

# A Geodesign Framework for illegal developments in Latin-American Cities



## Geodesign Environment

Occupation ruled by  
Development Controls

Illegal Occupation

Incidence of Natural  
Environment

Occupation of non  
developed land (legal  
or illegal)

Incidence of  
Cultural/Social  
Environment

Existing Occupation

Incidence of  
Cultural/Social  
Environment

A1

Geography shapes  
land occupation



B2

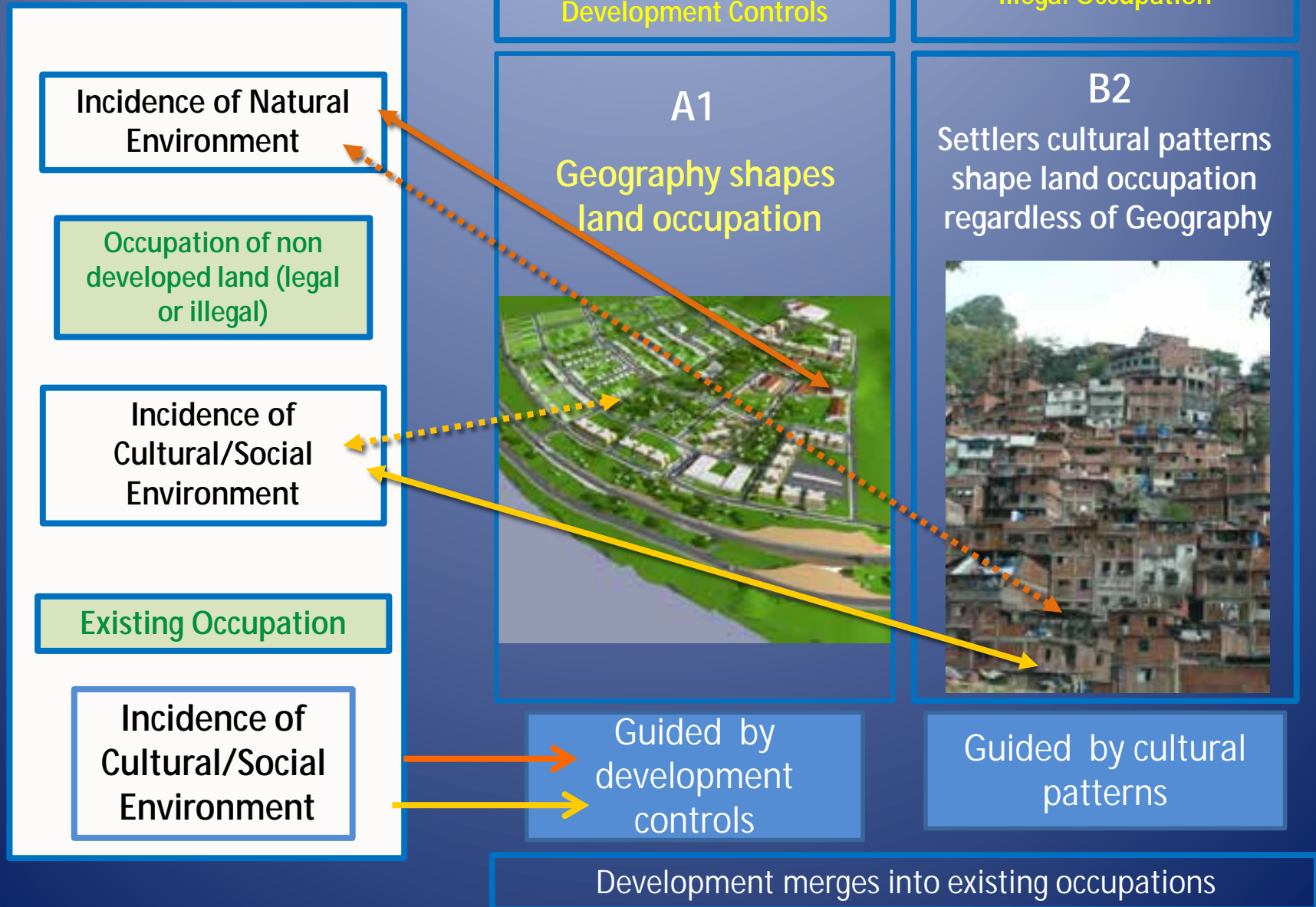
Settlers cultural patterns  
shape land occupation  
regardless of Geography



Guided by  
development  
controls

Guided by cultural  
patterns

Development merges into existing occupations





# A Built Geography, typical of some Latin American Cities



# The challenge for Latin American Designers: How to change Geography through Geodesign .



WHERE:

Up to 50 % of urban land is occupied by illegal developments that demand change.



AND:

geographic features are wrapped by development.

Barrio José Félix Ribas: located in the periphery of the city of Caracas. The biggest barrio in Latin America: population 120.000, in 96 hectares.



Can Geodesign used as a regenerative design tool, reverse the damage, caused by illegal occupations? **NO**



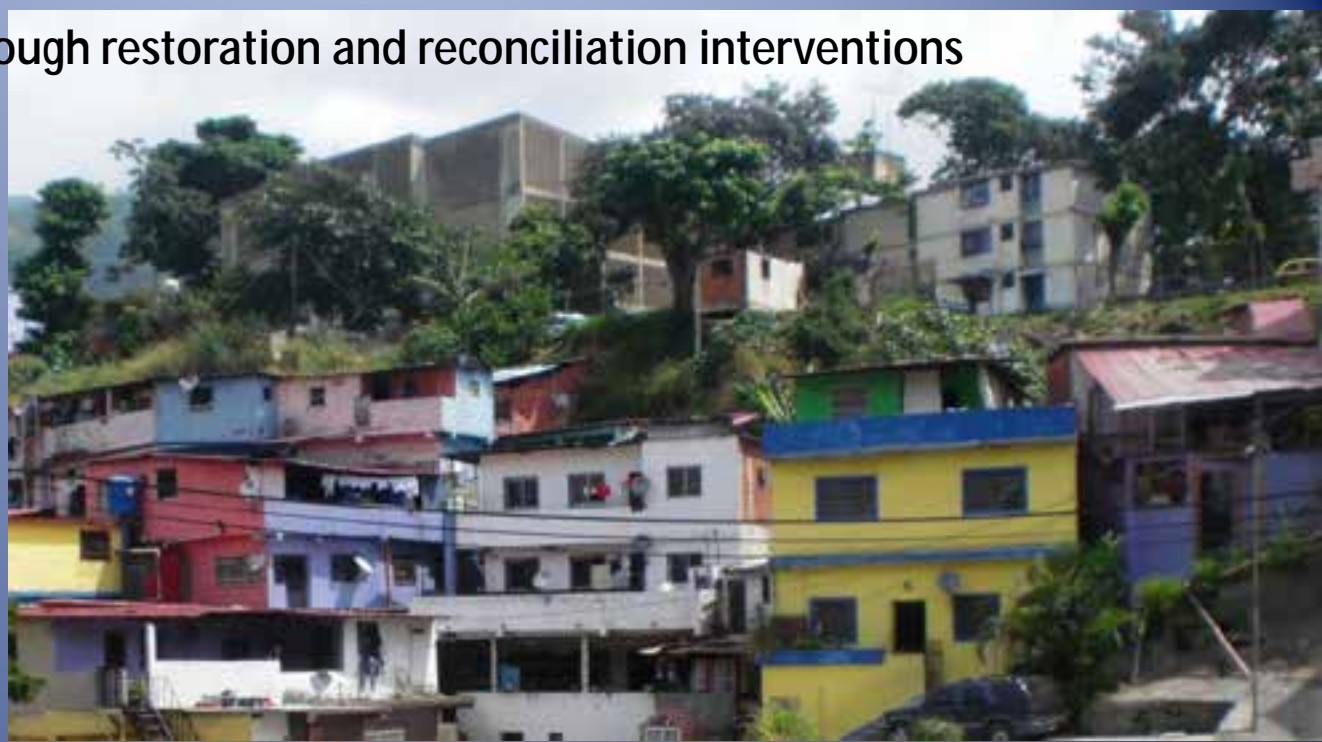
Geodesign can improve and modify the tendency of environmental deterioration

**HOW?** Through restoration and reconciliation interventions

A Restoration/  
Reconciliation Design  
Approach: Upgrading  
Public Facades:

A design process that  
acknowledges that human  
and natural systems are  
one.

aesthetical values of  
the community belong  
to their identity



## Restorative Approach: Improving Urban Facades





# Restorative Approach: Integrating geography and the public facade



Restorative approach can become a tourist attraction.  
(Casas Colgantes)





# Reversing the damage through Restorative Design



design restores  
the capability of  
a natural system





RESTORE existing  
Illegal developments  
INSTEAD of  
Government  
Relocation Policies

CIUDAD  
CARIBIA







**MANAROLA,  
Italy**

**PETARE,  
Venezuela**



Restoring the general appearance of the public facade can transform the settlement in an urban icon.....



# A Restorative Design Approach: Improving Public Space



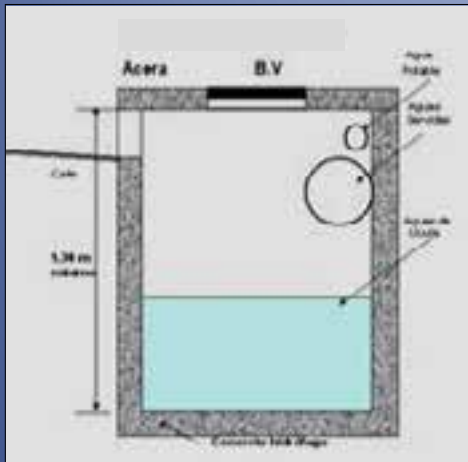


## Restorative (Reconciliation) Approach: Reconstruction of the urban tissue without affecting the occupation pattern of the settlement

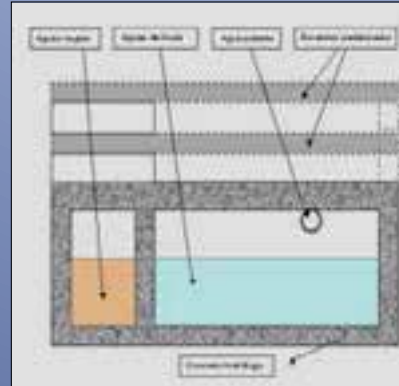


NOSE CUT Policy to gain public space

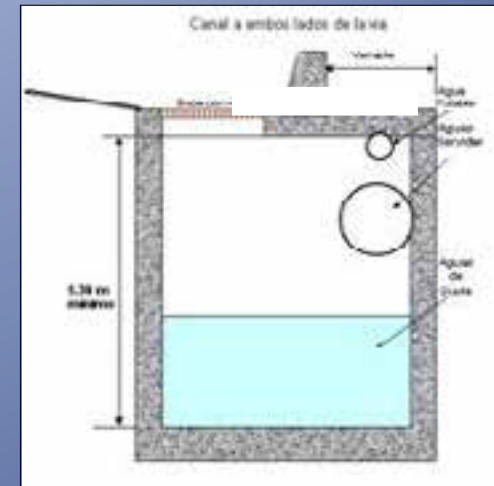
# Restoration of urban infrastructure



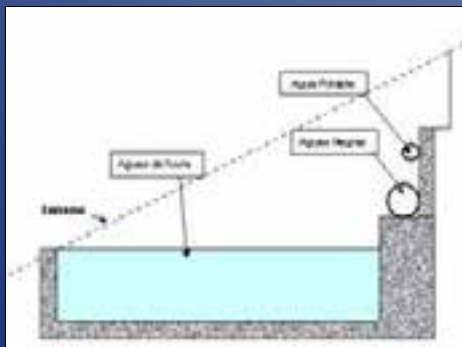
Opción 1  
Sobre acera



Canal sobre  
escalera

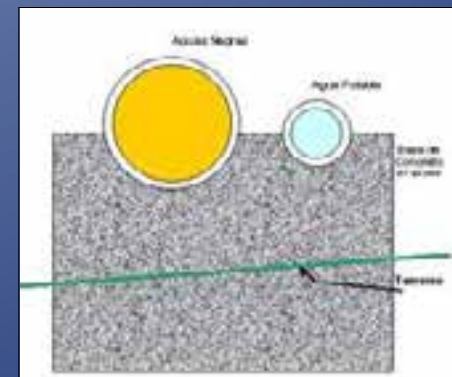


Opción 2  
Sobre borde de calzada



canaleta vereda

Sewer System: Channel  
at both sides of  
the pedestrian way



Red domiciliaria



# Change through Geodesign limited by social variables associated to residents.

Residents connection (roots) with the environment

strength measured in time of residence

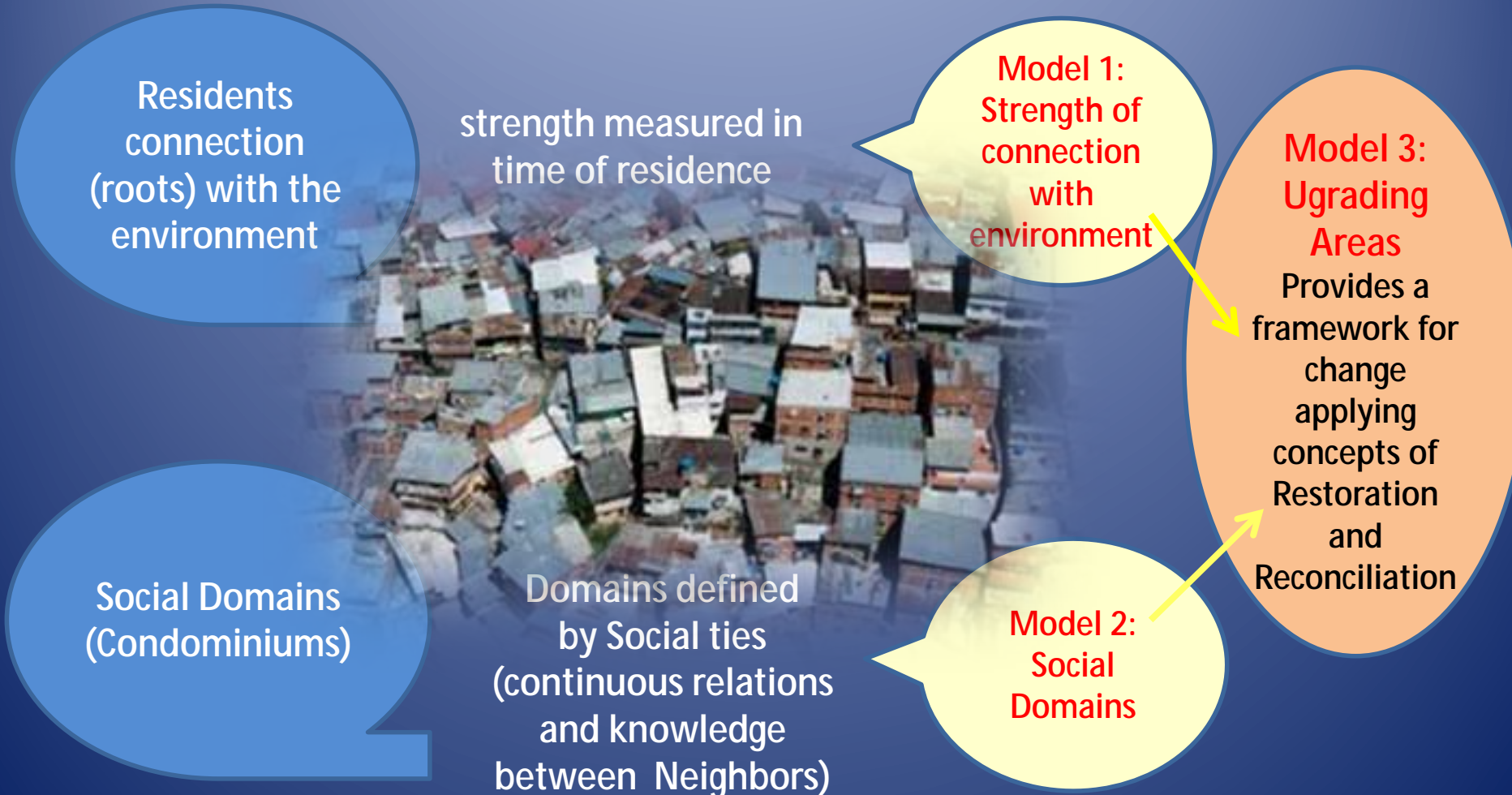
**Model 1:**  
Strength of connection with environment

Social Domains (Condominiums)

Domains defined by Social ties (continuous relations and knowledge between Neighbors)

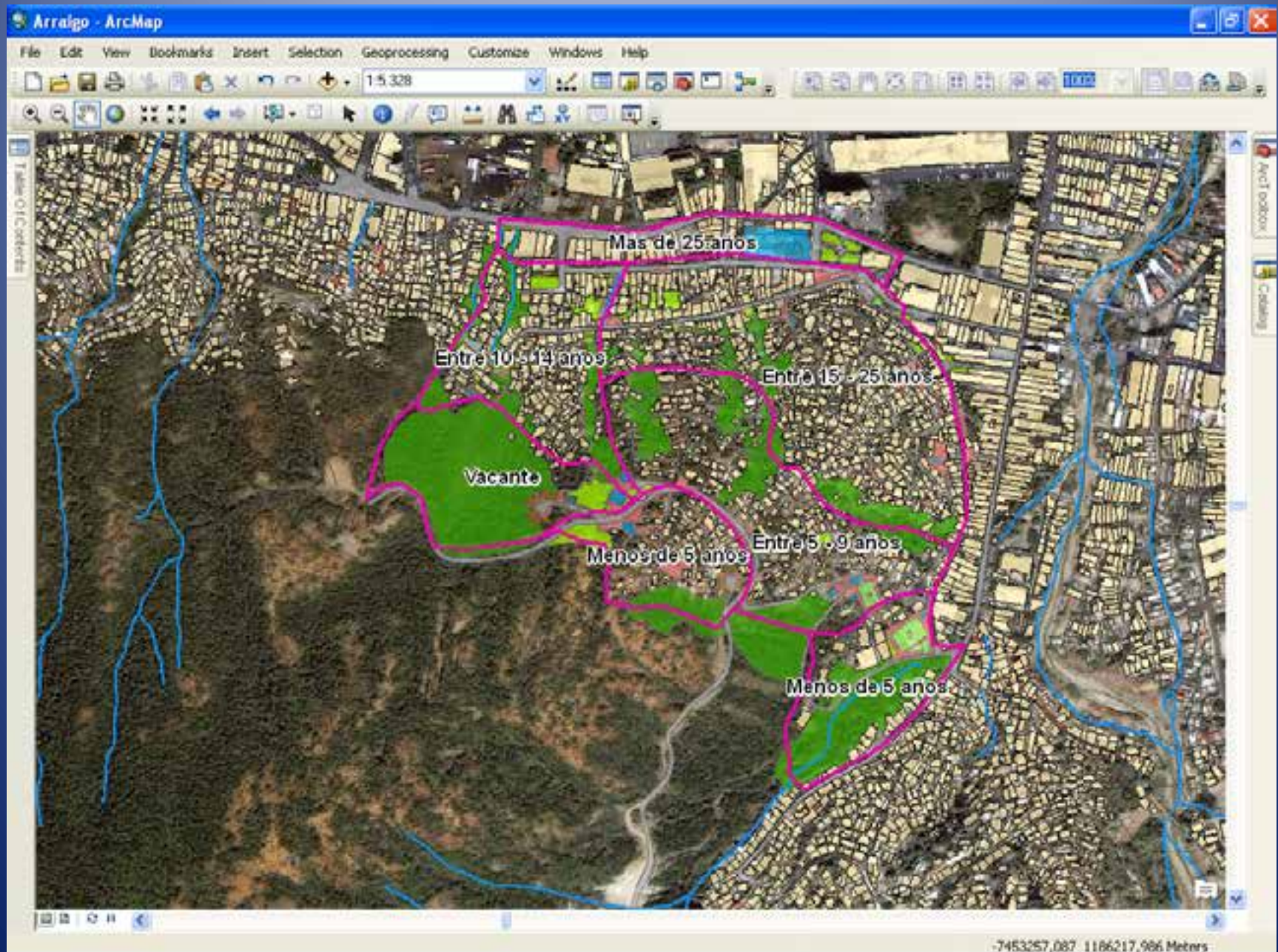
**Model 2:**  
Social Domains

**Model 3:**  
**Upgrading Areas**  
Provides a framework for change applying concepts of Restoration and Reconciliation



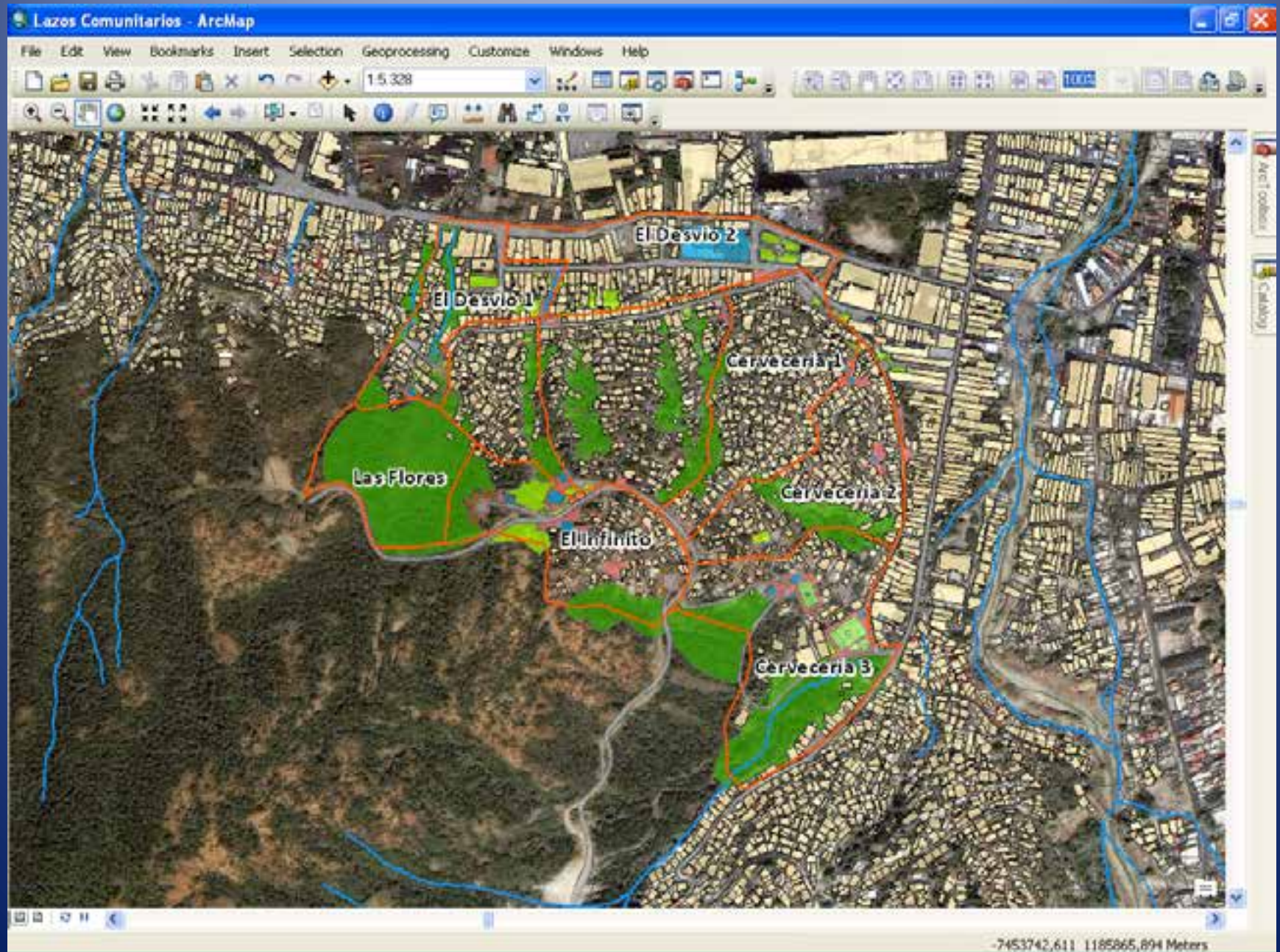


# Model 1: Residents connections with the environment



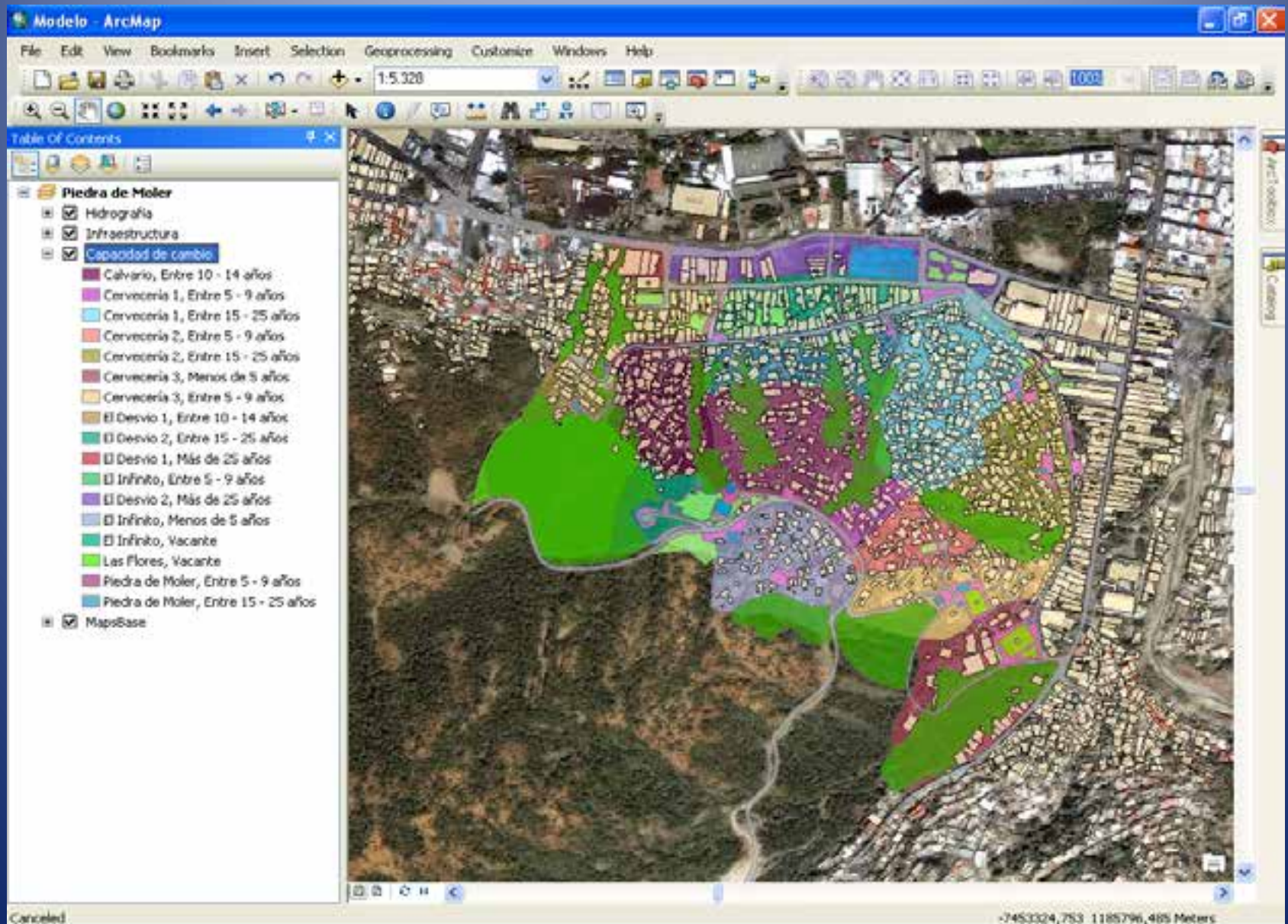


## Model 2: Social Domains (or Condominiums)





# Model 3: Upgrading Areas



Quantifying and measuring change is the first step for minimizing damage . ArcGIS tools gives the opportunity for doing it.

An excellent example of geodesign: Total integration with geographic features. Casares, Andalucía

