

An aerial photograph of a dense Amazon rainforest. A river, likely the Amazon, winds through the center of the image, its dark water contrasting with the lush green canopy. The forest is thick and continuous, with varying shades of green indicating different tree species and canopy heights. The overall scene conveys the vastness and complexity of the Amazonian environment.

# Land Conflict in Amazonia

**Cynthia S. Simmons**  
**Associate Professor, Geography**  
**University of Florida**



# **Program of Research: Land Conflict and Agrarian Reform**

## **1. Why Land Conflict and Violence?**

**The Political Economy of Land Conflict in the Eastern Brazilian Amazon. 2004. *Annals of the Association of American Geographers* 94(1): 183-206.**

**The Amazon Land War in the South of Pará. 2007. *Annals of the Association of American Geographers*, 97(3): 567–592.**

## **2. DALR Social Processes, and Development and Environment Impacts?**

**Doing it for Themselves: Direct Action Land Reform in the Brazilian Amazon. 2010. *World Development*, 38(3): 429–444.**

**Contentious Land Change in Amazônia's Arc of Deforestation. 2012. *Annals of the Association of American Geographers* 102(1): 103-128.**

# Struggle for Land

- **Historical Manifestation – Land Inequality and Conflict**

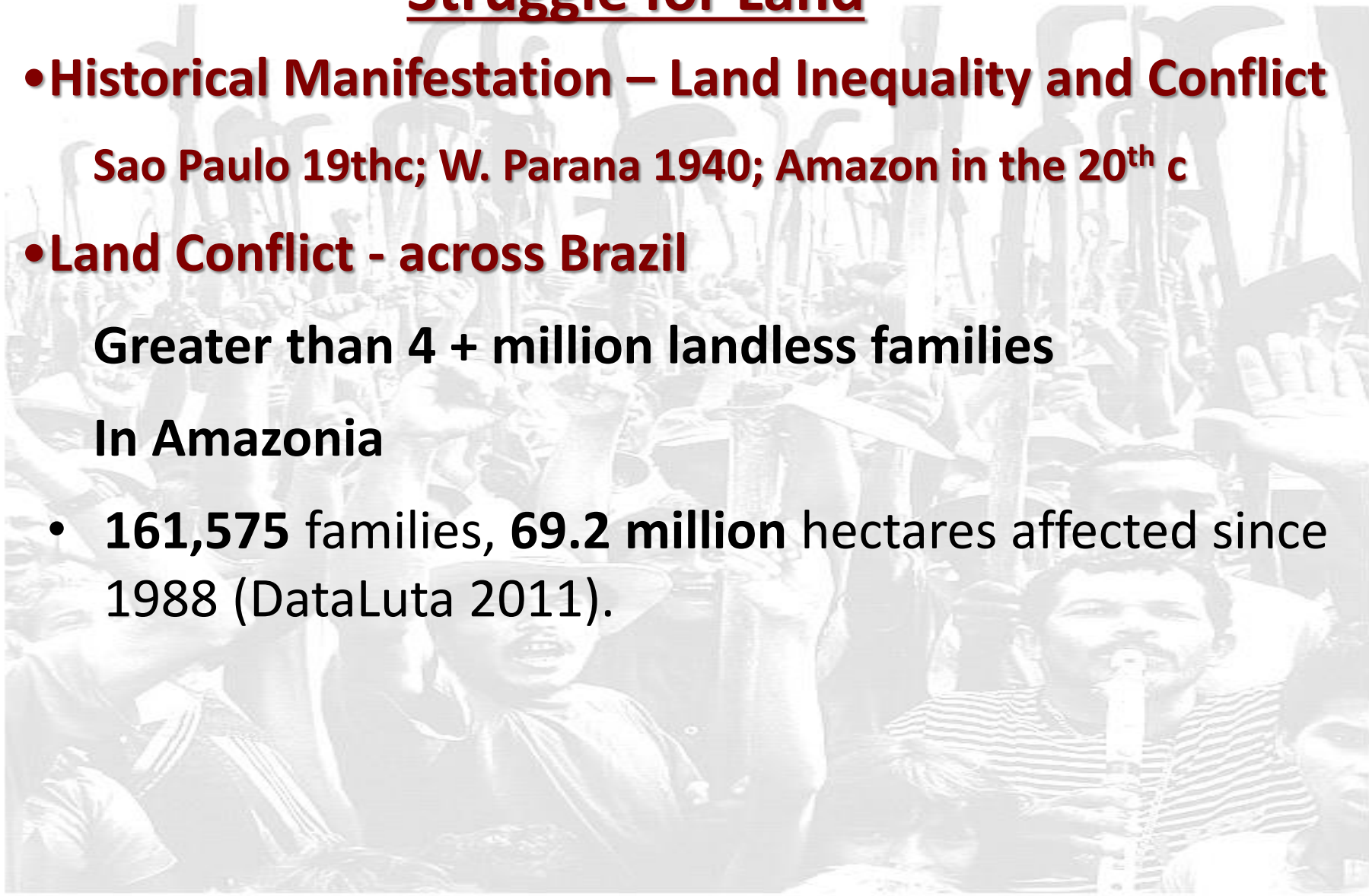
Sao Paulo 19thc; W. Parana 1940; Amazon in the 20<sup>th</sup> c

- **Land Conflict - across Brazil**

Greater than 4 + million landless families

In Amazonia

- **161,575 families, 69.2 million hectares** affected since 1988 (DataLuta 2011).



# Agrarian Reform in Brazil

## 1. State Agrarian Reform (SAR)

- **Agrarian reform laws** – Lei 601 in 1850, 1964, 1988;  
Land appropriation for social purpose  
função social, productive use (1964 land statute, 1988 Constitution)
- **Colonization** - Post WWII – Amazon – PIN 1970s;  
National Institute Colonization & Agrarian Reform (INCRA)  
Remedy land inequality via resettlement
- **Novo Mundo Rural – New Rural World**  
Formalize, informal agrarian settlements  
PA - Settlement Projects  
PAS – Projeto de Assentamento Sustentável  
PAE – Projeto de Assentamento Extrativista  
PAF – Projeto de Assentamento Florestal





Government Inaction→

## 2. Direct Action Land Reform (DALR)

Populist political expression and action to resolve land inequality, outside government process

**Smos** invading and **occupying land** deemed not productive, or in violation of the **social function** clause or some **environmental** or **labor laws** as stipulated by the constitution  
... And by doing so, force the government to follow through on agrarian reform processes.

In Contemporary Amazonia,  
DALR is the precursor to New Rural World Program

# Contemporary Land Conflict Dynamic

- Organized Landless Movement
  - **Pastoral Land Commission - CPT**
  - Rural Workers Syndicate - STRs
  - Federation of Rural Agricultural Workers of Pará and Amapá - FETAGRI
  - **Movement of the Landless Rural Workers - MST**
  - Movement of Workers without Roofs – MTST
  - **Movement of the Struggle for Land - MLT**



- Despite the multitude of movements, the strategy of direct action and ultimate goal are similar.
- Three Phases in the land occupation process

### 1. Mobilization



### 2. Selection of Target Property



### 3. The "Occupation"

- Encampamento – Camp
- Assentamento – Settlement



## The Outcome???

- Violent Land Conflict
  - **1,547 Land Conflict-related deaths 1988-2008;**
- **Amazon region most violent with ~50%**



# Map of Study Region



## ■ Pará – Most Violent

### Land Conflict is Complex

- Rural Landless & Large Landowners
- Military Police, Syndicate leaders, Catholic Church
- Landless movements

### Focus – Opening of Amazon Frontier

- Goals: Integrate the Amazon – Roads; Economic Growth – cattle & mining; alleviate poverty via colonization
- Outcome: Cattle Economy Strong; Population 4 to 24 million; Poverty and Landlessness persist.

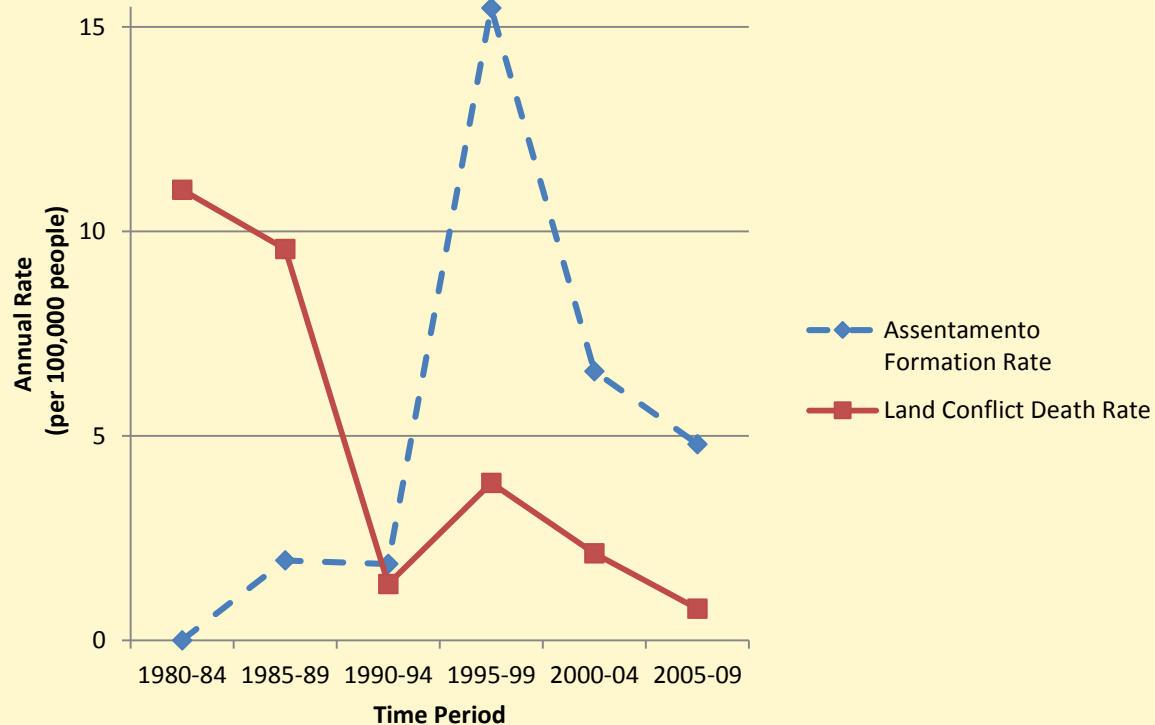
# Contemporary Land Struggle Opening of Amazon Frontier

**Phase 1 - Luta Posseira – pre 1985**

**Homen-Arma-Lote**

**Phase 2 - DALR – post 1985**

■ **Democratic  
Reform**





# **1. Why Land Conflict and Violence?**

**The Political Economy of Land Conflict in the Eastern Brazilian Amazon. 2004. *Annals of the Association of American Geographers* 94(1): 183-206.**

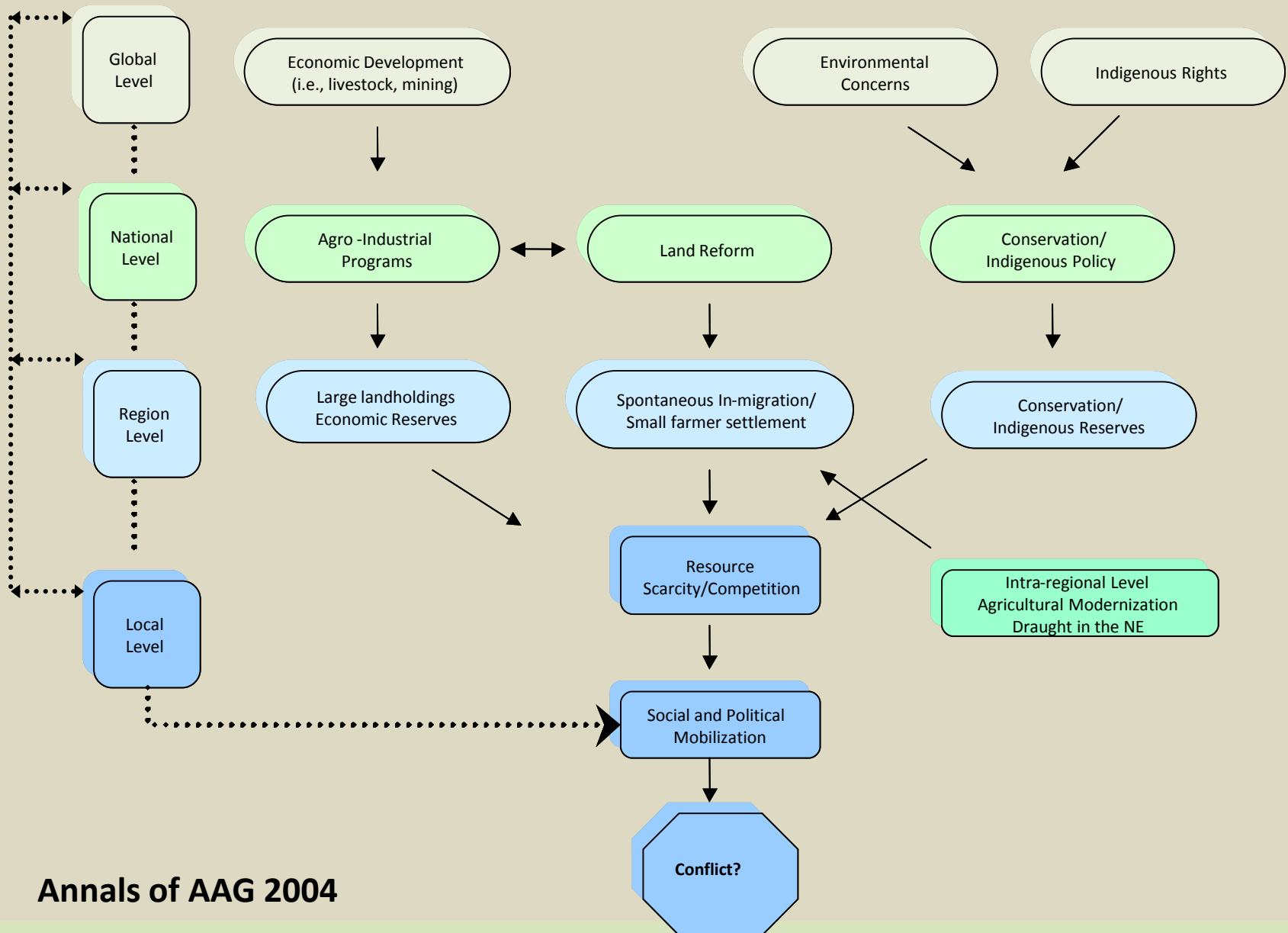
**The Amazon Land War in the South of Pará. 2007. *Annals of the Association of American Geographers*, 97(3): 567–592.**

# Analytical Framework

- Integrates Resource Scarcity and Abundance, which interacted creating conditions ripe for conflict
  - Early discovery of abundant valuable resources
  - Misdistribution of land in other parts of Brazil
  - Relative Land Scarcity
- Building on foundations of Amazonian Frontier literature
  - Institutional failures interacted with social forces and conditions creating land tenure insecurity and resource deprivation
- Situates Land Conflict within a Political Economy Perspective
  - Massey 1984a, 1984b, 1994; Kodras 1997;Cooke 1989; Cox 1997; Swyngedouw 1997

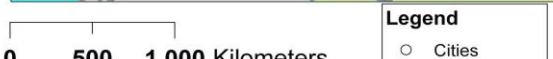
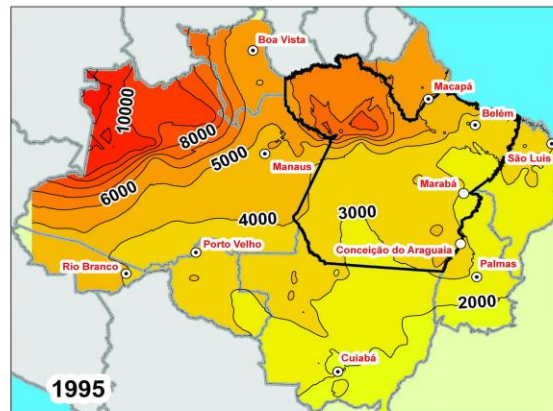
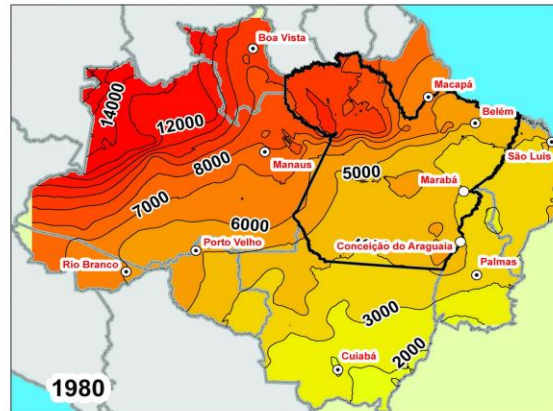
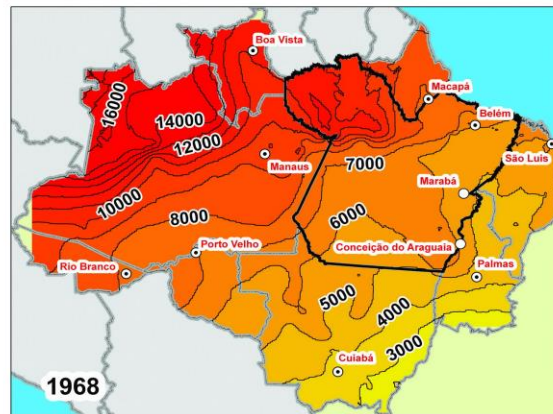


# Conceptual Design 1966-2000

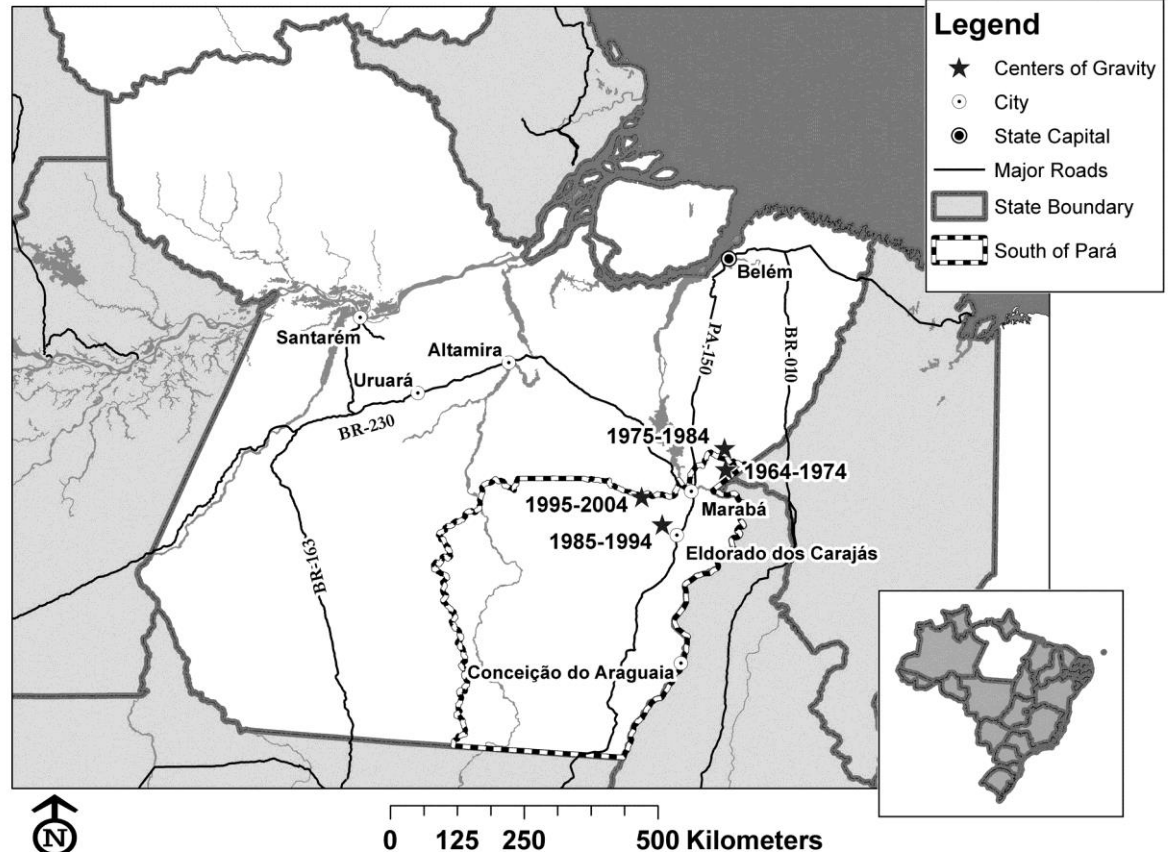


# Amazon Land War

## South of Para, AAG 2007



violence Stationary



# Contentious Politics

- **ENVIRONMENTAL MECHANISMS:**
  - **Relative Land Scarcity**
  - **Brazilian land law**, which in effect institutionalizes ambiguity and condones violence as a means to acquire and protect property rights

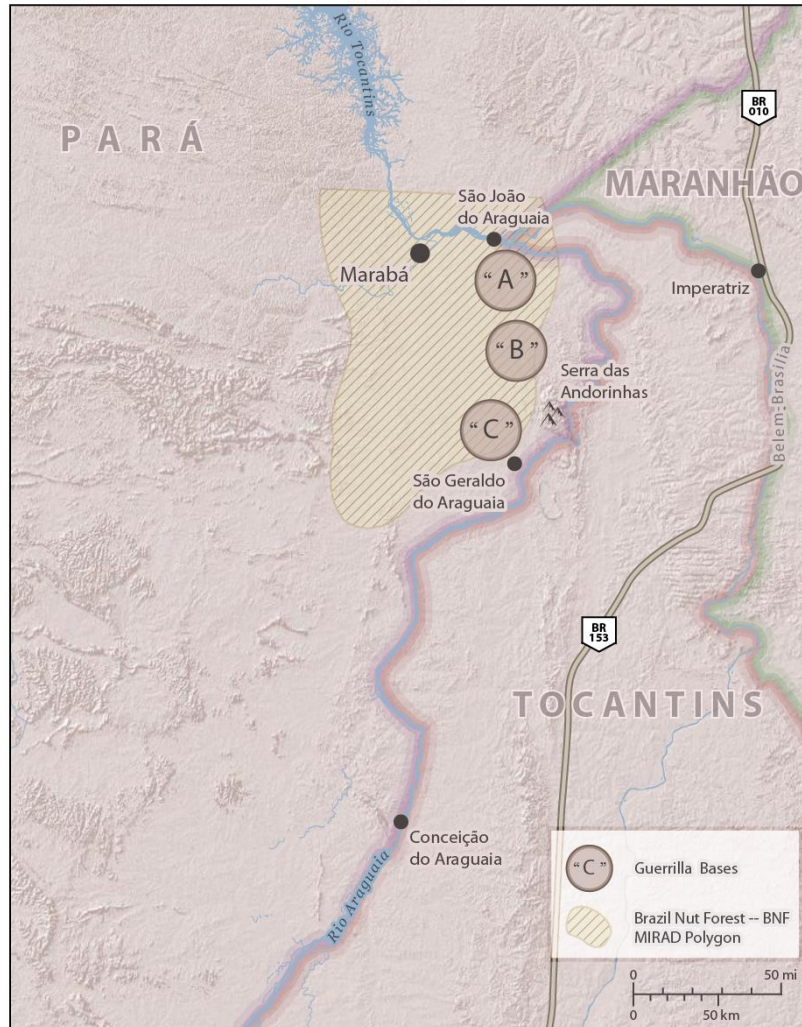


# Amazon Land War

## Luta Posseira - Long History

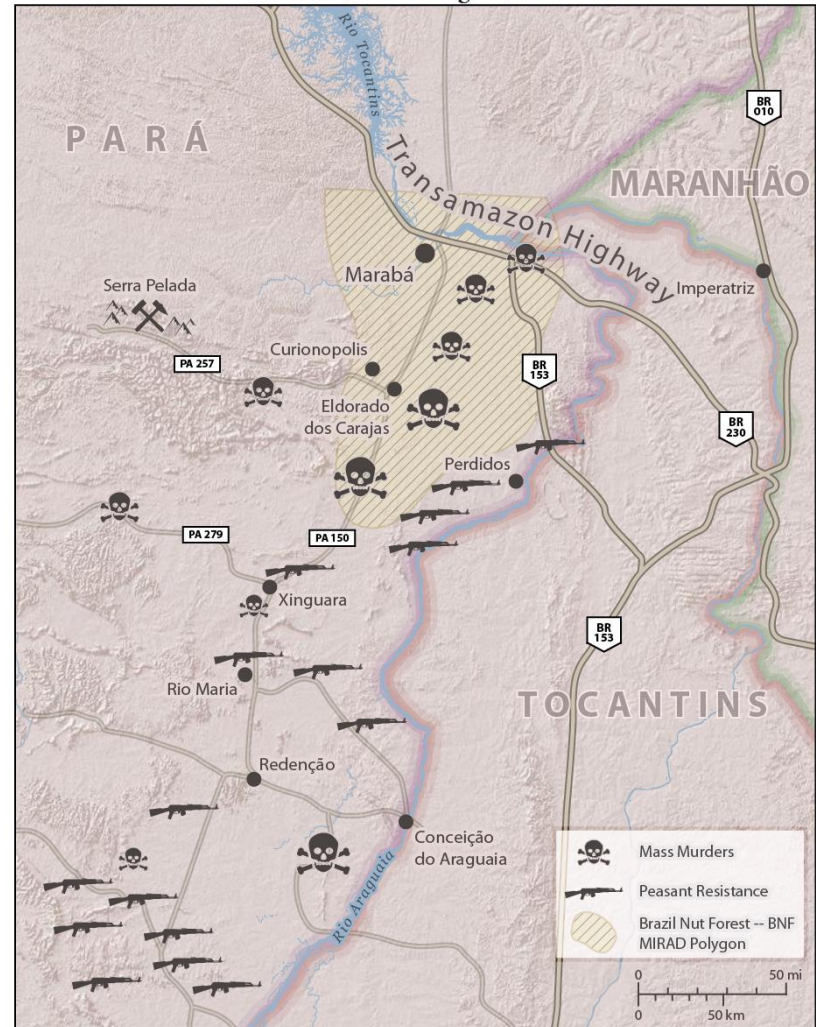
### *The Little War of Araguaia*

1972-1974

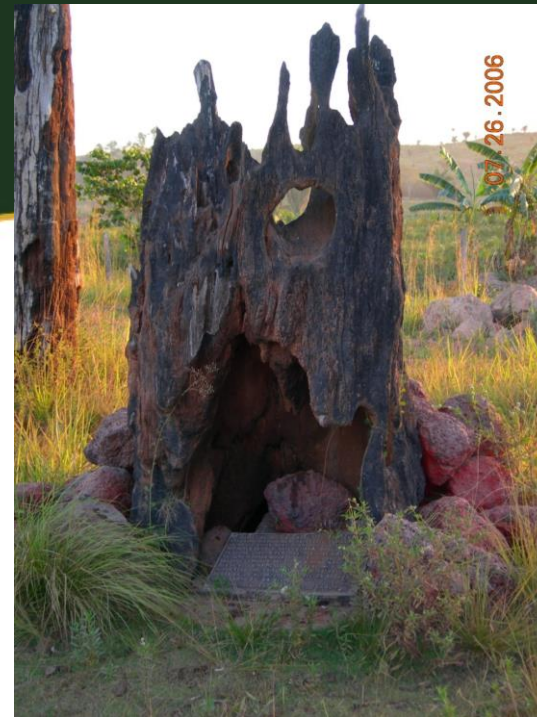


### *The Peasant Struggle and War of the Brazil Nut Groves*

Late 1970s through 1980s



# Culture of violence



- **THE COGNITIVE MECHANISM**

leading to intentional actions comprises perceptions of the region's history and a resulting ontology of violence that assumes material form in murderous conflict.

**Table 4.** Price list for assassinations in \$US 2006

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Posseiros (squatter)	\$83 to \$165
Agente pastoral (pastoral agent)	\$165 to \$826
Advogado (lawyer)	\$826 to \$8,264
Padre (priest)	\$8,264 to \$165,289
Bispo (bishop)	\$16,529 to \$165,289
Políticos (politician)	\$3,260 to \$16,074

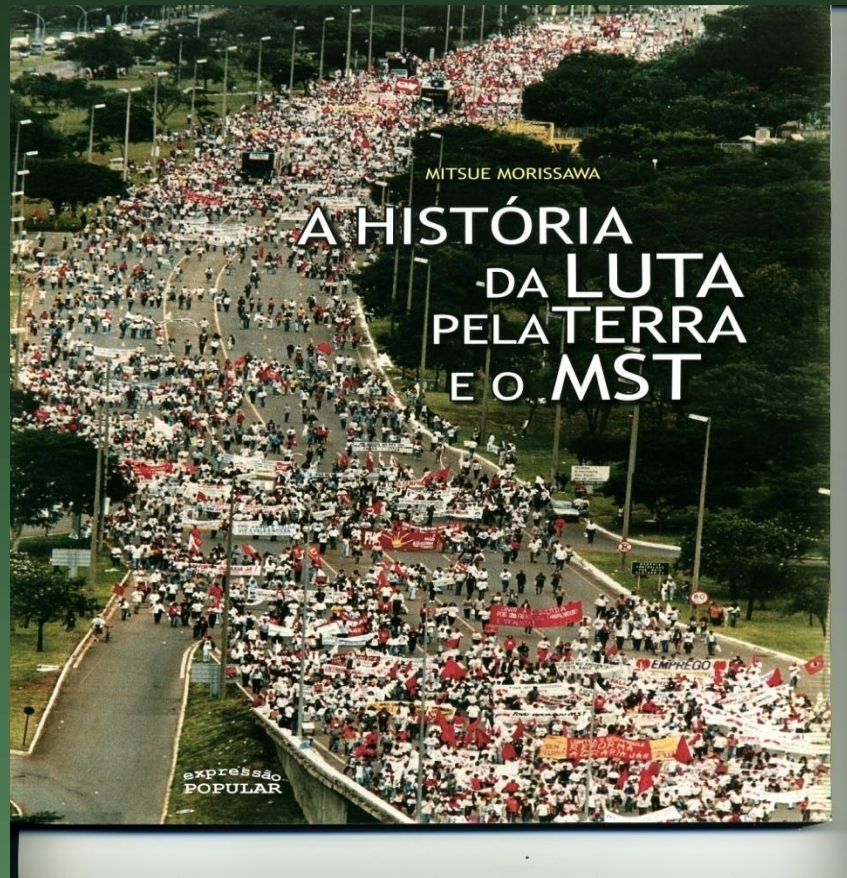
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*Source:* ISTOÉ 1993.

*Note:* Prices adjusted for inflation and converted from \$Cruzeiros to \$Reais and then to U.S. dollars using July 2006 exchange rates.



# Relation Mechanism





## **Part I. Direct Action Land Reform: Social Processes and Development Impacts**

NSF. *Brazil's Direct Action Land Reform: Spatial Strategies and Environmental Effects*. Simmons, Walker, Qi at MSU; Perz at UF 2005-2008.

**Doing it for Themselves: Direct Action Land Reform in the Brazilian Amazon. 2010. *World Development*, 38(3): 429–444.**

**Contentious Land Change in Amazônia's Arc of Deforestation. 2012. *Annals of the Association of American Geographers* 102(1): 103-128.**

# DALR

## Narrative:

1. Exogenous SMO (e.g., MST)

2. State as Adversary

3. Central Strategy

Precipitate Occupation of  
Private Holding pursuant to  
agenda



# Field Research Campaign

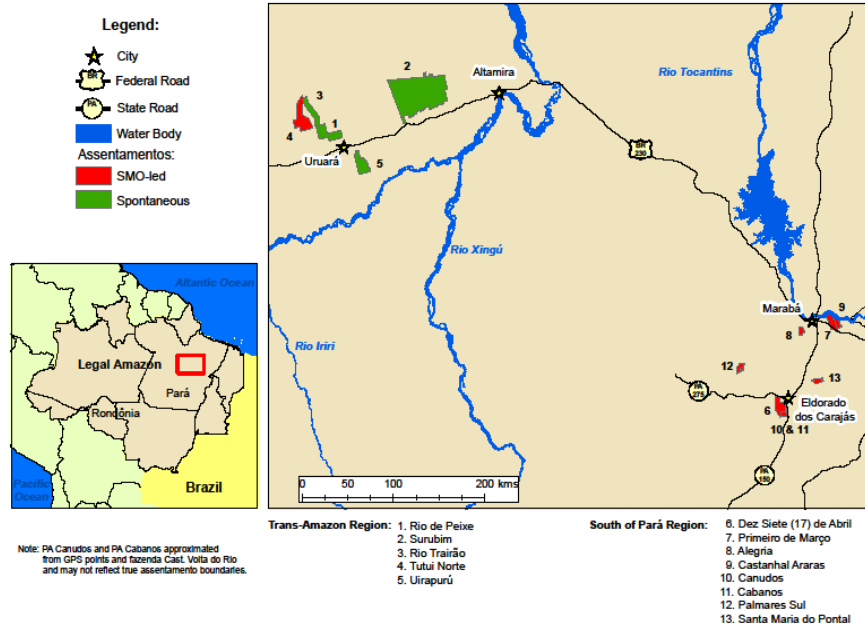
## Key Informant Interviews

Ethnographic approach, chain or snowball sampling design.

National. Regional, local level

Fall 2005, Spring and Fall 2006, Spring 2007

Figure 1a. Assentamento Study Sites in Pará



## 26 DALR Settlements

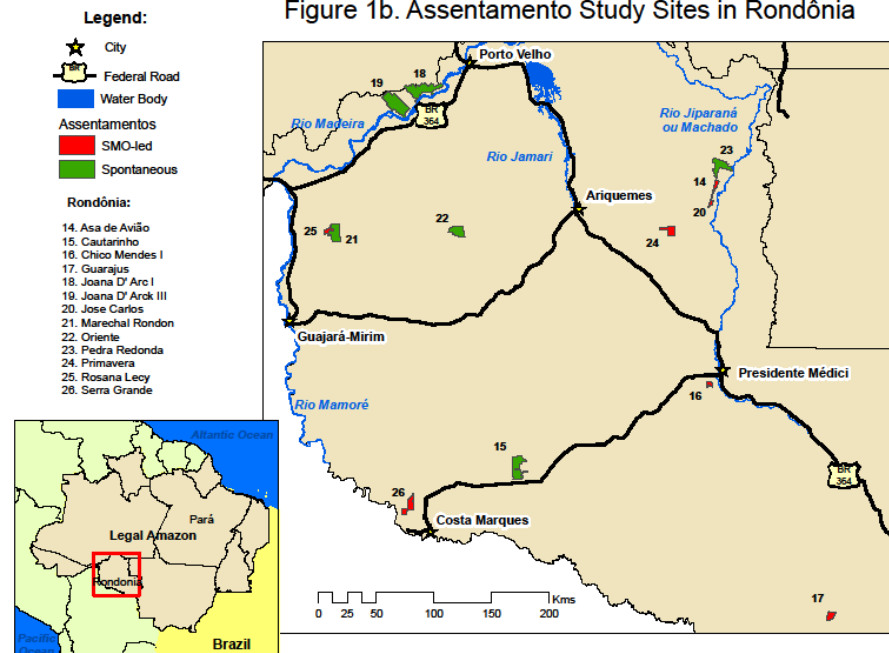
## Household Surveys

Data for Qualitative and quantitative Analysis.

Summer and Fall 2006

751 Household Surveys

Figure 1b. Assentamento Study Sites in Rondônia





# Spontaneous DALR

- ❖ Origin = original Colonization
- ❖ Target = vacant public land
- ❖ Timing & Organization = in accordance with SAR policies





# Objective 1: DALR Organizational Structure and Agency

How well does reality fit with the narrative?

	SMO-Led DALR (The Narrative)	Spontaneous DALR
Initiator	Singular, Exotic SMO (i.e., MST)	Multiple Participants
Role of State (INCRA)	Neutral or Adversarial	Neutral, or Adversarial Or Helpful
Precipitating Event	The Occupation	Settlement over time

## Findings:

### SMO:

#### Singularity → Multiplicity

- Across Amazonia (MST not most important)
- At the Settlement (PA) - (i.e., Primeiro do Março)

#### Exogeneity → Endogeneity

(i.e. Movement of the Peasants of Curumbiara - MCC; Asa de Avião)

### INDIVIDUALS:

#### Multiple Roles

- landless, employee of the State, community leader

## Findings:

### **THE STATE:**

Singularity → **Multiplicity**

- INCRA, Municipal Government; ITERPA

Neutral → Activist

Static → **Dynamic**

- Cycles of Contention – Under FHC versus Lula
- Spaces of Contention – Para versus Rondonia

Bureaucratic Agency

## Findings:

### Precipitating Event → **Contingency**

- DALR action ≠ New settlement (PA).
- Temporal – Geographical
- 17 of April, Massacre at Eldorado de Carajás
  - After 1996, settlements doubled in Brazil, tripled in Pará.

### **Hybridity – Organizational Structure and Agency**

- **Multiple Actors, endogenous leadership, and active State agency.**
  - SMO-led versus Spontaneous DALR not so clear (i.e., PA Tutui 'North)



## Objective 2:

### Development and Environment Impacts

### Mixed Results from Statistical Analyses:

#### SMO-led DALR:

- promotes relative wealth accumulation, in terms of acquisition of durable goods
- farming systems are somewhat “greener” than spontaneous DALR.
  - (+) greater access to credit
  - (-) residents use more fertilizers and pesticides.
  - (-) experience more wildfire.

#### Spontaneous DALR settlers greater tenure security,

- (-) more settlements in primary forest.

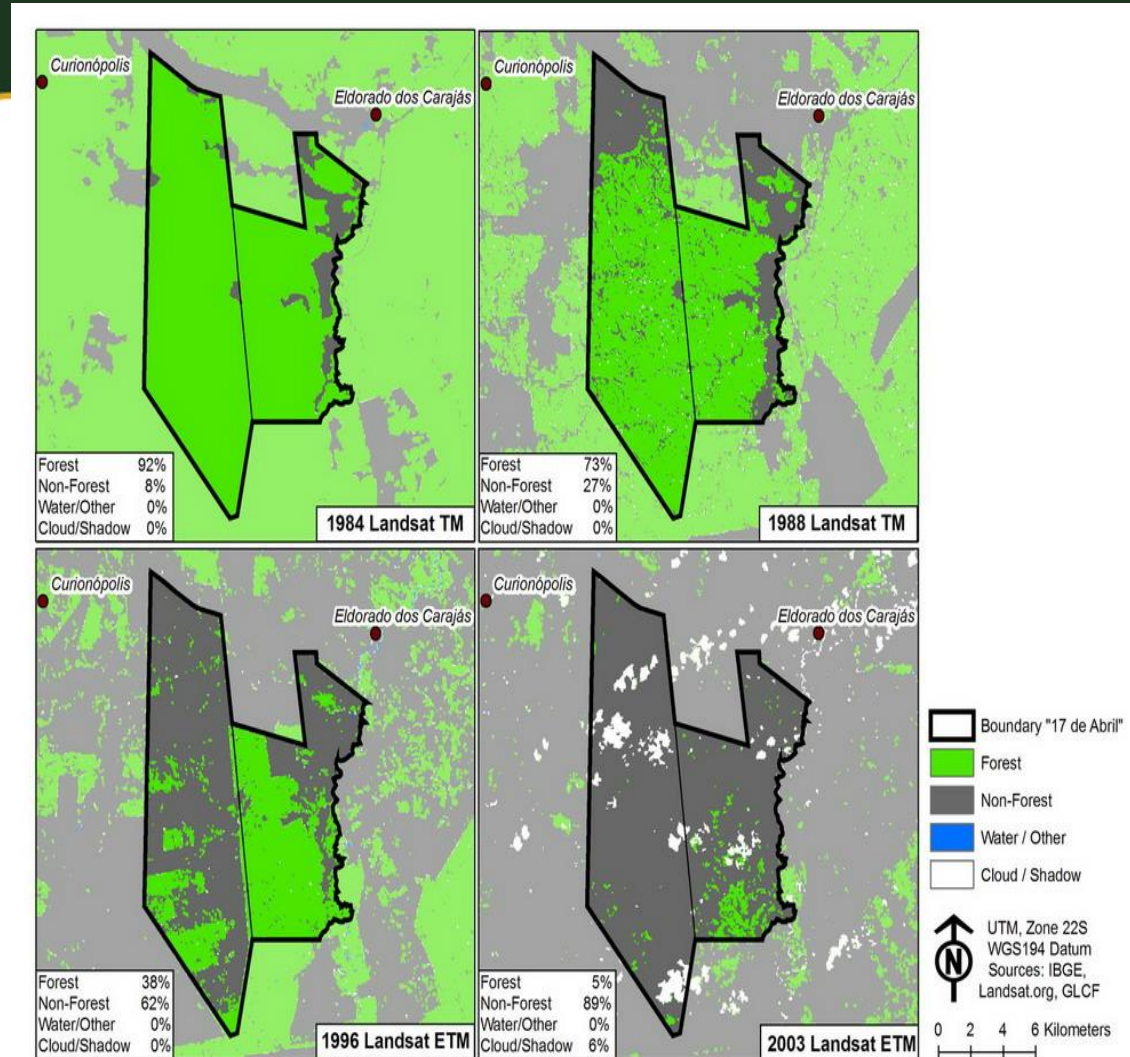
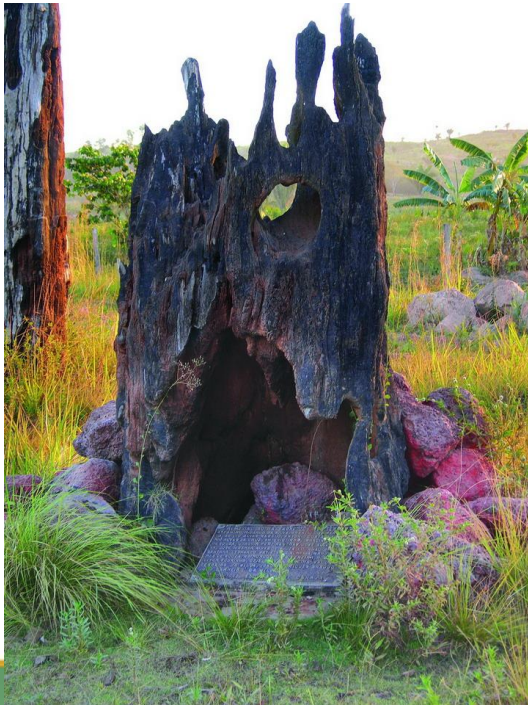
**In general, our research thus far shows:**

DALR in Amazonia is a collection of processes, involving a multiplicity of SMOs, diverse individual actors, and unexpected interactions between the State and civil society that culminate in the creation of a landscape of human settlements.

DALR appears to improve their life circumstances, which probably explains the growth of DALR in terms of families participating and expansion of land occupied.

**Are DALR processes and the PAs sustainable, today and in the future?**

# DALR may be effective in improving livelihoods, but at what cost?





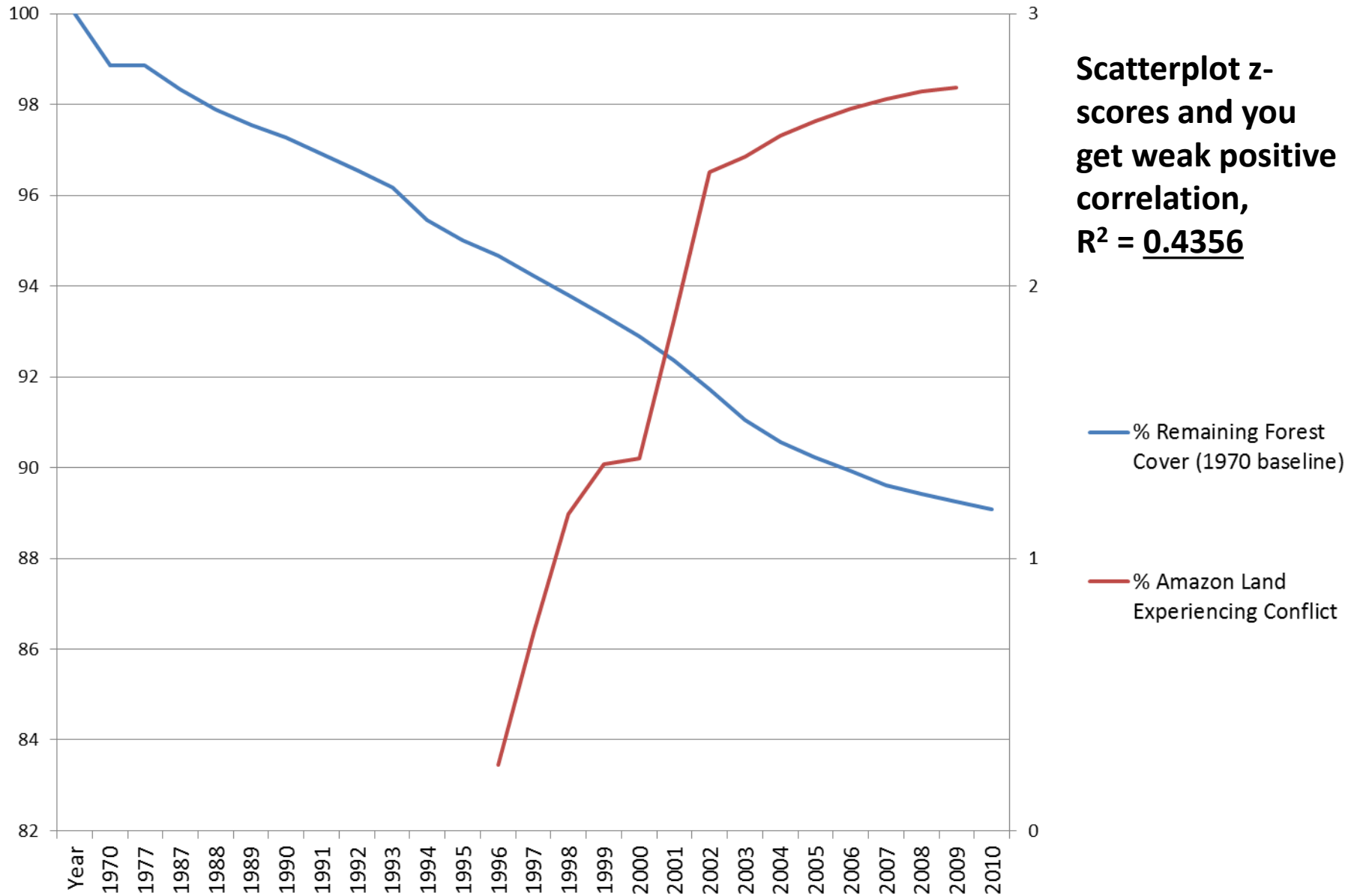
# Part II. Contentious Land Change: DALR Processes and Land Change

Geography and Regional Science Program of the National Science Foundation. *Contentious Land Change in the Eastern Amazon*. Simmons, C. S. Aldrich, S., Arima, E., Walker, R. T. 2012-2015.

## Driver of Land Cover Change

1. **Infrastructure** (roads)
2. **Logging**
3. **Small farmers**
4. **Pasture for Ranching** → 80% of deforestation
5. **Direct Action Land Reform – Land Conflict?**

## A Link Between Deforestation and Land Conflict?





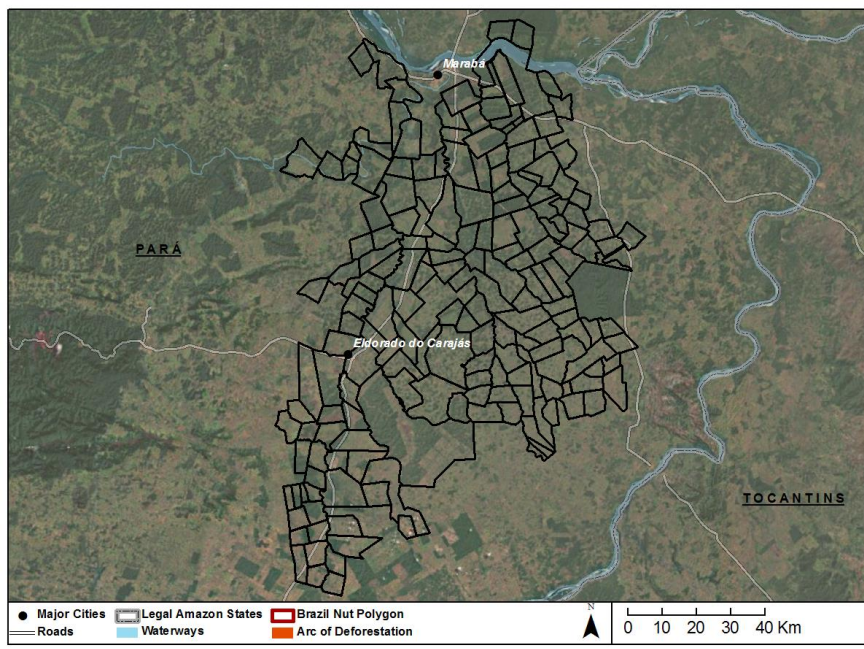
# Brazilnut Polygon in Southeastern Pará

## Extractive Economy

- Rubber
- ❖ Brazilnut

## Amazon Development Gateway

- ❖ Global Cattle Supply



## State Aforamento System

- 190 properties
- 4000-5000 ha

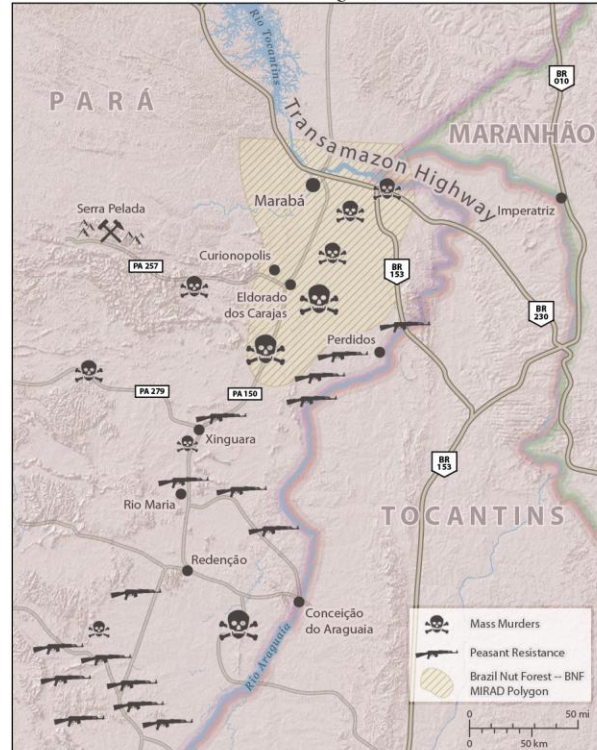
# History of Violence

- Little War of Araguaia
- Luta Posseira
- War of the Brazilnut Groves
- DALR

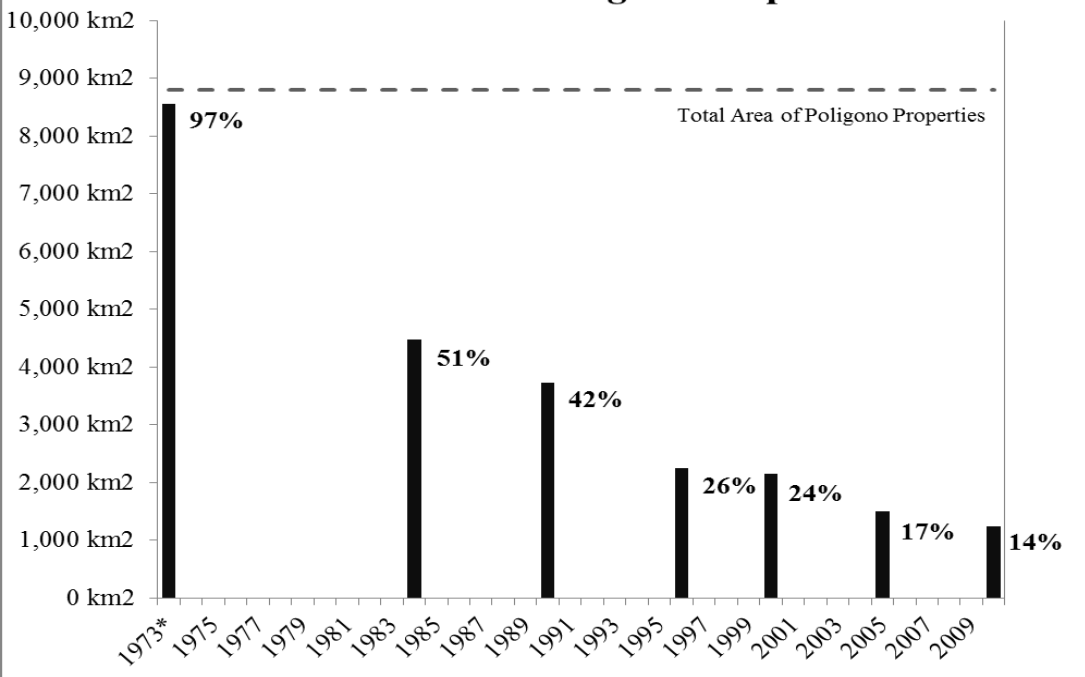
The Little War of Araguaia  
1972-1974



The Peasant Struggle and War of the Brazil Nut Groves  
Late 1970s through 1980s



Total Forest Area of *Poligono* Properties



## Deforestation

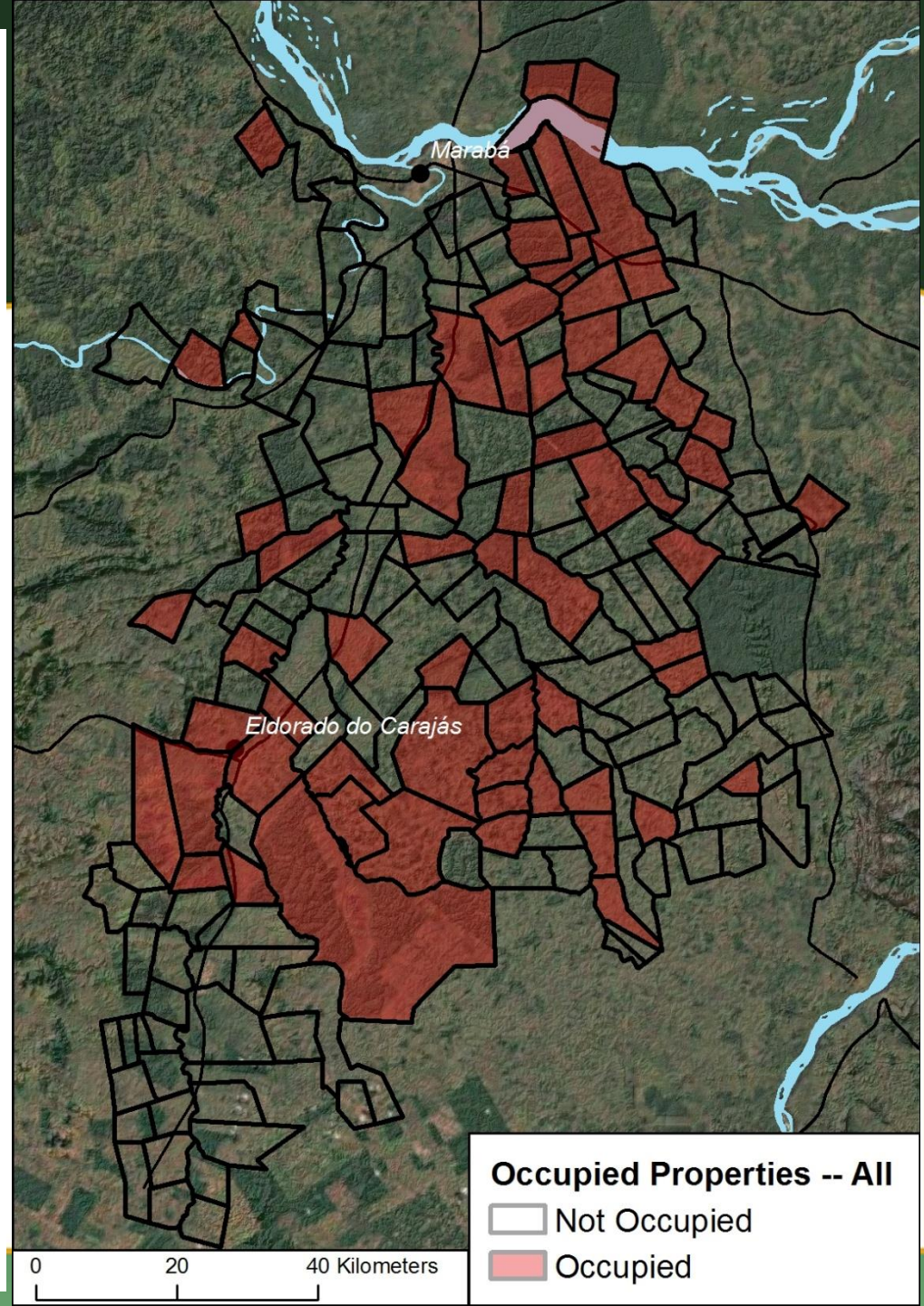
- 97% 1973
- 14% Today



# Brazil Nut Polygon South of Pará

1980 – 2003:

- **1800** conflict events.
- 36% of properties occupied, 34% expropriated for Agrarian Reform



# Data Collection – Recreate Occupation Characteristics

- **Newspaper archive:**

- More than 3,700 news accounts from 3 local newspapers

- **Remote Sensing:**

Forest cover Change



- **Interviews:**

- Ranchers, SMO leaders, SMO members, Government Agents (also academic literature review)



# Land Change Science – unitary land manager pursuing Agronomic Interests.

In CLC,  
Multiple land managers on one lot...who is responsible for deforestation and why?



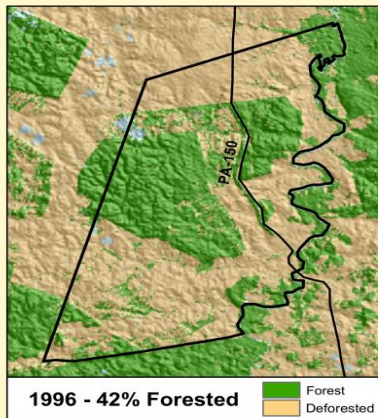
**Shifts of property control and land change due to land conflict in southeastern Pará.**  
**DALR = Direct Action Land Reform.**



# “Uncertainty increases deforestation”

## The story of *“Bala do Sul”* Ranch.

But... this is just  
anecdote, right?

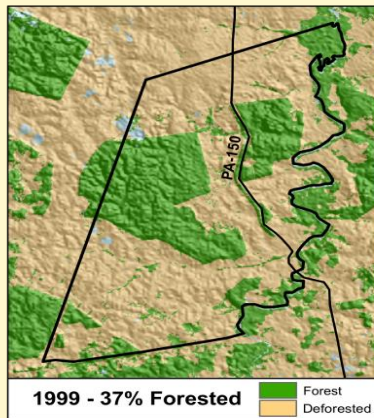


### **Smallholder Actions:**

Property Destruction - 2  
Non-Lethal Violence - 0  
Lethal Violence - 0  
Occupation - 0  
Protest - 2

### **Largeholder Actions:**

Property Destruction - 0  
Non-Lethal Violence - 1  
Lethal Violence - 3  
Eviction - 1  
Legal Action - 2

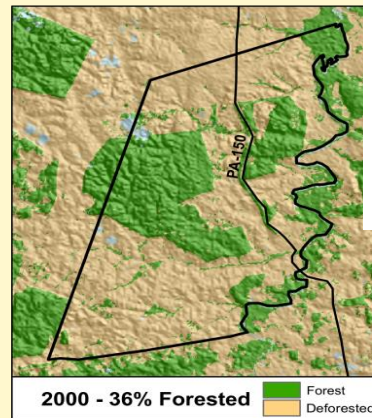


### **Smallholder Actions:**

Property Destruction - 5  
Non-Lethal Violence - 4  
Lethal Violence - 1  
Occupation - 5  
Protest - 7

### **Largeholder Actions:**

Property Destruction - 2  
Non-Lethal Violence - 3  
Lethal Violence - 0  
Eviction - 2  
Legal Action - 6

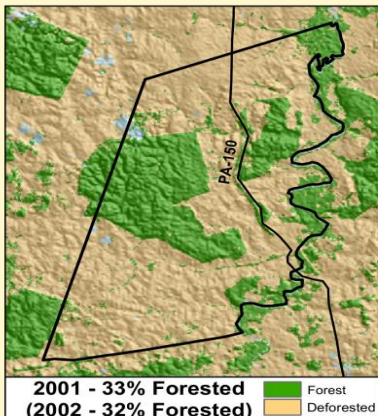


### **Smallholder Actions:**

Property Destruction - 3  
Non-Lethal Violence - 1  
Lethal Violence - 0  
Occupation - 1  
Protest - 2

### **Largeholder Actions:**

Property Destruction - 0  
Non-Lethal Violence - 0  
Lethal Violence - 0  
Eviction - 1  
Legal Action - 4

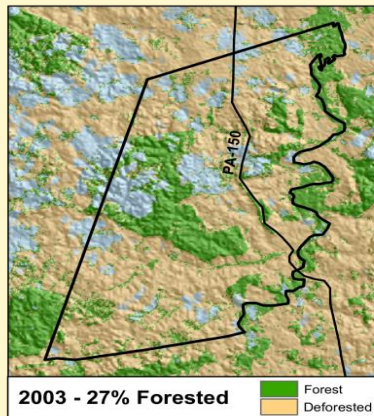


### **Smallholder Actions:**

Property Destruction - 3  
Non-Lethal Violence - 4  
Lethal Violence - 0  
Occupation - 0  
Protest - 2

### **Largeholder Actions:**

Property Destruction - 0  
Non-Lethal Violence - 0  
Lethal Violence - 0  
Eviction - 0  
Legal Action - 4



### **Smallholder Actions:**

Property Destruction - 2  
Non-Lethal Violence - 1  
Lethal Violence - 0  
Occupation - 0  
Protest - 1

### **Largeholder Actions:**

Property Destruction - 0  
Non-Lethal Violence - 0  
Lethal Violence - 0  
Eviction - 0  
Legal Action - 1

### **Overall Total, Smallholder Actions (1984-2004):**

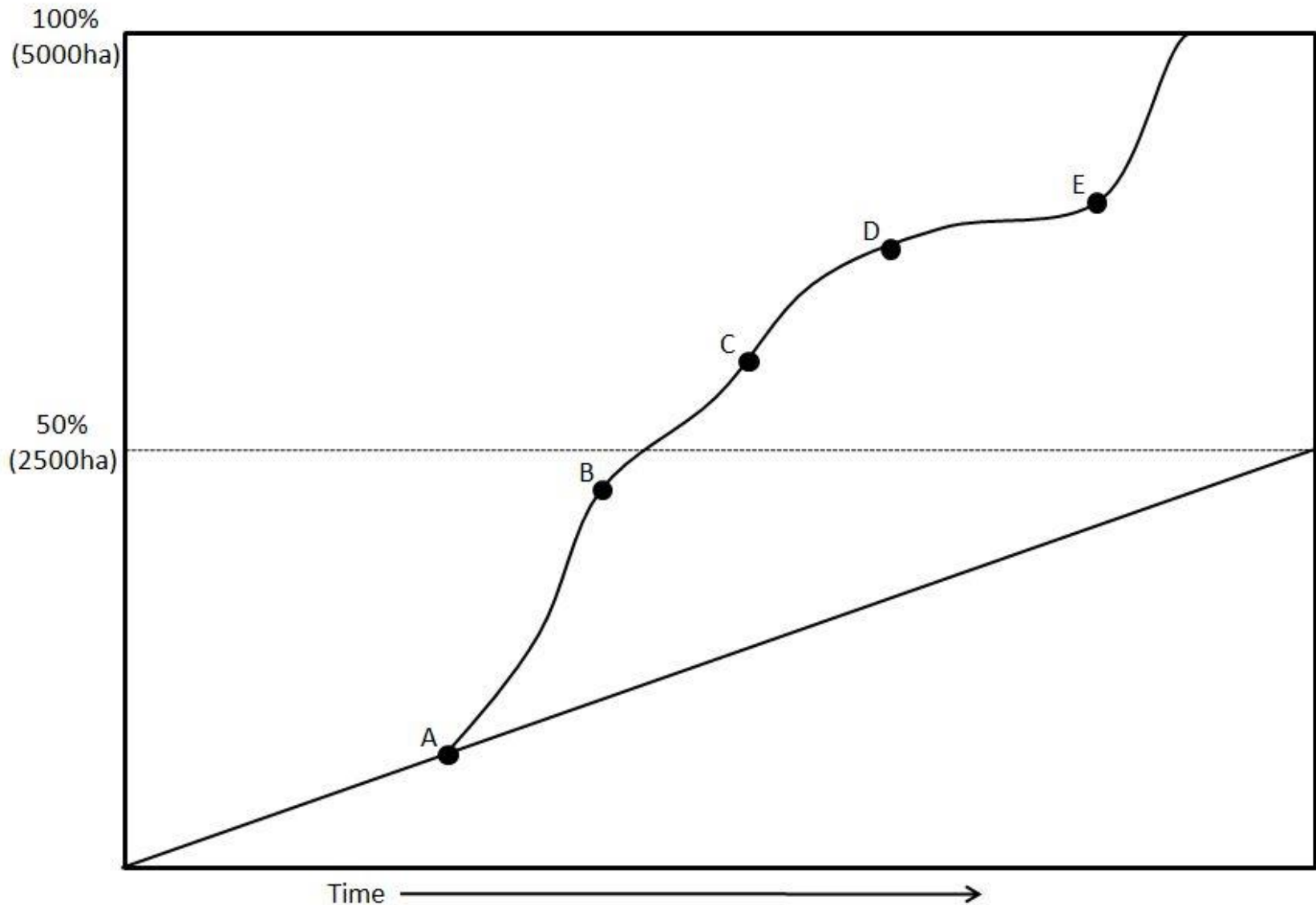
Property Destruction - 15  
Non-Lethal Violence - 10  
Lethal Violence - 1  
Occupation - 6  
Protest - 14

### **Overall Total, Largeholder Actions (1984-2004):**

Property Destruction - 2  
Non-Lethal Violence - 4  
Lethal Violence - 3  
Eviction - 4  
Legal Action - 17

Scale for each display is 1:173,000.  
Cloud cover is standardized for  
each year until 2003.

# Agronomic LC or C-LC



## Difference of Means Test on Hectares of Forest Change between 1980 and 2003

	Mean (Standard Deviation)	Standard Error
Contentious Properties ( $n = 79$ )	-3124.481 (2865.015)	322.3394
Properties with No Reported Contention ( $n = 101$ )	-1891.485 (1579.443)	157.1595
Combined ( $n = 180$ )	-2432.633 (2312.342)	172.3518
Difference	1232.995***	358.6109
*** - two-sample, unequal variances t-test, significant at 1% level		

**Contentious Land Change in Amazônia's Arc of Deforestation. 2012. *Annals of the Association of American Geographers* 102(1): 103-128.**

# Findings

- ❖ Deforestation increased on properties targeted for DALR supporting C-LC
  - Contention increases deforestation
  - On properties still under private ownership (non-PAs), DALR was not significant contributor to deforestation.
  - Supported by spatial regression models



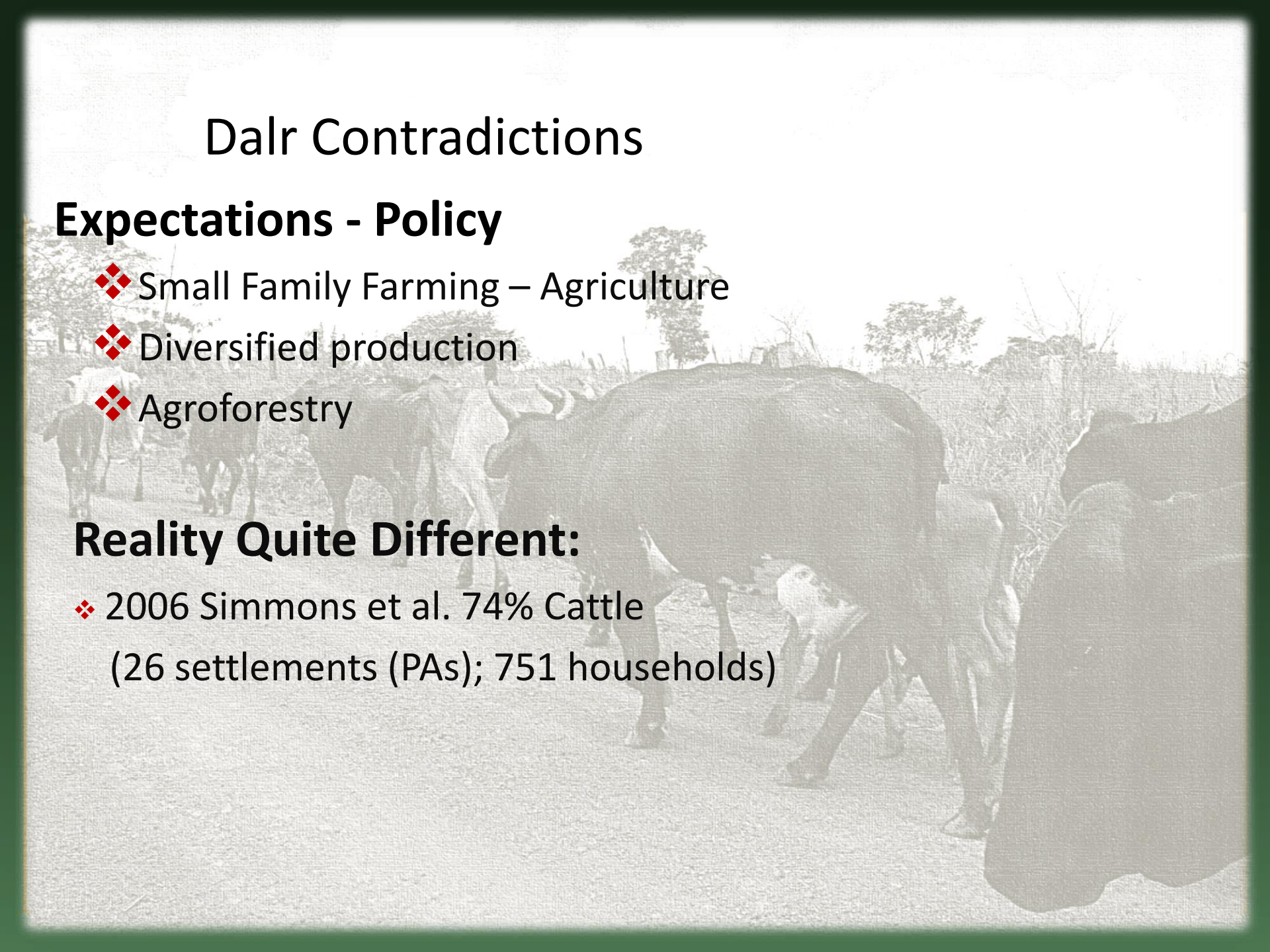
# Dalr Contradictions

## Expectations - Policy

- ❖ Small Family Farming – Agriculture
- ❖ Diversified production
- ❖ Agroforestry

## Reality Quite Different:

- ❖ 2006 Simmons et al. 74% Cattle  
(26 settlements (PAs); 751 households)



DALR effective in improving livelihoods, but at what cost?

DALR is complex, understanding processes at work important for effective policy.

Millions of Brazilians interpret the world and their place in it through the optic of the DALR struggles they have endured, and the leaders who have inspired their efforts.

Thus, SMO-led DALR, and DALR in general, must be recognized as a preeminent post-development phenomenon, a social welfare quest with its own philosophy, culture, and agenda, and with minimal governmental input.

Because the Brazilian state never managed to create a life of dignity for the rural poor, it must now follow the lead of those who are doing it for themselves.