

THE DIFFERENCES BETWEEN URBAN PLANNING CONCEPTIONS AND PRACTICES IN AMAZON: HOW MUCH DO ECONOMIC CYCLES MATTER?

Economic cycles

- Colonial mercantile economy based on natural resources, and agriculture commodities: cotton, coffee, up to “the big depression”
 - In the 1930’s: industrialization effort centred in Sao Paulo after coffee crisis. High internal migration to Sao Paulo
 - ECLAC development models of imports substitution and protectionism and decentralization of industry to promote equal territorial development (Prebisch and Furtado) would be established by central Government, implemented with local elites governance
 - macrocephaly of Sao Paulo, *red queen effect*
 - 1970’s first oil crisis
 - 1980’s Latin America’s debt crisis
 - 1990’s Washington Consensus
 - 2002 onwards Lula/Dilma new development model inspired in ECLAC old models: fastest growing cities are commodities, energy and oil driven
- each economic crisis brings more people into the cities, slums

Amazon Occupation: land use change

- One of the major drivers of deforestation are roads and colonization projects.
- The land appropriation is not based on productivity but owning land for speculation and future use.
- Deforestation follows a cycle that starts with logging, cattle and establishment of villages/cities
- Public policies promote immigration but urban planning does not accomplish to provide sufficient infra-structure to incomers

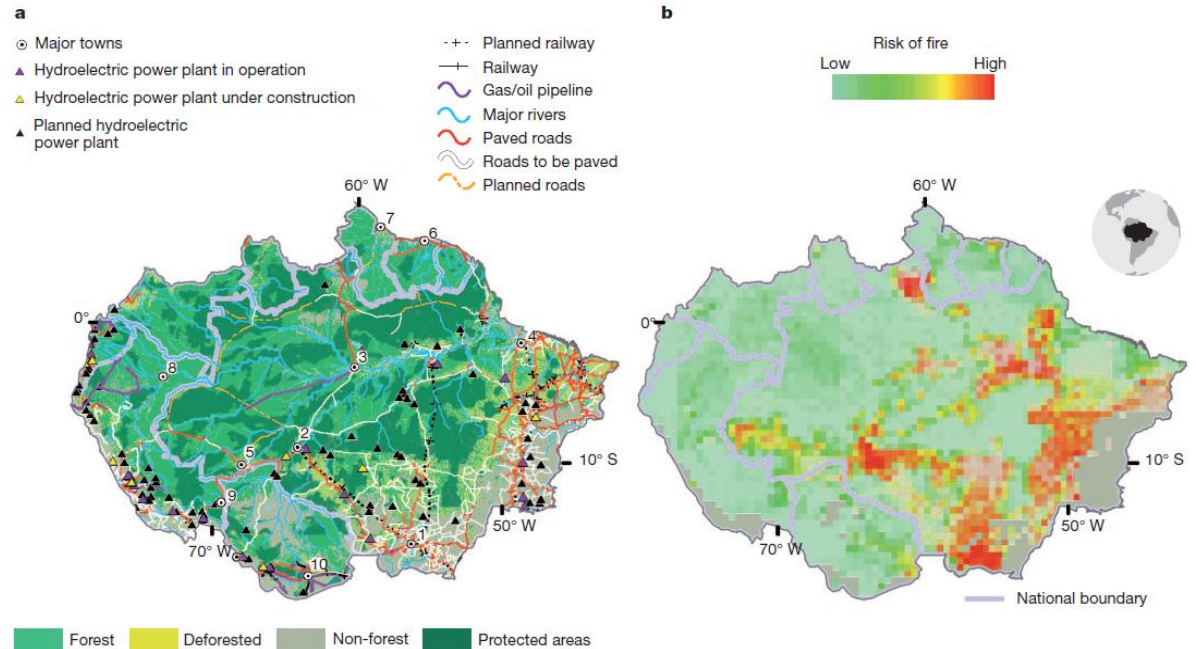


Figure 4 | The Amazon basin today and future fire risks. a, Protected areas and major planned infrastructure. b, The risk of fire by 2050⁹⁶ under business-as-usual deforestation and climate change scenarios³⁴. The numbers in

a indicate the following cities: 1, Cuiabá; 2, Porto Velho; 3, Manaus; 4, Belém; 5, Rio Branco; 6, Paramaribo; 7, Georgetown; 8, Iquitos; 9, Puerto Maldonado; 10, Santa Cruz de la Sierra.

Development Plans

- ❑ Amazon has an area of 5.217.423 km², 61% of Brazilian territory
- ❑ From 1946 to 1953, Plano de Valorização da Amazônia: SPEVEA support the diversification of the agricultural activity to supply the rest of Brazil
- ❑ 1960' 70's PIN, PROTERRA and II PDA: roads and land distribution
- ❑ 1980's POLAMAZONIA: 15 poles of development and PGC Carajás for mining

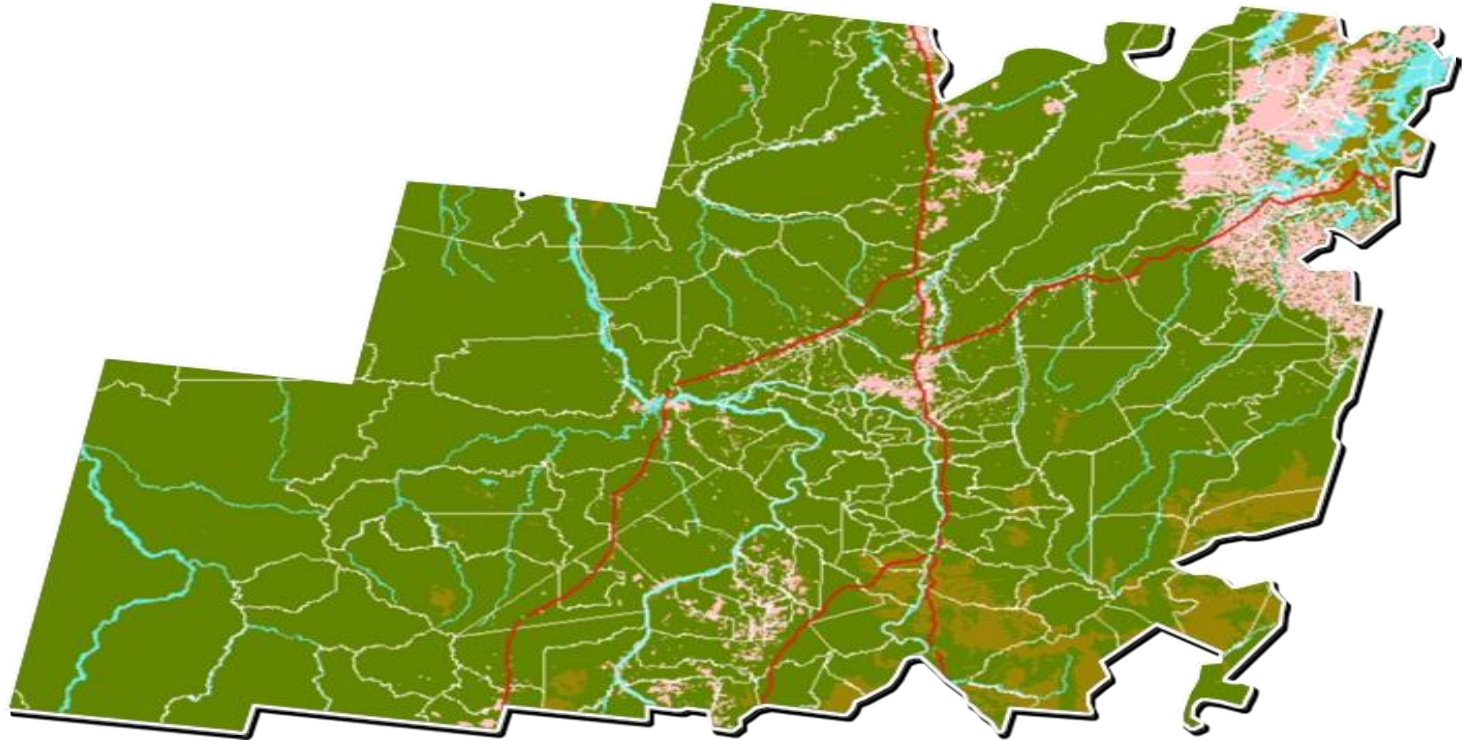


The effects of PGC Carajás a mining corridor through the forest

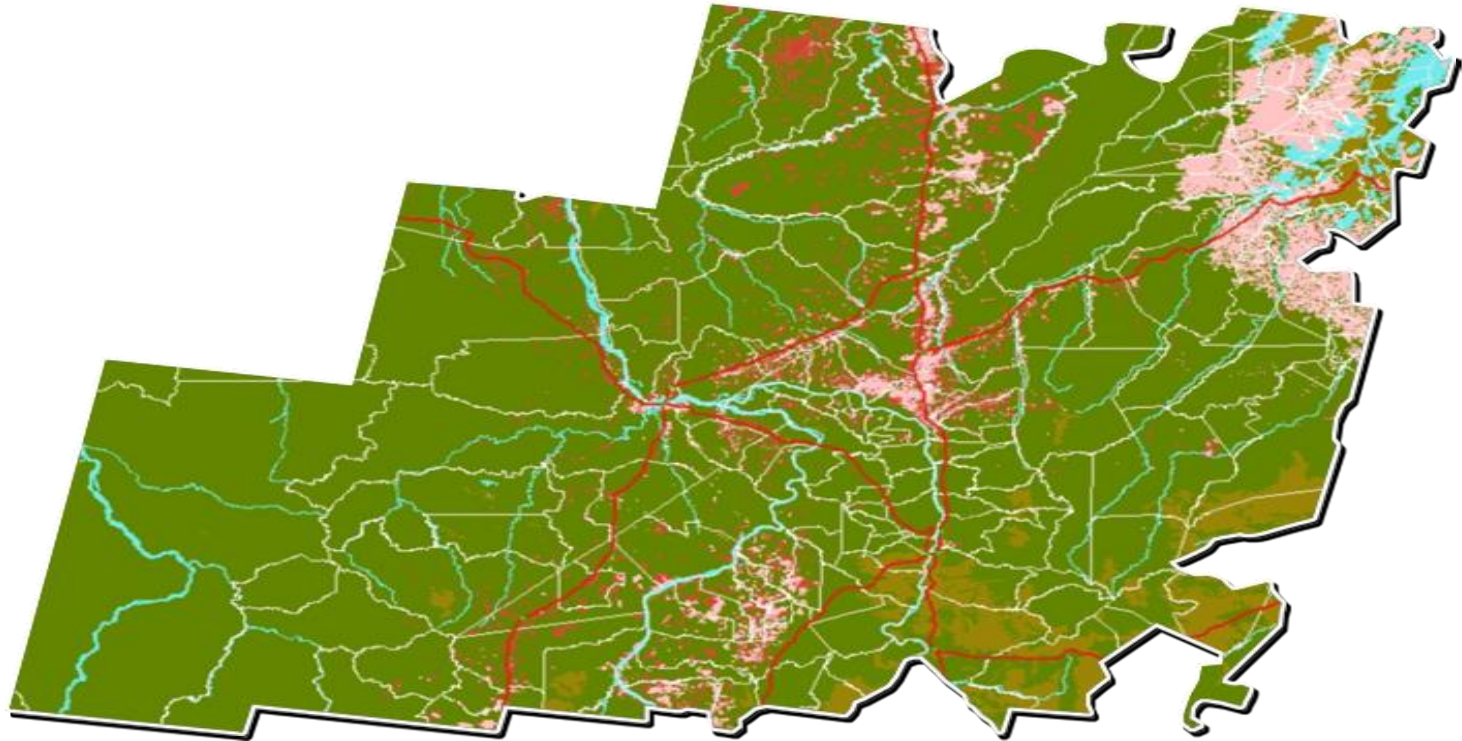
- 465.000 Km²
- 9,0 % of Amazon
- Inhabitants: 5 million



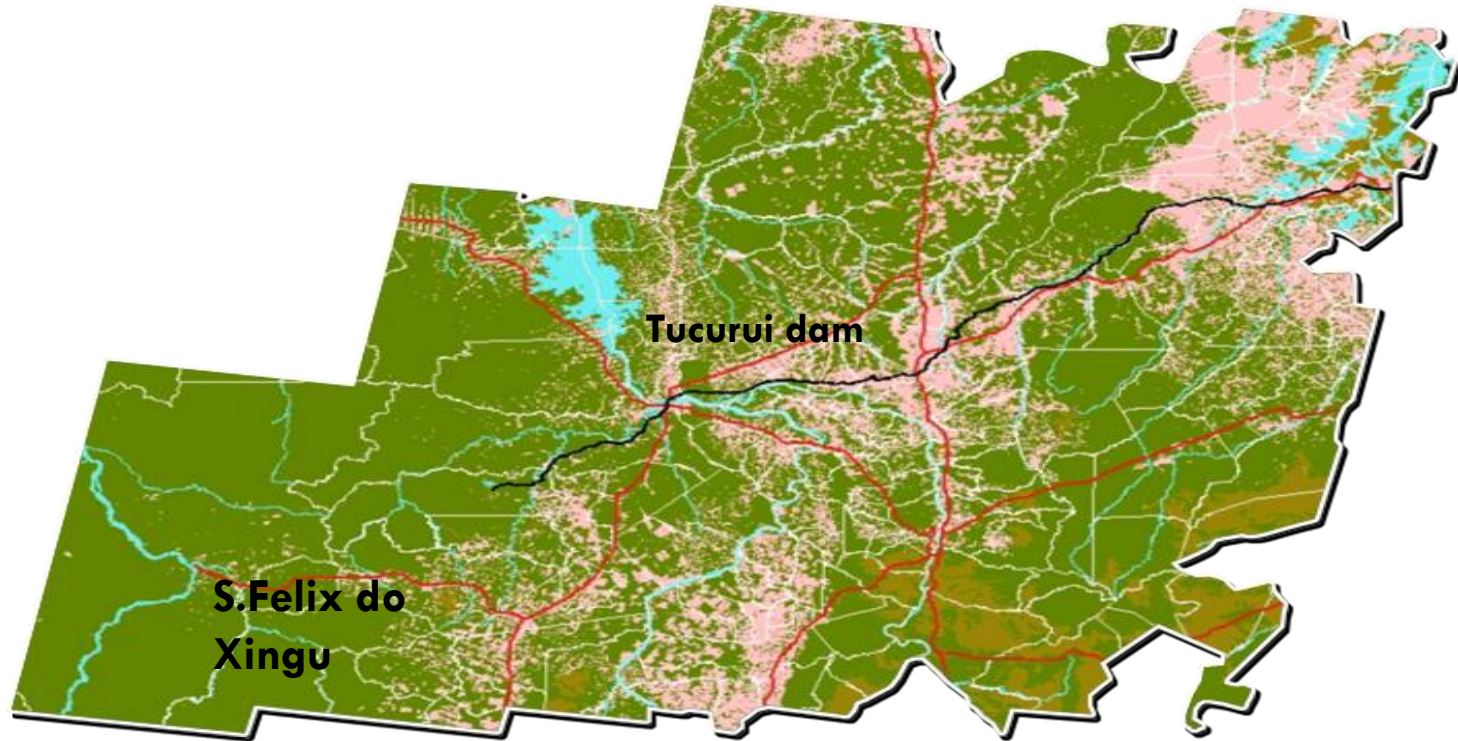
1975



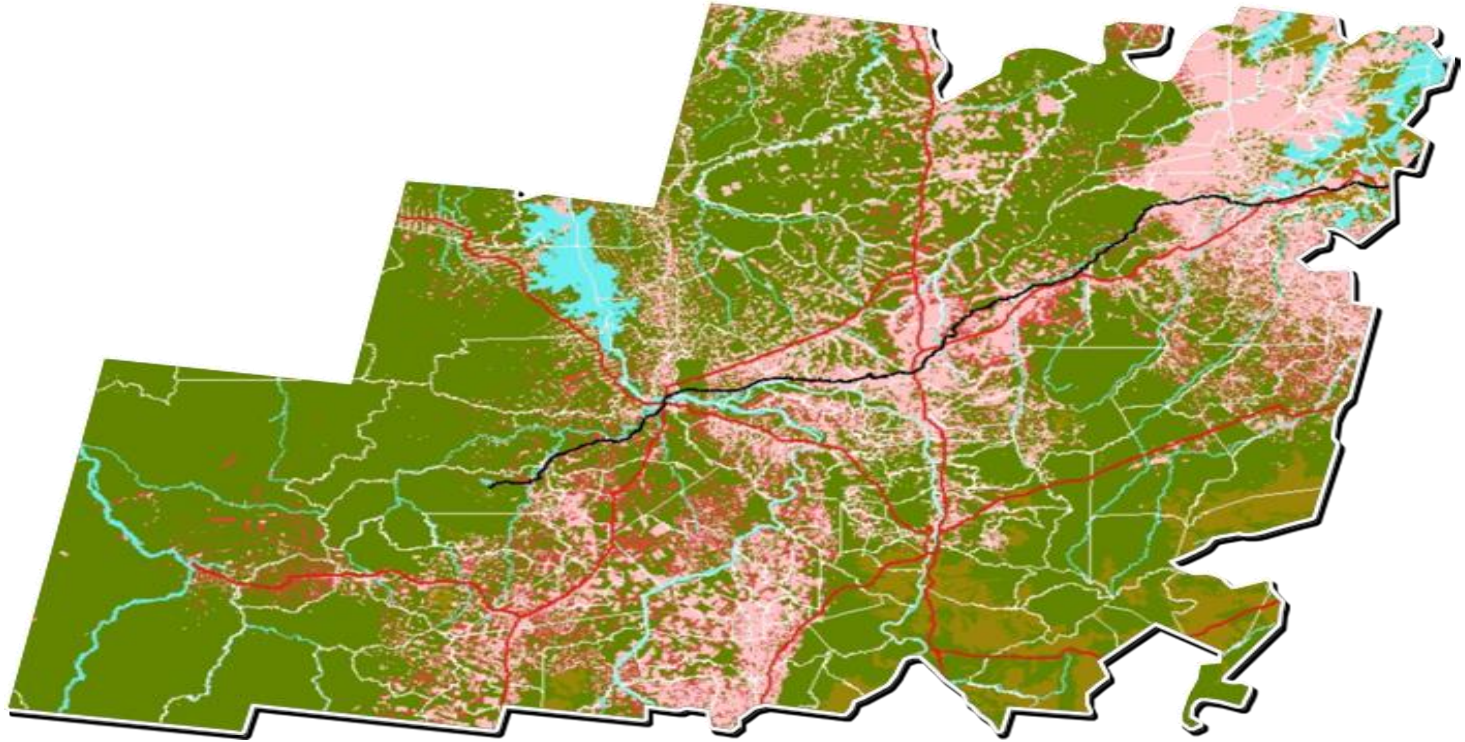
1978



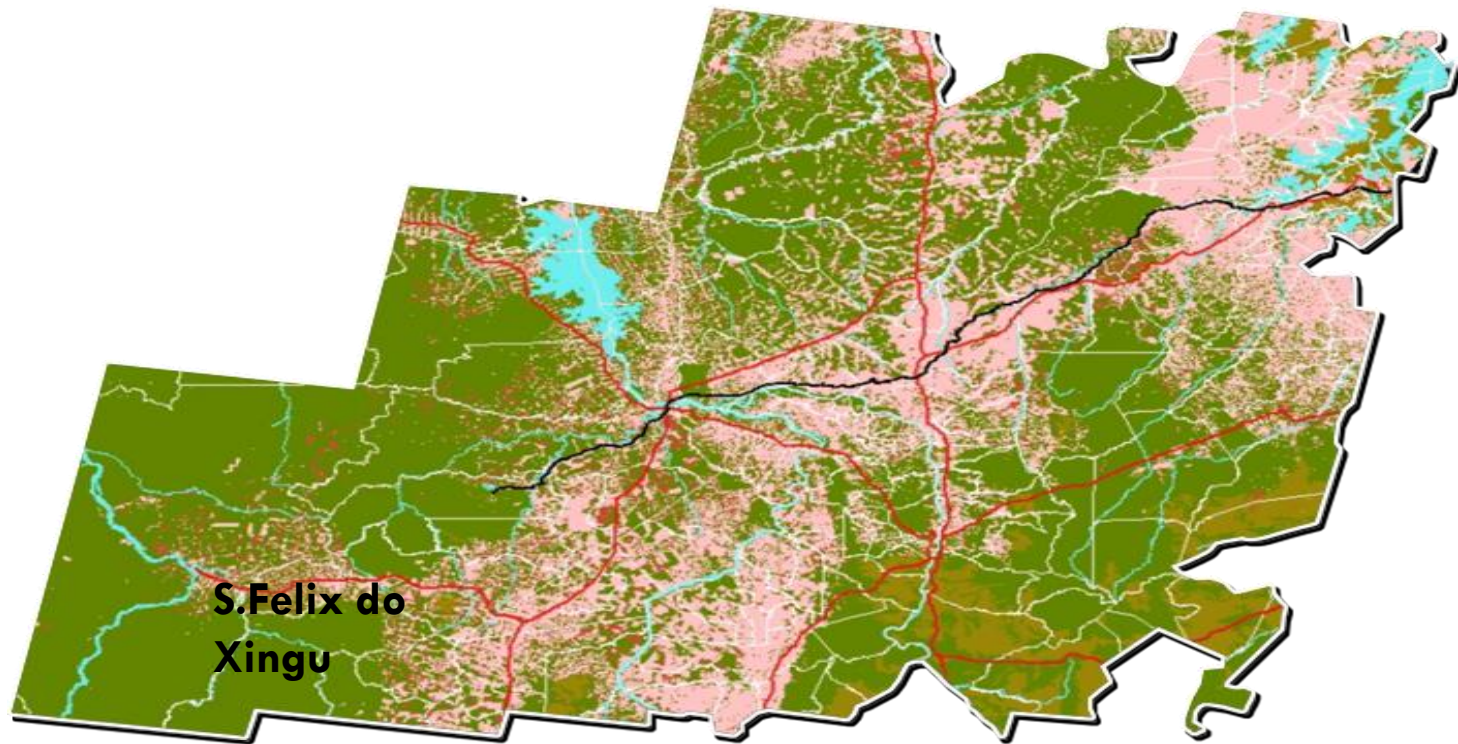
1985



1990



1995

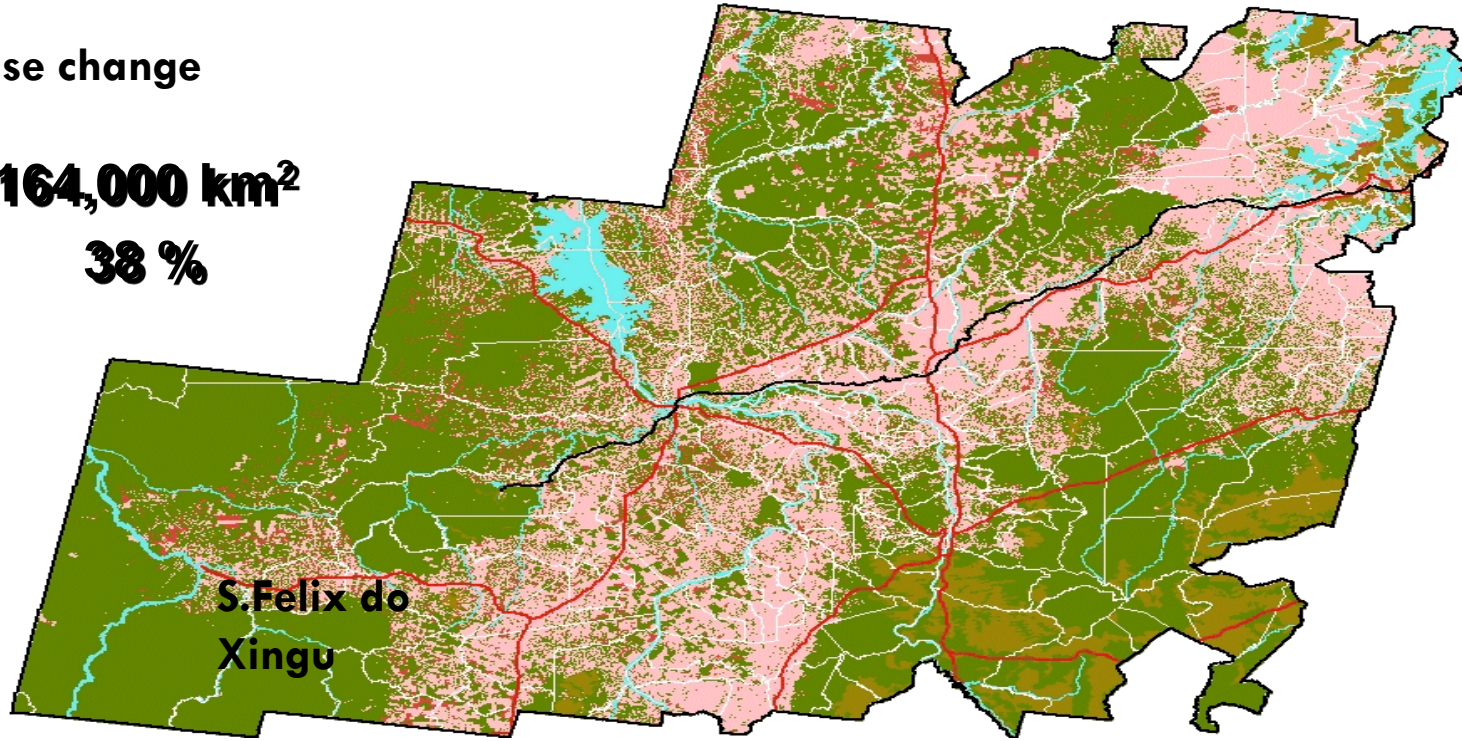


2000

Land use change

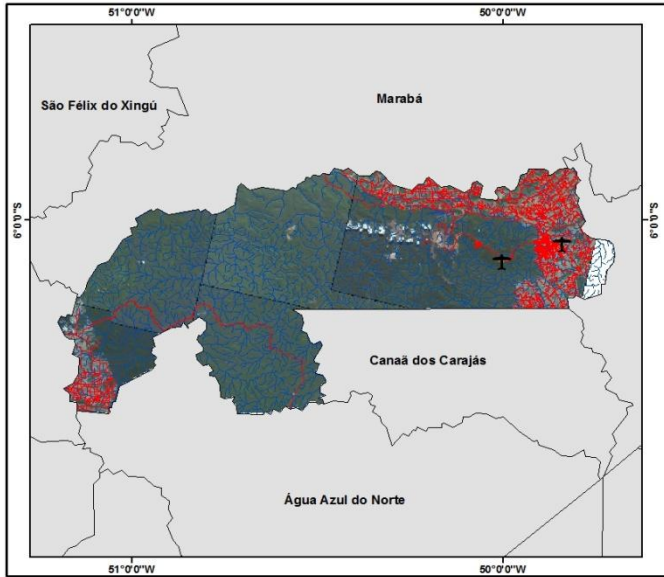
164,000 km²

38 %

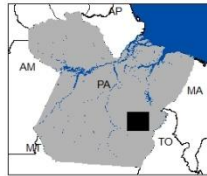


The main mining city: Paraúpebas

MUNICÍPIO DE PARAUPEBAS



Área de Estudo no Estado do Pará



Legenda

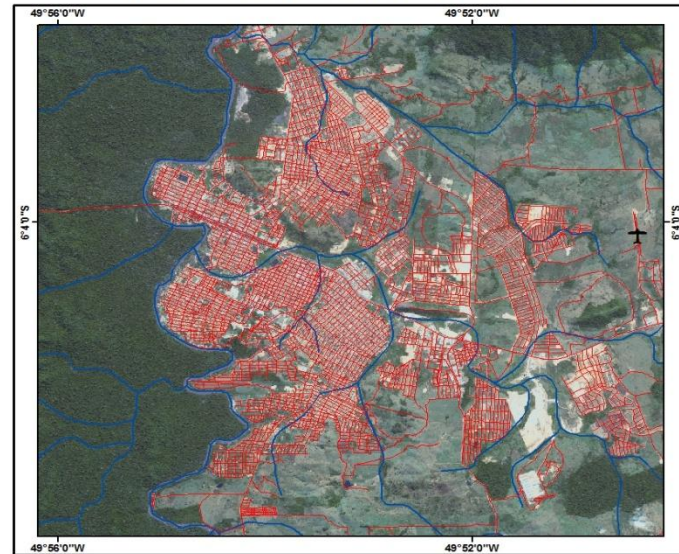
- ✈ Campo de pouso
- Estradas
- Corpos d'água
- Limites municipais



Projeção: Lat/Long
Datum Horizontal: SAD 69
Composição colorida de imagens
SPOT 5 (R,G,B) sensor HRG2
de 07/2009

0 185 370 740 1.11 1.48 km

ÁREA URBANA DO MUNICÍPIO DE PARAUPEBAS



Município de Paraúpebas



Legenda

- ✈ Campo de pouso
- Estradas
- Corpos d'água



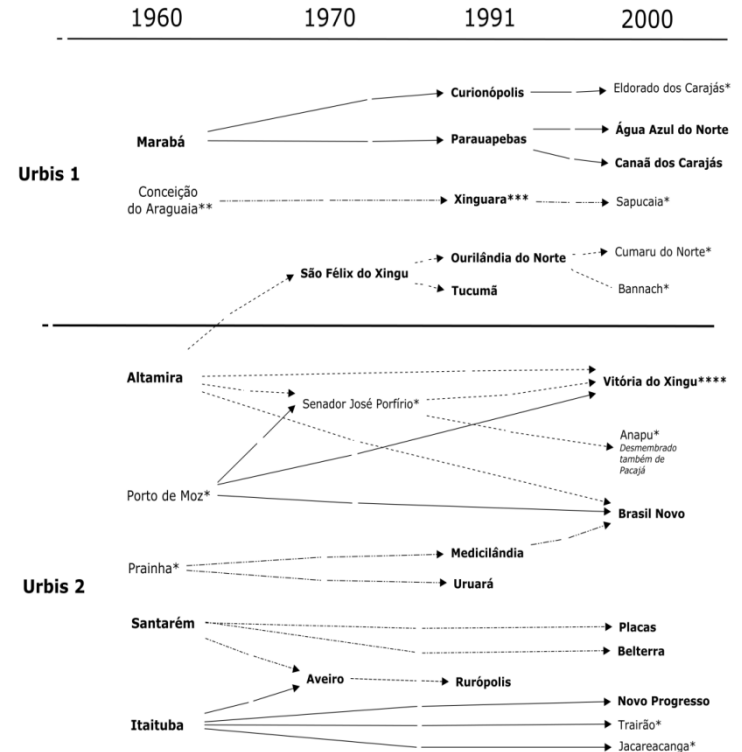
Projeção: Lat/Long
Datum Horizontal: SAD 69
Composição colorida de imagens
SPOT 5 (3R,4G,5B) sensor HRG2
de 07/2009

0 15 30 60 90 120 km

Economic cycles

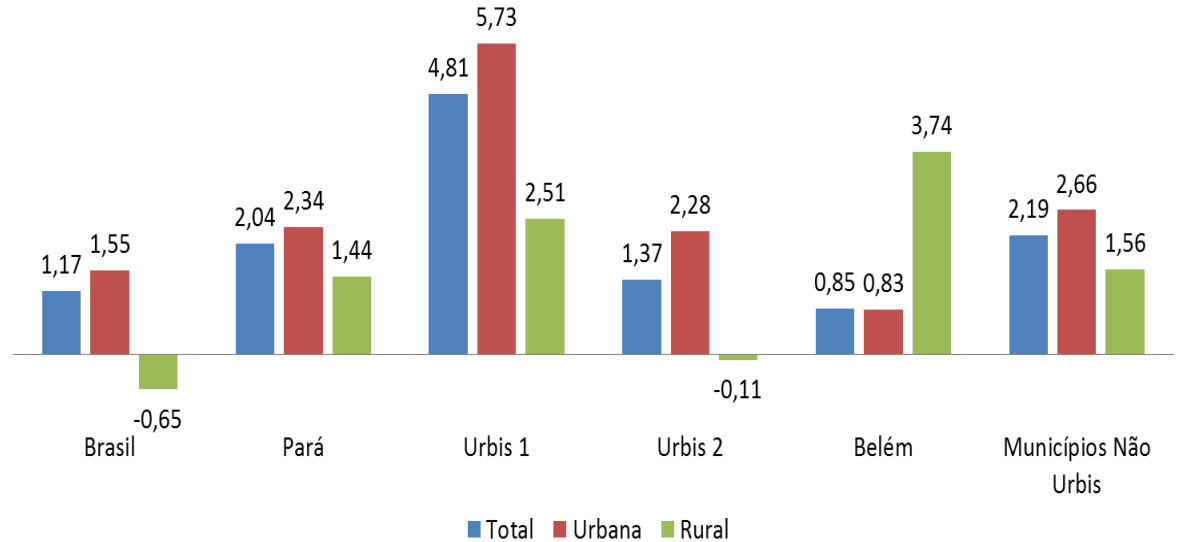
In the studied area the most dynamic (mining and cattle) of the state

- In Amazon roads are linked to economic cycles and reflect directly in the creation of new urban agglomerations as the traditional occupation and transportation occurred by riverside
- Pará in 1970/80 had 83 municipalities, in 1991, 105 and from 2000, 143,



Population
growth above the
average for
Brazil and for
Para state

Taxa de crescimento demográfico anual (%), por situação rural e urbana, entre
2000 e 2010



Methods and materials

- Multidisciplinary Approach

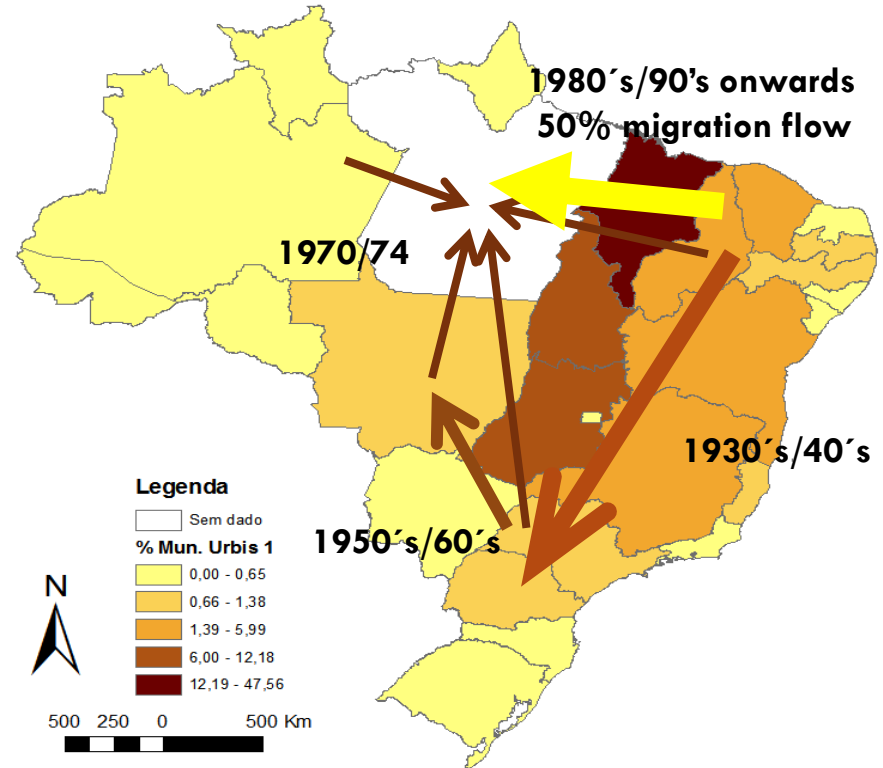
- Cognitive: families trajectory
- Demography: migration flows
- Geography: territory identity
- Sociology: social, family and belonging networks
- Economics: productivity
- Political science: geography of voting; elites formation.

Methods and materials

- Data collection on inter-regional and intra-regional migration flows: census
- Descriptive
- Primary data collection on origin: employment offices, churches, labour associations, cultural associations, etc.
- Network analysis by PAJEK

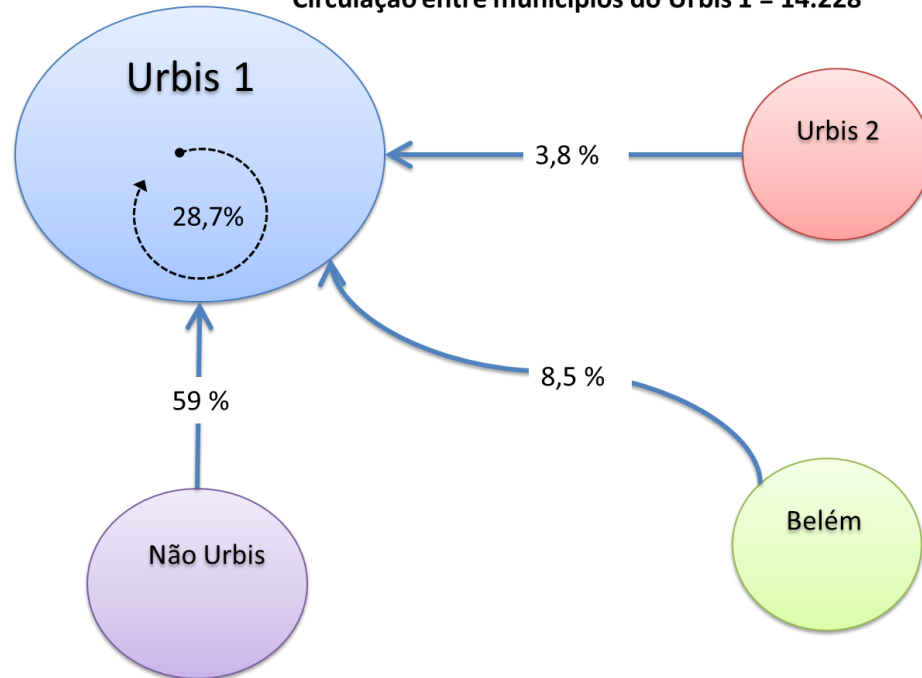
Migration flows: Inter-state

- Half of the population comes from other states, specially from the poorest ones, characterizing the studied region as a frontier for better economic opportunities, for those with lower qualification.



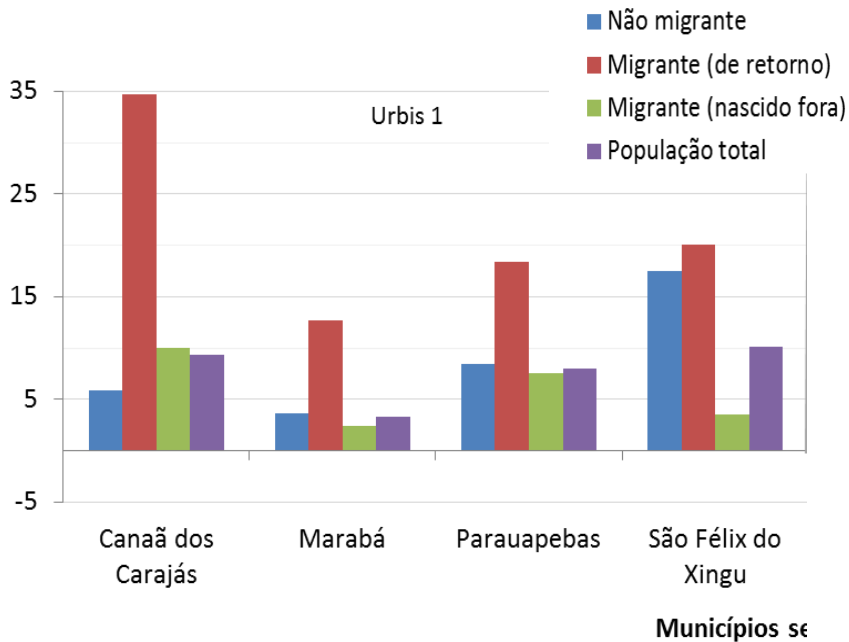
Migration Flows: Intra-state

Imigrantes (Urbis 2 + Belém + Não Urbis) = 35.554
Circulação entre municípios do Urbis 1 = 14.228

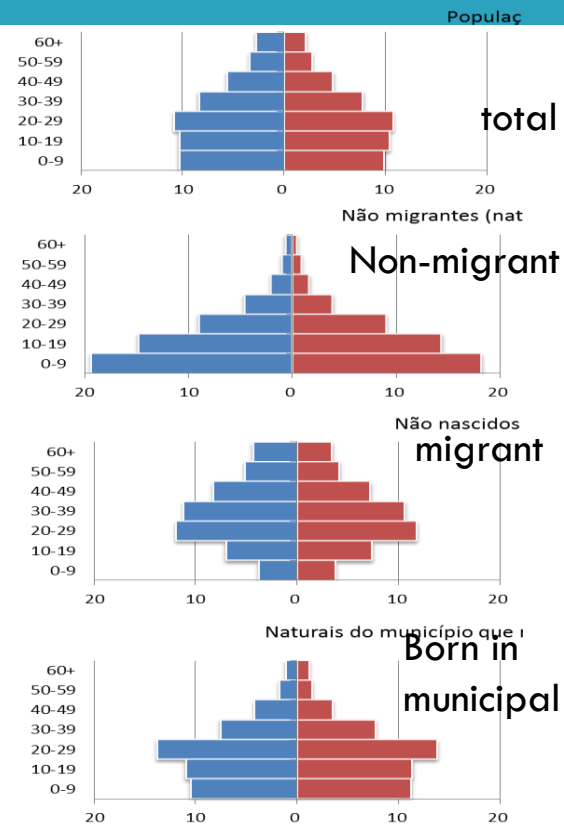


Population profile by origin

Taxa de crescimento demográfico anual



Urbis 1

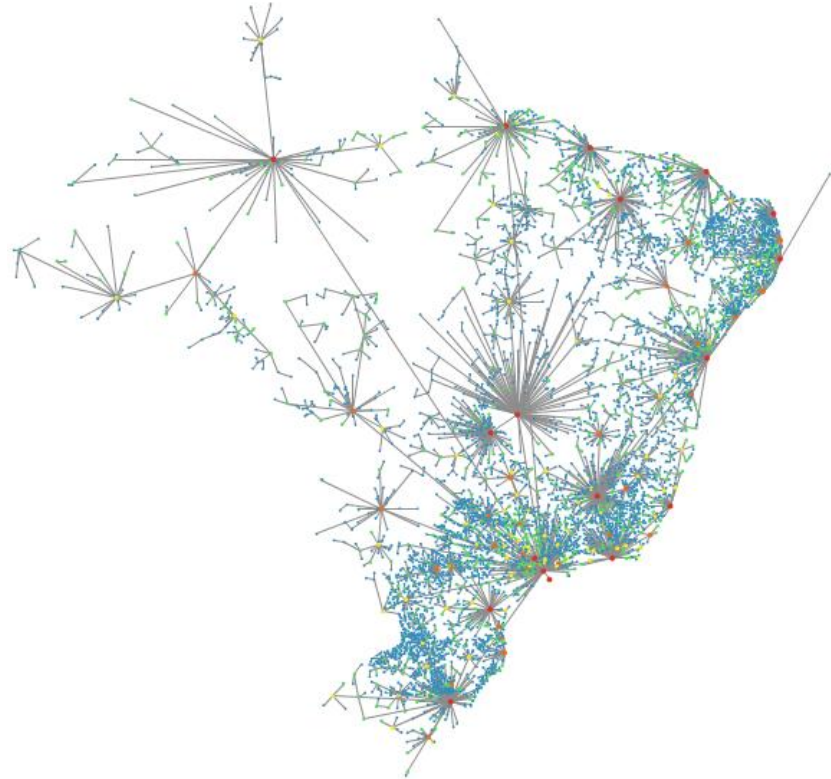


Current status: Multidisciplinary approach

- Political science: tracking elites of influence by elected politicians and credit
- To establish elites social networks. “the strength of weak ties”
- Migration flows of origin-destination of families/single
- Tracking second generation labour force
- Typology of cities/urban landscape

Based on previous work on urban networks: flows of influence

Density to establish
hierarchy of cities within
Brazil



Preliminary findings: Factorial Analysis

construct

□ Individual

□ Colective

variables

- History of urban settlement
 - Origin of migrant (model of city)
 - Commitment to the city (second generation return) and family migration
 - Motivation to migrate
-
- The existence of a department of urban planning
 - Central government planning
 - Credit
 - Infra-structure provision

Preliminary findings: network analysis

Elites path

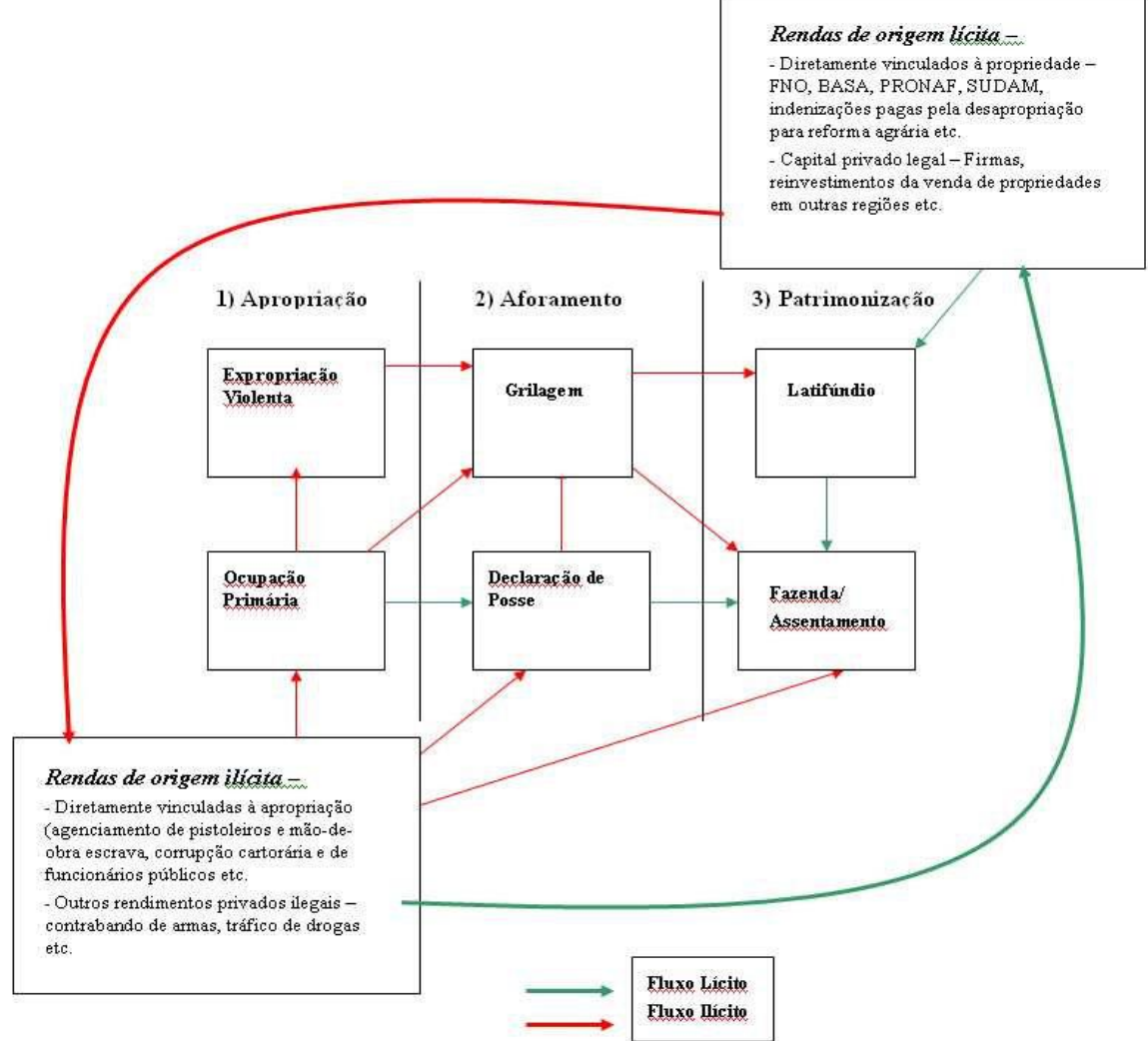
- ❑ Origin (state, municipal)
- ❑ Links to government
- ❑ Links to credit
- ❑ Links to land ownership

Poor families path

- ❑ Origin(state municipal)
- ❑ agglomeration in new informal settlements
- ❑ Social links (church, political parties, etc)

We track the path of land occupation by elite:
Valid for forest into rural use conversion
and sometimes rural into urban conversion

- Local urban planning follows private interests
- Infra-structure provision follows mining, energy projects or illegal logging/cattle



Final remarks

- Cities would drive local endogenous development if have higher productivity
- Among all visited Ourilândia was the municipal with some planning and where we found longer commitment by local families

THANK YOU!
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