

# COMBATING AMAZON DEFORESTATION

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# **AGENDA**

## **LOOKING BACK**

The Action Plan

Policy Evaluation

- monitoring and law enforcement
- priority municipalities
- conditional rural credit
- protected territory

## **MOVING FORWARD**

Challenges and Opportunities

# FRAMING

## COMBATING ILLEGAL DEFORESTATION

### ENVIRONMENT

- ecosystem services
- climate change mitigation

### ECONOMICS

- natural resources
- global commodity markets
- financial responsibility

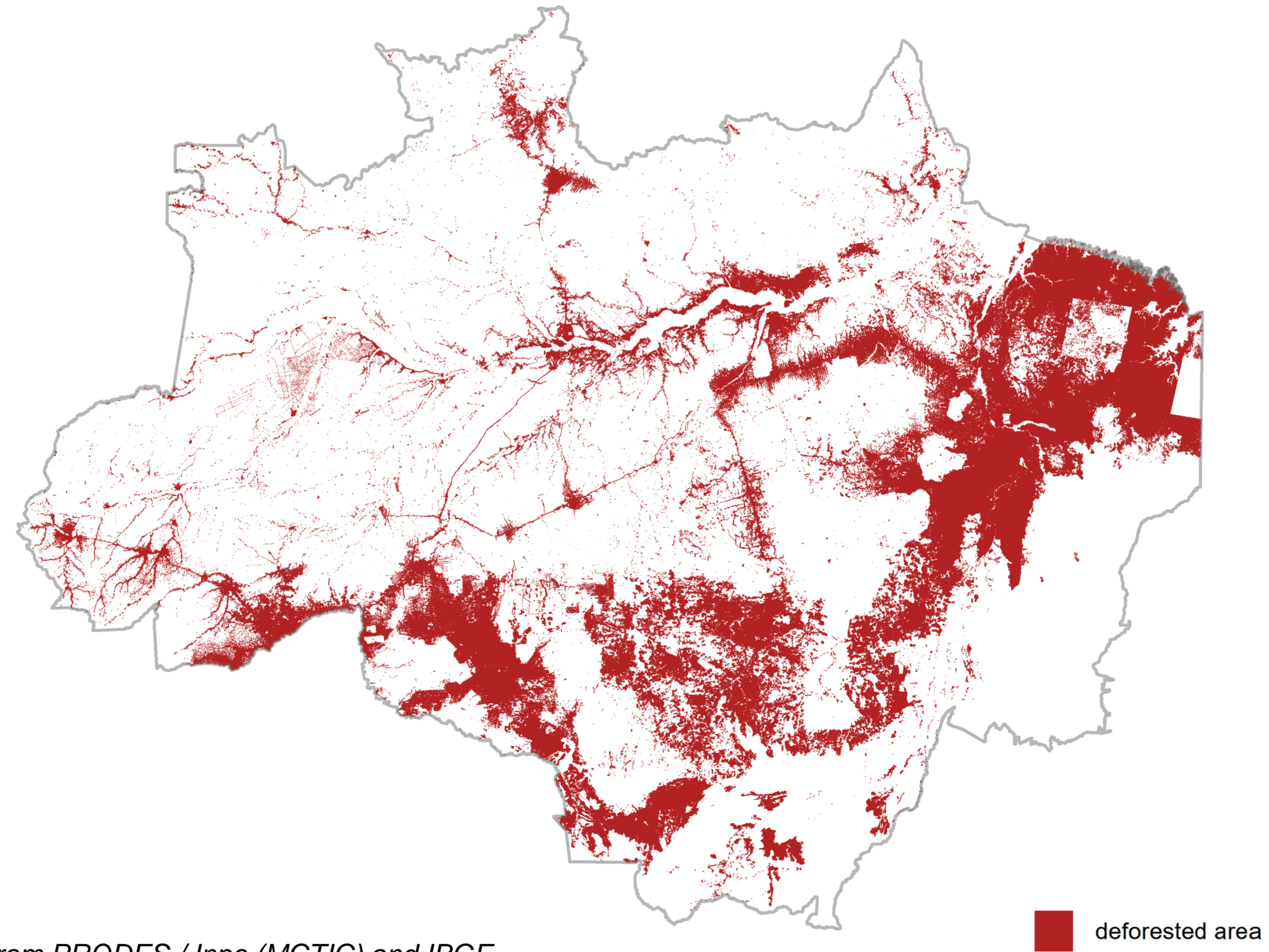
### LAW ENFORCEMENT

- illegal occupations
- unauthorized clearings

**LOOKING BACK**

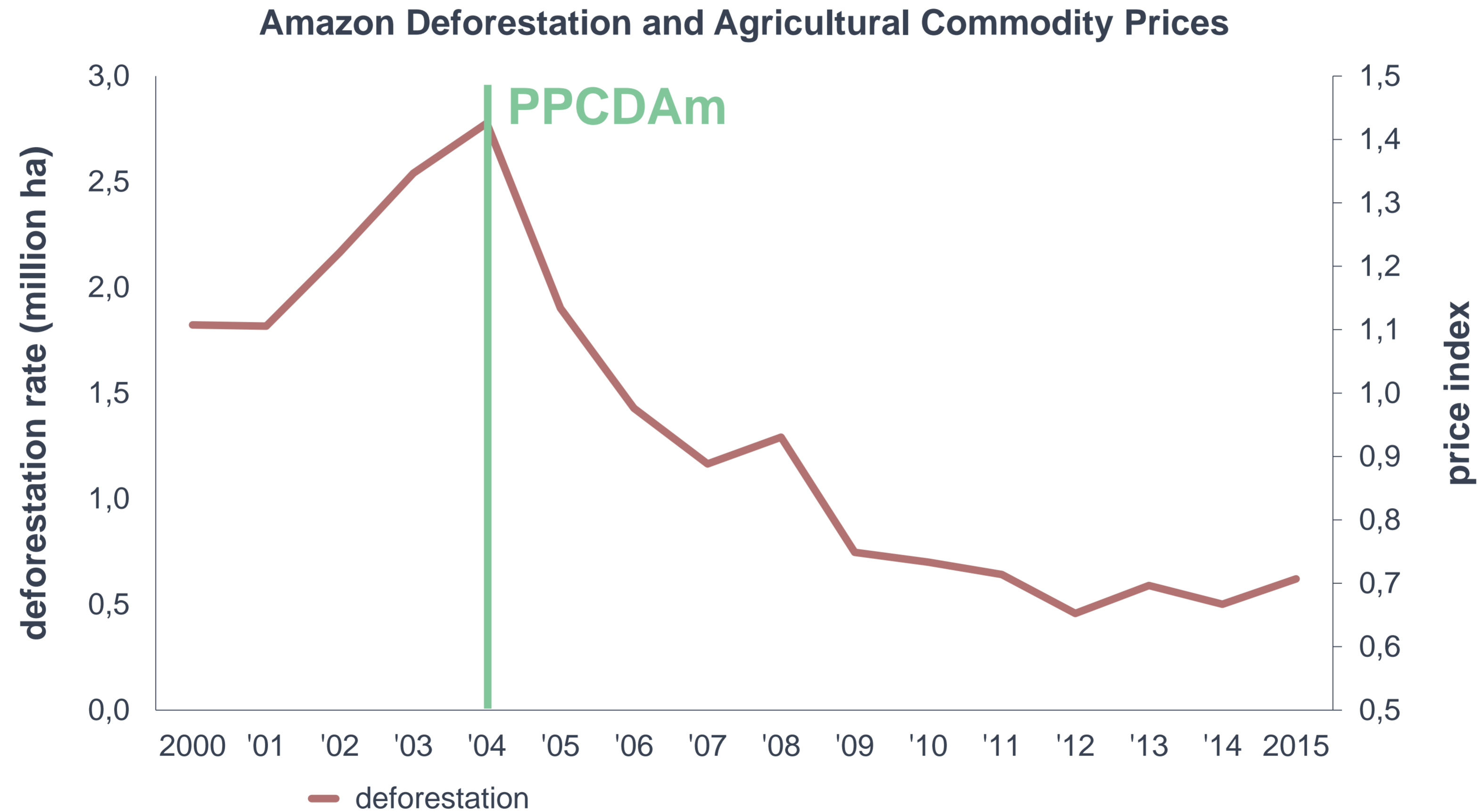
# THE ACTION PLAN

## Amazon Deforestation: Historical Through 2004



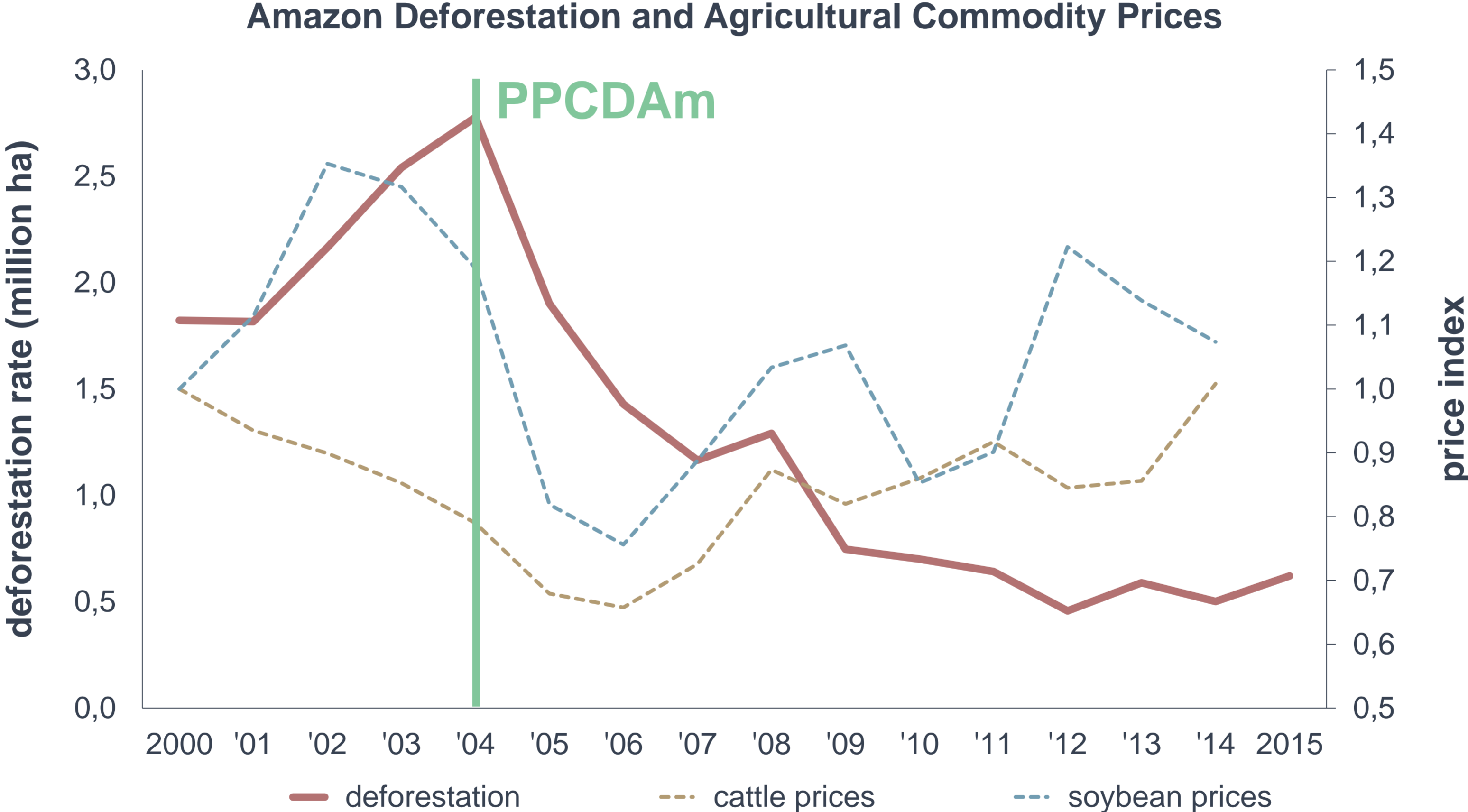
Source: Climate Policy Initiative with data from PRODES / Inpe (MCTIC) and IBGE.

# THE ACTION PLAN



Source: Climate Policy Initiative with data from PRODES / Inpe (MCTIC) and SEAB-PA.

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Source: Climate Policy Initiative with data from PRODES / Inpe (MCTIC) and SEAB-PA.

Assunção, Gandour and Rocha (2015) *Deforestation slowdown in the Brazilian Amazon: Prices or policies?*  
link: [academic paper](#) and [executive summary](#)

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# MONITORING AND LAW ENFORCEMENT

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## DOES LAW ENFORCEMENT REDUCE DEFORESTATION?

- illegal practice
  - illegal occupations
  - unauthorized clearings

law enforcement



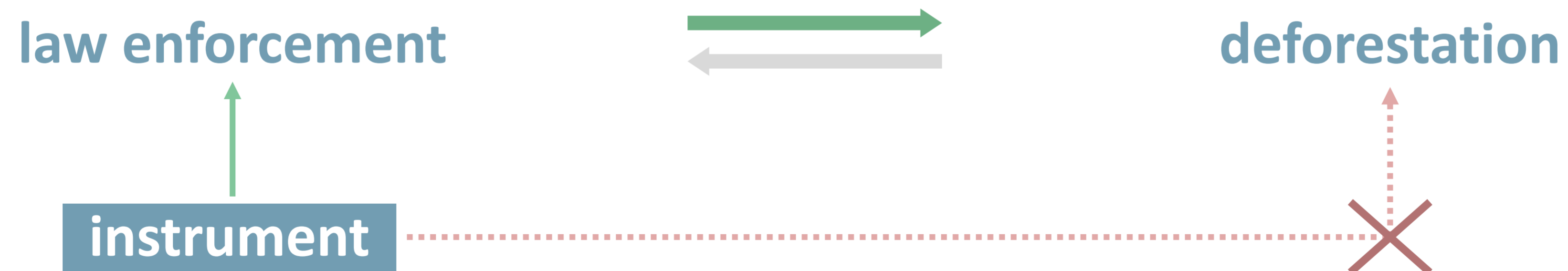
deforestation



# MONITORING AND LAW ENFORCEMENT

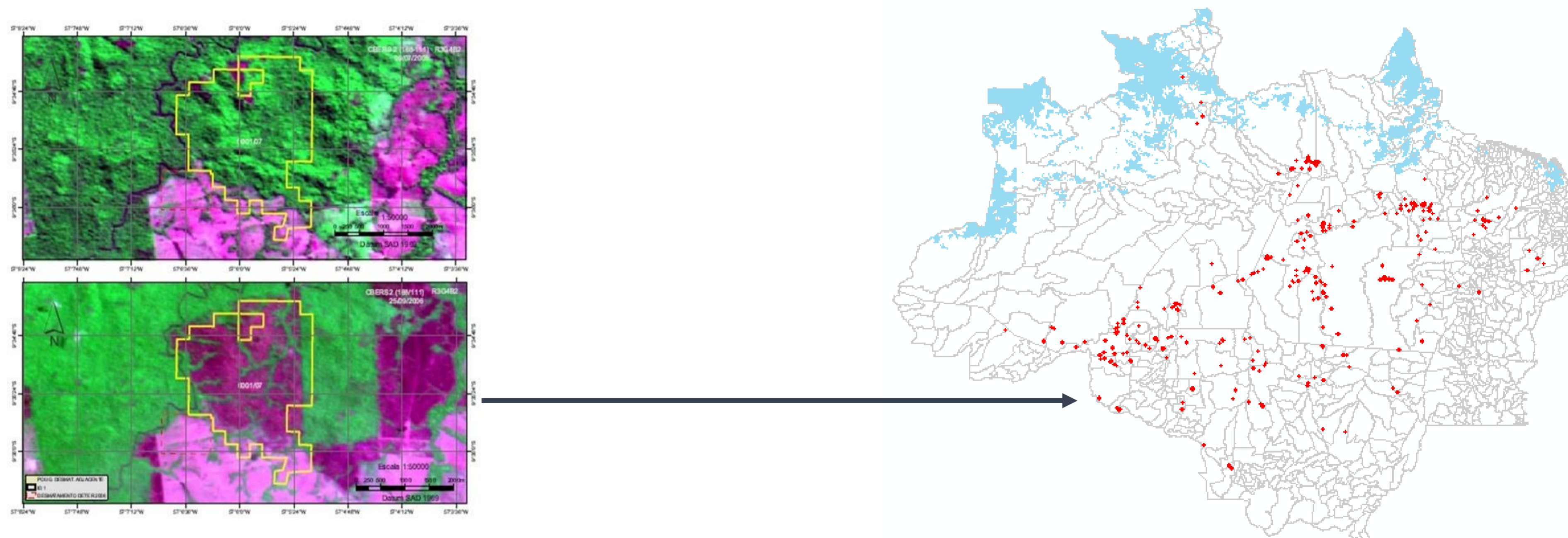
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# MONITORING AND LAW ENFORCEMENT

## DETER SYSTEM



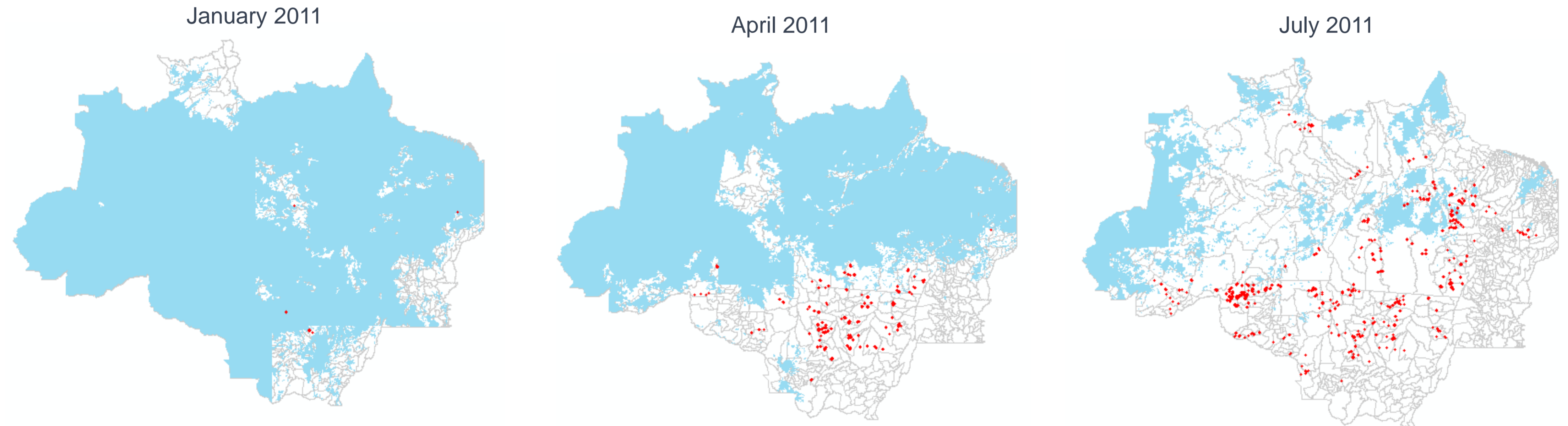
Source: Climate Policy Initiative with data from Ibama (MMA), DETER / Inpe (MCTIC) and IBGE.

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# MONITORING AND LAW ENFORCEMENT

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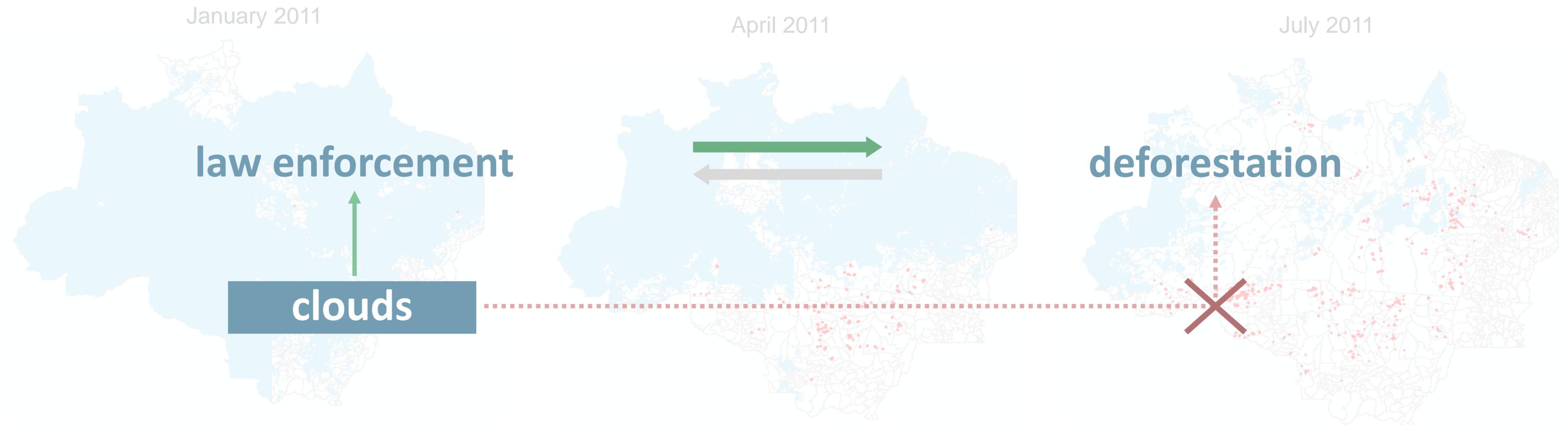
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# MONITORING AND LAW ENFORCEMENT

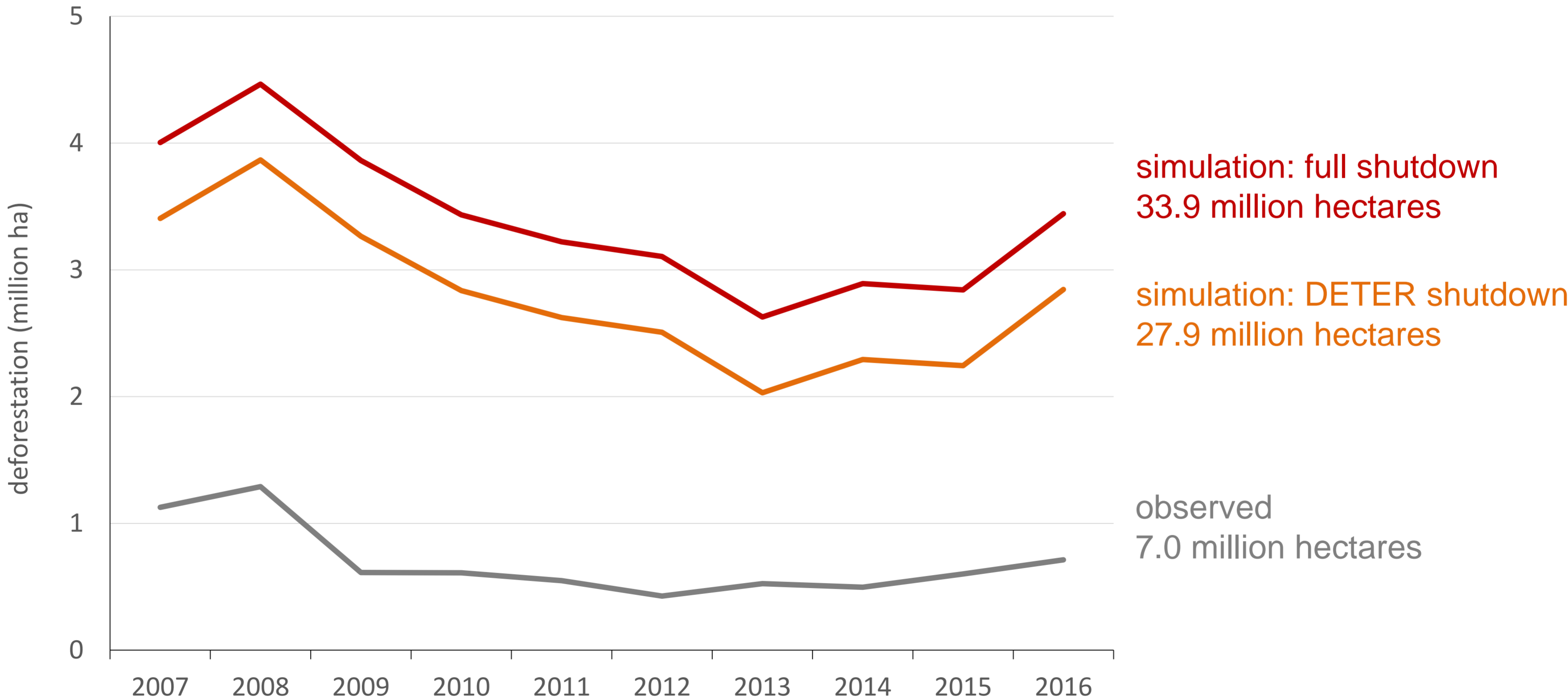
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Source: Climate Policy Initiative with data from Ibama (MMA), DETER / Inpe (MCTIC) and IBGE.

# MONITORING AND LAW ENFORCEMENT

## SIMULATION: SHUT DOWN MONITORING AND LAW ENFORCEMENT



# MONITORING AND LAW ENFORCEMENT

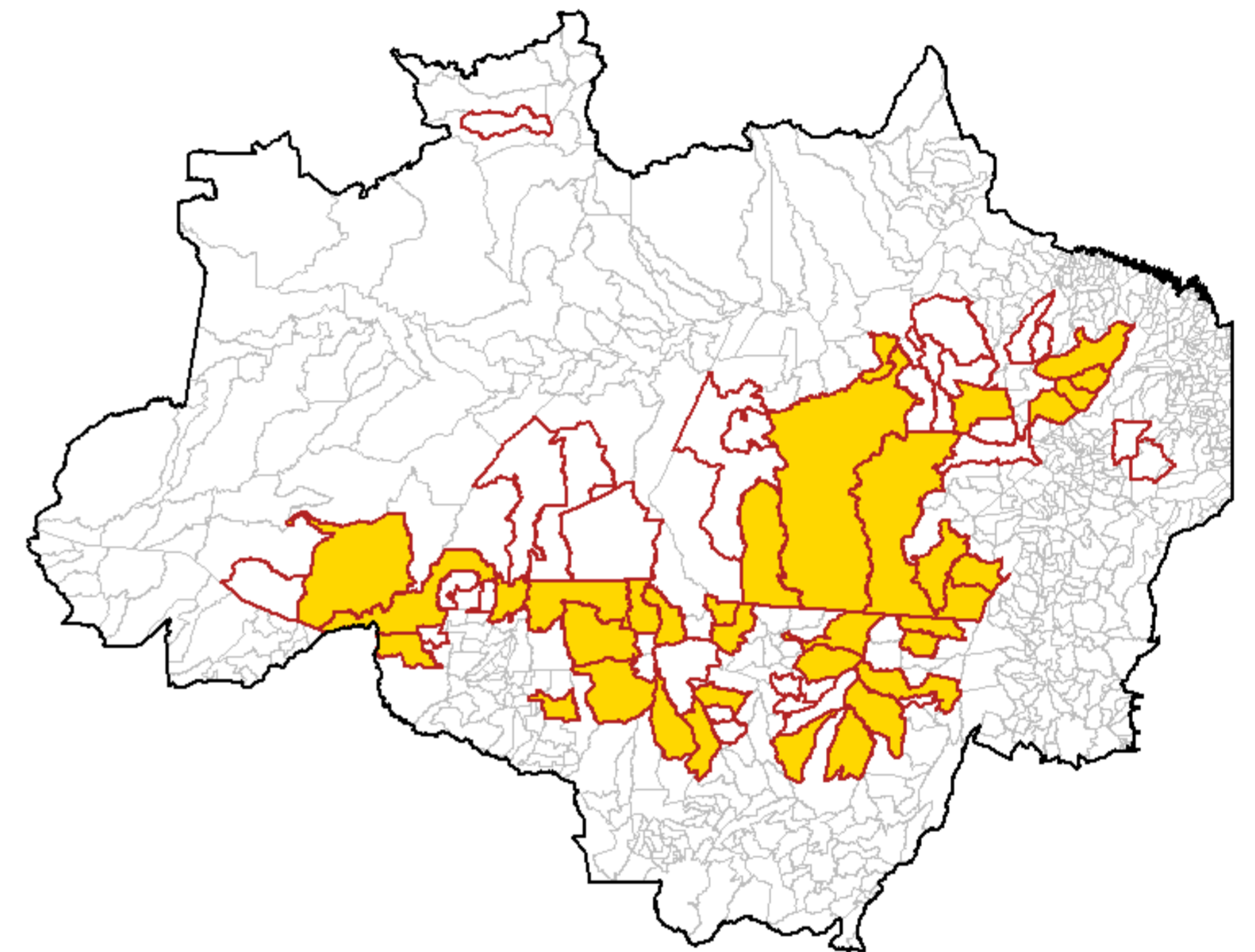
## POLICY COSTS

- agricultural production
  - no evidence of significant negative impact
- financial cost/benefit



## OTHER POLICY EFFORTS

- priority municipalities
  - 1.1 million ha avoided deforestation (2008–2011)
  - no impact: agricultural production, rural credit



■ = priority municipality (2008)  
□ = priority municipality (ever)

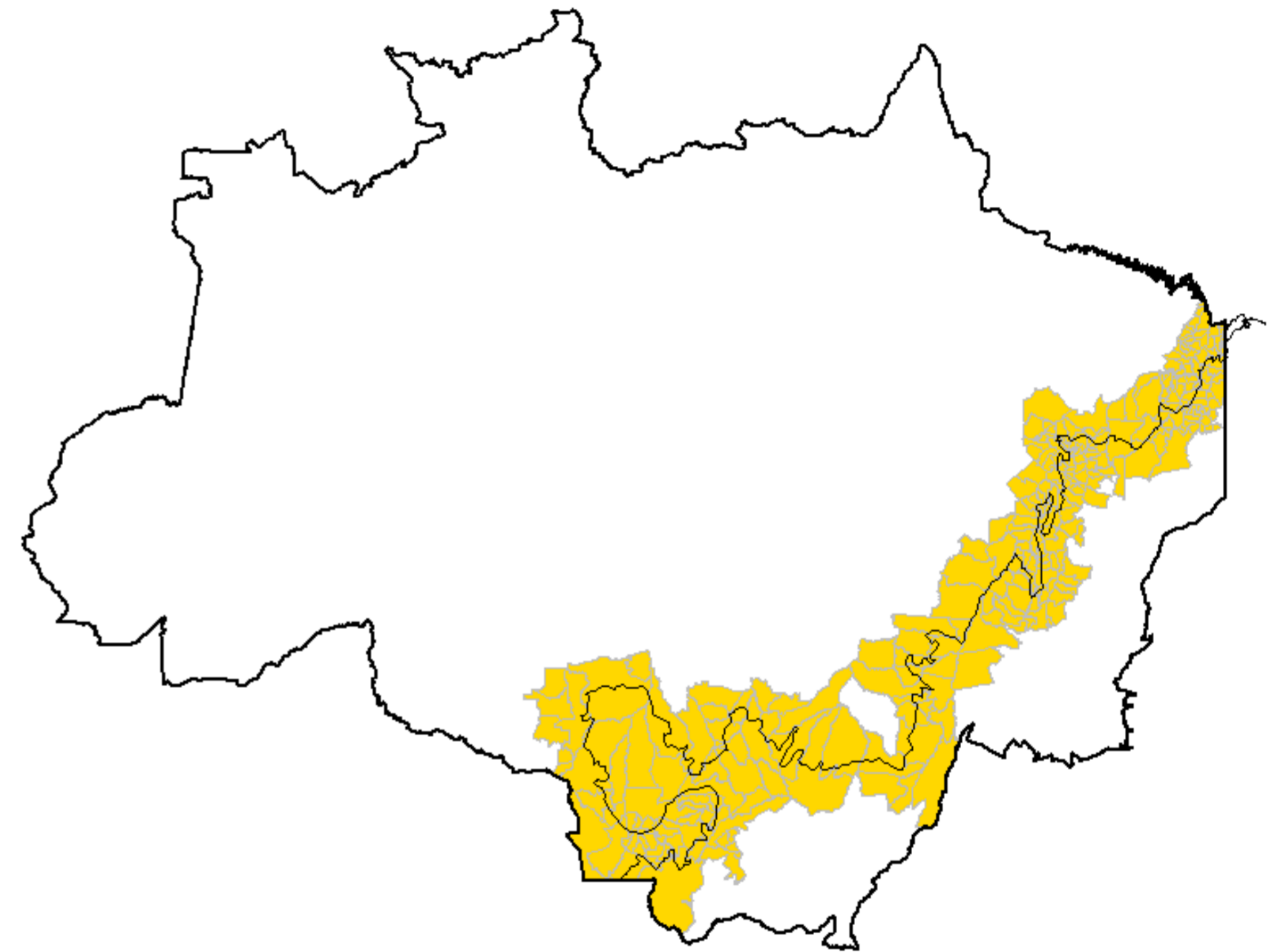
Source: Climate Policy Initiative with data from MMA and IBGE.

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## OTHER POLICY EFFORTS

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- priority municipalities
  - 1.1 million ha avoided deforestation (2008–2011)
  - no impact: agricultural production, rural credit
- conditioning of rural credit
  - 200 thousand ha avoided deforestation (2009–2011)
    - USD 290 million reduction rural credit concession
  - financial environment & regional heterogeneity

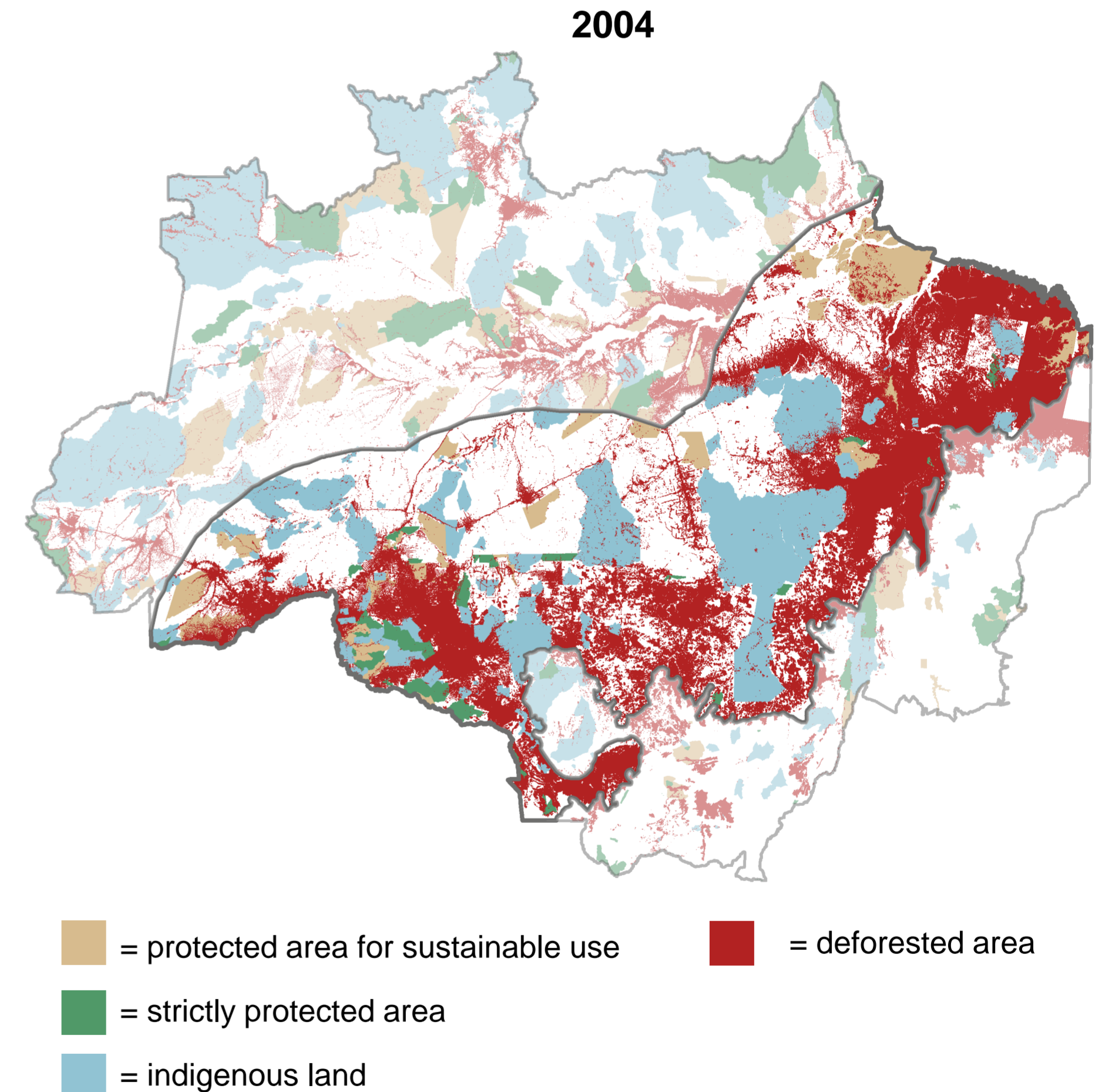


Source: Climate Policy Initiative with data from IBGE.



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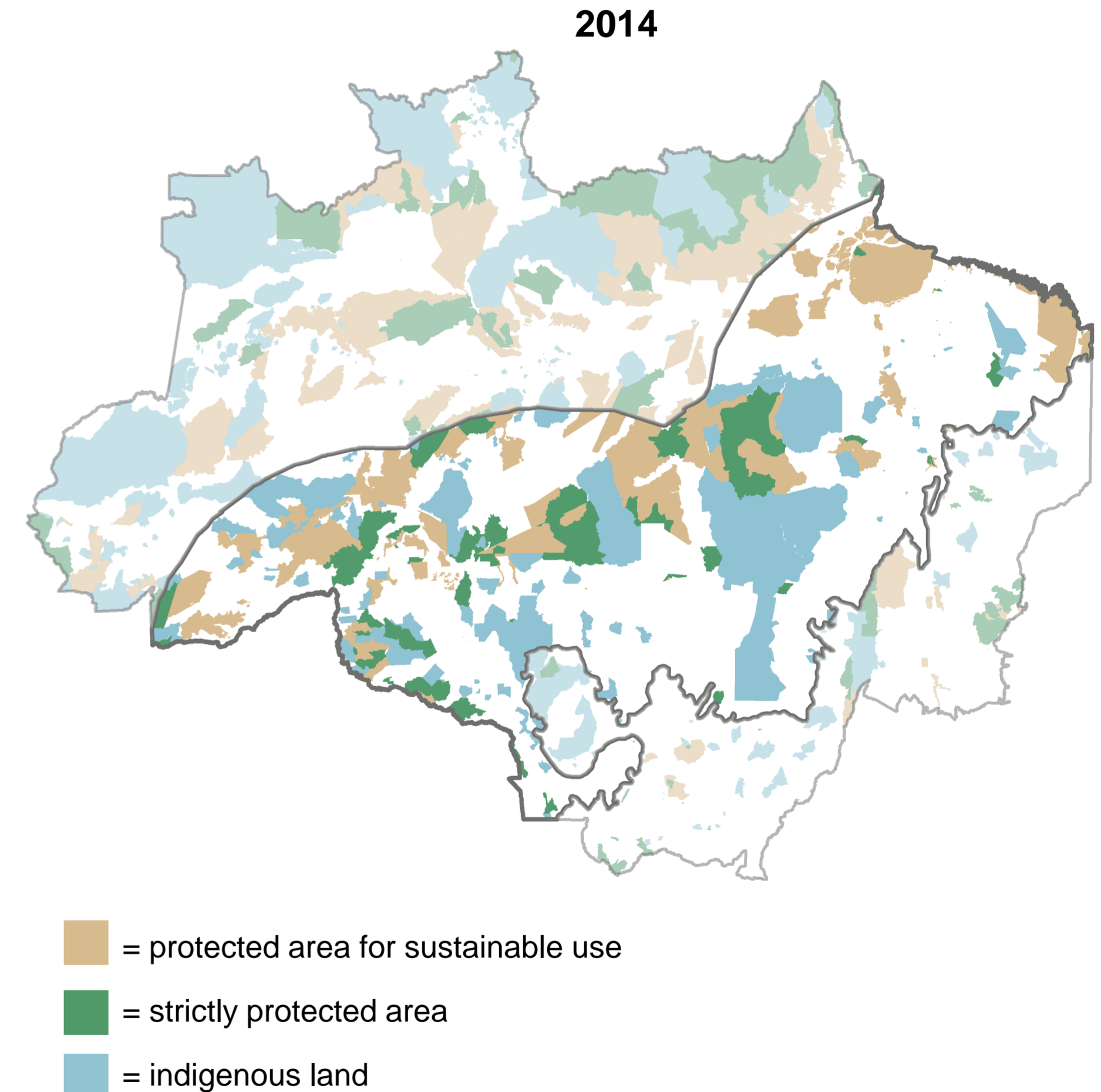
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- protected territory



Source: Climate Policy Initiative with data from MMA, Funai, ISA, PRODES / Inpe (MCTIC) and IBGE.

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  - financial environment & regional heterogeneity
- protected territory
  - local shielding effect
  - deflection



Source: Climate Policy Initiative with data from MMA, Funai, ISA, PRODES / Inpe (MCTIC) and IBGE.

**MOVING FORWARD**

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# CHALLENGES AND OPPORTUNITIES

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## TARGET DEGRADATION

- gradual forest loss
  - reduced resilience, increased vulnerability
- enhanced conservation potential
  - preventive action
- technical challenges
  - ongoing efforts: DETER-B, MapBiomas Alertas

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# CHALLENGES AND OPPORTUNITIES

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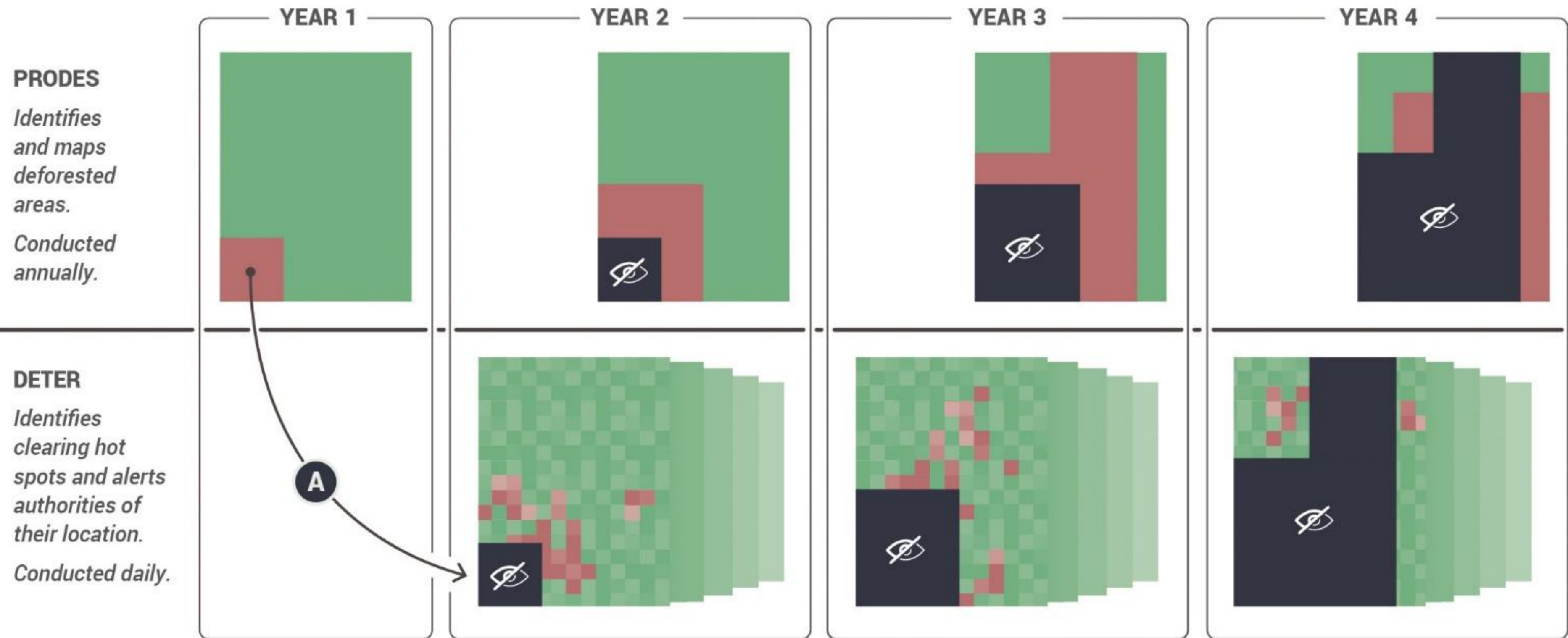
## MONITOR REGENERATION

- vulnerability: invisible to monitoring systems
  - measurement
  - protection

# CHALLENGES AND OPPORTUNITIES

## MONI

### • vuln

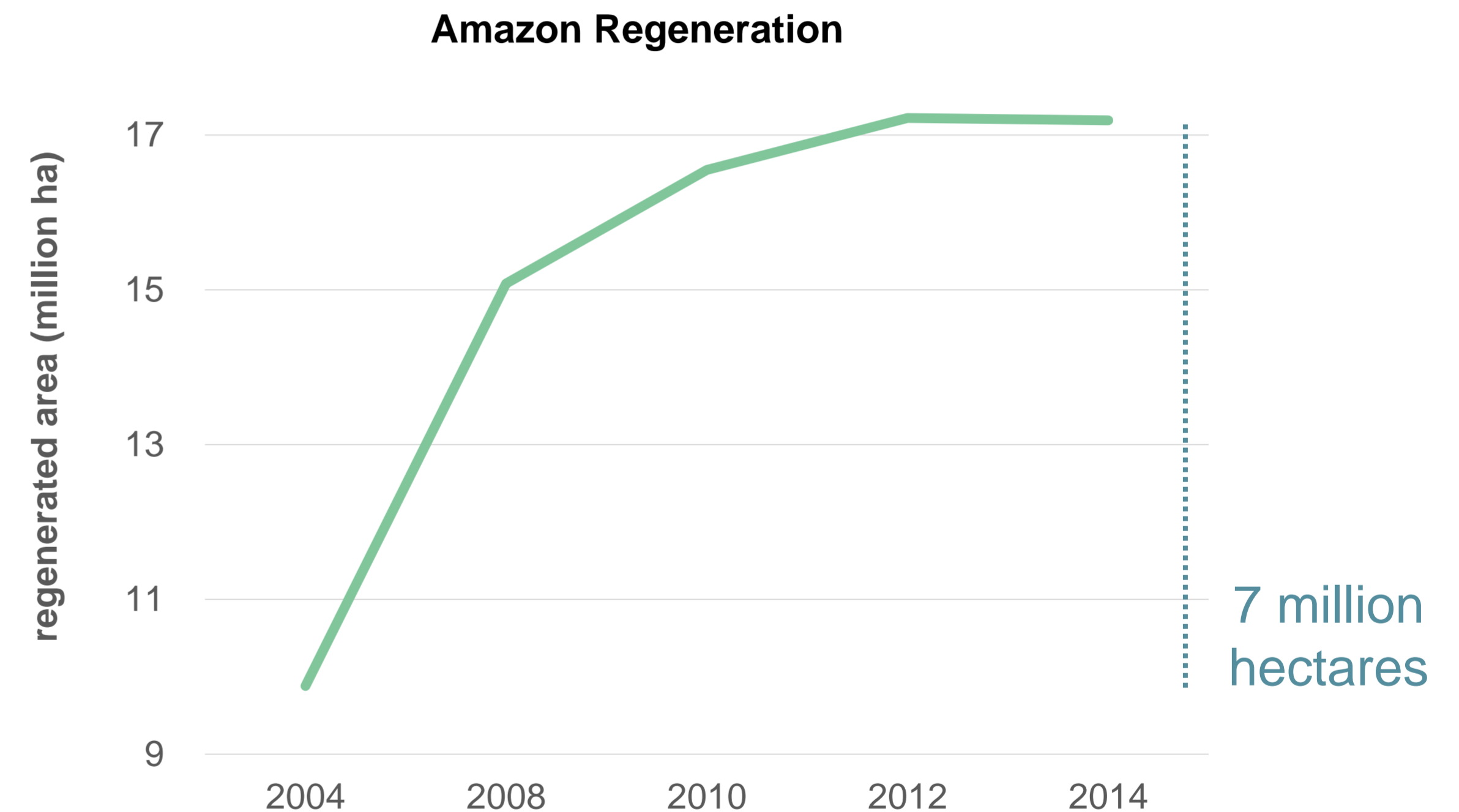


**A** Once detected by PRODES, an area is marked as deforested in the year of detection and incorporated in both systems' "deforestation masks" in later years. DETER only scans areas outside this mask for signs of clearing activity.

# CHALLENGES AND OPPORTUNITIES

## MONITOR REGENERATION

- vulnerability: invisible to monitoring systems
  - measurement
  - protection
- international commitments
  - reforest / restore 12 million hectares

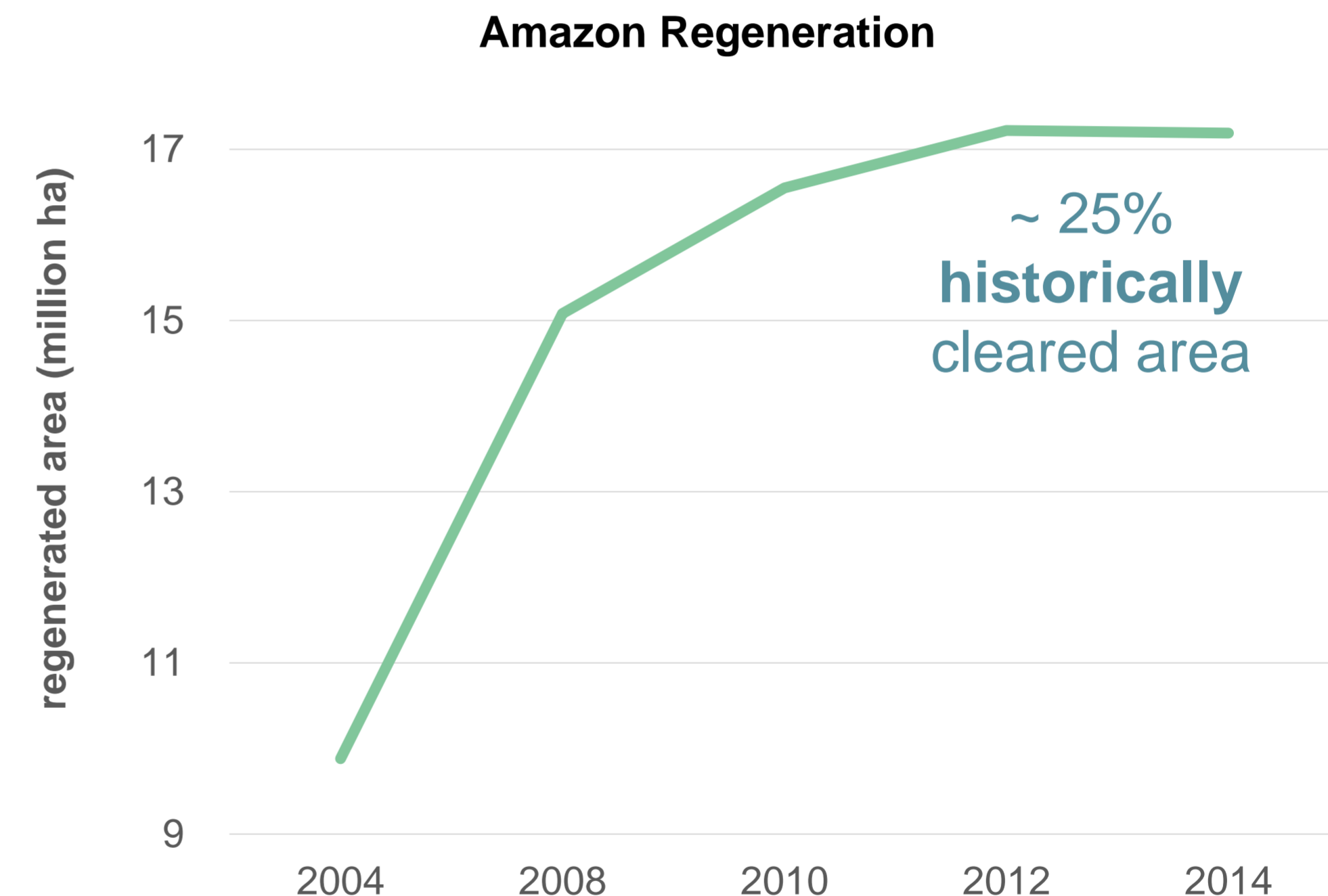


Source: Climate Policy Initiative with data from TerraClass Amazônia / Inpe (MCTIC) and Embrapa (MAPA).

# CHALLENGES AND OPPORTUNITIES

## MONITOR REGENERATION

- vulnerability: invisible to monitoring systems
  - measurement
  - protection
- international commitments
  - reforest / restore 12 million hectares
- inefficient land use pattern
  - abandoned lands



Source: Climate Policy Initiative with data from TerraClass Amazônia / Inpe (MCTIC) and Embrapa (MAPA).



INPUT 

 CLIMATE  
POLICY  
INITIATIVE

**THANK YOU**

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