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## What kind of policy is best suited to contain deforestation in Brazil?

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# Why deforestation is an issue?



- Brazil has 15% to 20 % of the 1.5 million described species on Earth (Ministry of Environment, 2002);

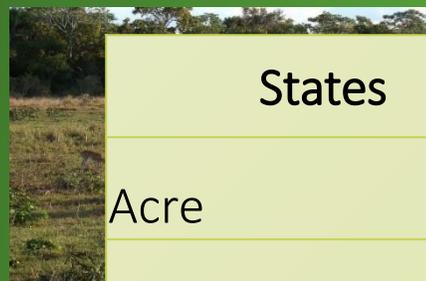


- *Hotspot's* of biodiversity: Cerrado and Rain Forest (Myers et al., 2000);



- Recent data show an increase in the annual rate of deforestation in the Amazon, reaching 5,831 Km<sup>2</sup> in the period of August 2014 to July 2015. (INPE, 2015)

# Deforestation in an result of...



States	Forest (R\$/ hectare)	Pasture (R\$/ hectare)	Variation (%)
Acre	108,00	1571,80	1455,4
Amapa	141,00	800,00	567,4
Amazonas	132,43	1243,91	939,3
Pará	457,73	1509,40	329,8
Rondônia	358,50	1762,50	491,6
Mato Grosso	546,13	2083,69	381,5
Average NORTH	416,53	1832,39	439,9
Source: Reydon, 2011.			

# What kind of policy is best suited to contain deforestation in Brazil?

- Brazil has a robust land and environmental legislation, but has difficulties in implementing, enforcing and controlling;
- The application of regulatory mechanisms through *command-and-control* tools requires a large administrative apparatus and large monitoring capability;
- It's essential to discuss the possibilities for more efficiency in controlling public lands by the state and the land and environmental laws fulfillment that rule the land use and occupation in Brazil.

# The Brazilian FOREST CODE



- Data shows that Brazil has around 43 million hectares PPA deficits and 42 million hectares LR deficits (Sparoveck et al.; 2011);
  - Only 10% of land owners have LR área (Oliveira & Bacha 2011);
  - Such rural properties irregularity occur for various reasons such as lack of supervision, imprecise definition of some mechanisms, non-acceptance of restrictions on the part of land owners, among others.
- Legal Reserve (LR) = biodiversity
- However, non-compliance with the Forest Code is very significant.

# The Brazilian *New* FOREST CODE

- After a long period of discussion at the National Congress, in 2012 the Law No 12.651 was approved, that established the New Forest Code;
- The New Forest Code introduced some important requirements for environmental conservation:
  - **The Rural Environmental Registry (RER / CAR):** public and electronic registration Nationwide, compulsory for all rural properties = integrate environmental information of rural properties, making database for control, monitoring, environmental and economic planning and combating deforestation.

# The Rural Environment Registry (RER/CAR)



# The *New* Forest Code and Economics Mechanism's

- The New Forest Code provides two economic's mechanism's:
  - **Legal Reserve compensation:** the land owner can compensate his Legal Reserve in another rural property with Legal Reserve surplus. These mechanism has a clear objective to reduce the compliance cost with the Law.
  - **Rural Land Tax (RLT/ITR):** beyond the collection scope it has regulatory purpose, i.e extrafiscal. The extrafiscal purpose is precisely to curb land speculation resulting from the ilegal public land occupation.

# Why the mechanism's doesn't work for contain deforestation?

- Both mechanism's have specific limitations itself as well togheter constituing a bottleneck for reducing the deforestation in Brazil:

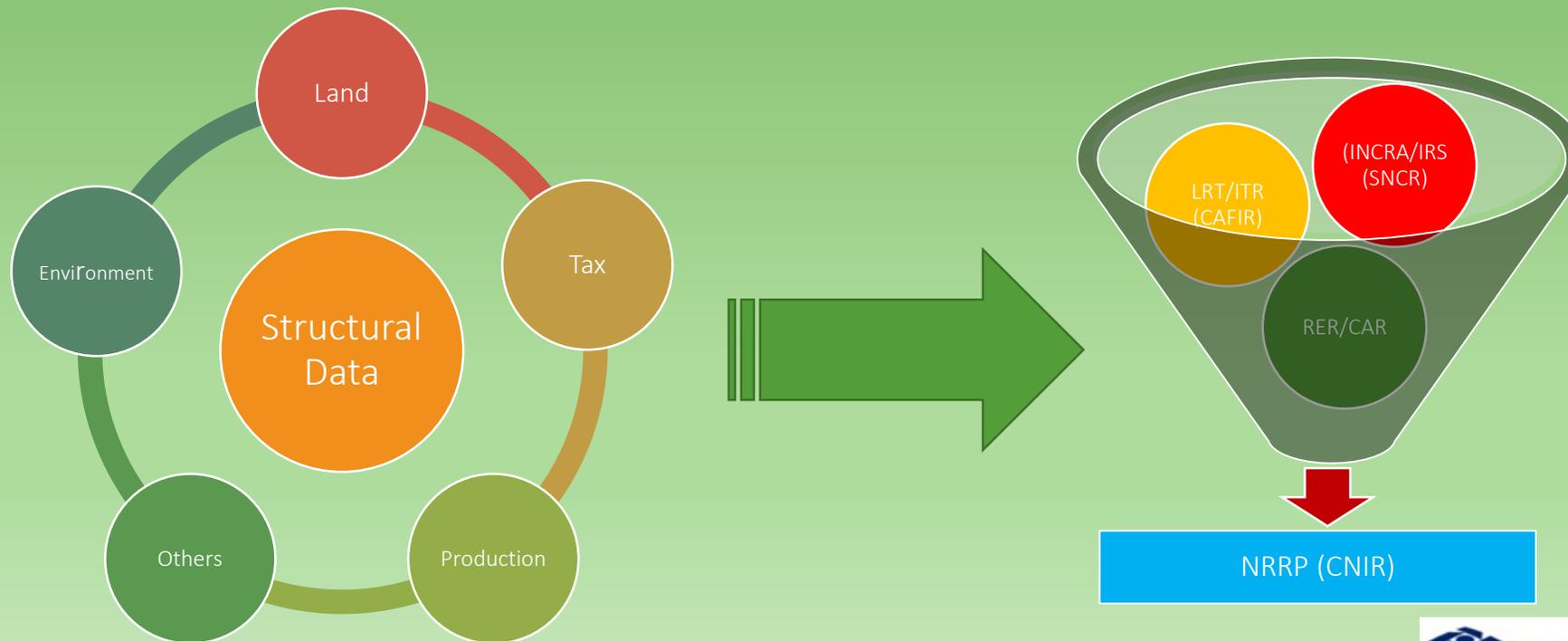
Specific limitations	General limitations
LR Compensation:	Incompatibility between the environmental areas concepts used in RLT law and the Forest Code
It isn't clear how the mechanism will be operated	
RLT/ITR:	
Self-declaratory character	

# Lack of land governance is the main problem regarding deforestation

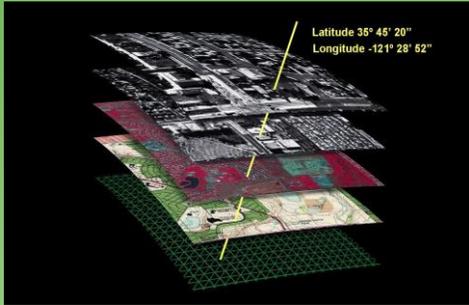
- Brazilian Institutional framework on land governance, agriculture and environment in Brazil is reflected in the weakness communication between these bodies (Ministry of Agrarian Development, Ministry of Environment; Department of Treasury – IRS)
- There are several initiatives to regulate the use and occupation by economic agents. But command-and-control mechanisms are insufficient to control land speculation and deforestation;
- Brazilian state is not able to carry out proper supervision of rural lands, in its agrarian, productive and environmental aspects.

# The new paradigm for Land Governance

- The necessary progress for effective land governance constitutes in **rural properties integrated georeferenced registry = National Rural Properties Registry (NRPR)**



# Next research steps...



➤ Making feasible to integrate the RER/CAR to the NRRP/CNIR:

- Propose adequacy of similar of concept's used in the ITR and Forest Code,
- Strengthen reaserch through institucional participation.



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# Thank's!!

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