



MINISTÉRIO DA CIÊNCIA E TECNOLOGIA
INSTITUTO NACIONAL DE PESQUISAS ESPACIAIS

TerraClass

Surveying and Monitoring Deforested Areas in Amazonia

Cláudio Almeida

INPE Amazônia

ABCC Workshop Sept/2010

Who?



■ Cláudio Almeida

- Masters Remote Sensing – INPE 2008
- Remote Sensing, Land Use Land Cover
- Head of Amazon Regional Center

Amazon regional Center



Monitoring of Global Tropical
Forests

Training Program

A map of the Brazilian Legal Amazon region, showing a complex pattern of deforestation. The map is color-coded: green represents forested areas, yellow represents deforested areas, and purple represents areas that have been cleared and then reforested. The deforestation is most prominent along the edges of the Legal Amazon, particularly in the central and eastern parts of the region. The map is overlaid with a grid of orange lines, likely representing state boundaries. The text is centered over the map.

Brazilian Legal Amazon

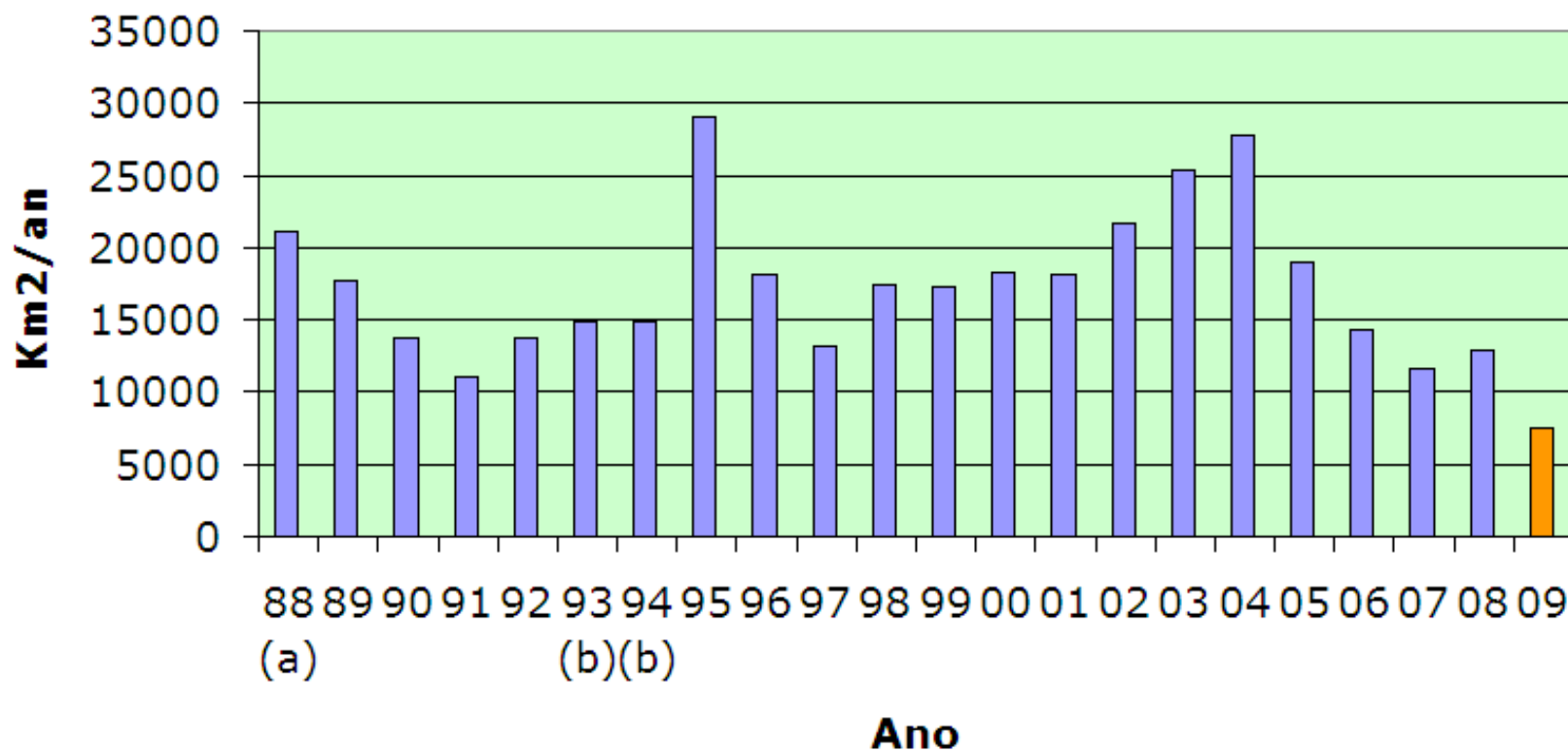
More than 5 million km²

Forest ~ 4 million km²

**2009 ± 736.000 km² Deforested
(PRODES, 2010)**

PRODES

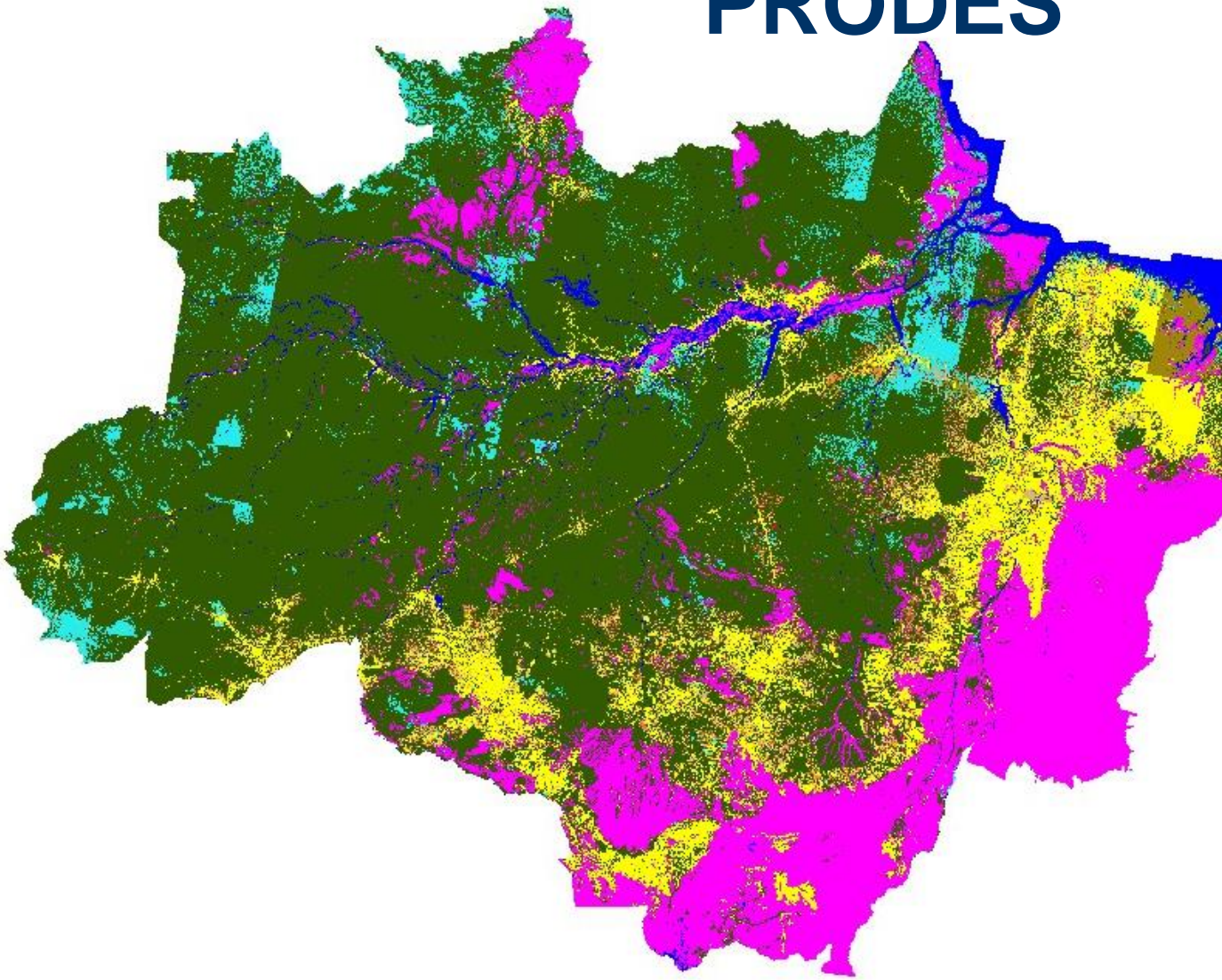
Annual Deforestation Rate



PRODES

**Deforested
~736.000 Km²**

**10+ years
500.000 Km²**

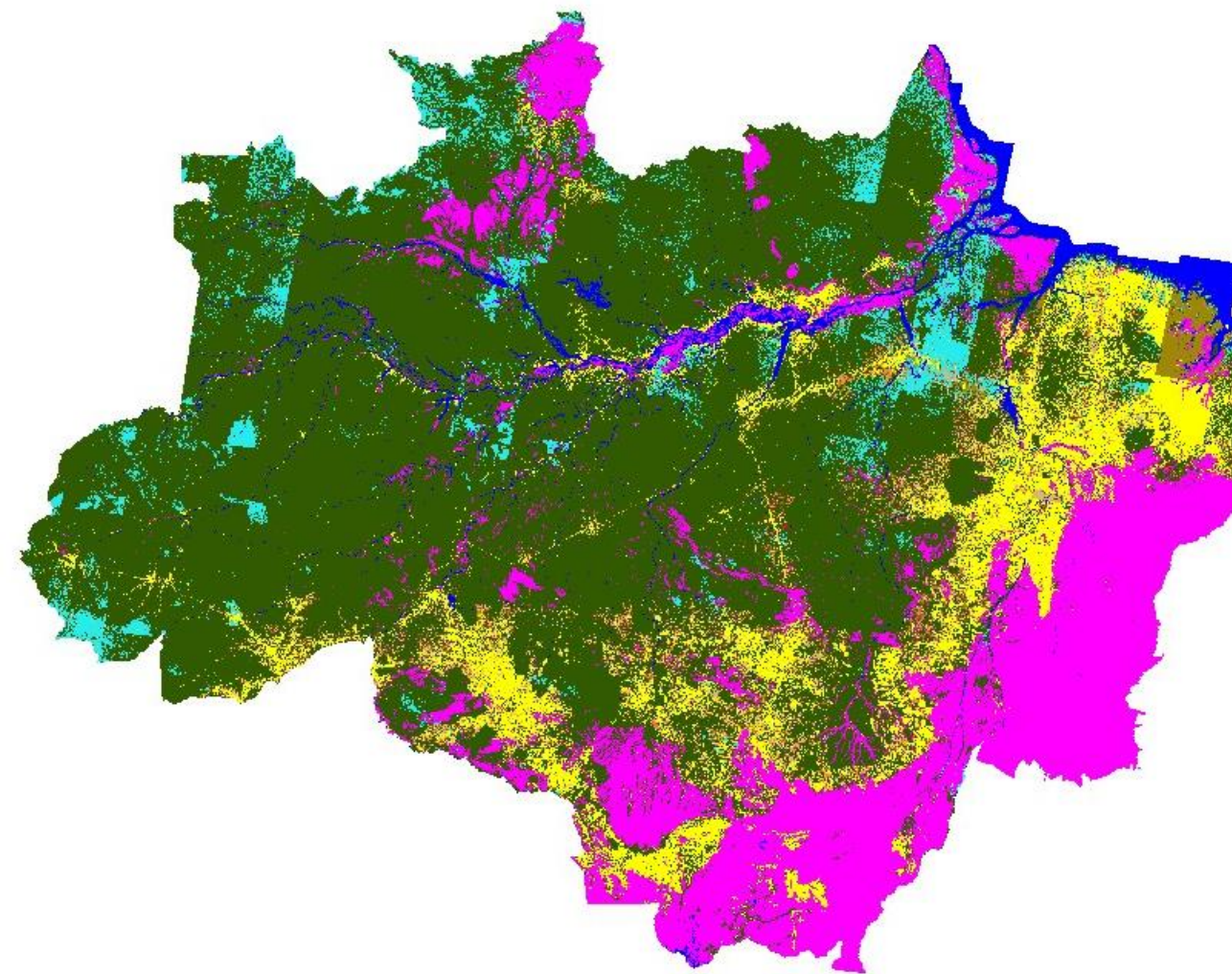


What is under the yellow?

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Goal 2009



**Map Secondary
Vegetation in
PRODES -2008
Deforested
areas**

PRIMARY FOREST

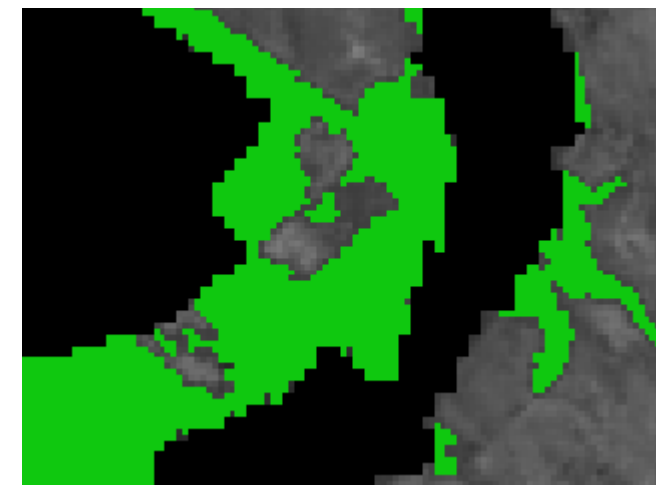
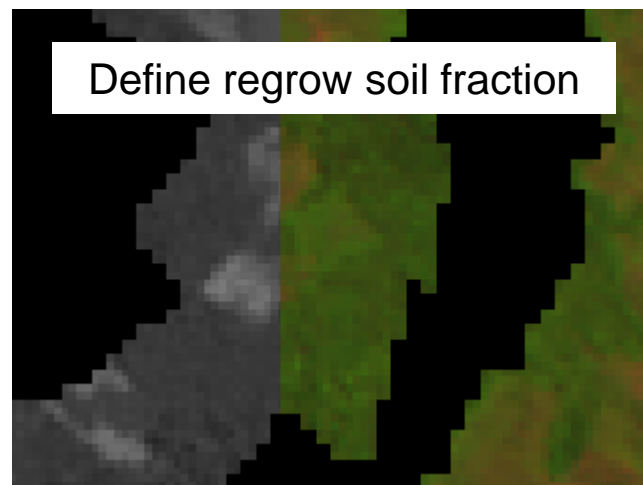
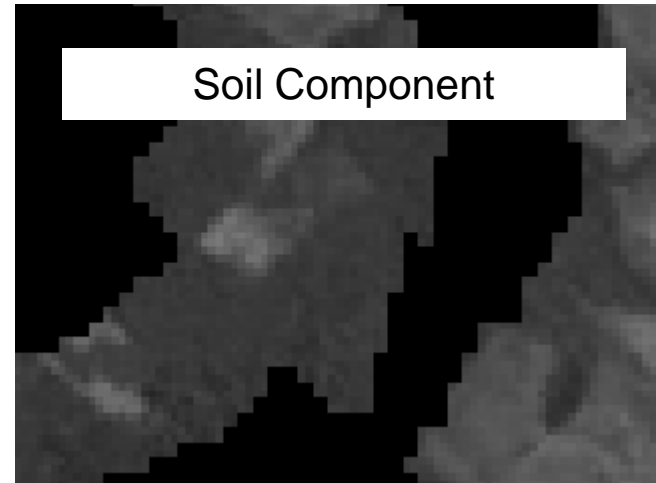
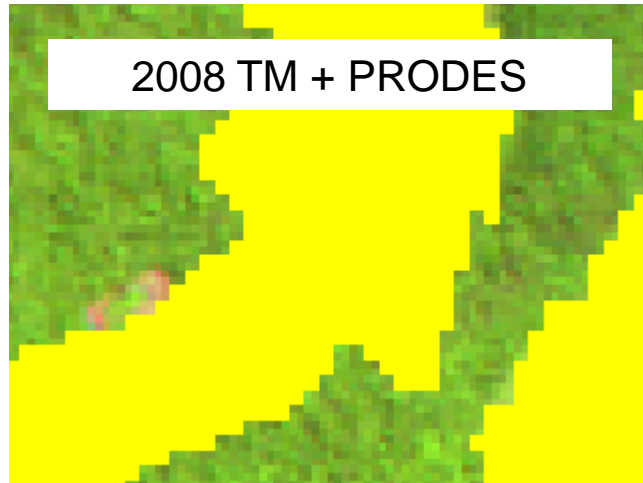


SECONDARY FOREST





How? Which deforested regions are regrowing?



Secondary Vegetation

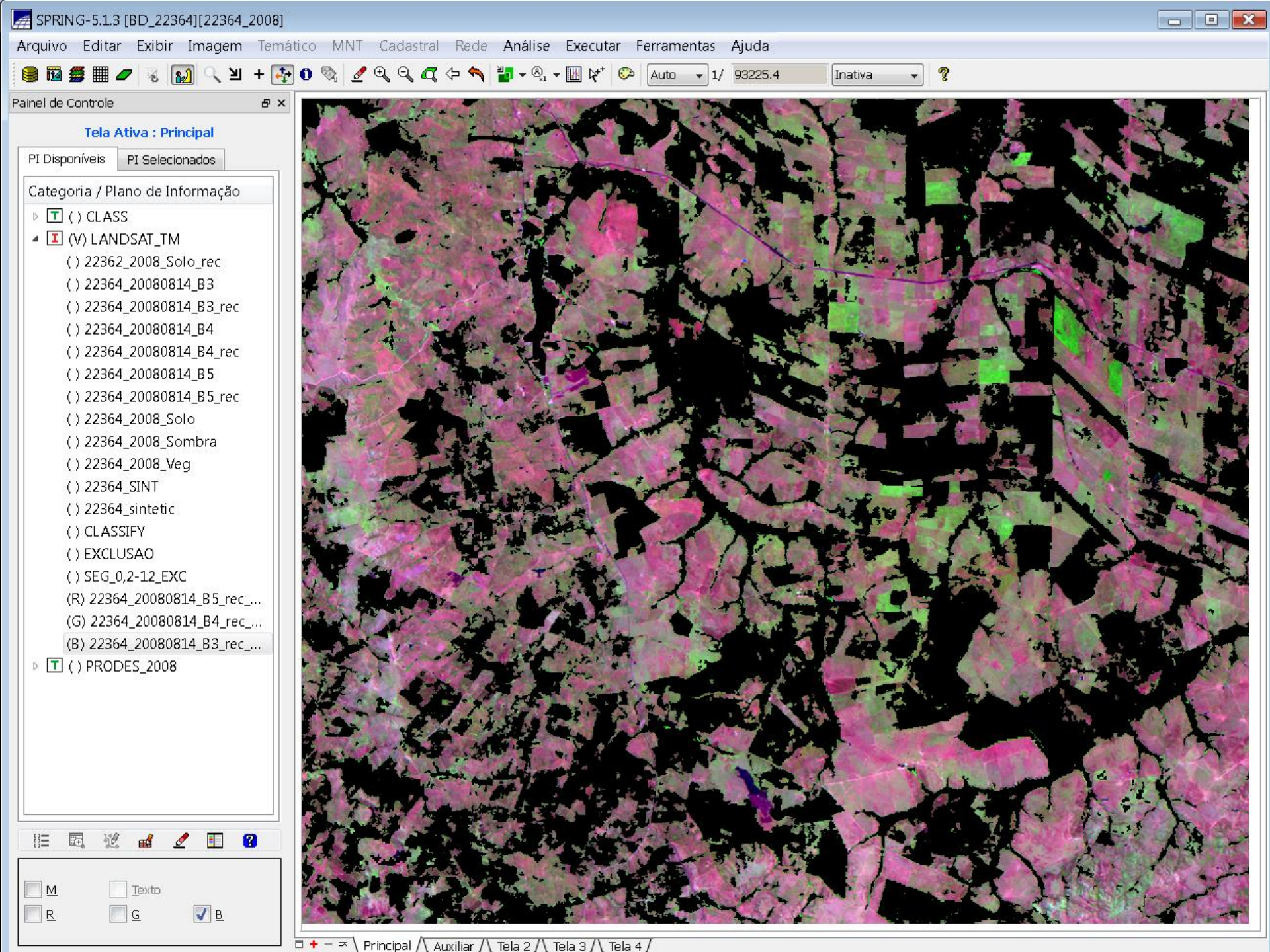
Estados	Extensão desflorestamento – PRODES 2007 (km²)	Área de Vegetação Secundária (km²)	Regeneração (%)
Acre	19065.9	3788.2	19.87%
Amapá	2440.3	725.8	29.74%
Amazonas	32623.7	14825.8	45.45%
Maranhão	94647.9	15212.0	16.07%
Mato Grosso	198354.4	23254.8	11.72%
Pará	233399.4	51666.8	22.14%
Rondônia	81409.2	11118.9	13.66%
Roraima	8067.5	2289.9	28.38%
Tocantins	29856.1	6029.0	20.19%

18,42 %

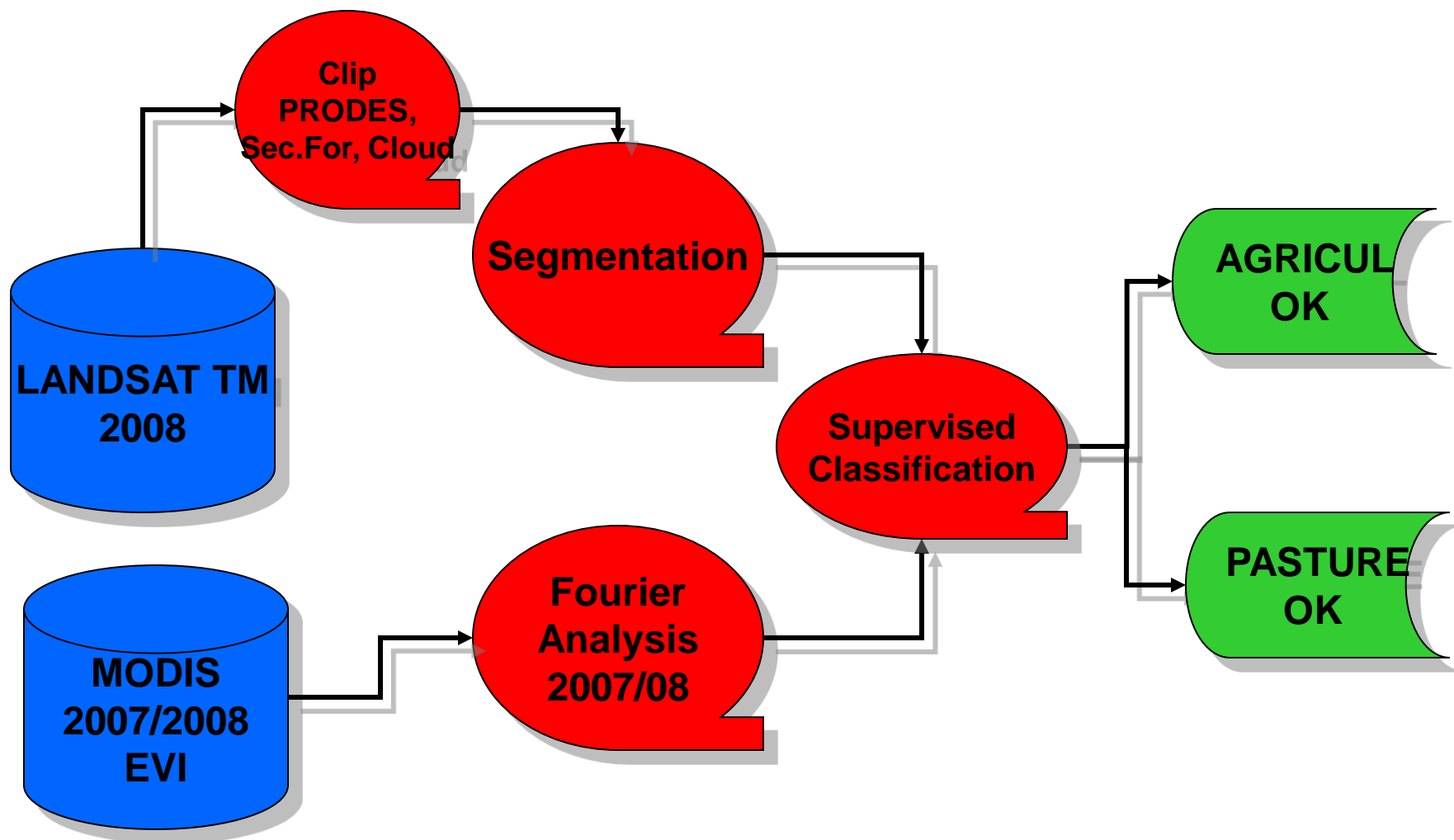


Goal 2010














**Map all uses for Oriental Amazon states
(MT, PA, AP, MA e TO)**



Classifying Agriculture and Pasture



Legenda

	AGRICULTURA - 457,98 Km ²
	FLORESTA SECUNDÁRIA - 558,68 Km ²
	PASTAGEM LIMPA - 2.359,67 Km ²
	PASTAGEM DEGRADADA - 473,29 Km ²
	PASTAGEM MUITO DEGRADADA - 276,75 Km ²
	URBANO - 4,34 Km ²
	ÁREA QUEIMADA - 9,93 Km ²
	DESMATAMENTO 2008 - 112,78 Km ²
	FLORESTA - 7.834,88 Km ²
	NAO FLORESTA - 3.754,13 Km ²
	HIDROGRAFIA - 42,55 Km ²
	NUVENS - 0,83 Km ²
	OUTROS - 5,44 Km ²

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