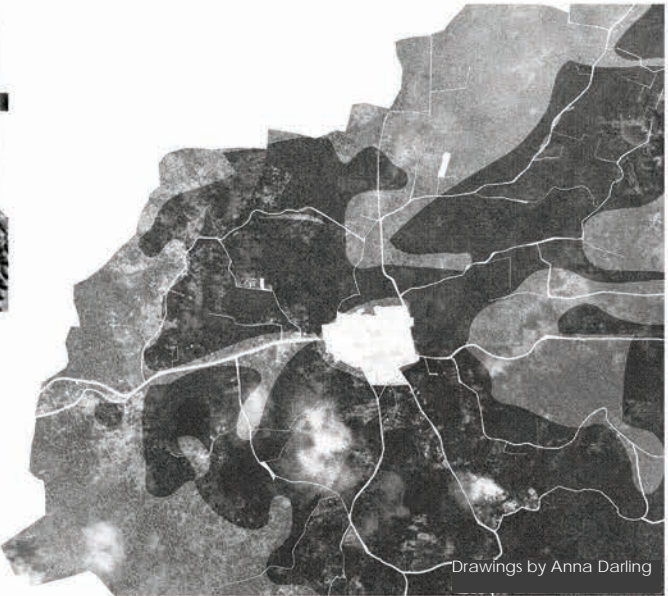
- 1 Transform agriculture into the primary human activity in Galápagos in such a way that it contributes to the conservation of the natural heritage of Galápagos, especially with regards to controlling invasive species, through the design and implementation of highly efficient agro-ecological production systems.
- 2 Contribute to economic sustainability in Galápagos through the **promotion of local markets** that function under the principles of a social and solidarity-based economy.
- 3 Consolidate a research system based on **dialogue, sharing knowledge, + expanding local capacity** to create and innovate.



Greatest Threat to the Galápagos



tomato, coffee, otoy, papaya, guava, squash, banana, pineapple, corn, onion, lettuce, cucumber

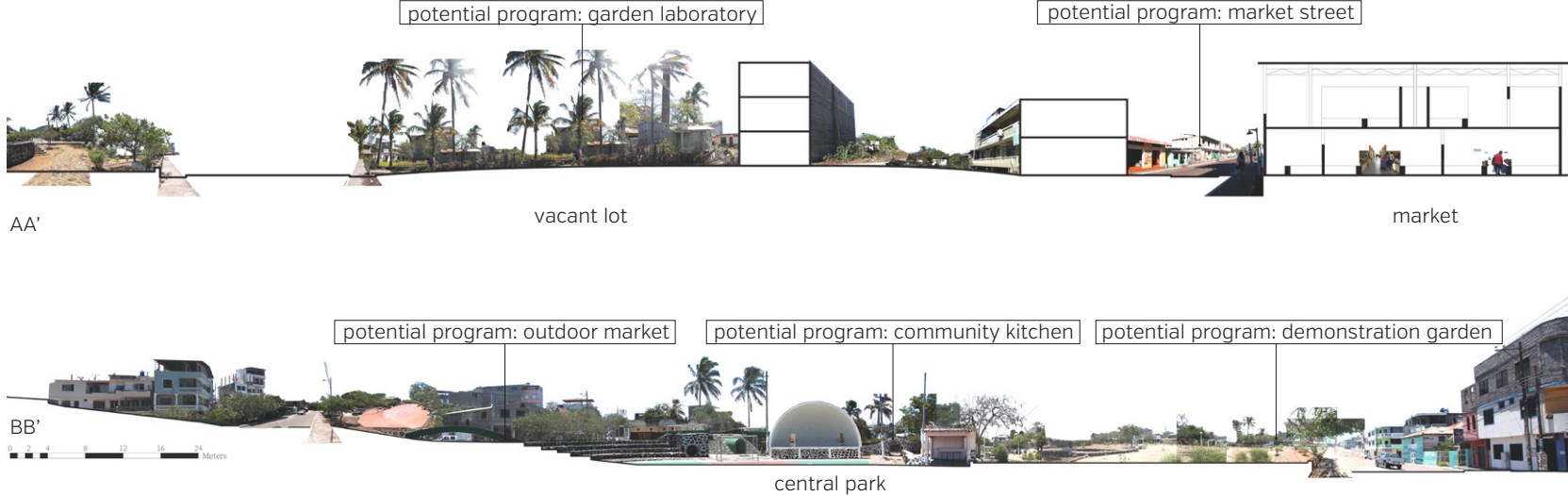


Project Approach

Capitalize on Existing Innovators



Transform the Existing Single Use + Conventional Public Space



Structuring New Development

Existing Conditions

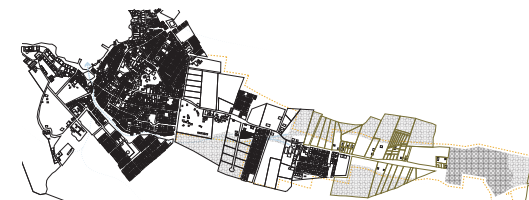


Strange Block Layout

Proposed Approach



1 Connecting Circulation



2 Growth + Conservation Swaps



Central Park

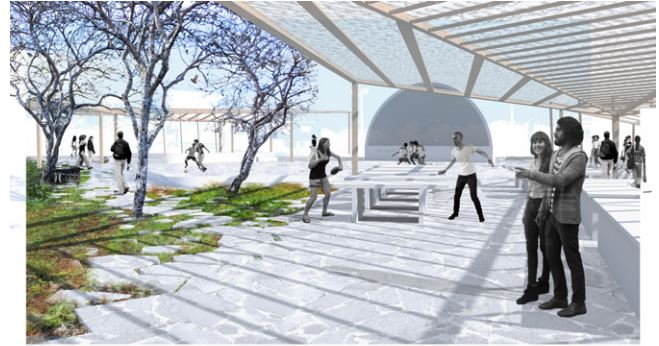


Growing Conditions

Demonstration Garden + Park



Community Space



Tourist Interface



- proposed stairs allowing access to high school
- municipal market
- irrigated growing demonstration area
- walkthrough to municipal market
- preserve the conch
- proposed culinary school on adjacent lot
- rainwater harvesting shade structures
- main street

