



Brazilian Policy to tackle deforestation in the Amazon

Francisco J.B. Oliveira Filho

Ministry of Environment - MMA

Climate Change Secretary - SMCQ

Department of policies to tackle deforestation - DPCD

APRIL 28, 2008



Obama's
Working-Class
Woes

Why More Women
Are Choosing
C-Sections



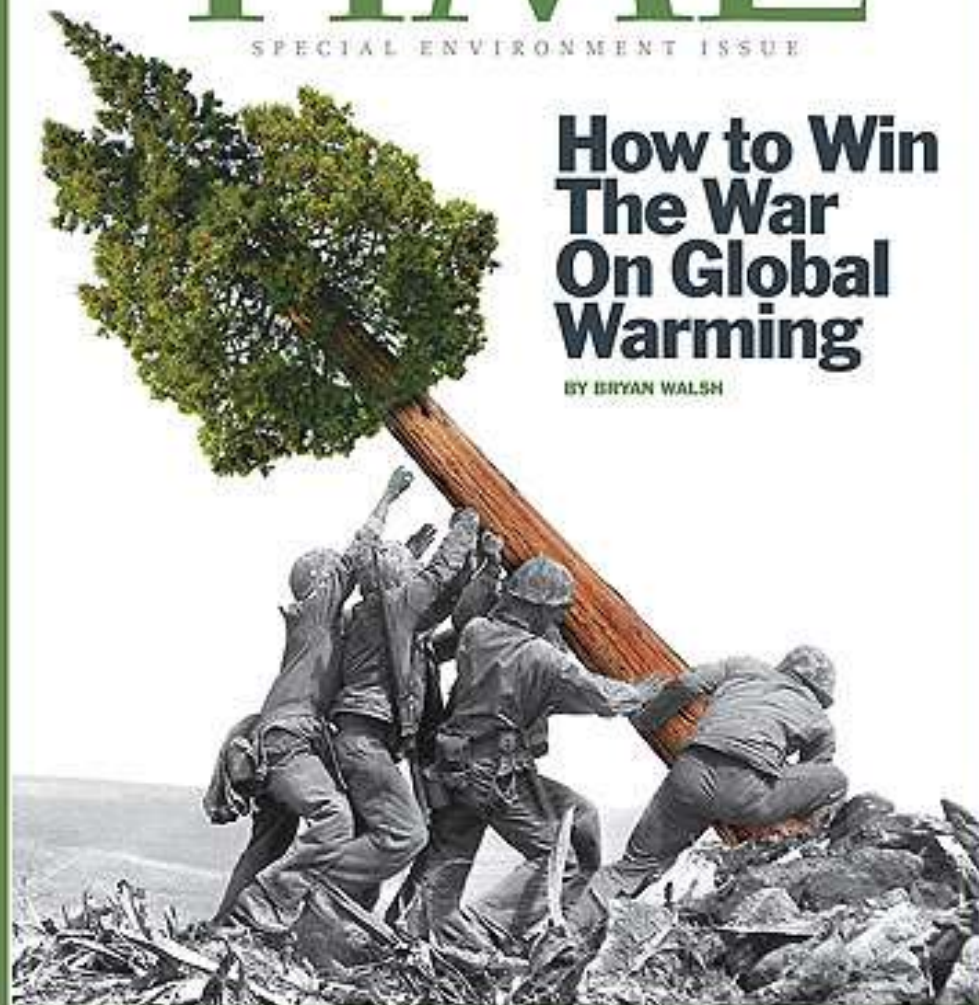
Can Richard
Branson Save the
Airline Industry?

TIME

SPECIAL ENVIRONMENT ISSUE

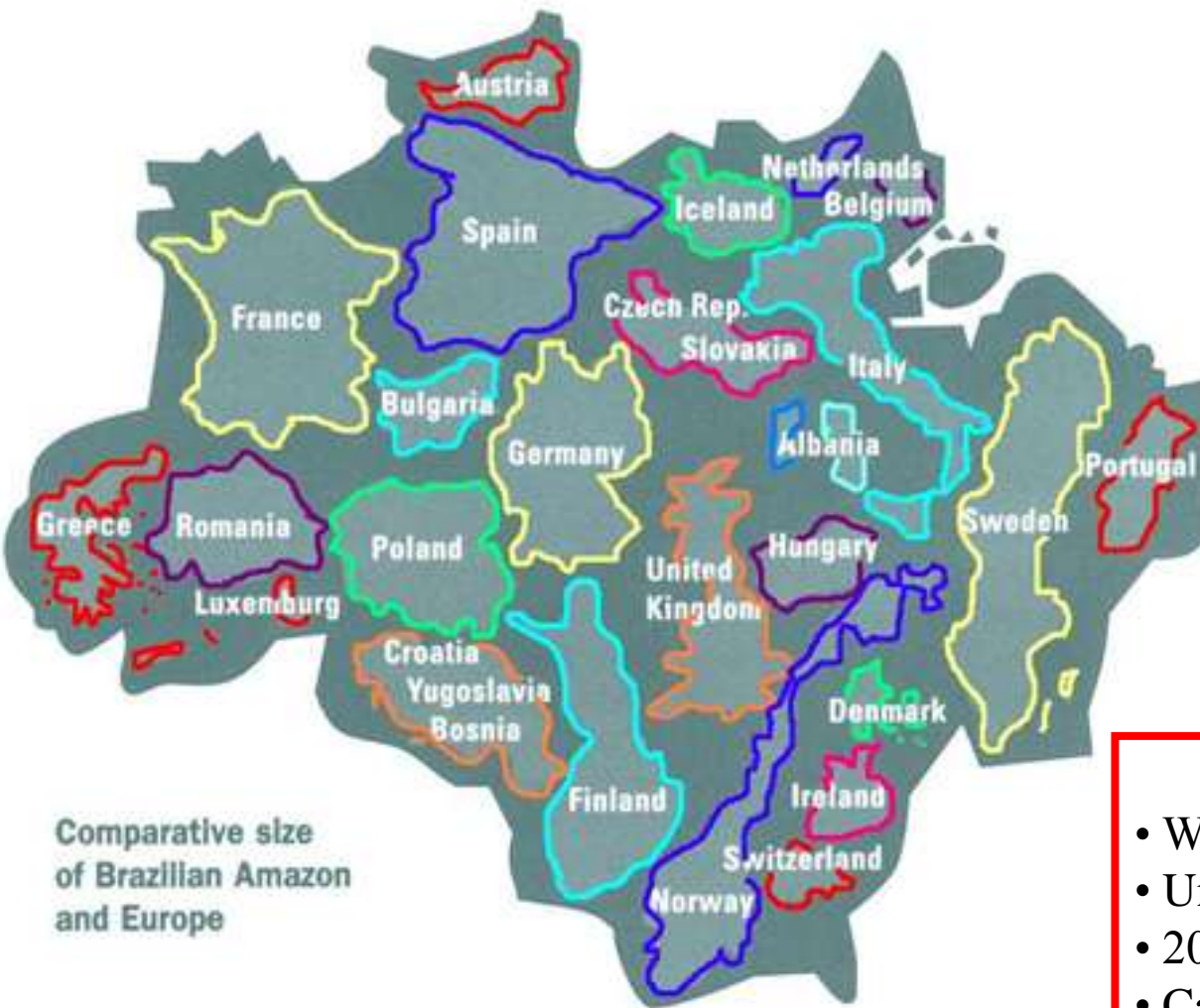
How to Win The War On Global Warming

BY BRYAN WALSH



www.time.com

The Amazon challenge...



Comparative size
of Brazilian Amazon
and Europe

- 5.1 million Km²
- 23 million people (12% of Brazil's)
- 350,000 indigenous people
- 70% urban population
- 46% below poverty line (2nd poorest region)
- 17% deforested

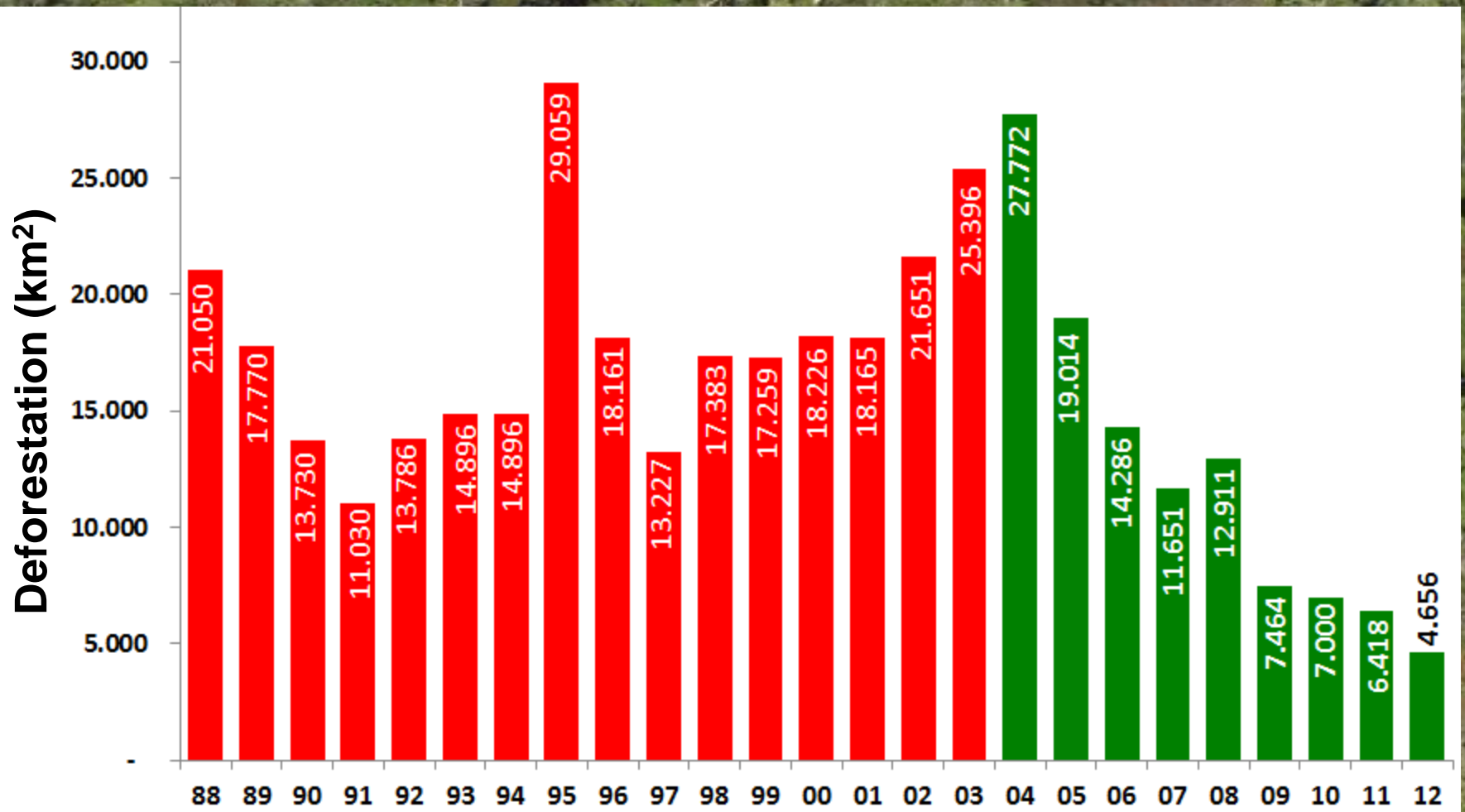
Global Benefits

- World's largest rainforest
- Unique biodiversity
- 20% globe's fresh water
- Carbon stocks



Impossible...

is a word used by those who prefer to live the world as it is, instead of using the power they have to change it.



Deforestation in 2012: 4.656 km²

- 83% (2004-2012)



Brazil is committed to reduce 36.1% of GHG emissions by 2020 and has already reduced 50%

The context...





Deforestation Drivers



charcoal



Cattle



Soybean



Sugar cane

Brazilian Policy...



National Climate change policy

Lei nº 12.187 de 29 de dezembro de 2009

“Art. 3º. National Climate Change Policy Instruments are:

I – National climate change plan;

II – National climate change fund;

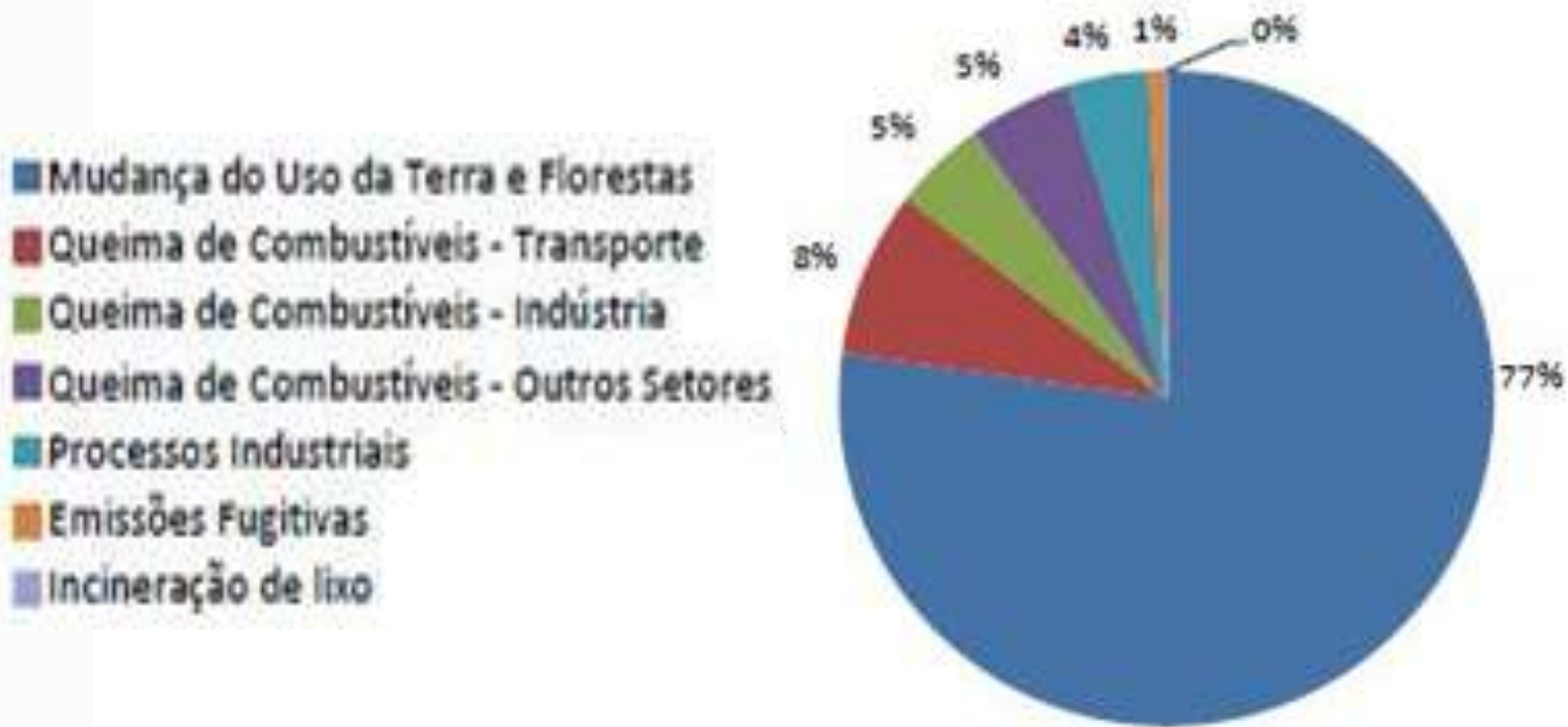
*III – **Biome Plans to prevent and control deforestation;***

...”

National climate change plan (Sectorial Plans)

PLAN	AREA	NOTE
Amazon	Control and monitoring deforestation (80% by 2020)	On-going
Cerrado (savannas)	Control and monitoring deforestation (40% by 2020)	On-going
Energy	Energy efficiency	On-going
Agriculture	Low carbon agriculture	On-going
Industry	Steel (charcoal), cement, chemistry, pulp and paper, aluminum, glass	Public consultation 2012
Transport	Urban mobility and logistics	Public consultation 2012
Health	Adaptation to climate change	Public consultation 2012
Mining	Extraction and pelletization	Public consultation 2012
Fishing (voluntary)	Energy efficiency and adaptation	Studies funded by Climate Change Fund

Brazilian CO₂ Emissions by sector



Fonte: Adaptado de MCT, 2010a. Second Brazil National Communication to the UN Framework Convention on Climate Change. Brasília: MCT –General Coordination on Global Climate Change.

The path to 2012...



In January 2003...

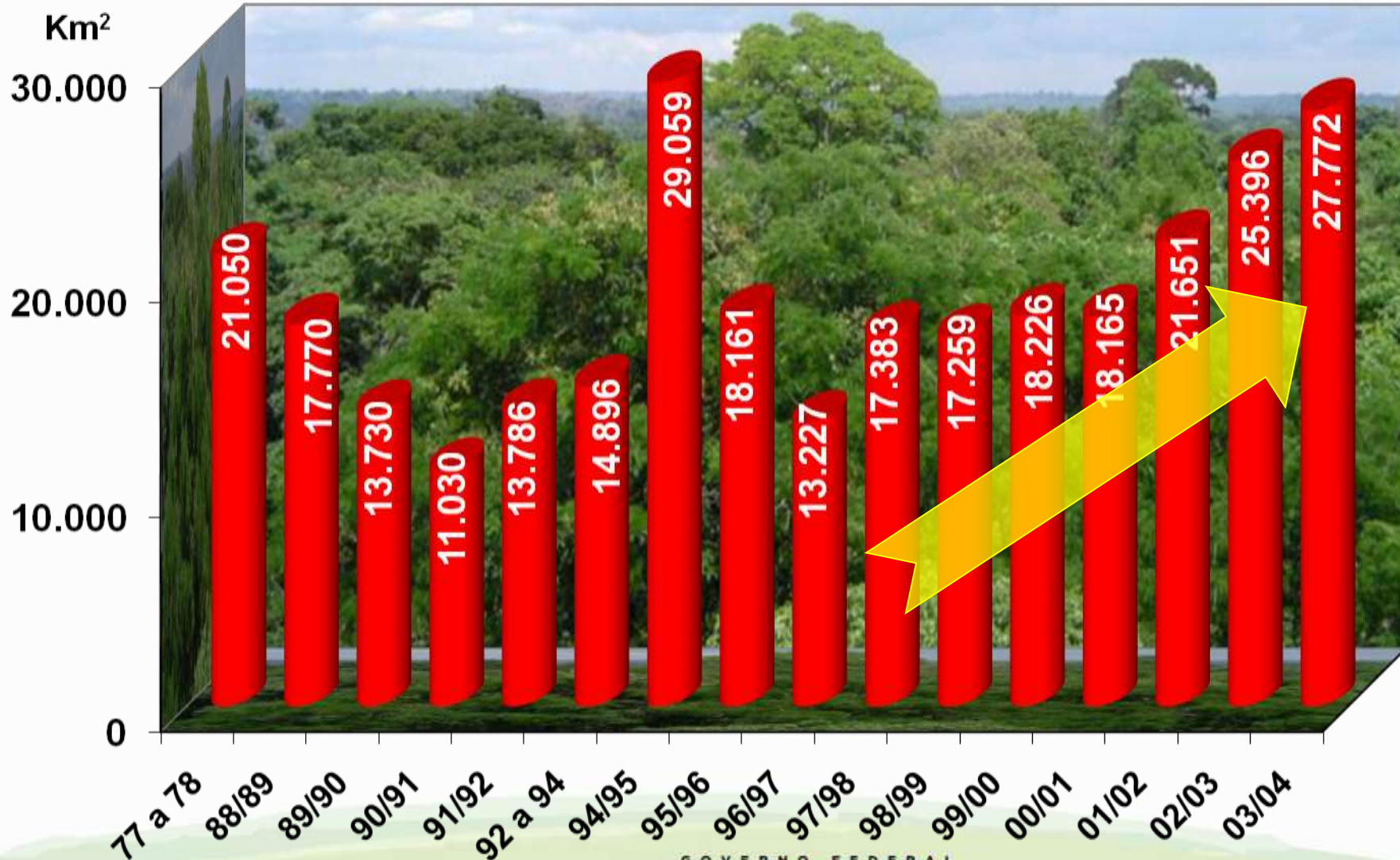


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BRASIL
PAÍS RICO É PAÍS SEM POBREZA



Brazilian Amazon Deforestation rates



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BRASIL
PAÍS RICO É PAÍS SEM POBREZA

Source: www.obt.inpe.br/prodes

Executive Office of the Presidency

Presidential Decree 3/07/2003

Interministerial Permanent Workgroup

Dedicated to reduce deforestation rates in the
Legal Amazon

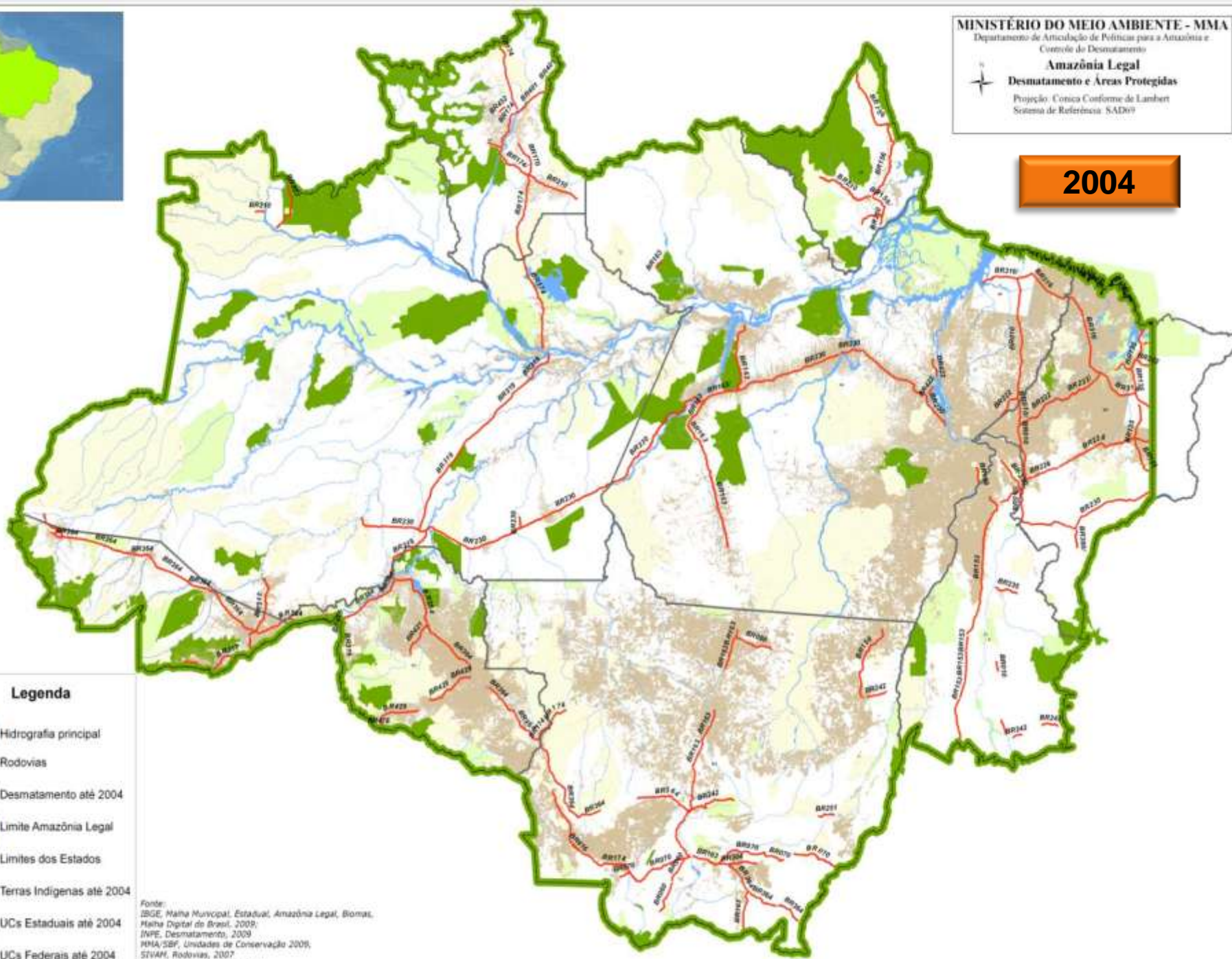
8 months later...

Interministerial Action Plan

(March 2004)

- 1. Land use planning**
- 2. Monitoring and Control**
- 3. Sustainable Activities**

2004



Legenda

-  Hidrografia principal
-  Rodovias
-  Desmatamento até 2004
-  Limite Amazônia Legal
-  Limites dos Estados
-  Terras Indígenas até 2004
-  UCs Estaduais até 2004
-  UCs Federais até 2004

Fonte:
 IBGE, Malha Municipal, Estadual, Amazônia Legal, Biomas,
 Malha Digital de Brasil, 2009;
 INPE, Desmatamento, 2009;
 MMA/SBR, Unidades de Conservação 2009;
 SIVAM, Rodovias, 2007;
 FUNAI, Terras Indígenas, 2010

2010



**250,000km² of new
Protected areas and
100,000km² of Indigenous
Lands demarcated**

Legenda

Desmatamento 2010

Desmatamento até 2009

Amazônia Legal

América Latina

Rodovias Principais

Limites Estaduais

Hidrografia

Terra Indígena

Unidades de Conservação Feder

Unidades de Conservação Estadu

Sistema de Coordenadas Geográficas
Datum: SAD 69

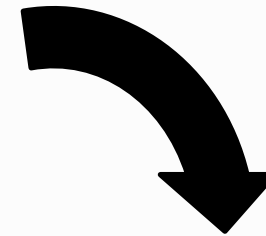
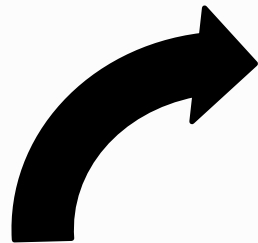
0 100 200 400 600 800 km

Monitoring and Control

Integrated actions



Monitoring
systems



Law Enforcement

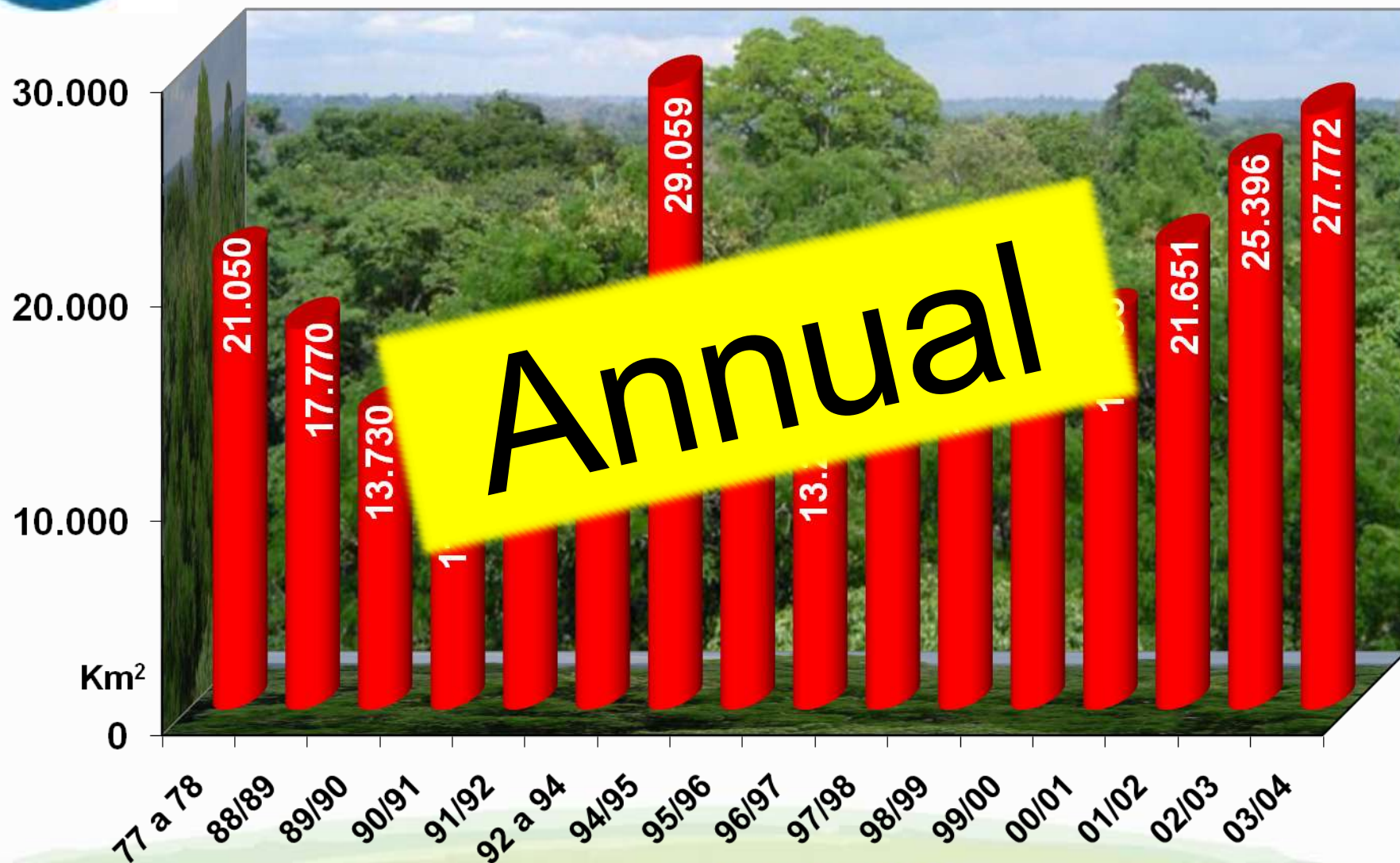


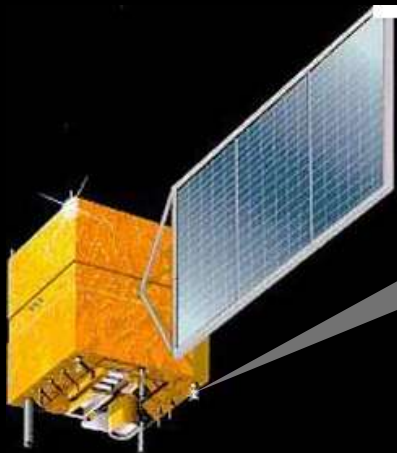
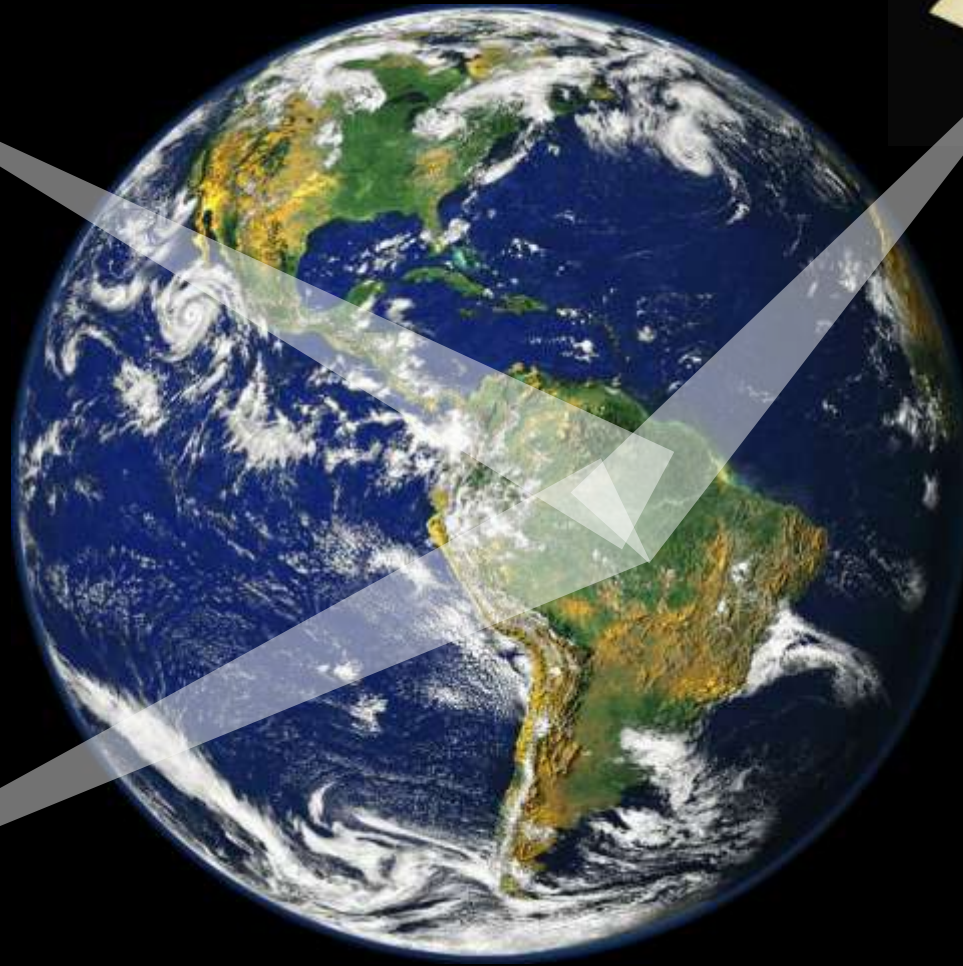
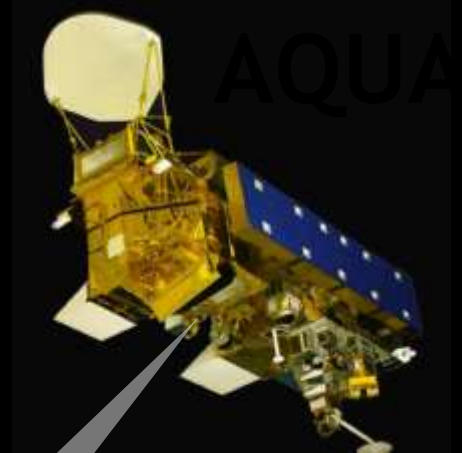
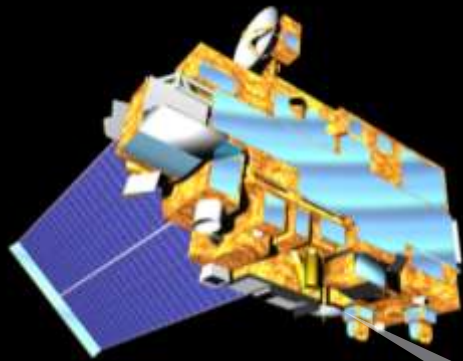
Remote Sensing
Centre





PRODES system





MODIS*

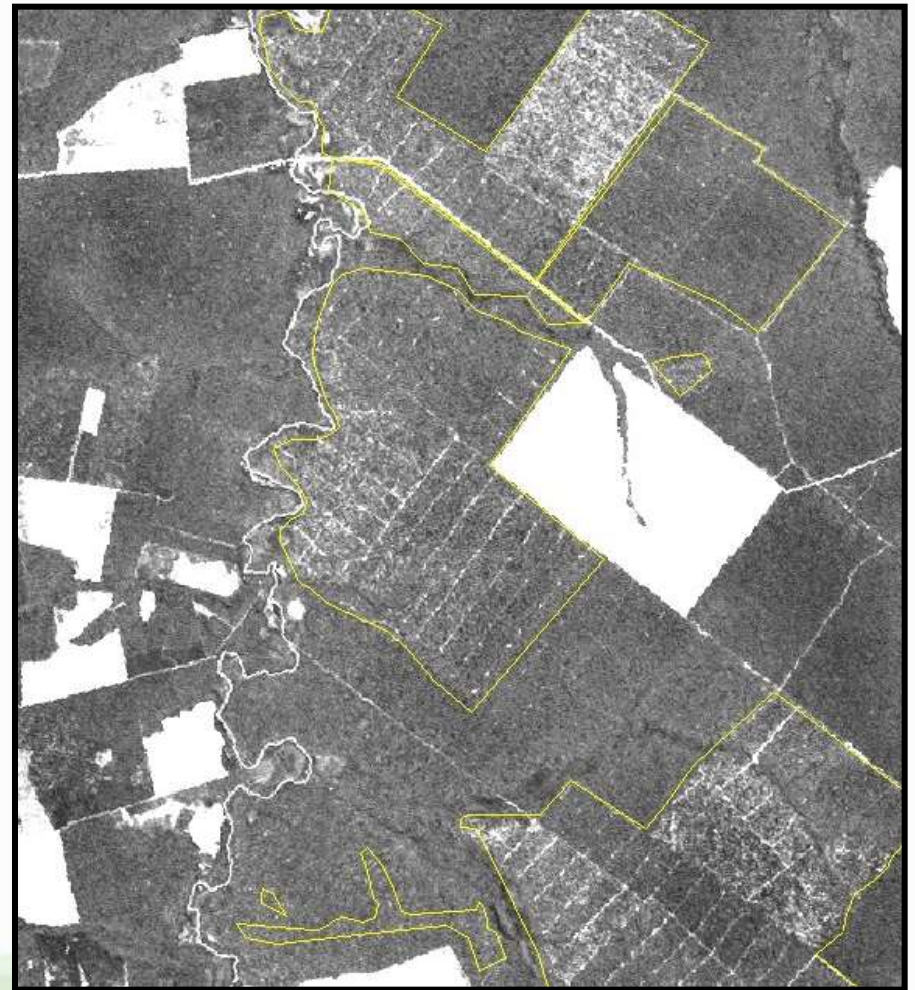
**~250m
resolution**



New data every day



Selective logging detection

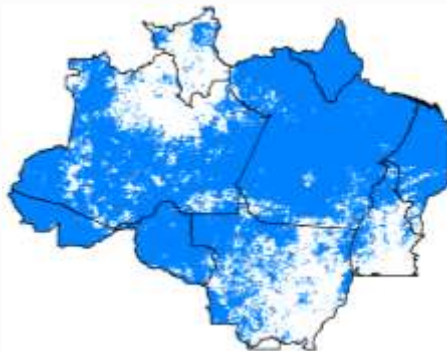


Cloud Cover - 2011

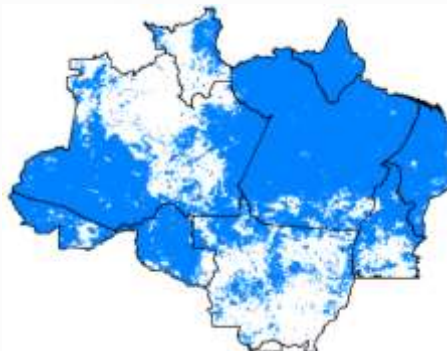
Cloud Cover



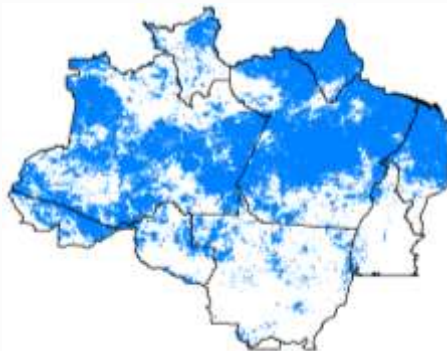
JAN.



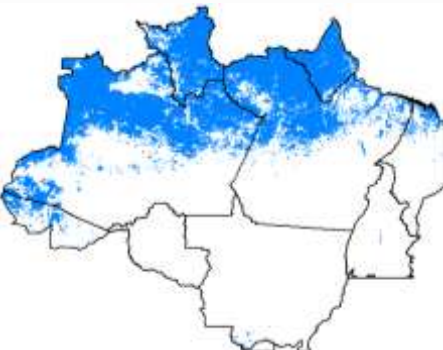
FEB.



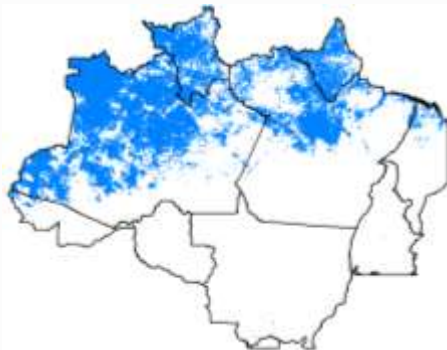
MAR.



APR.



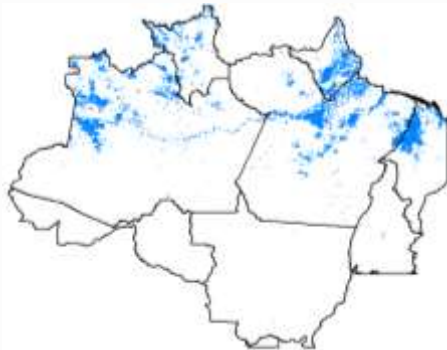
MAY.



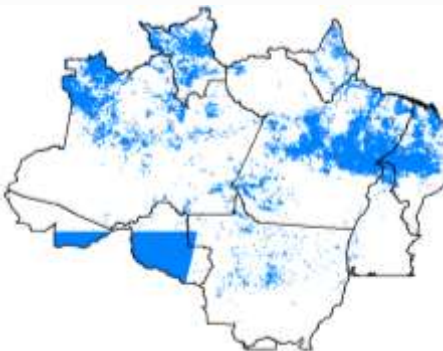
JUN.



JUL.



AUG.



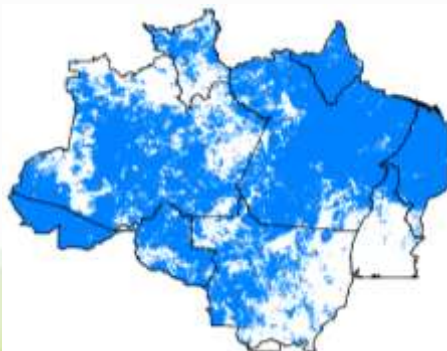
SEP.



OCT.



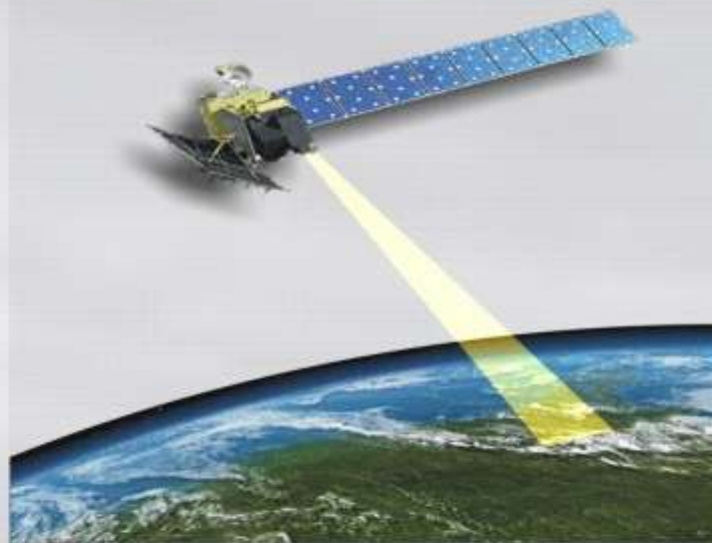
NOV.



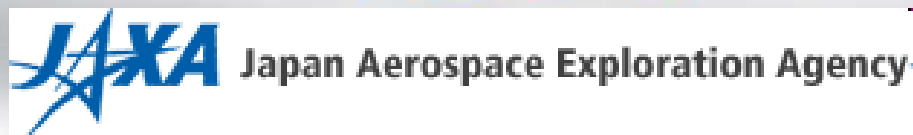
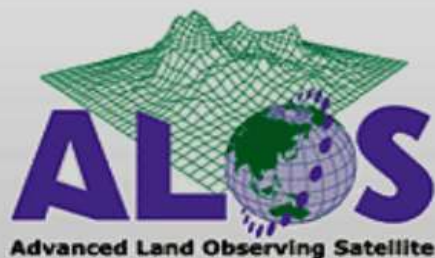
DEC.



INDICAR



Indicador de desmatamento
por imagens de radar





Levantamento de informações de uso
e cobertura da terra na Amazônia

Sumário Executivo

EMPRESA BRASILEIRA DE PESQUISA AGROPECUÁRIA - EMBRAPA | INSTITUTO NACIONAL DE PESQUISA ESPaciais - INPE



Banco Mundial

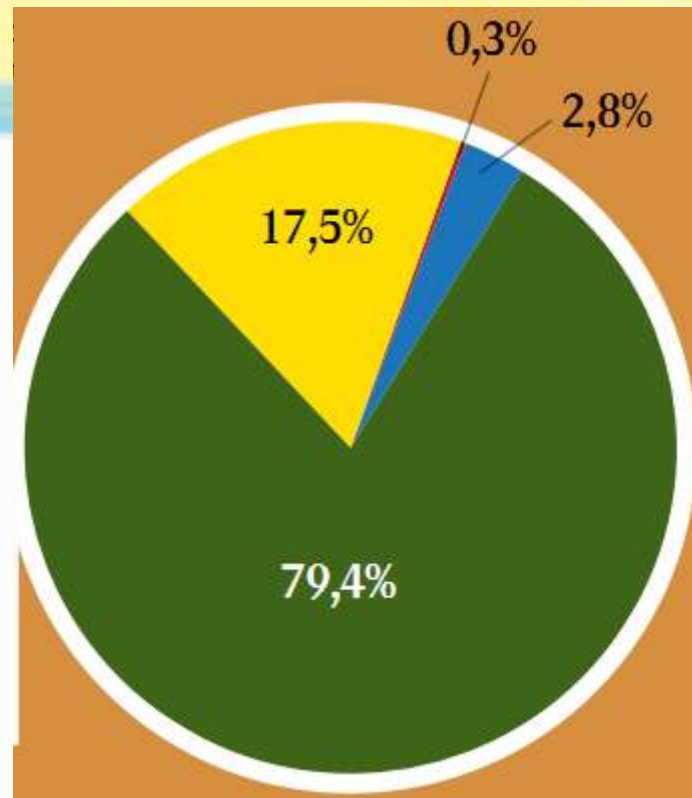


Ministério da Ciência,
Tecnologia e Inovação

Ministério da Agricultura,
Pecuária e Abastecimento



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Meio Ambiente



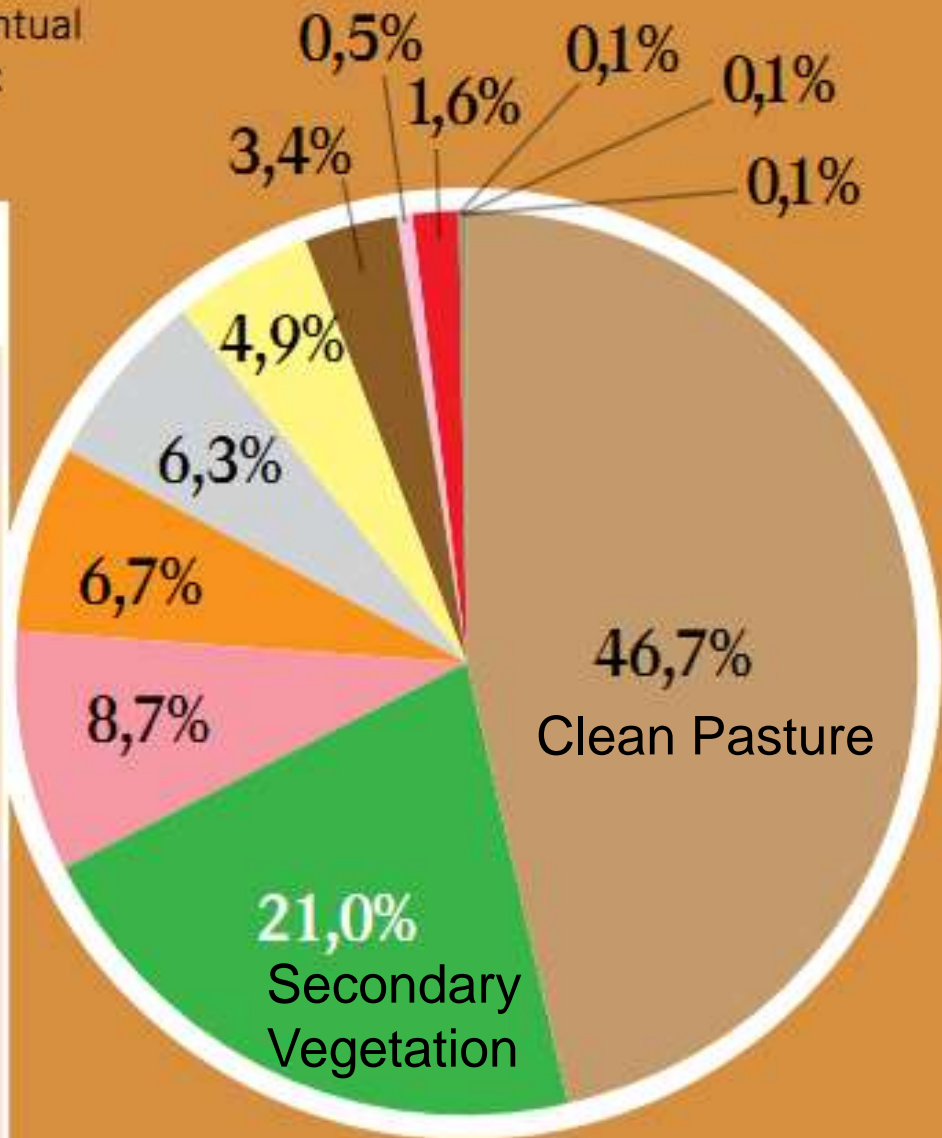
- Floresta
- Desflorestamento acumulado
- Hidrografia
- Desflorestamento 2008

O gráfico a seguir apresenta a distribuição percentual das classes temáticas mapeadas pelo TerraClass:

TERRACLASS 2008

Classes de Uso e Cobertura da Terra nas áreas desflorestadas da Amazônia

- Pasto Limpo
- Vegetação Secundária
- Pasto Sujo
- Regeneração com Pasto
- Área Não Observada
- Agricultura Anual
- Mosaico de Ocupações
- Área Urbana
- Mineração
- Pasto com Solo Exposto
- Outros
- Desflorestamento 2008



2 days later...



**Monitoring
system**

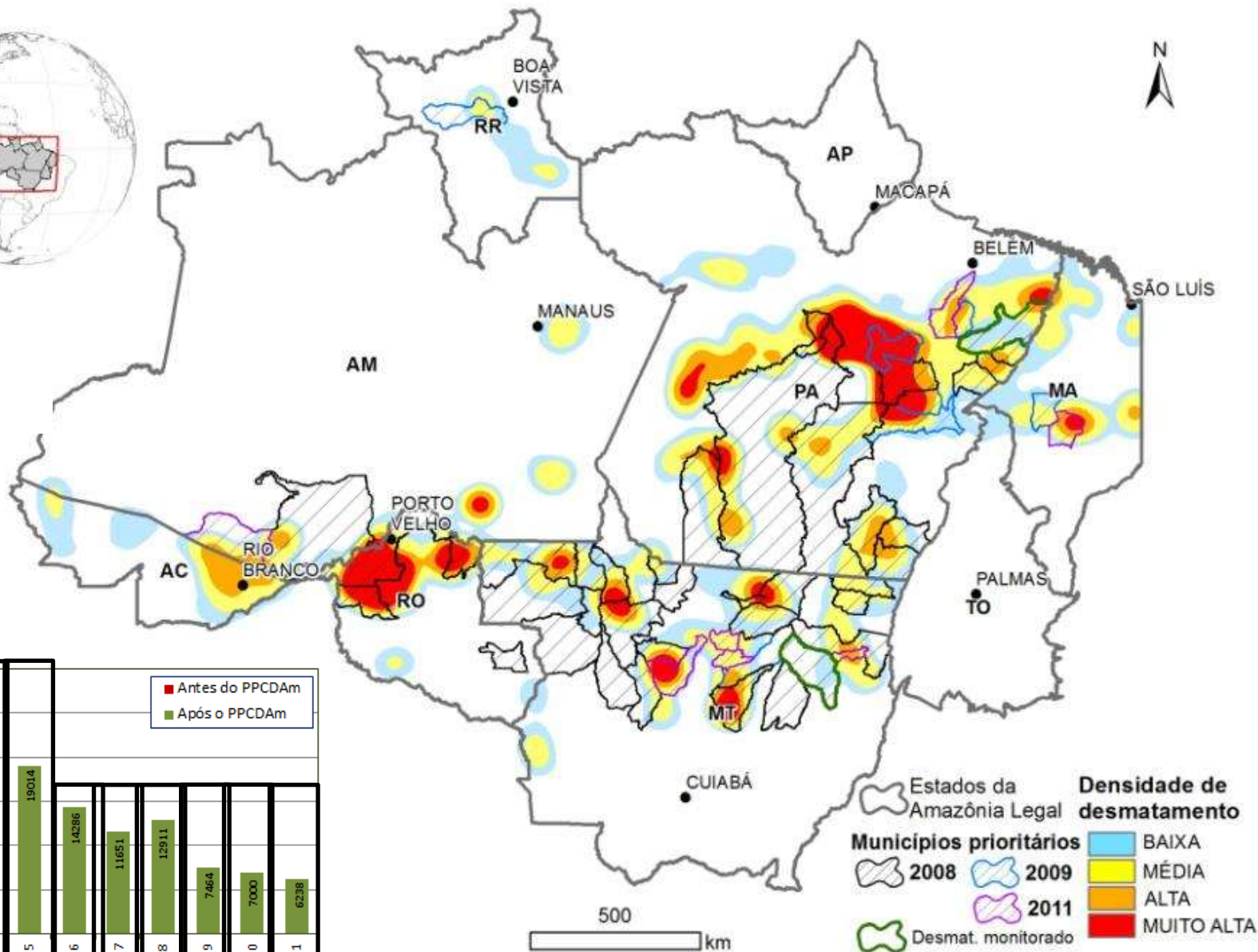


Law Enforcement



**Remote Sensing
Centre**

2011



Decree nº 6321/2007 - Priority municipalities

Municípios Prioritários para Ação de Controle e Prevenção do Desmatamento até 2011 e Municípios com iniciativas de CAR, definidos em Portarias do MMA

Portaria nº 28/2008, Localização

Alta Floresta, 10
Altamira, 29
Aripuanã, 11
Brasil Novo, 30
Brasnorte, 12
Colniza, 27
Confresa, 13
Cotriguaçu, 14
Cumaru do Norte, 31
Dom Eliseu, 32
Gaúcha do Norte, 16
Juara, 17
Juína, 18
Lábrea, 8
Machadinho d'Oeste, 44
Marcelândia, 19
Nova Bandeirantes, 20
Nova Mamorê, 47
Nova Maringá, 26
Nova Ubiratã, 21
Novo Progresso, 35
Novo Repartimento, 36
Paranaíta, 22
Peixoto de Azevedo, 23
Pimenta Bueno, 45
Porto Velho, 46
Porto dos Gaúchos, 24
Rondon do Pará, 38
Santa Maria das Barreiras, 39
Santana do Araguaia, 40
São Félix do Araguaia, 28
São Félix do Xingu, 41
Ulianópolis, 43
Vila Rica, 25

Portaria nº 102/2009, Localização

Amarante do Maranhão, 9
Feliz Natal, 15
Itupiranga, 33
Marabá, 34
Mucajá, 48
Pacajá, 37
Tailândia, 42

Legenda
Ano de Inclusão dos municípios na lista Municípios

2008
2009
2011

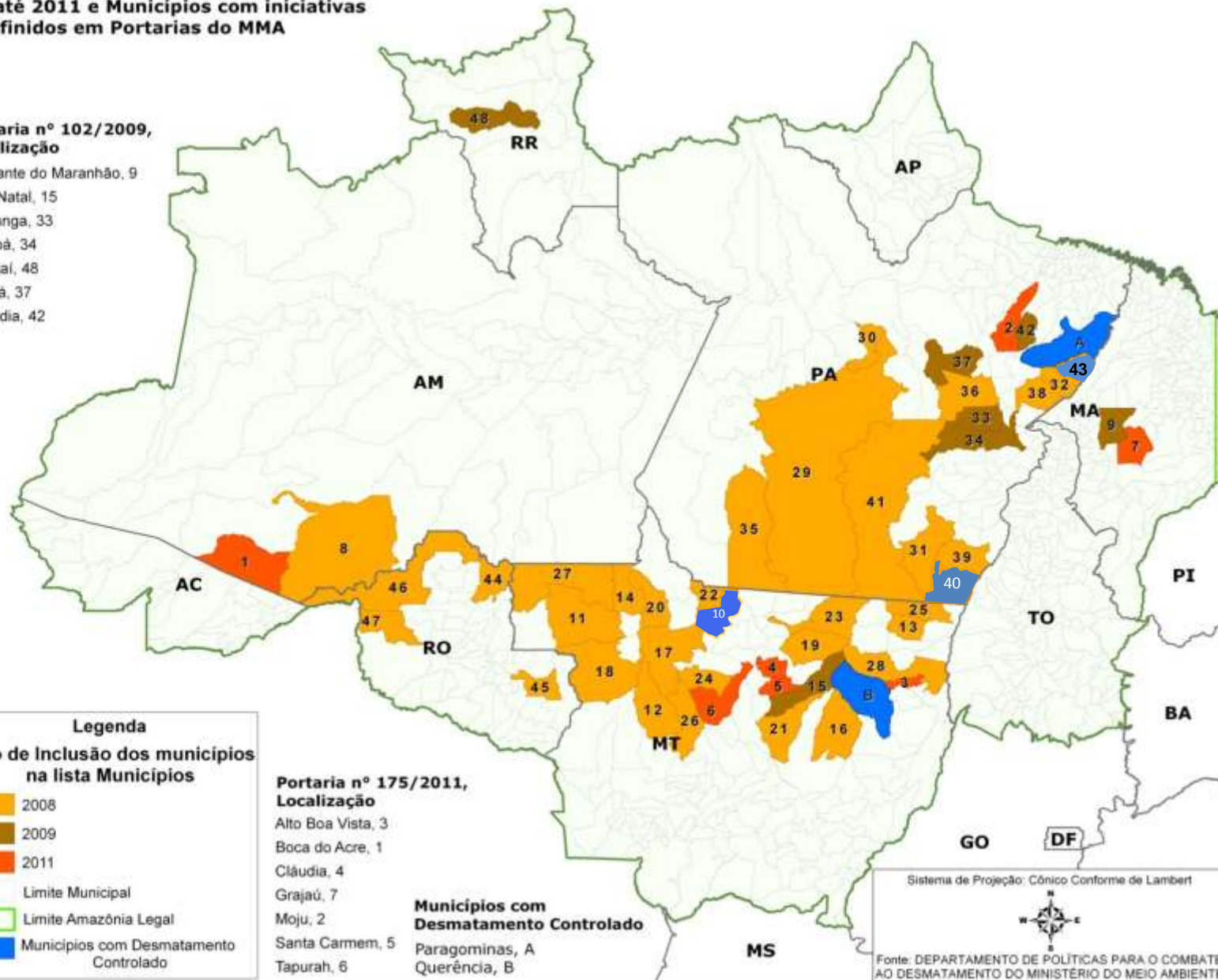
Limite Municipal
Limite Amazônia Legal
Municípios com Desmatamento Controlado

Portaria nº 175/2011, Localização

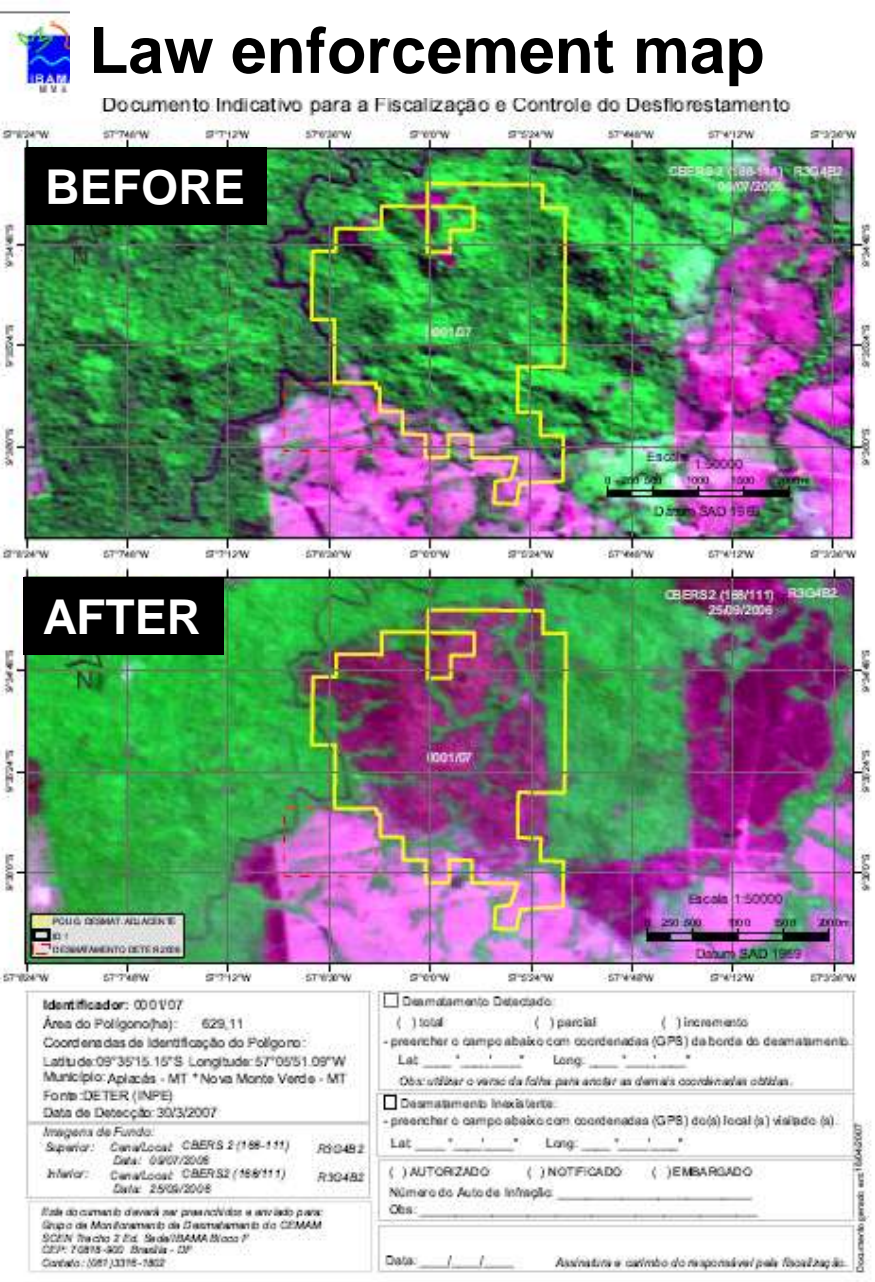
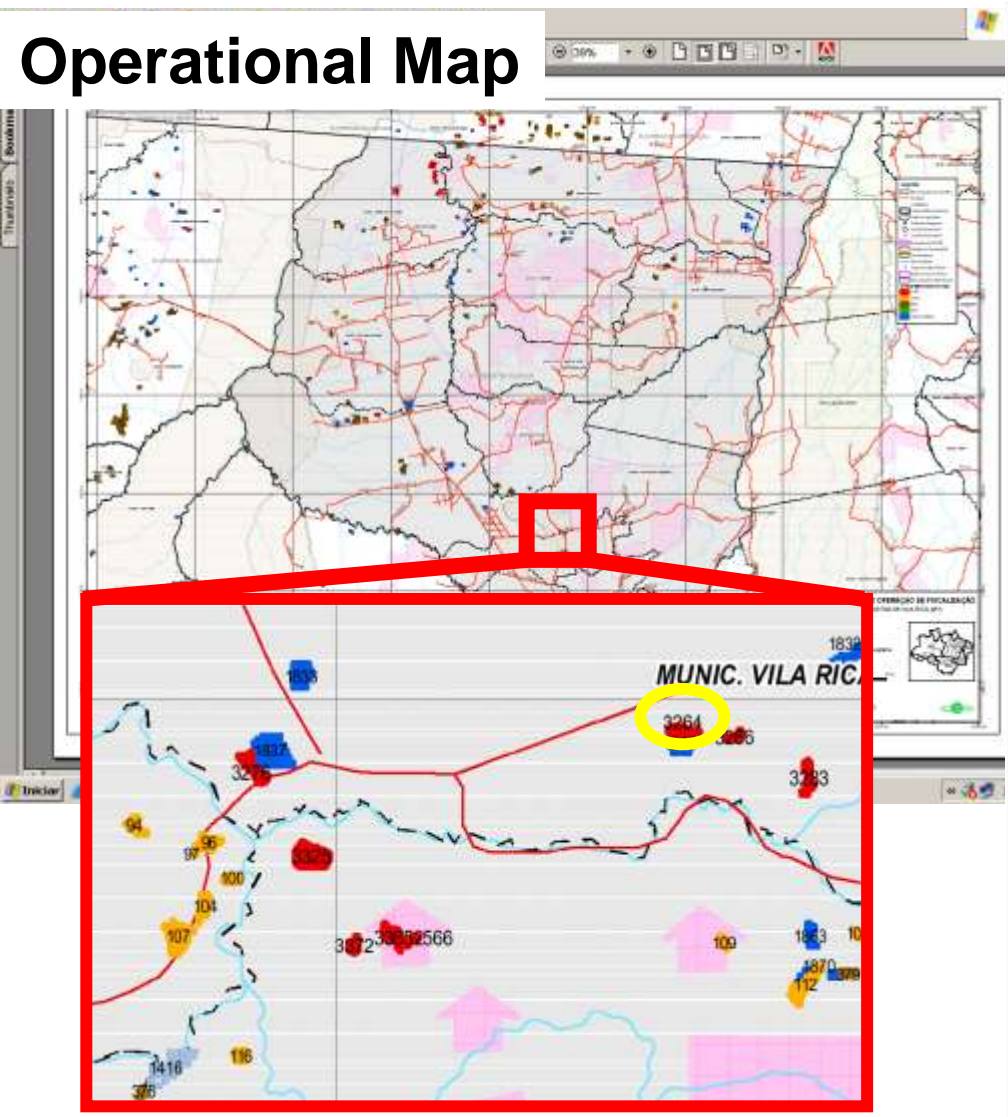
Alto Boa Vista, 3
Boca do Acre, 1
Cláudia, 4
Grajau, 7
Moju, 2
Santa Carmem, 5
Tapurah, 6

Municípios com Desmatamento Controlado

Paragominas, A
Querência, B



Operational Map



...in 2 days...



**Monitoring
system**



Law enforcement



**Remote Sensing
Center**





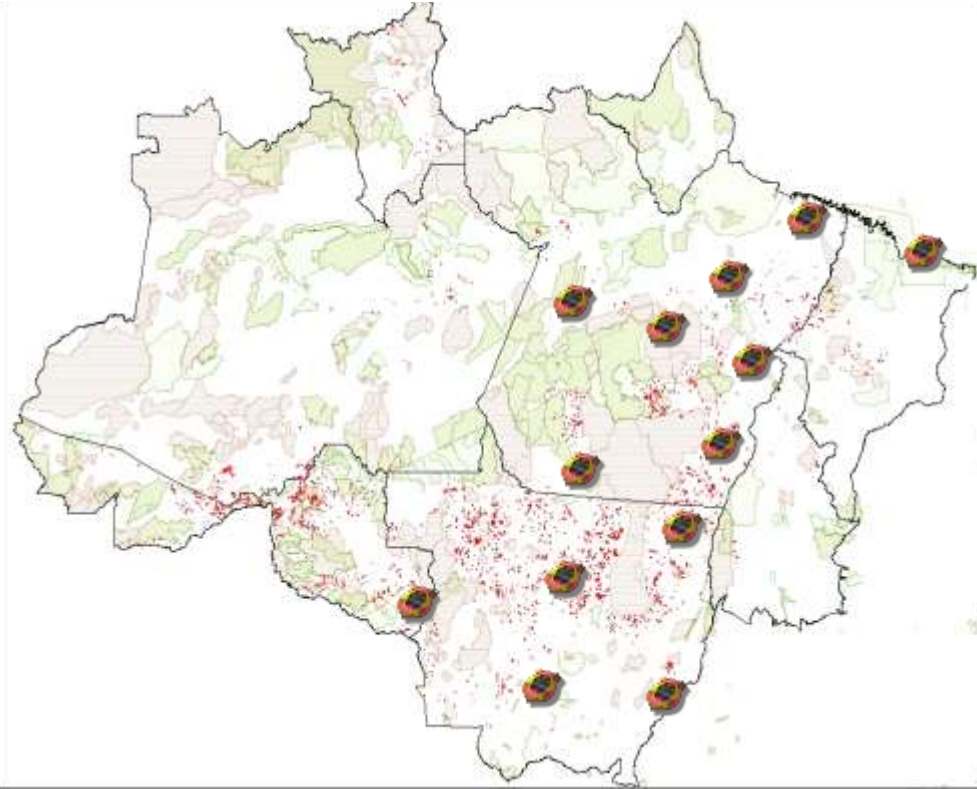
3,000 police officers / year



Day



Motorway barriers



Night



**~ 110
Chainsaws**



95 Bulldozers



329 Trucks

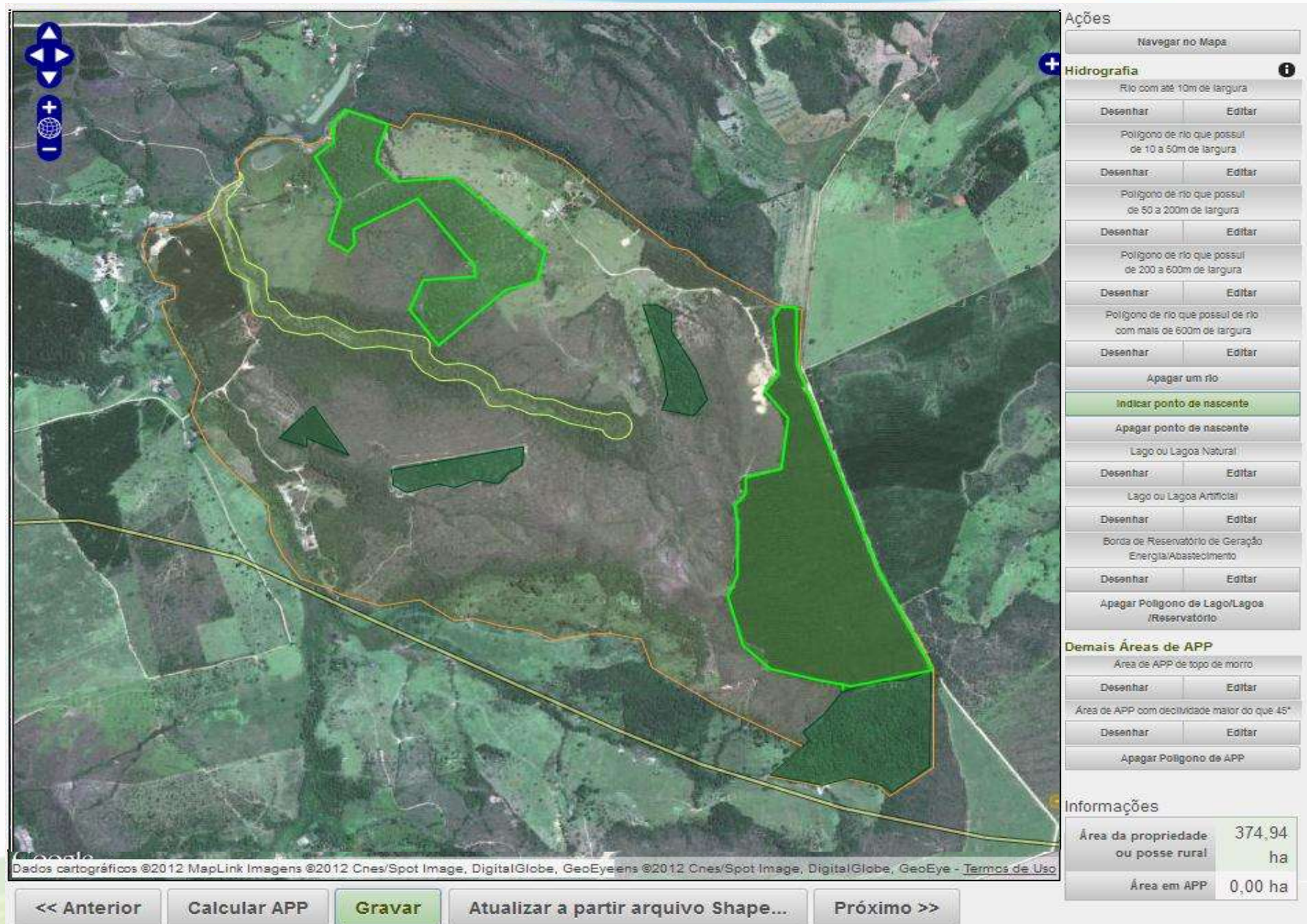


Electronic Fine PDA



AI-e

Environment regularization of private properties (CAR)



Ações

Navegar no Mapa

Hidrografia

Rio com até 10m de largura

Desenhar Editar

Polígono de rio que possui de 10 a 50m de largura

Desenhar Editar

Polígono de rio que possui de 50 a 200m de largura

Desenhar Editar

Polígono de rio que possui de 200 a 600m de largura

Desenhar Editar

Polígono de rio que possui de mais de 600m de largura

Desenhar Editar

Apagar um rio

Indicar ponto de nascente

Apagar ponto de nascente

Lago ou Lagoa Natural

Desenhar Editar

Lago ou Lagoa Artificial

Desenhar Editar

Borda de Reservatório de Geração Energia/Abastecimento

Desenhar Editar

Apagar Polígono de Lago/Lagoa /Reservatório

Demais Áreas de APP

Área de APP de topo de morro

Desenhar Editar

Área de APP com declividade maior do que 45°

Desenhar Editar

Apagar Polígono de APP

Informações

Área da propriedade ou posse rural	374,94 ha
Área em APP	0,00 ha

Dados cartográficos ©2012 MapLink Imagens ©2012 Cnes/Spot Image, DigitalGlobe, GeoEye ©2012 Cnes/Spot Image, DigitalGlobe, GeoEye - Termos de Uso

<< Anterior Calcular APP **Gravar** Atualizar a partir arquivo Shape... Próximo >>



Brazil and **Norway**
established a
partnership

**FUNDO
AMAZONIA**

O BRASIL CUIDA. O MUNDO APOIA. TODOS GANHAM.

Decreto nº 6.727 de 1º de agosto de 2008

- A voluntary mechanism of fund raising dedicated to support projects and action plans that will contribute to prevent and reduce deforestation, and to promote the sustainable use of the forest in the Amazon region.

Supported Categories

To achieve its **objectives**,
the **Amazon Fund**
supports **projects**
in the **following areas**:
(specified in Decree nº. 6527/08)

- I Management of public forests and protected areas;
- II Environmental control, monitoring and surveillance;
- III Sustainable forest management;
- IV Economic activities developed from sustainable use of the forest;
- V Ecological and economic zoning, land-use planning and land title regulation;
- VI Conservation and the sustainable use of biodiversity and;
- VII Recovery of deforested areas.

ACTO

Amazon Cooperation Treaty Organization

First international project launched in Rio+20



Some **7 million km²** stretched across **nine countries** in **South America**:



Bolivia



Suriname



Ecuador



Guiana



Venezuela



French Guiana



Colombia

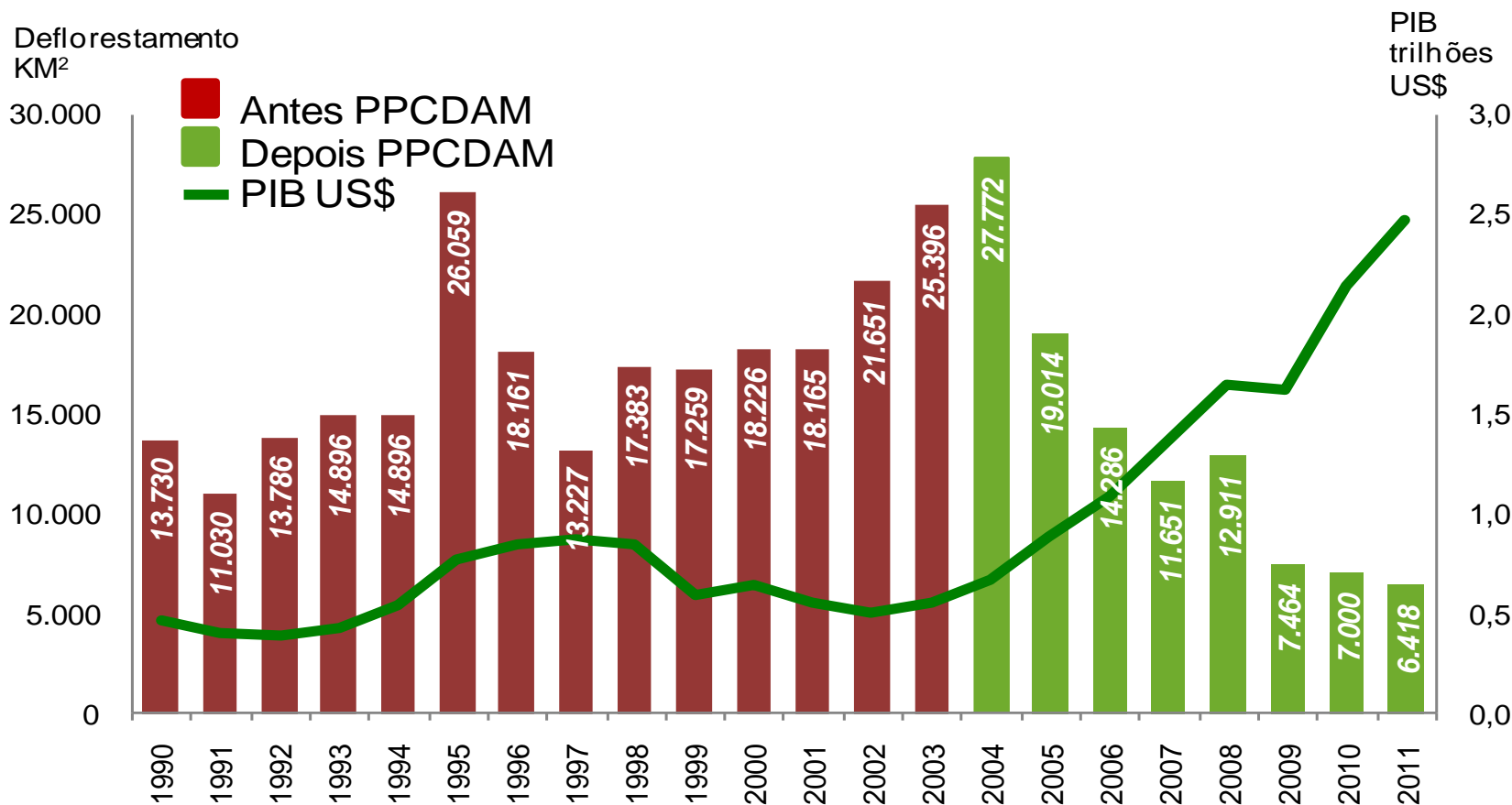


Brazil



Peru

Amazon Deforestation X GDP x PIB



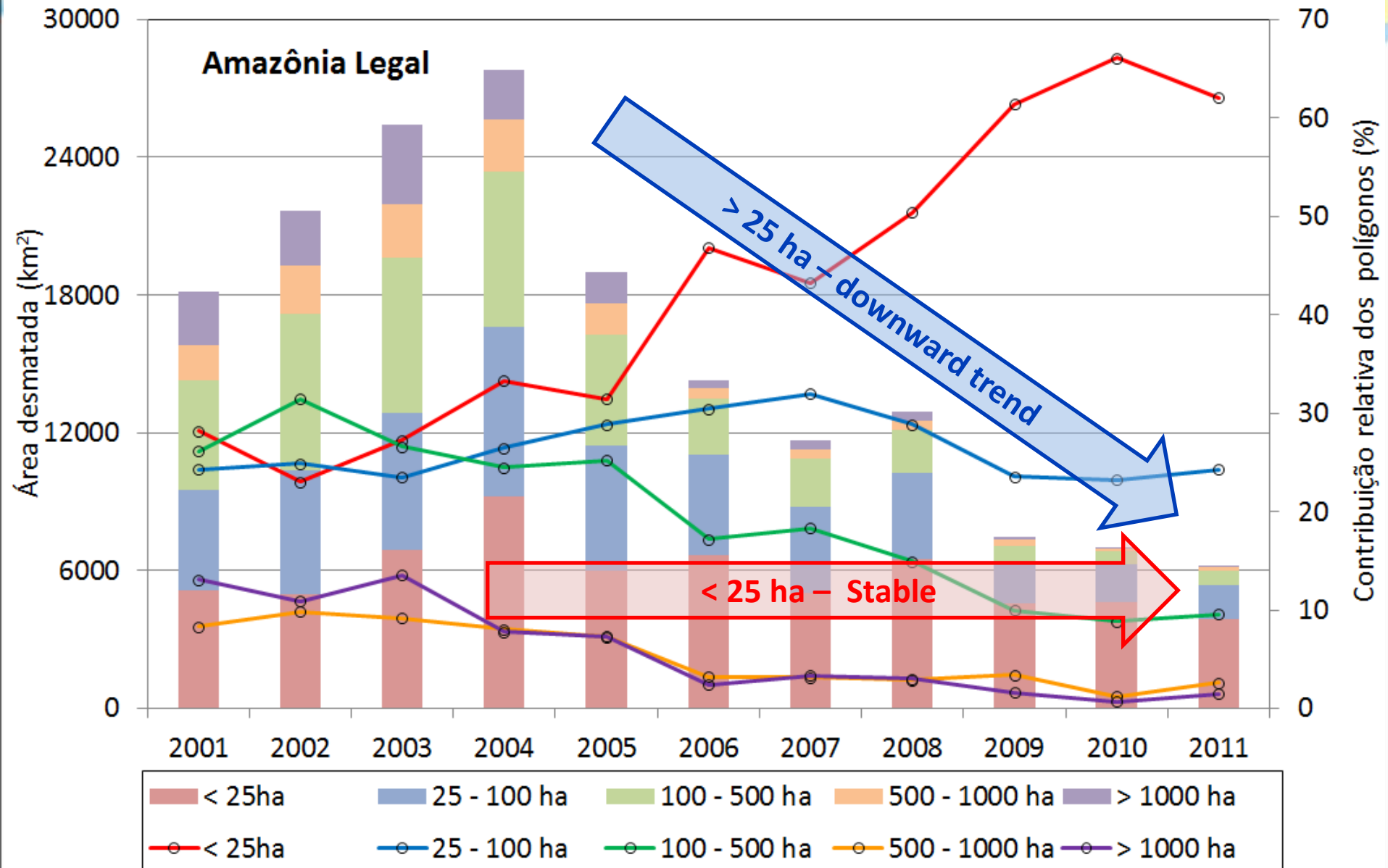
Fonte: PRODES-INPE E BACEN



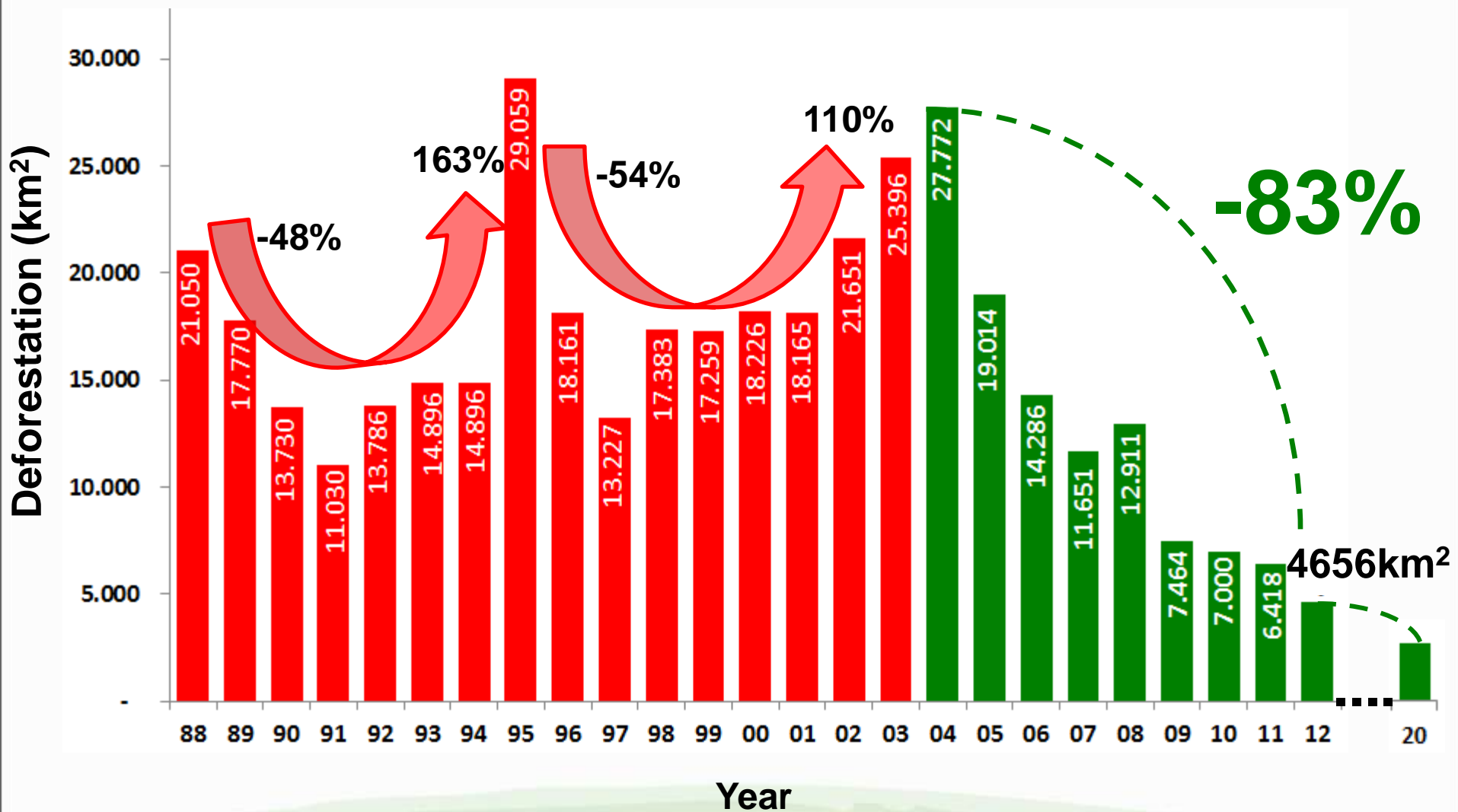
The future challenges...

2012 - 2015





Brazilian Amazon Deforestation rates (1988-2012)



*“ At first I thought I was fighting to
save rubber trees.
Then, I was fighting to save the
Amazon rainforest.
Now I realize I am fighting for
humanity!”*



Chico Mendes
Rubber tapper

Thank you!

Francisco J. B. Oliveira Filho
francisco.oliveira@mma.gov.br