

# Municipalities in Multi-Level Governance: Outcomes of Policy-Making on Land Cover Change in the Brazilian Amazon

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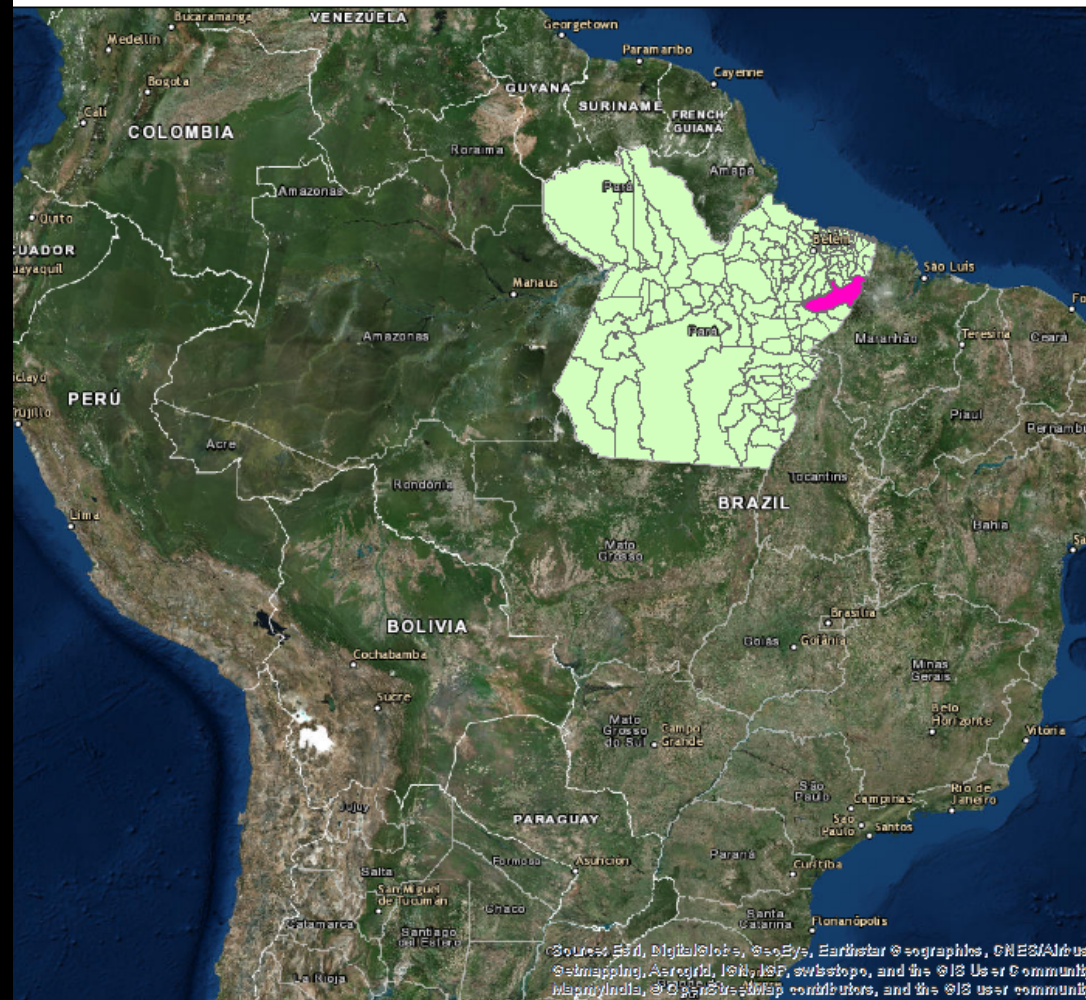
# Objectives

**Question:** What explains variation in effectiveness of some municipalities in controlling deforestation?

**Hypothesis:** Elites were crucial in building multi-level governance arrangements to register land under CAR and stop deforesting.

**Elites:** individuals with disproportionately high social, political or economic power. Here: focus on rural elites - those with large tracts of land and/or highly capitalized agricultural systems (with access to credit, inputs, ...).

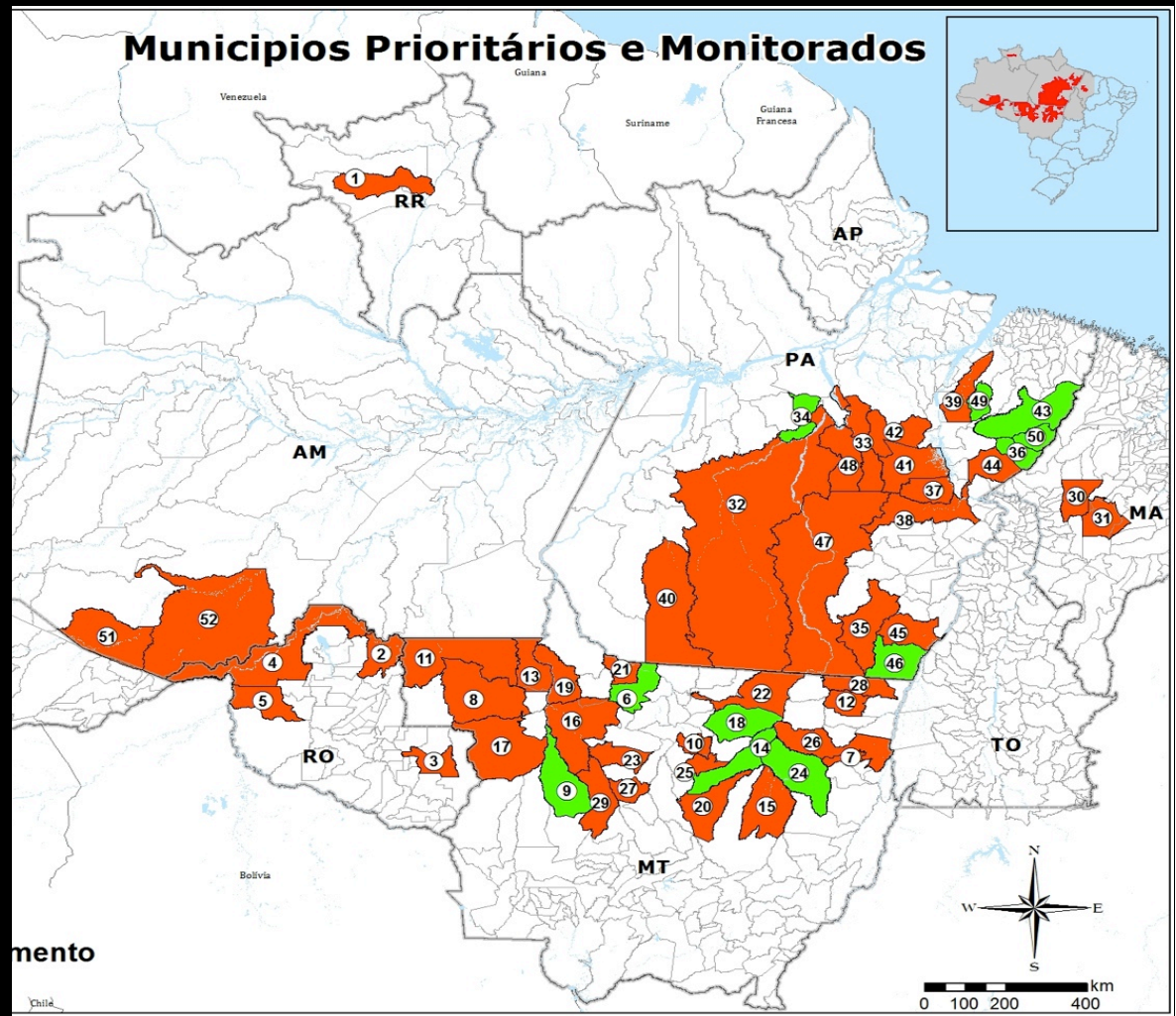
## Multi-level Governance



3 levels of government + individuals + groups + private actors

# Context: anti-deforestation policies

- PPCDAm-II: Federal-level policies to control illegal deforestation in the Brazilian Amazon
  - Monitoring (satellite imagery)
  - Command and Control
  - Target municipalities
- Municipal policies become important:
  - Georeference properties: CAR
  - Engage local actors: pact
  - Municipal Environment Office: license



Source: Ministry of Environment, 2014



# Context

- Six Municipalities in Pará state
- Colonization started in the 1960's
- Average 57% of territory deforested
- All included in the list of Target Municipalities

Municipality	Total area (km <sup>2</sup> )	% CAR	Deforest 2013 (km <sup>2</sup> )	Left List?
Paragominas	19342.3	86.00	30.8	Y
Ulianópolis	5088.5	88.34	11.1	Y
Dom Eliseu	5268.8	86.09	10.2	Y
Tailândia	4430.2	82.64	33.2	Y
Moju	9094.1	62.56	35.4	N
Rondon do Pará	8246.4	57.65	28.8	N





# Methods

## Spatial Analysis

Feb 2016 CAR database

INPE deforestation data  
(2000-2014)

Global Forest Change data  
(2000-2014)

## Policies, Actors, Organizations

Interviews

- Local actors

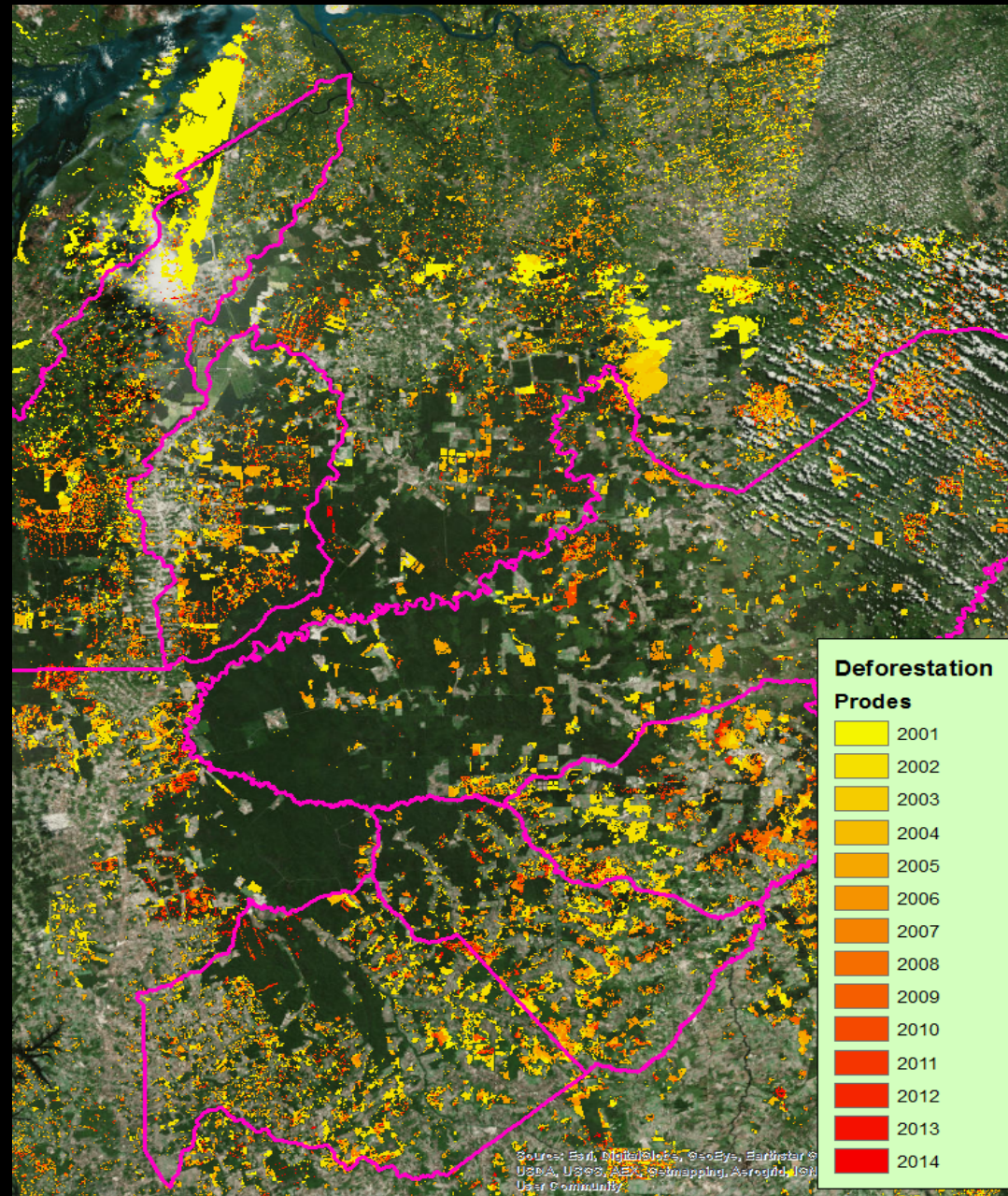
- State-level actors

- Federal-level actors

- NGO representatives

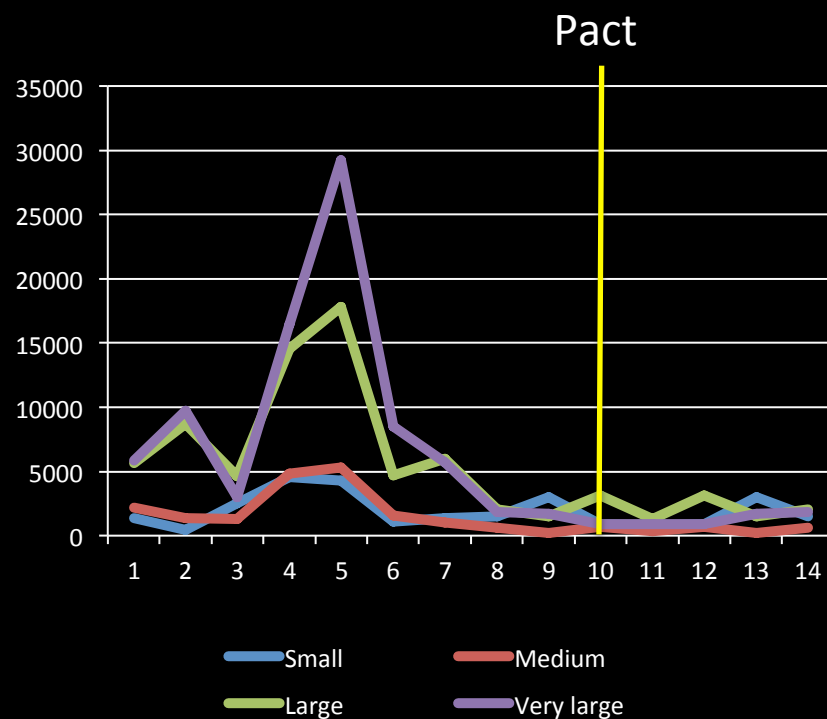
Participatory observation

Gray literature



# Results: Paragominas

## Actors of Deforestation

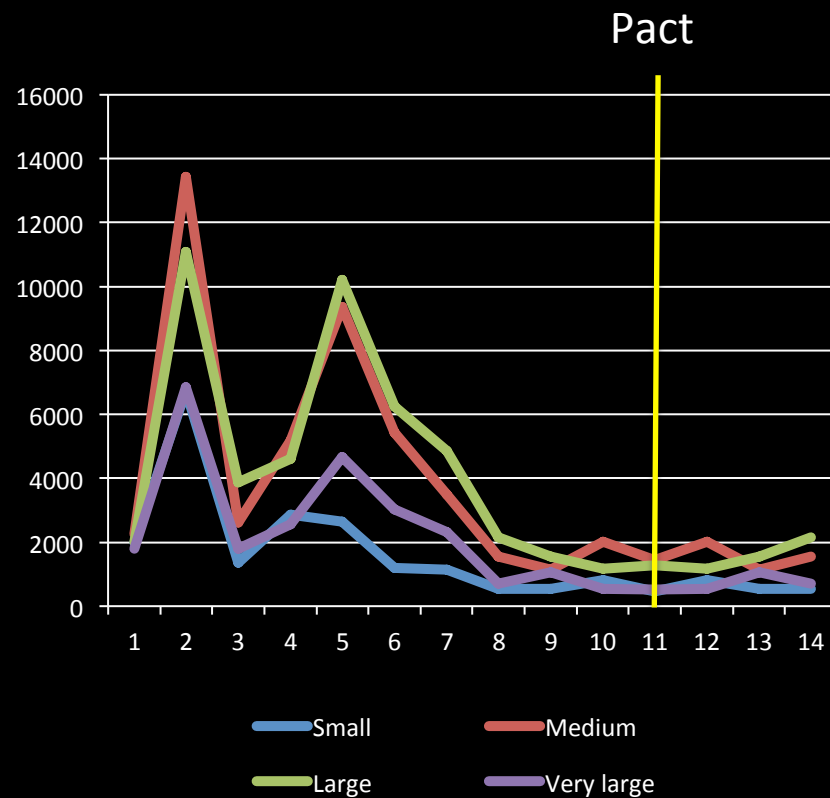


## Actors and Organizations

- Capitalized farmers and mayor articulated:
  - Various societal groups (pact for zero deforestation)
  - NGOs: Imazon, TNC (CAR)
  - Financial partners: Fundo Vale (financial resources)
  - Private sector: Dow Agrosciences (follow-up project)

# Results: Dom Eliseu

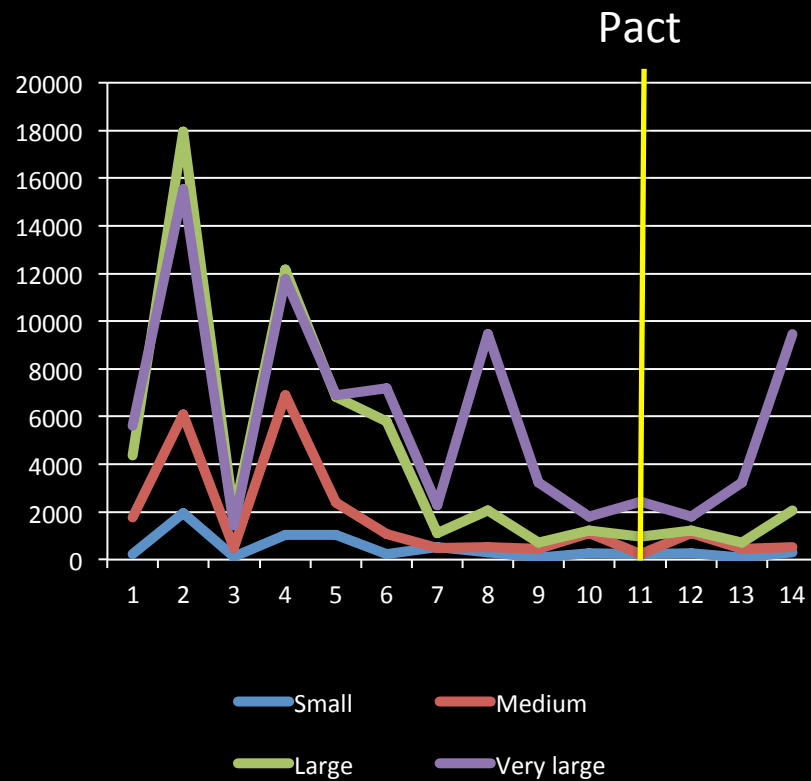
## Actors of Deforestation



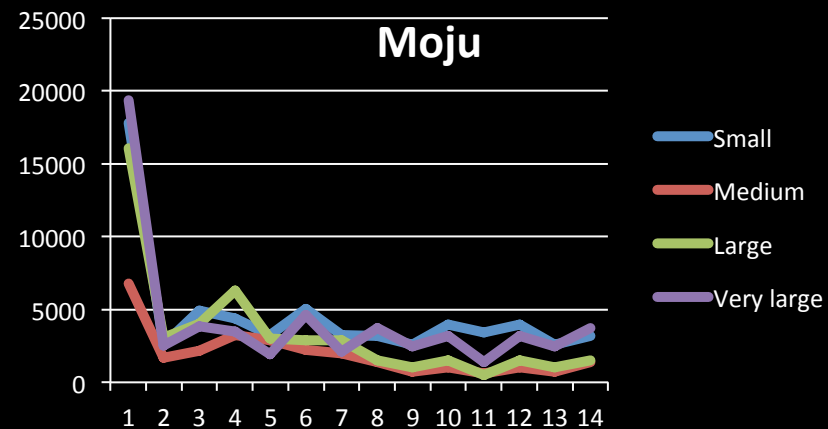
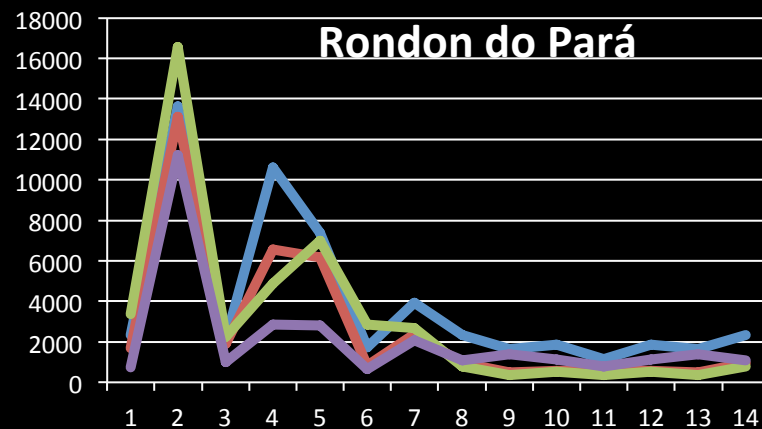
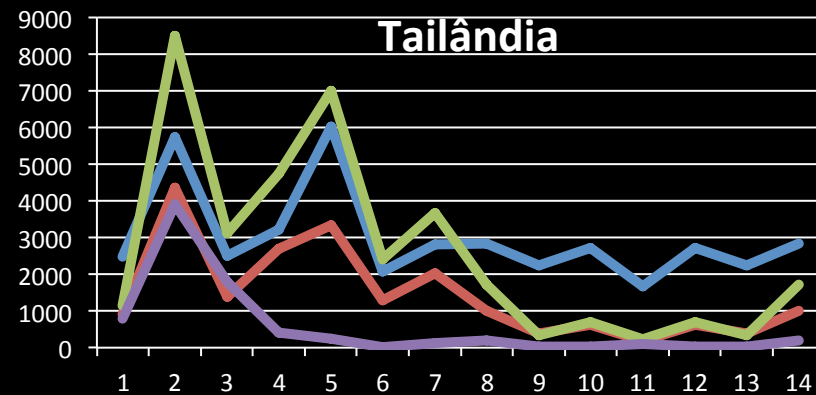
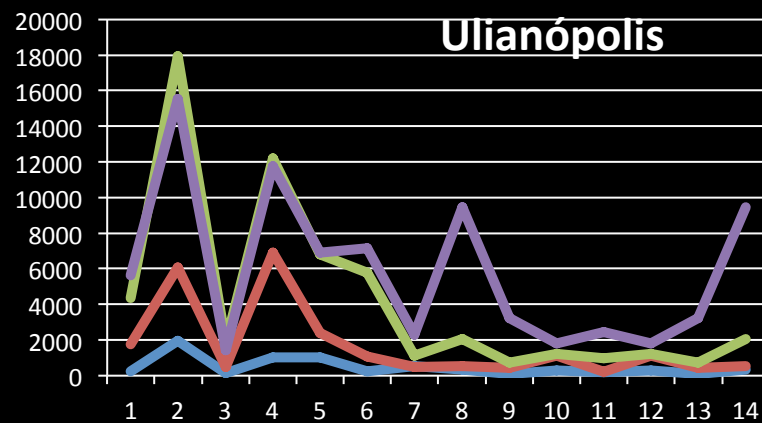
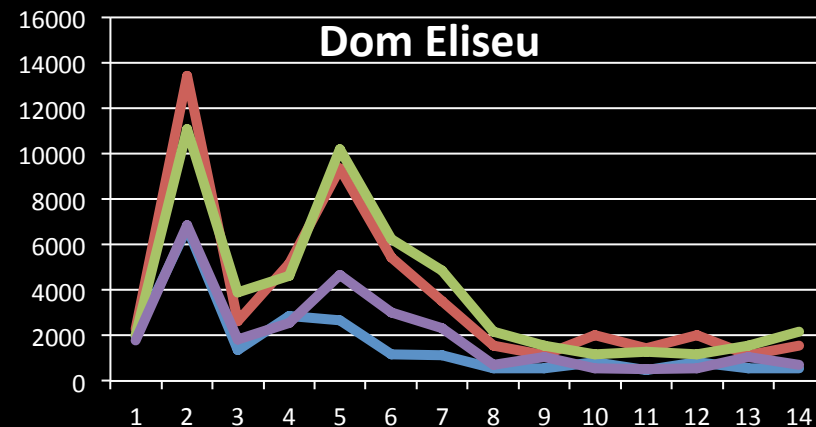
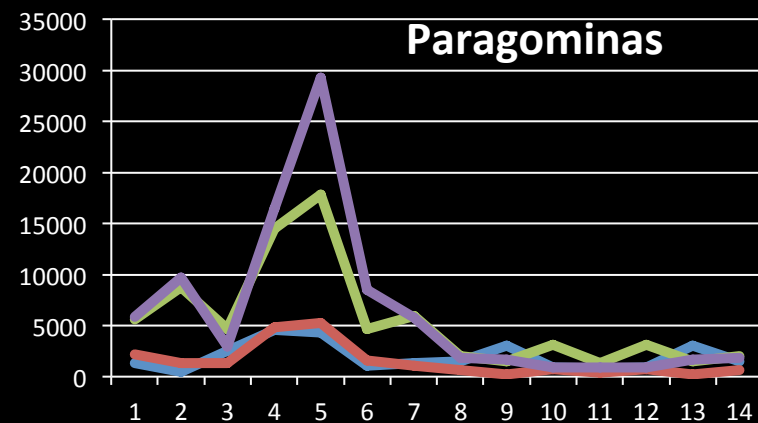
## Actors and Organizations

- Municipal Government leaders:
  - Drew from Paragominas' experience
  - Efforts to develop a "Green Region": NGO Imazon and resources from UNDP
  - Support from Union of Rural Producers
  - Support from state and federal governments

# Results: Ulianópolis







# Results

- Paragominas: municipal-level initiative that inaugurated model that would be adopted by other municipalities (CAR, pact, local licensing)
- Dom Eliseu and Ulianópolis: external projects (UNDP and Imazon) mobilized internal actors
- Moju: