



MINISTÉRIO DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

De Monitoramento do Desmatamento na Amazônia para um Sistema de Monitoramento para REDD+

Dalton M. Valeriano

5ª reunião GTT REDD+
21-22 de março, 2016

PRODES - INPE's Amazon Deforestation Monitoring

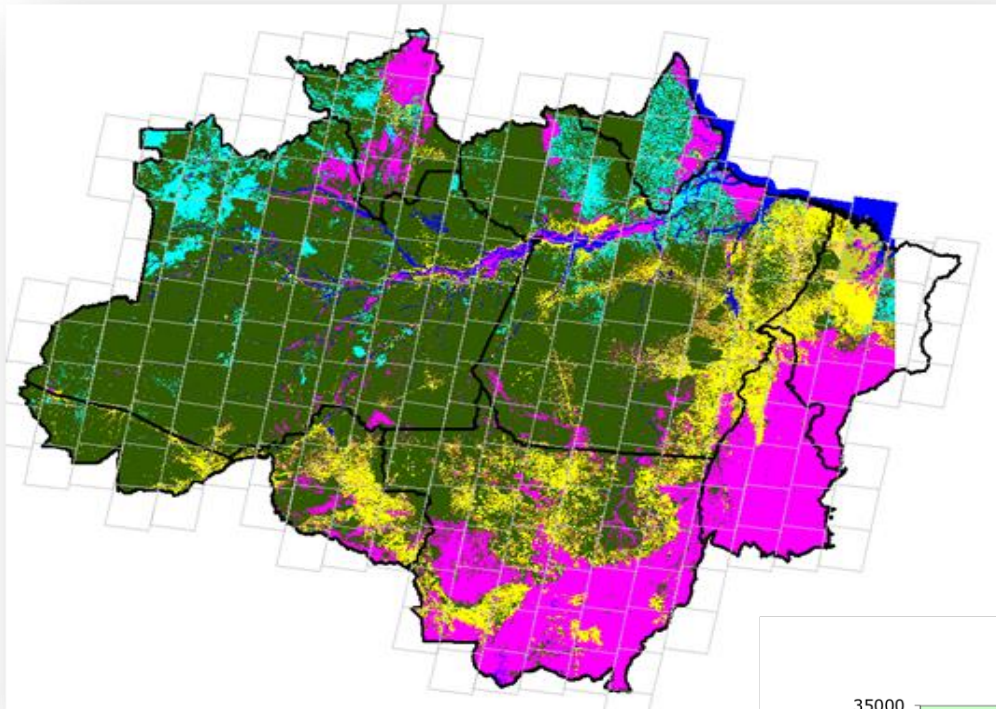
Monitoring program started in 1988

Oriented to deforested area calculation

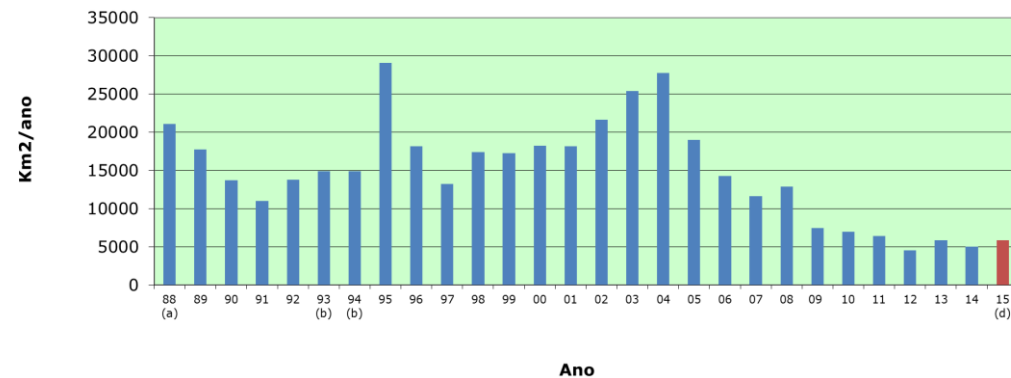
Object: Clear cut with MMA of 6.25 ha

Based on yearly wall to wall maps from classification of TM/Landsat, CBERS/CCD, ResourceSat/LISS-3, DMC, SPOT/HRC

Restricted to forested areas in Brazilian Legal Amazon Region

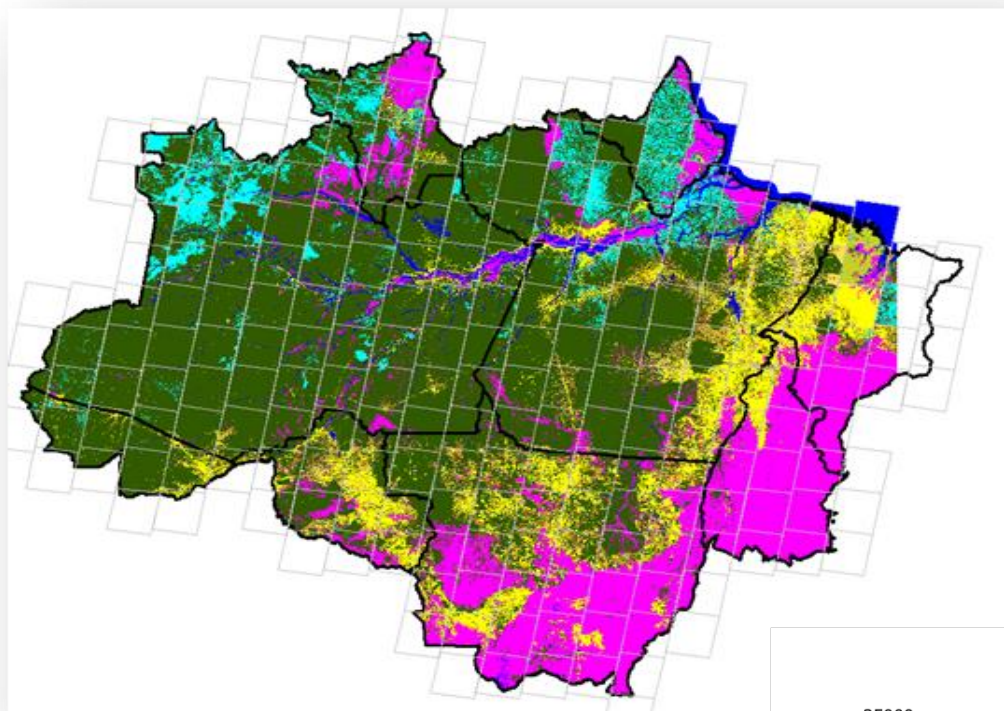


Taxa de Desmatamento Anual na Amazônia Legal





PRODES - INPE's Amazon Deforestation Monitoring



Monitoring program started in 1988

Oriented to deforested area calculation

Object: Clear cut with MMA of 6.25 ha

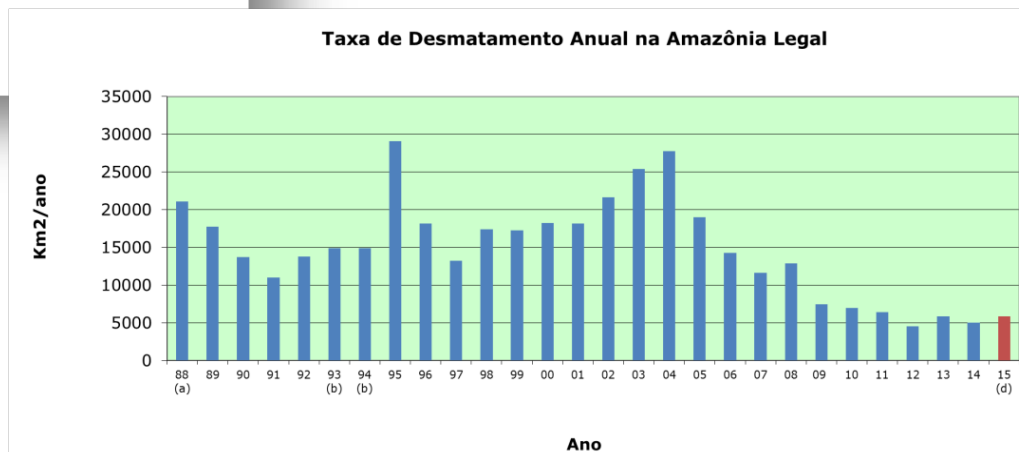
Based on yearly wall to wall maps from classification of TM/Landsat, CBERS/CCD, ResourceSat/LISS-3, DMC, SPOT/HRC

Restricited to forested areas in Brazilian Legal Amazon Region

Originally conceived as a metric to evaluate effectiveness of deforestation control policies

In 2003 deforestation maps were made available in internet

Then applied to deforestation control, GHG reporting, academic studies, public awareness

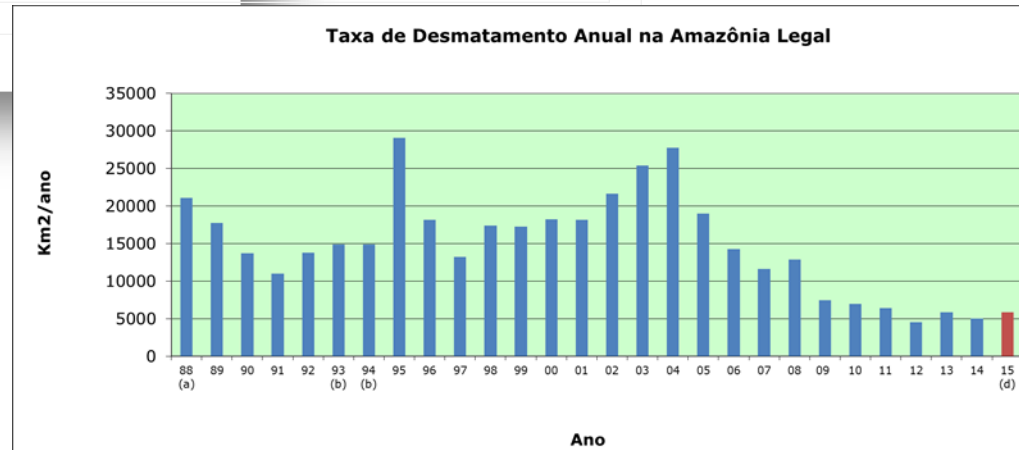
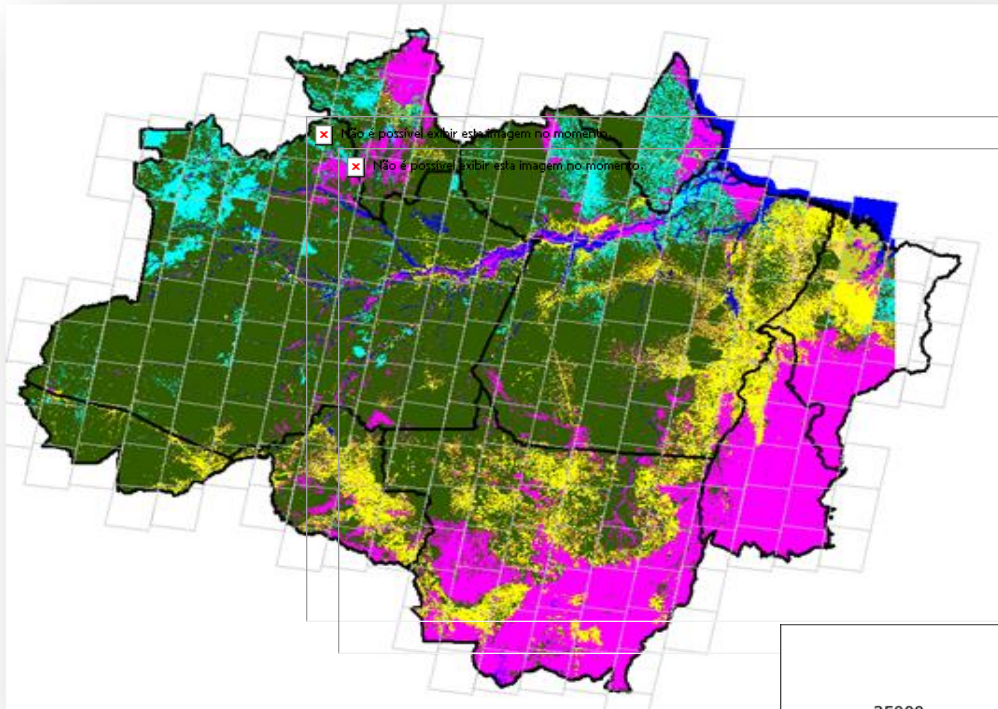


From deforestation control to REDD+

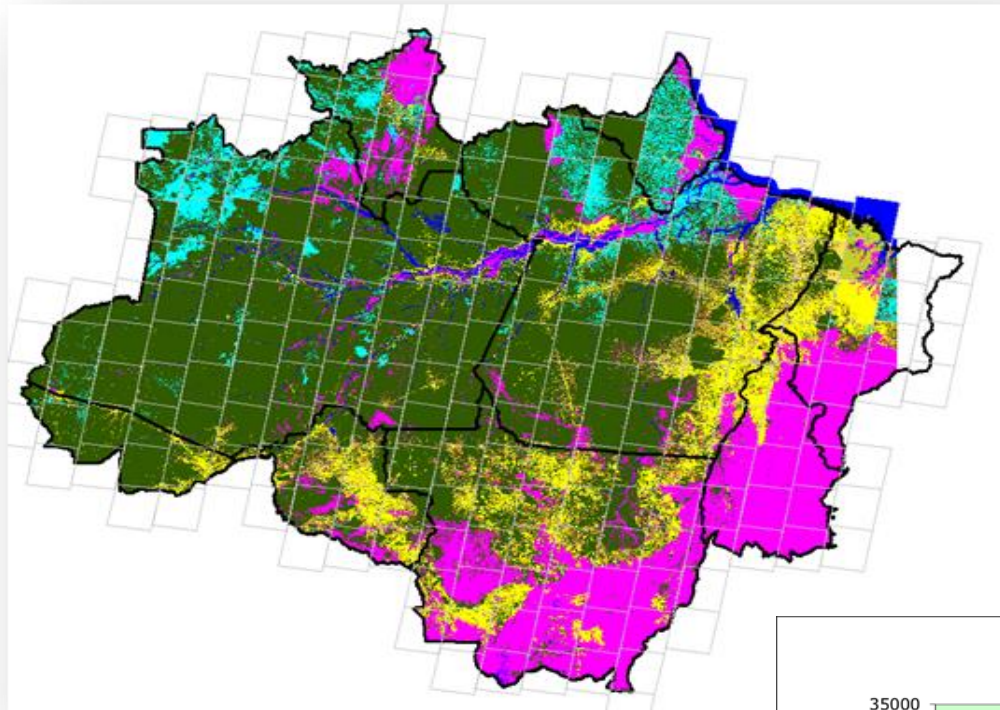
2004 – Brazil launches the Government Plan to to Prevent and Control Deforestation in the Amazon – PPCDAm

Deforestation level drops significantly

2008 - PRODES transparency and PPCDAm sound results become basis for the agreement between Brazil and Norway on payment for voluntary deforestation reduction, a bilateral REDD+ test case. BNDES/Amazon Fund



From deforestation control to REDD+



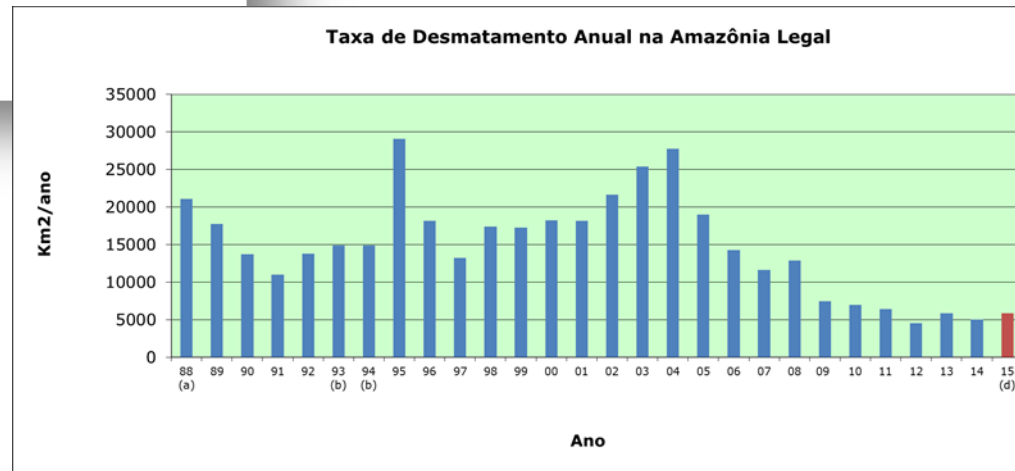
2004 – Brazil launches the Government Plan to to Prevent and Control Deforestation in the Amazon – PPCDAm

Deforestation level drops significantly

2008 - PRODES transparency and PPCDAm sound results become basis for the agreement between Brazil and Norway on payment for voluntary deforestation reduction, a bilateral REDD+ test case

2014 - PRODES data is used in Brazilian Submission of Forest Reference Emission Level, FREL, a first step to install REDD+ mechanisms for the country.

Regional and partial submission





Further initiatives towards national MRV system

INPE's State of the Forest Monitoring Programs:

- Forest Degradation (DEGRAD)
- Forest Logging (DETEX)

REDD+ Working Group

- National definition of Forest Degradation for REDD+ policies.

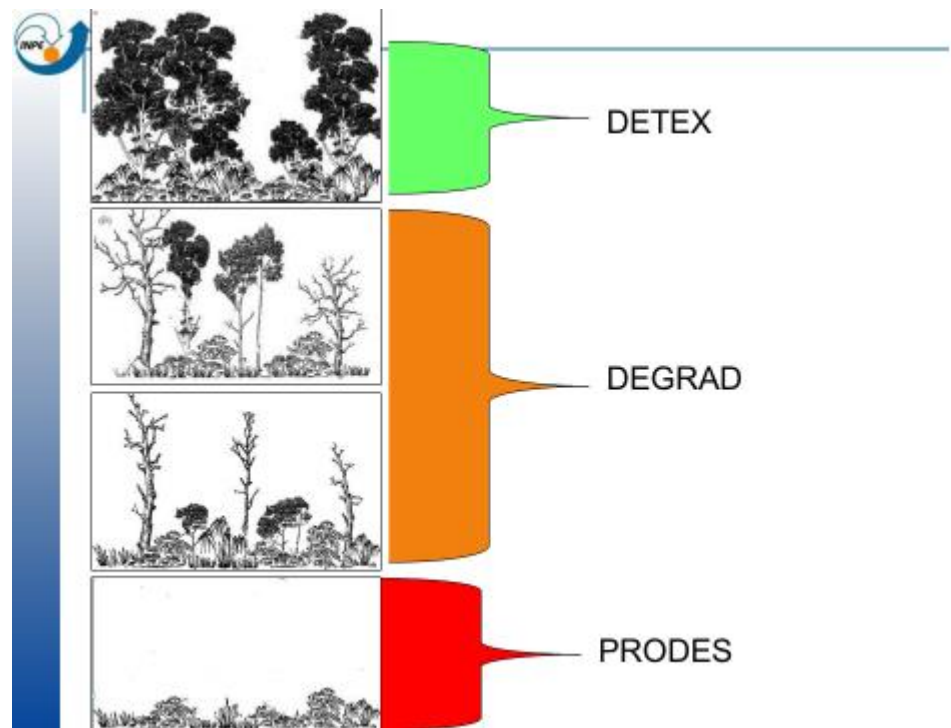
Ministerial Ordinance for LCLUFC Monitoring System

- Action Plan toward the National Monitoring System

Further initiatives towards national MRV system

INPE's State of the Forest Monitoring Programs:

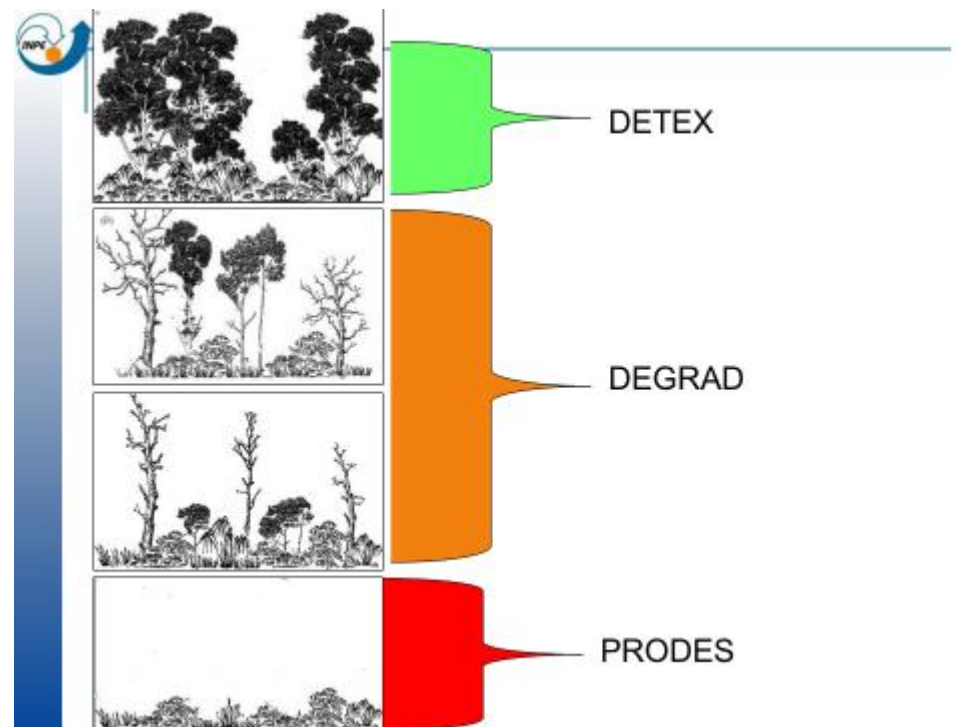
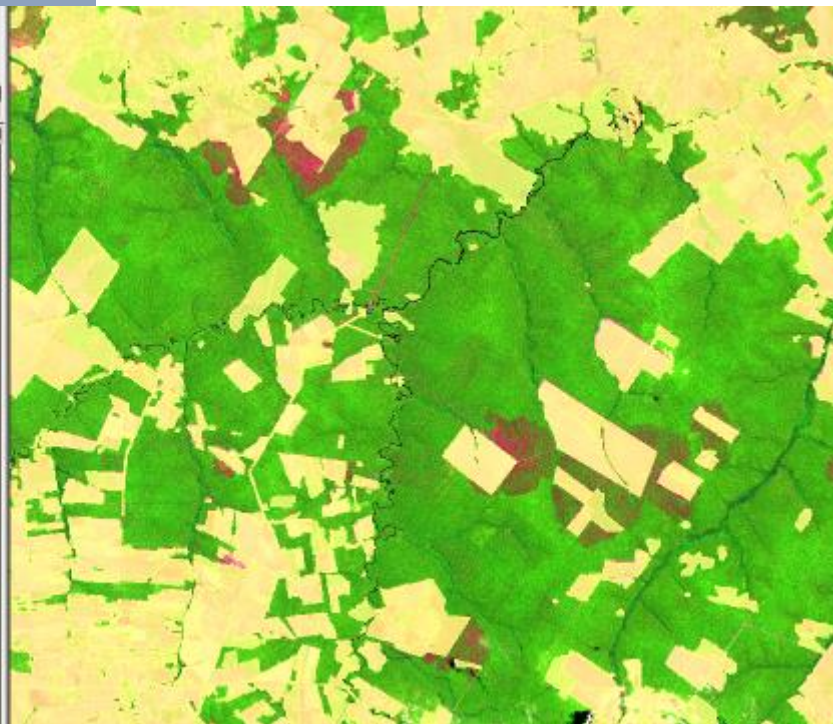
- Forest Degradation (DEGRAD)
- Forest Logging (DETEX)



Further initiatives towards national MRV system

INPE's State of the Amazon Forest Monitoring Programs:

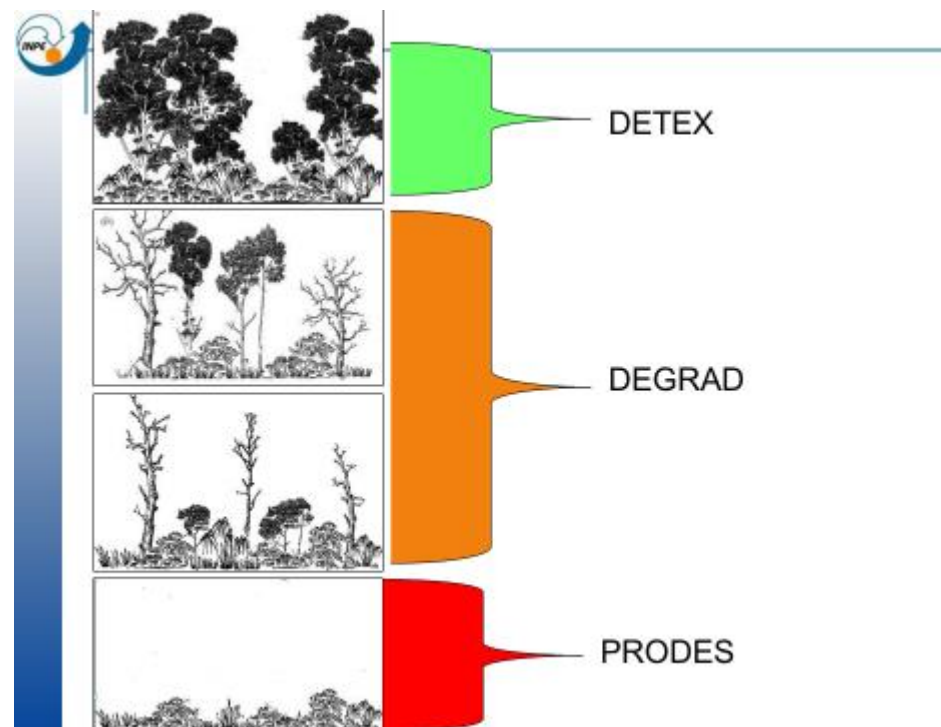
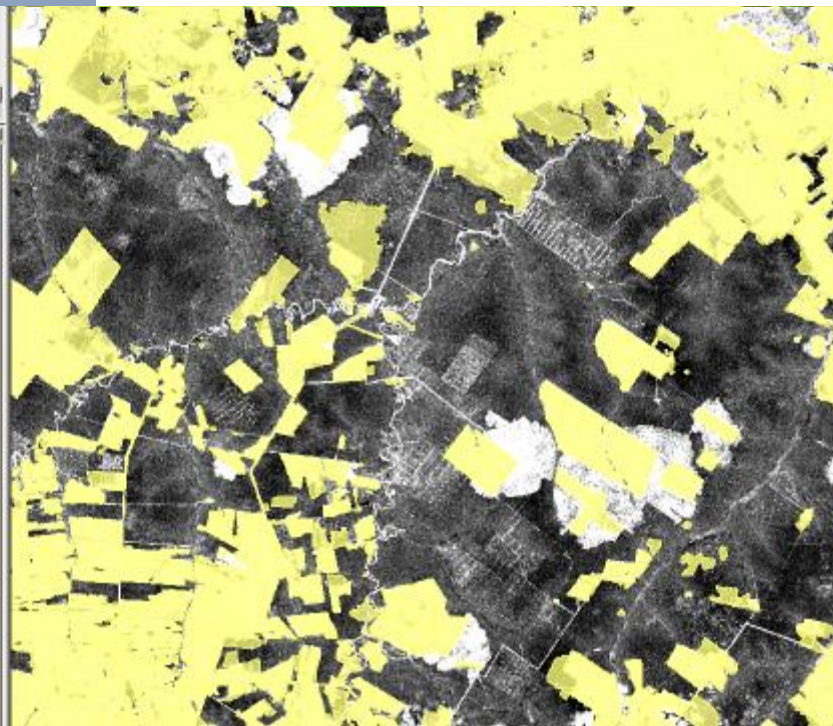
- Forest Degradation (DEGRAD)
- Forest Logging (DETEX)



Further initiatives towards national MRV system

INPE's State of the Amazon Forest Monitoring Programs:

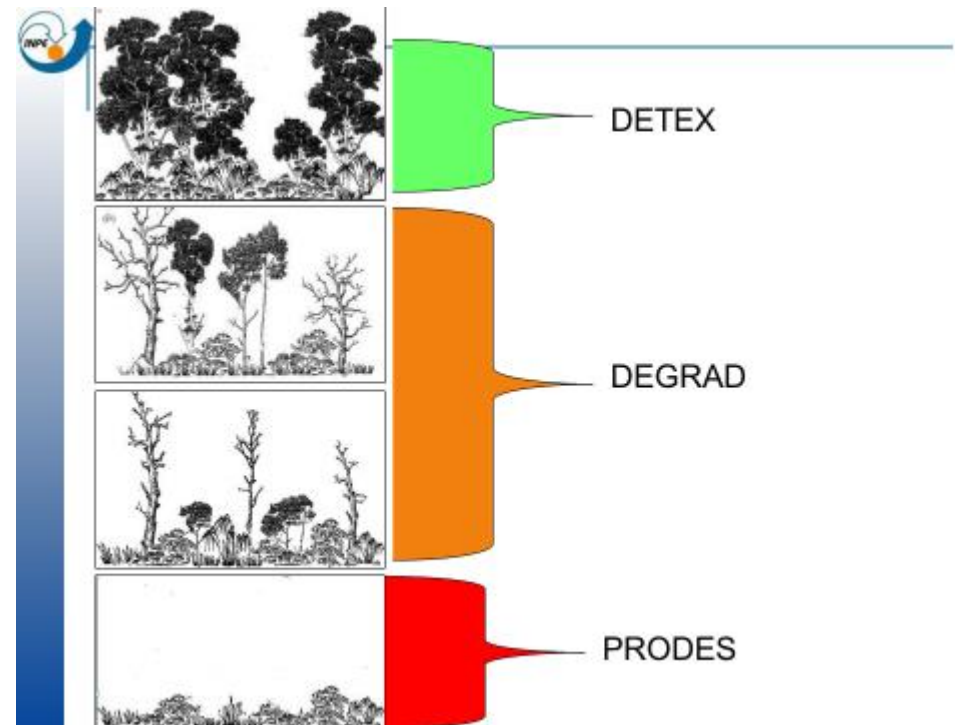
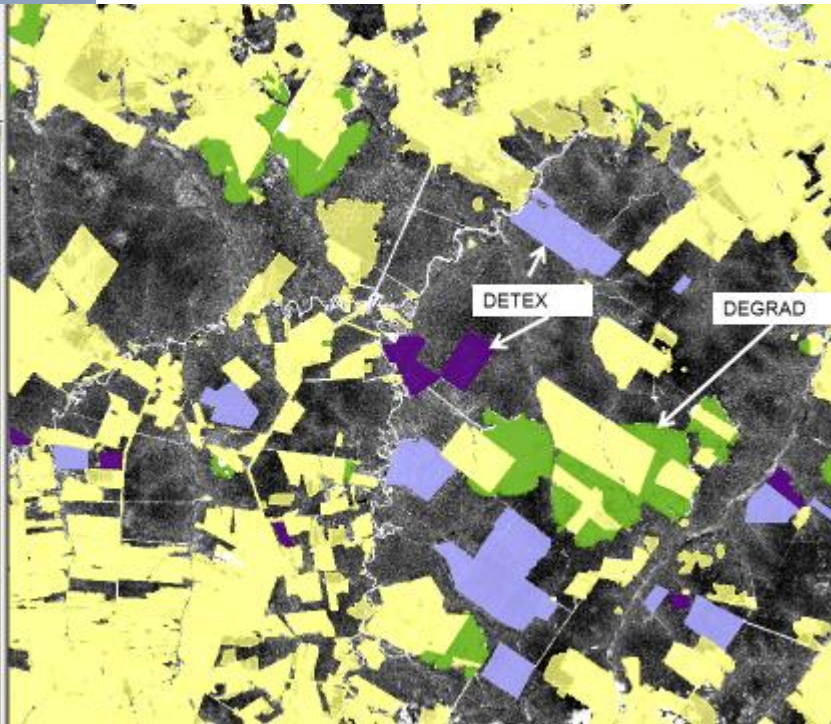
- Forest Degradation (DEGRAD)
- Forest Logging (DETEX)



Further initiatives towards national MRV system

INPE's State of the Amazon Forest Monitoring Programs:

- Forest Degradation (DEGRAD)
- Forest Logging (DETEX)



Present monitoring approach

Multiscale continuous monitoring:

DETER-A (250-350 m)
Activity alert

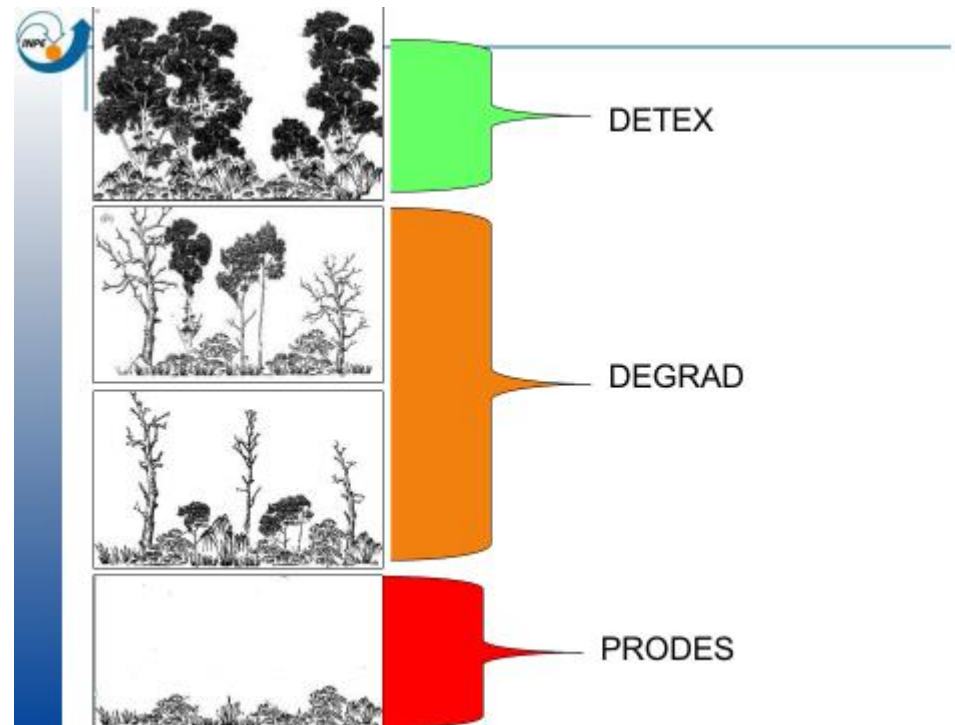
DETER-B (60m)

DETER-C (30 m)

Deforestation (3 classes)

Logging (2 classes)

Fire scar





Further initiatives towards national MRV system

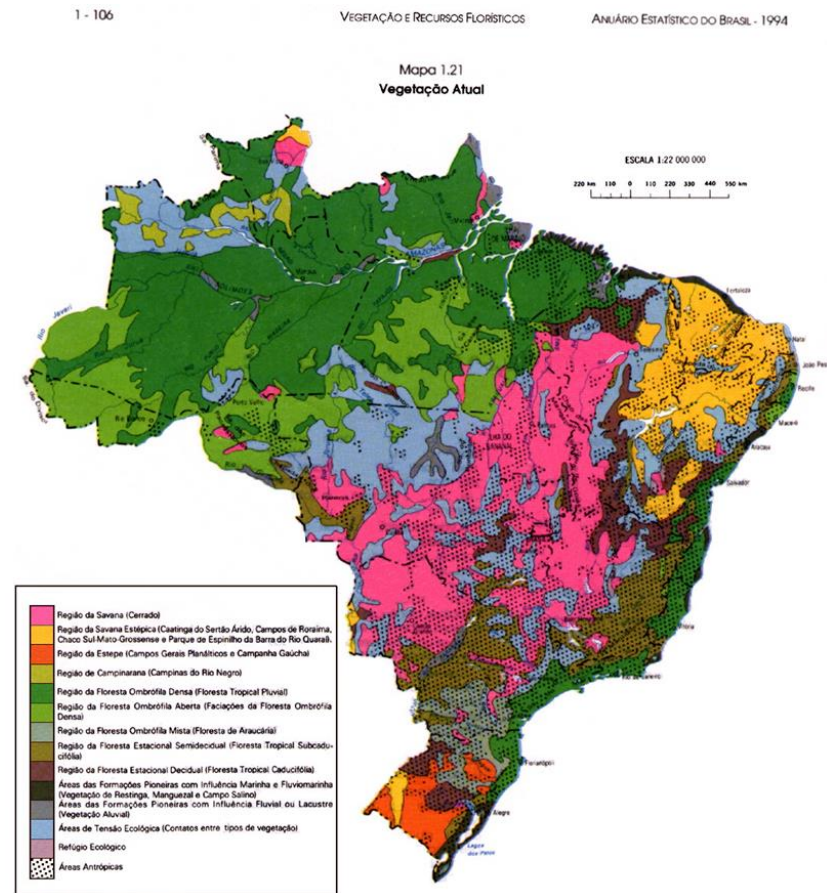
REDD+ Working Group (Ministry of Environment)

- National definition of Forest Degradation for REDD+ policies:
- Still under work. Converging points are:
 - Forest fire is a degradation event except when prescribed
 - Logging activity is a degradation event when illegal at any instance
 - Firewood gathering not being considered yet

Further initiatives towards national MRV system

Ministerial Ordinance for LCLUFC Monitoring System (nov 2015)

- Sets the Action Plan toward the National Monitoring System
- Priorities – Amazon, Cerrado, Atlantic Forest, Caatinga, Pantanal, Pampa
- Themes – Deforestation, Forest Degradation, Forest Regeneration, Land Use
- Timeline – 2016 -2020.
- Fundings – Government, BR-NO Amazon Fund, WB/CF/FIP, WB/GEF, DE-GIZ, UK-DEFRA



Further initiatives towards national MRV system

Needs for REDD+ policies

Issue of Forest Reference Emission Level (FREL)

Deforestation 2000-2010

Base map (2000) under review (next)

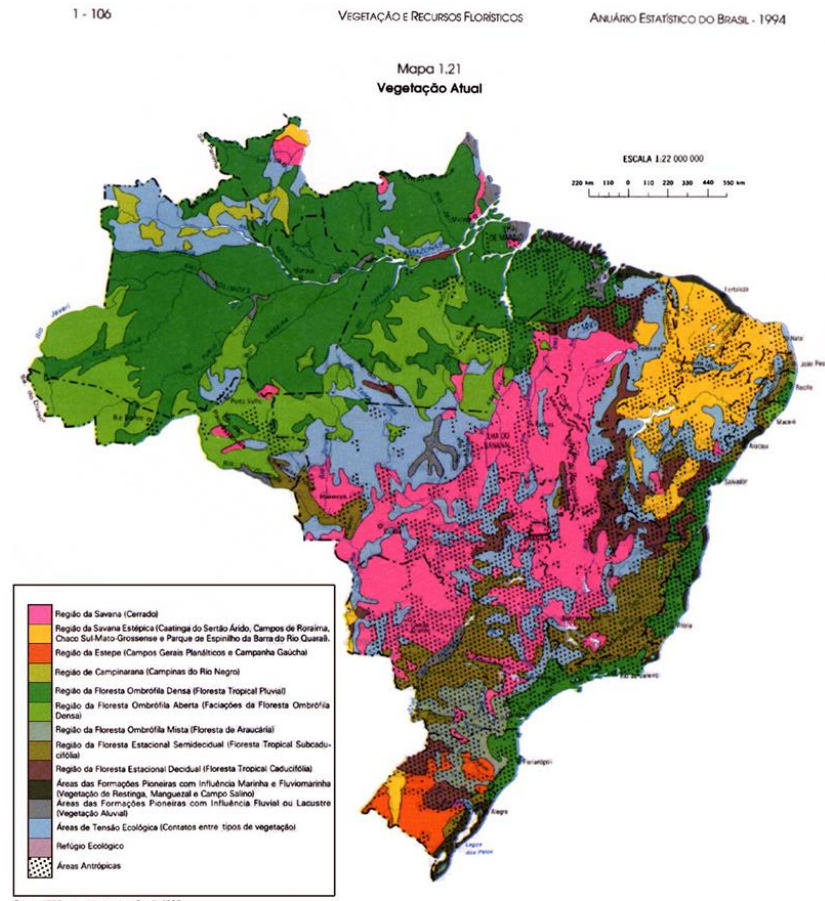
Expect date for all set November 2016

Degradation 2000-2010 (Setzer)

Regeneration 2000-2010 (?)

Implementation of a monitoring system for national MRV communications

Same concept of DETER Family for the Cerrado will be adopted



Present (Urgent) Challenges:

Definition of deforestation
Clear cut or conversion?

Definition of forest degradation

Definition of forest cover in open
vegetation domains

