

Payment of the  
Environmental Services of  
Temperate and Tropical  
Forests to *Ejidors* and  
*Comunidades* in high  
poverty areas

INE 2002

A stylized silhouette of a mountain range in shades of brown and tan, positioned at the bottom of the slide against a teal-to-blue gradient background.

# The main cause of deforestation is land use change towards agriculture and pastures

The land use decision depends on:

Market signals (prices of inputs and products)

Short-term horizon forced by poverty

Higher organization costs in community forestry



# Market failures

The market does not pay for the environmental services provided by forests:

Watershed and aquifer protection.

Biodiversity Conservation

Carbon sequestration



# Land use changes

## Control vs. Incentives

- In Mexico, the prohibition of land use changes has been largely ineffective, costly and, where strongly enforced, it has resulted in foregone income opportunities for families living in poverty.
- The areas where we observe conservation either have no profitable alternative use or have successful community-based timber operations.



# Increasing profitability vs. agriculture and cattle grazing

## Elements of the strategy:

1. Neutralize subsidies
  - Apply VAT to agrochemicals
  - Eliminate agricultural bias in *Procampo*
2. Continue strategic support to community forestry firms, i.e. *Prodefor*, *Procymaf*
3. **Payment for environmental services of forests to *Ejidors* & *Comunidades***



# A program to pay for environmental services

## Basic questions:

1. Target resources and population
2. Instruments for payments
3. How much to pay
4. Sources of funding



# Instruments

- Long term:
  - Develop markets and other mechanisms to link beneficiaries and forest communities.
- Short term:
  - Government direct payments to communities through contracts and agreements.



# Pilot projects

## 2002-2003

1. Disaster prevention fund, targeting high slope forested areas. (2002-2003)
2. Water recharge areas in Lerma-Chapala watershed.

## 2003

3. Watershed protection in overdrafted aquifer regions
4. National Forestry Fund & carbon sinks registry





# To whom?

## Priority population and Forests

- Priority watersheds (“availability” zones 1 to 6, and over-drafted aquifers)
- Temperate and Tropical forests in good conservation state (National Forest Inventory 2000)
- Conservation Priority regions (CONABIO)
- Land titling program finished (SRA)
- High marginality areas (CONAPO)

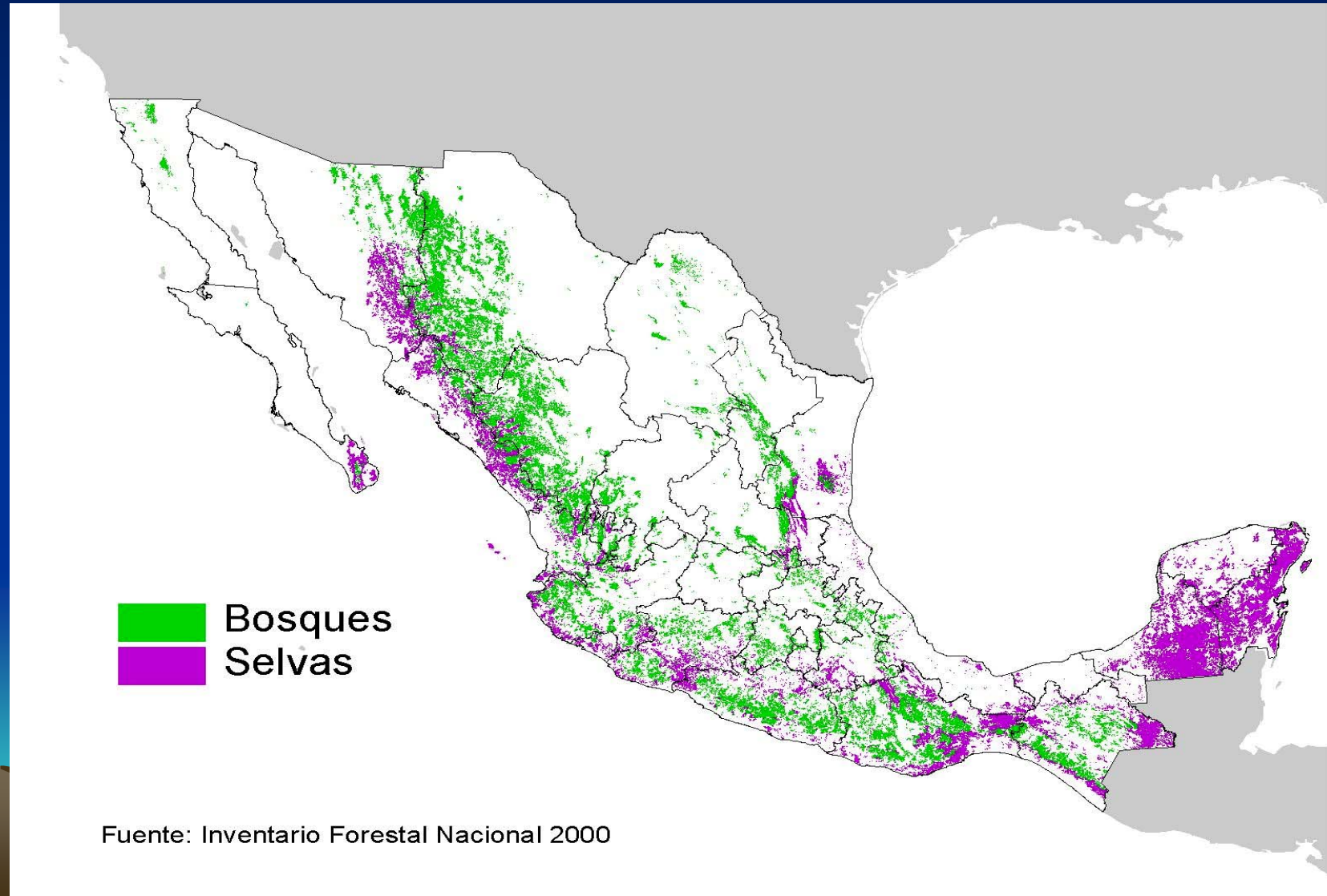


# Overlapping criteria to get our priorities

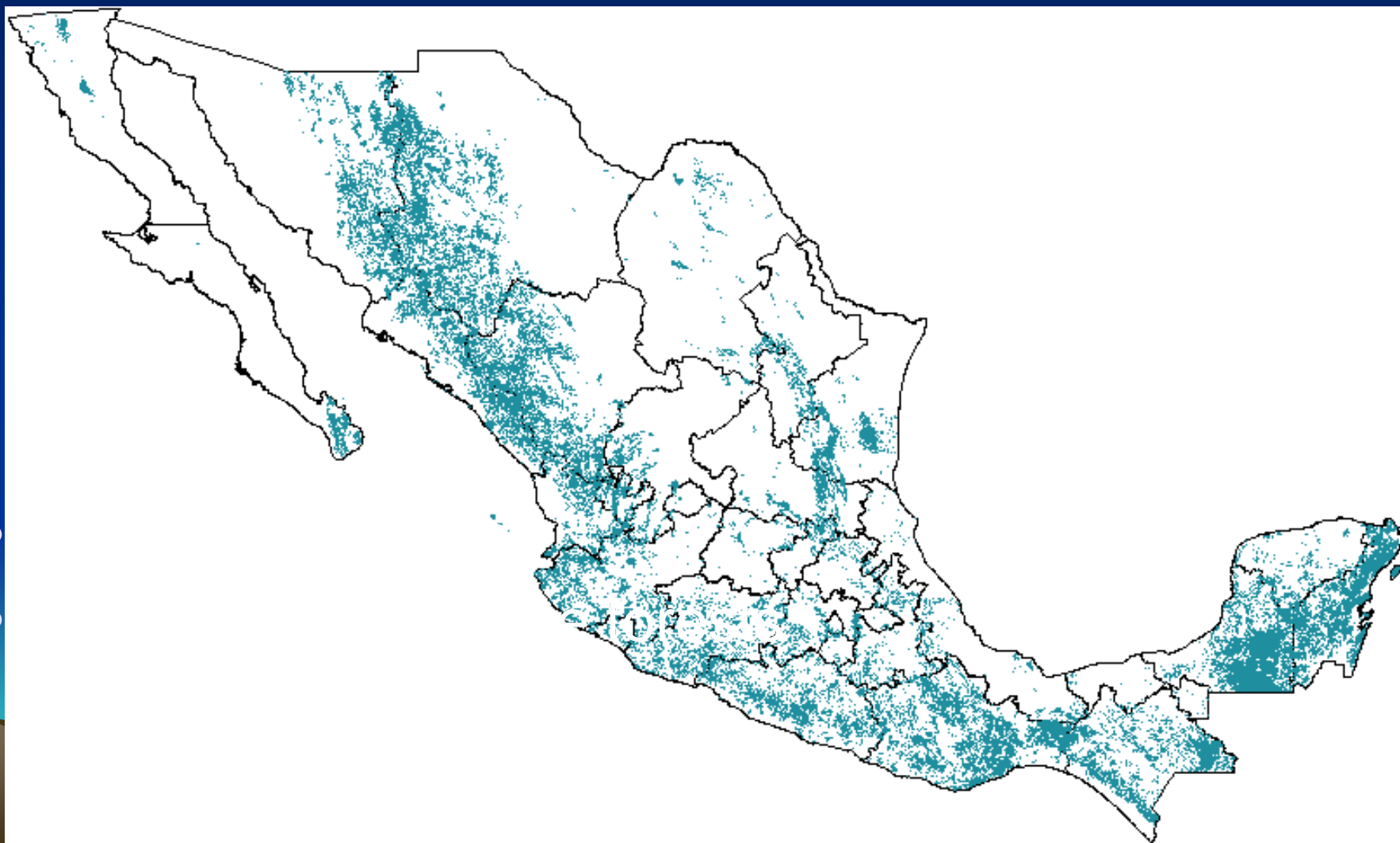
1. Overlap priority conservation areas, forest inventory, selecting areas of continuous forests.
2. Marginality index at the locality level, spatial distribution of values.



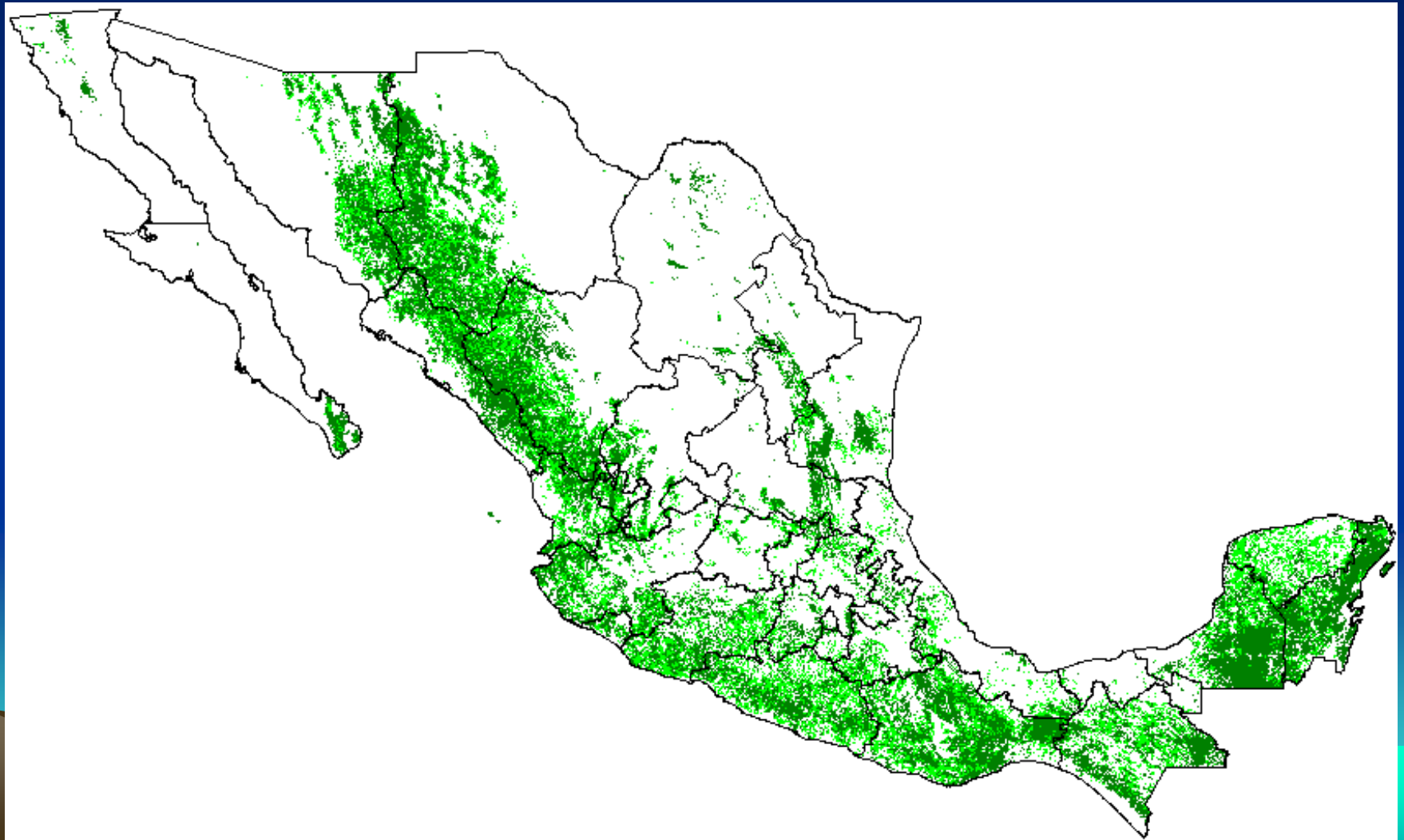
# Temperate and Tropical Forests



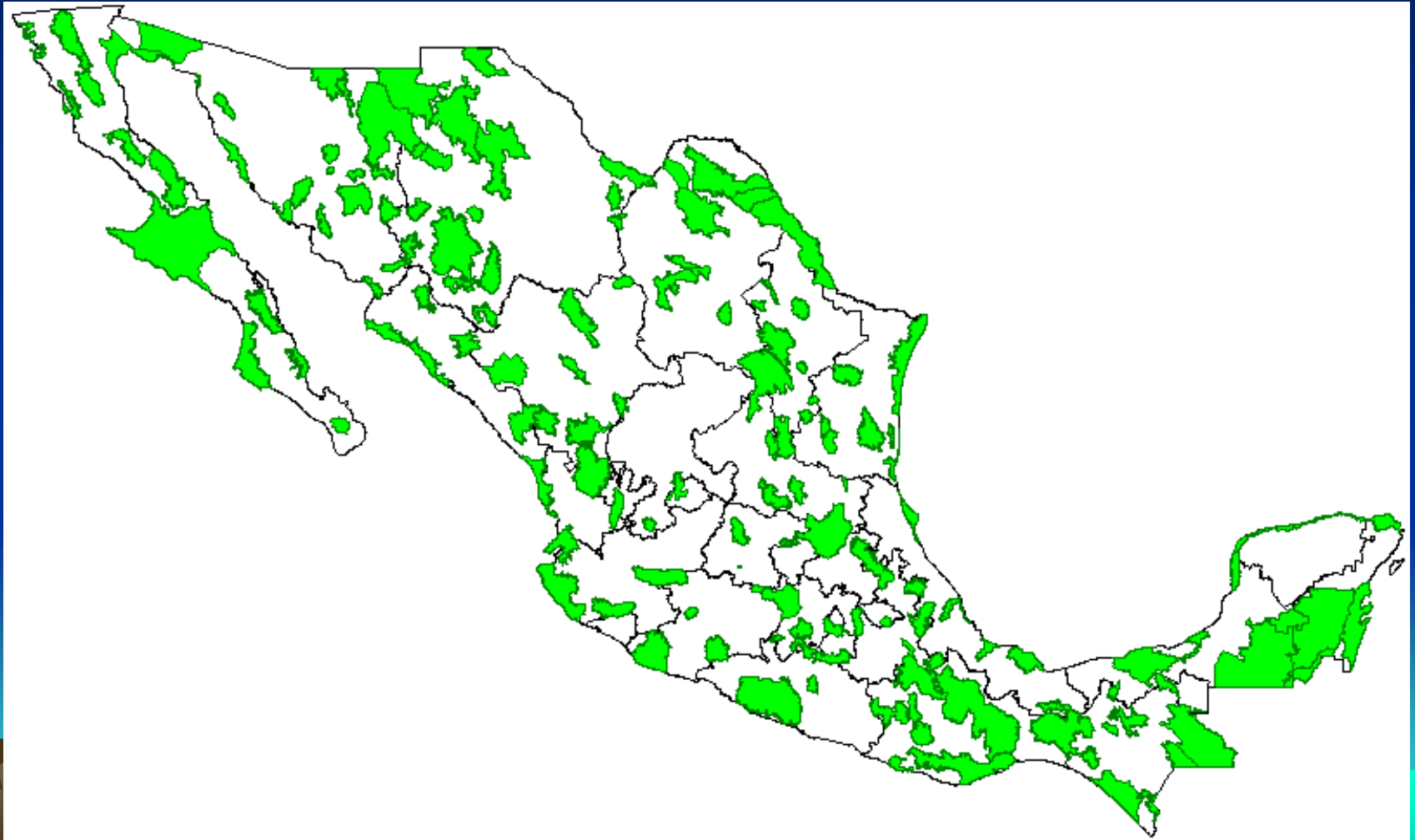
# Forest Assessment 2000



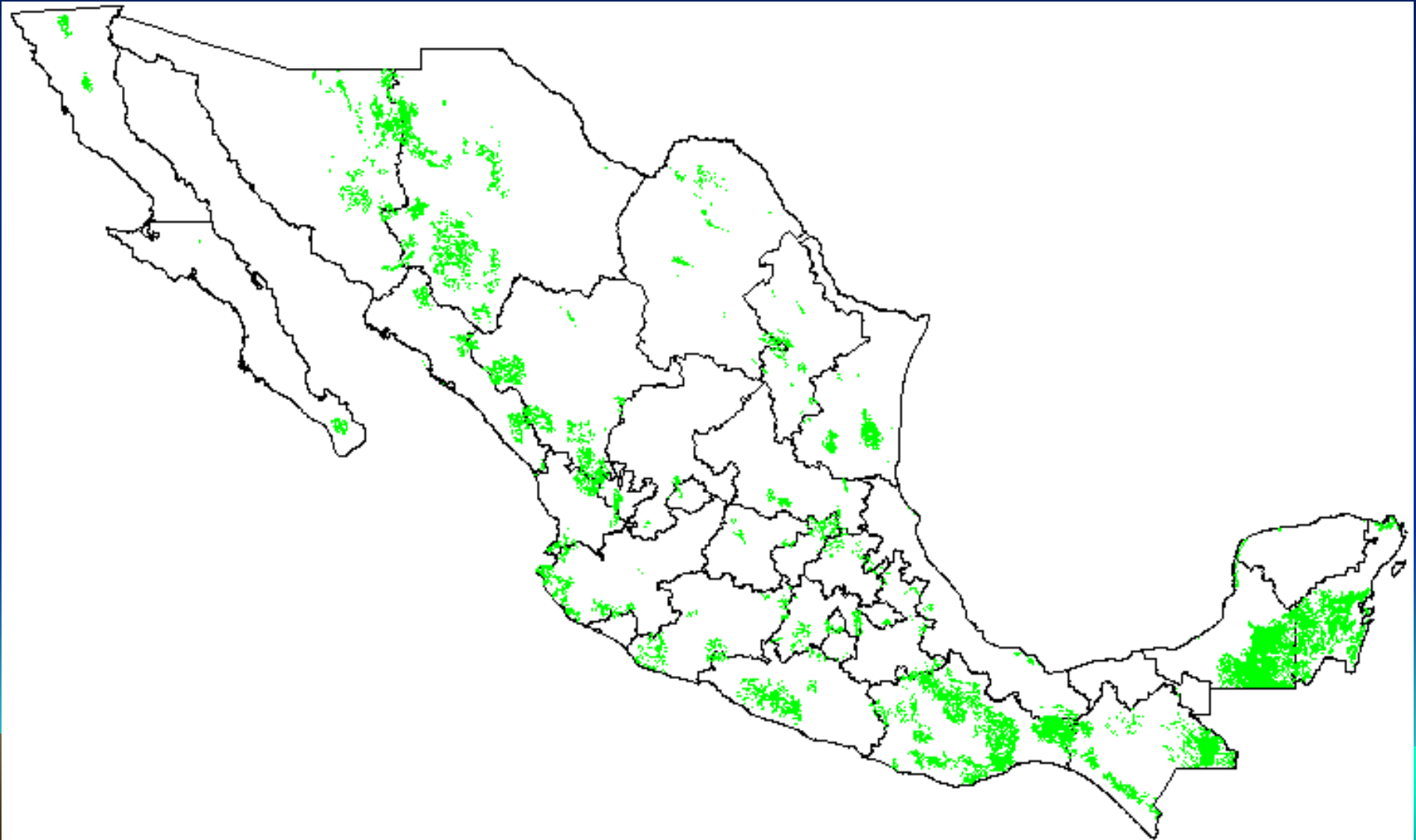
# Pure & associated classes



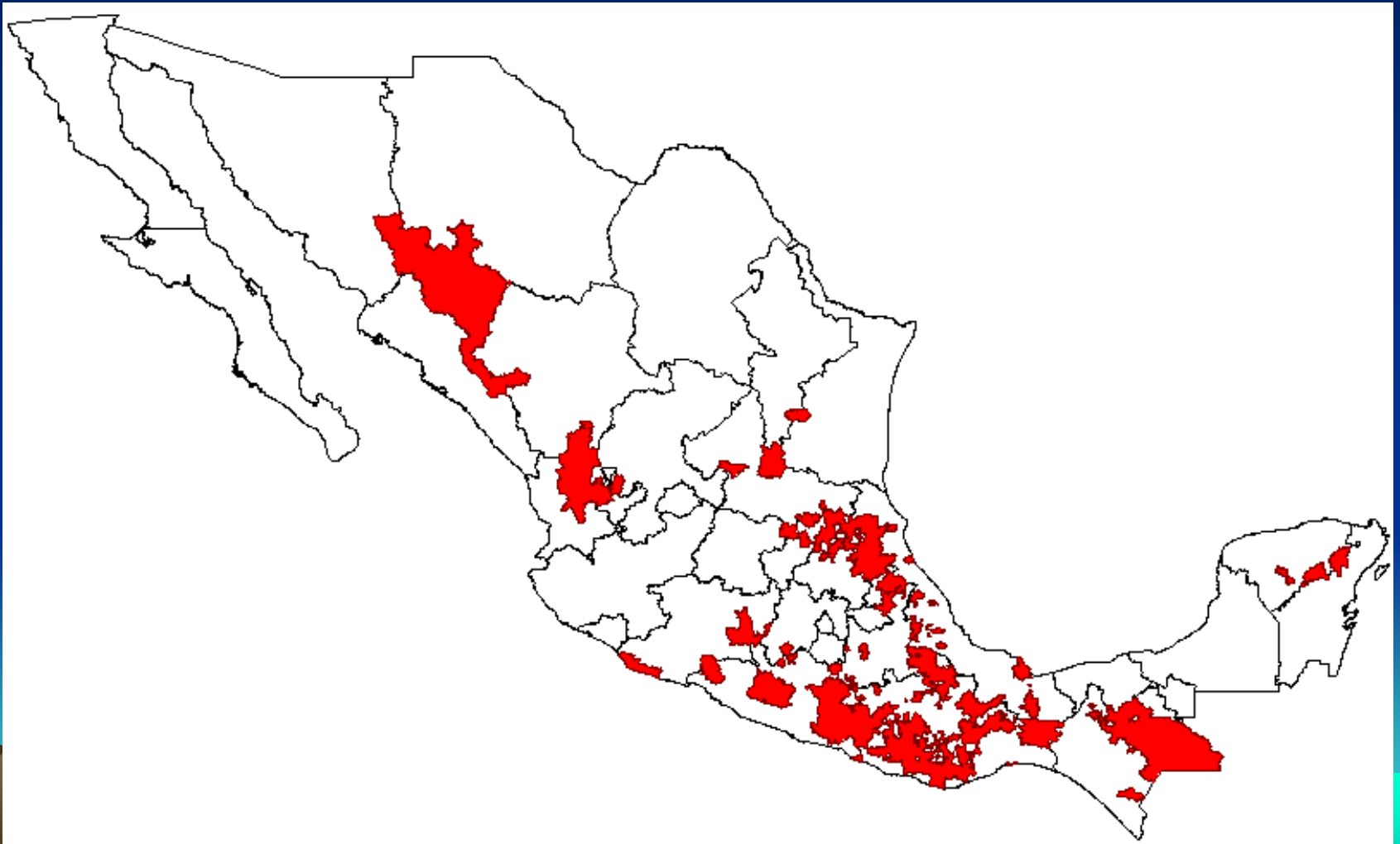
# Conservation priority terrestrial regions CONABIO



# Forests in conservation priority areas



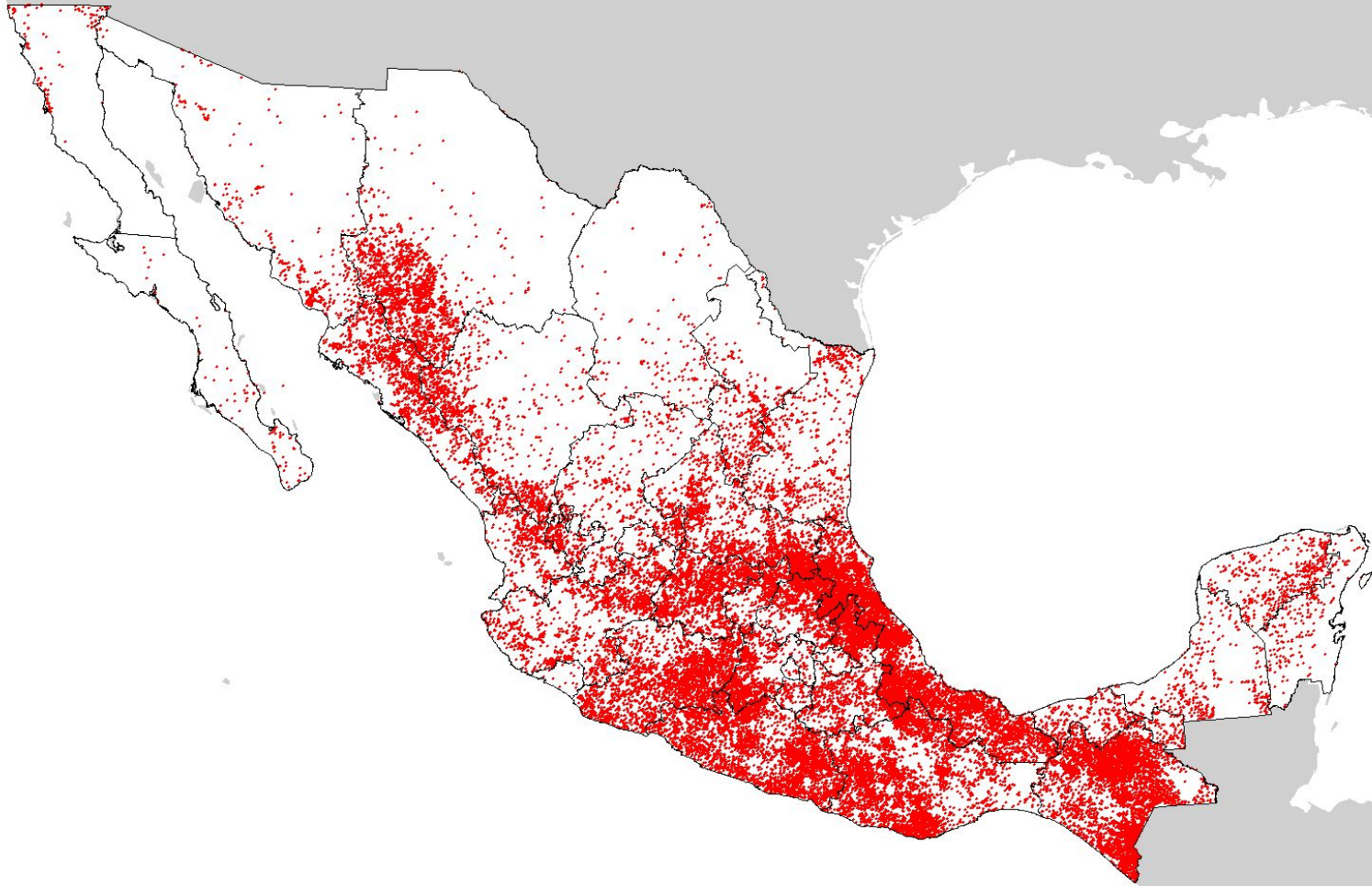
# High poverty areas (Municipal level)





# High poverty areas

(locality level)

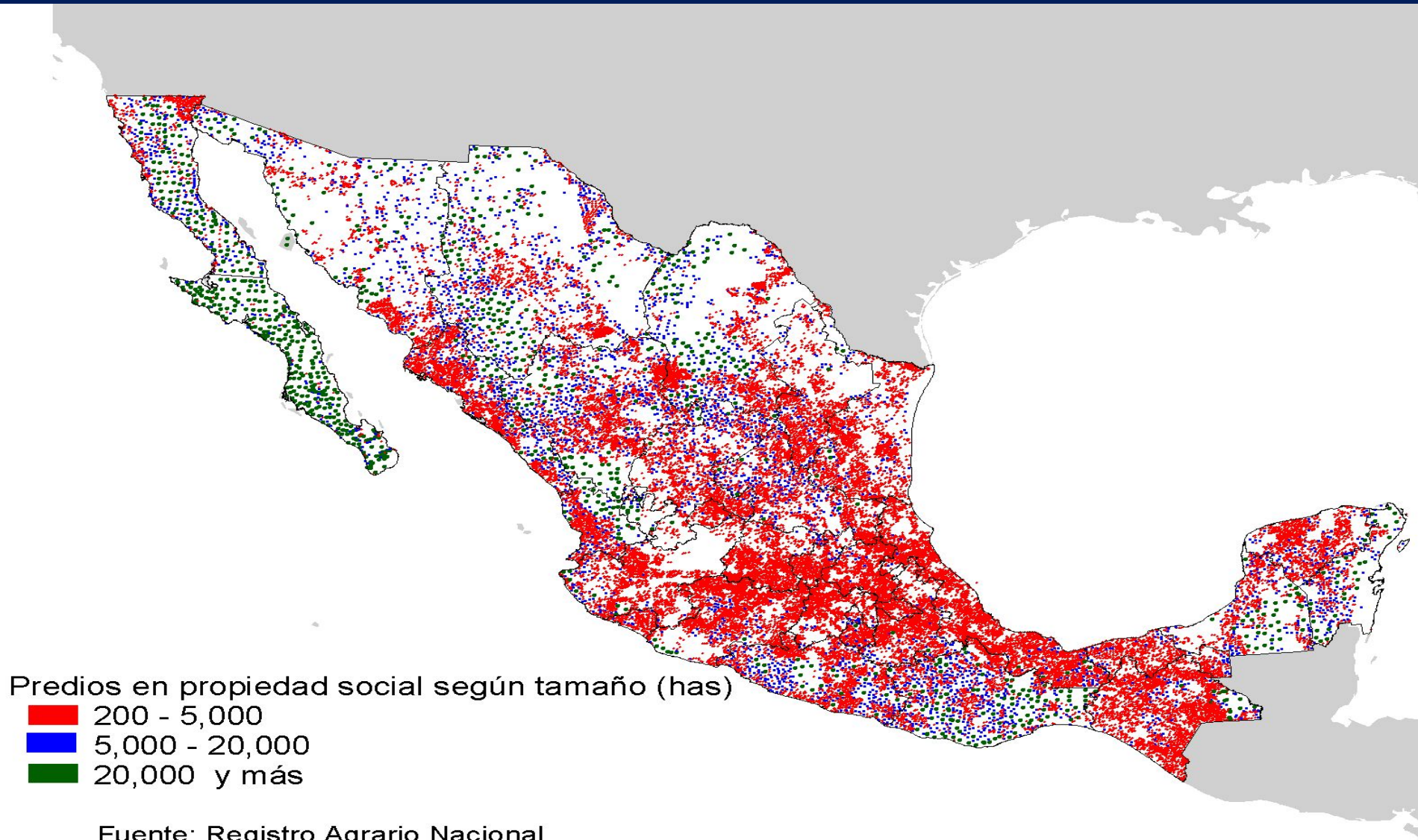


Fuente: CONAPO

# Forests, CPA & high marginality areas

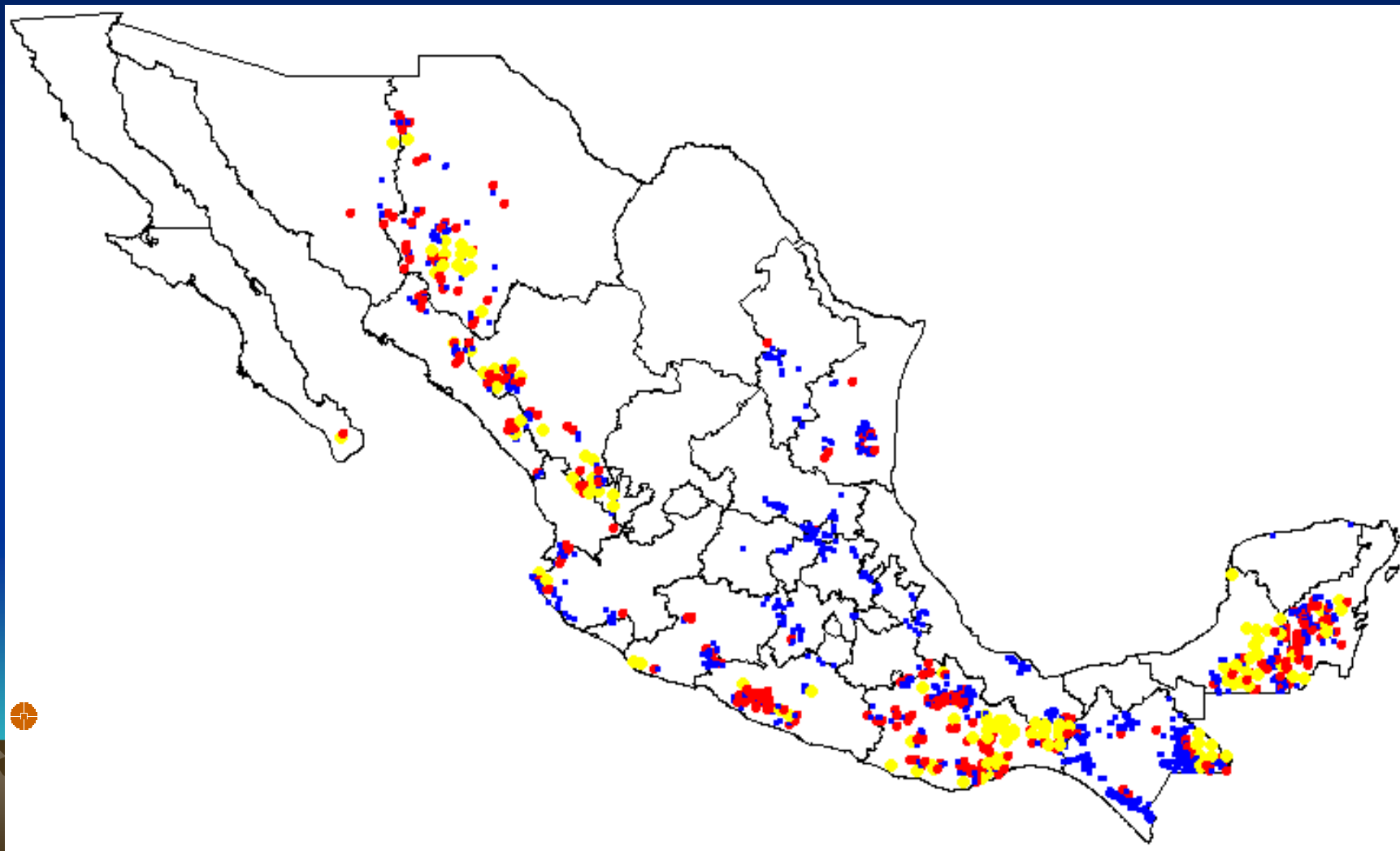


# *Social ownership: Ejidos and Comunidades*



Fuente: Registro Agrario Nacional

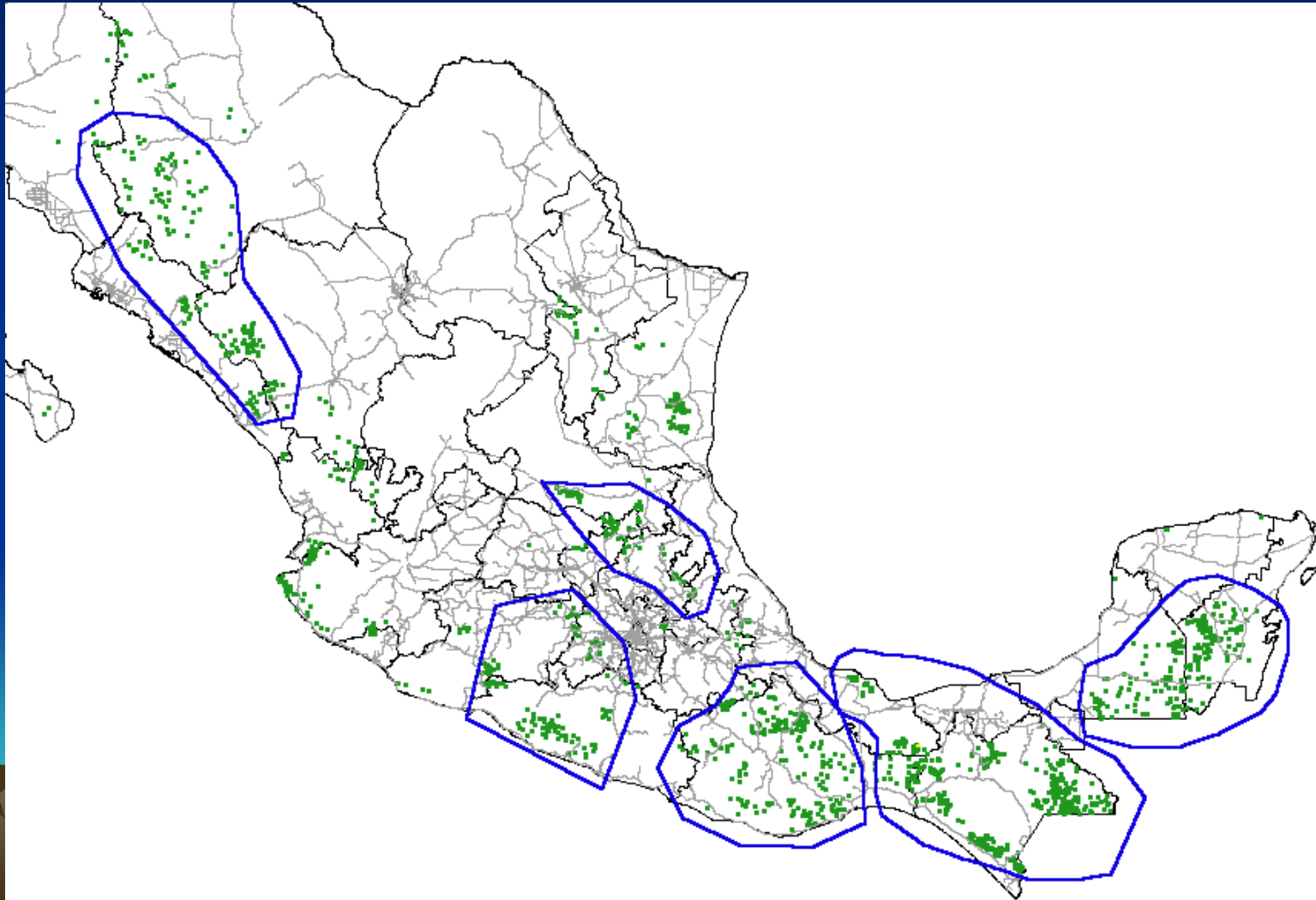
# *Ejidos and Comunidades* in priority conservation forests



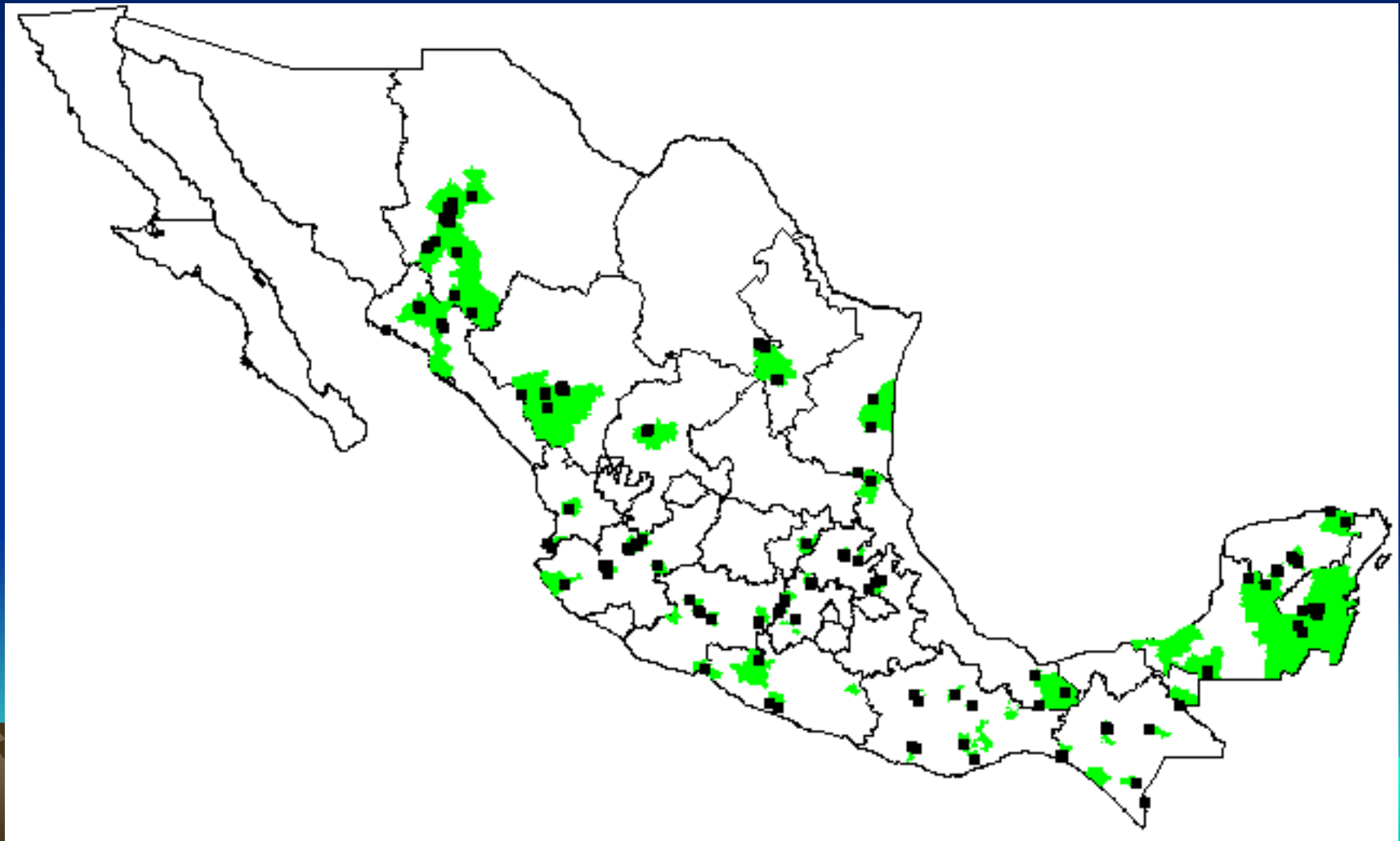
- El resultado fue de 1495 ejidos

- B. California Sur (2)
- Chihuahua (87),
- Coahuila (2),
- Durango (59),
- Guanajuato (2),
- Hidalgo (19),
- Michoacán (41),
- Morelos (2),
- Nuevo León (23),
- Puebla (36),
- Sinaloa (42),
- Tabasco (1),
- Tlaxcala (4),
- San Luis P. (32),
- Zacatecas (5).
- Campeche (90)
- Chiapas (384),
- Colima (5),
- Guerrero (69),
- México (25),
- Jalisco (61),
- Nayarit (14),
- Quintana Roo (98),
- Oaxaca (208),
- Queretaro (33),
- Sonora (9),
- Tamaulipas (74),
- Yucatán (3),
- Veracruz (65)

# Priority regions (biodiversity conservation)



# Governance, opportunity costs and cooperation on common resource management 1997 WB-Berkeley survey



# Size of payments

Max: Value of services

Min: Opportunity costs for forested areas

