



**Instituto
de Economia
Agrícola**

Ciclo de Seminários

Uso e Técnicas do Sensoriamento Remoto como Instrumento de Apoio ao Seguro Rural

Dia: 26 de junho de 2013 (quarta-feira)

Horário: 14:00 horas

Local: Sala Ruy Miller Paiva

Bernardo Rudorff



<http://www.agrosatelite.com.br>



TIROS-1
01/04/1960



Landsat 1
1972



Landsat 2
1975



Landsat 3
1978



Landsat 4
1982



Landsat 5
1984



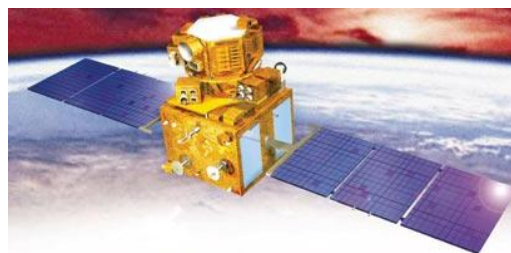
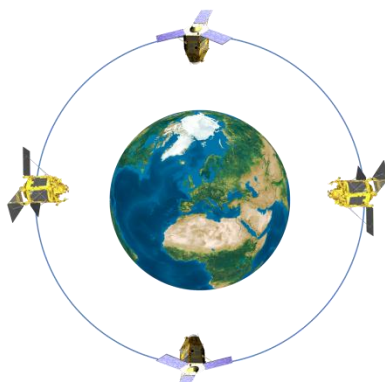
Landsat 7
1999



Landsat 8
11 fev 2013

Spot

- 1 (1986)
- 2 (1990)
- 3 (1993)
- 4 (1988)
- 5 (2002)
- 6 (09/2012)



IRS (2003, 04/2011)



Cbbers
1999 & 2003



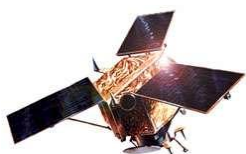
DMC



RapidEye



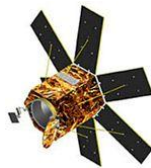
EOS-AM (Terra) & -PM (Aqua)
MODIS



Ikonos
(1999)



QuickBird
(2001)

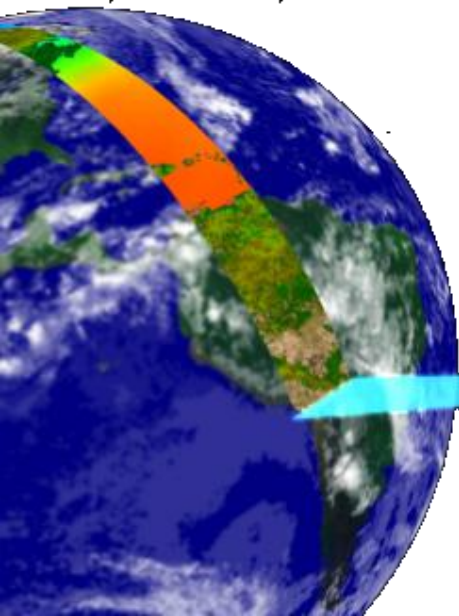


Orbview-3
(2003)

CARACTERÍSTICAS DAS IMAGENS DE SENSORES ÓTICOS A BORDO DE SATÉLITES DE SENSORIAMENTO REMOTO

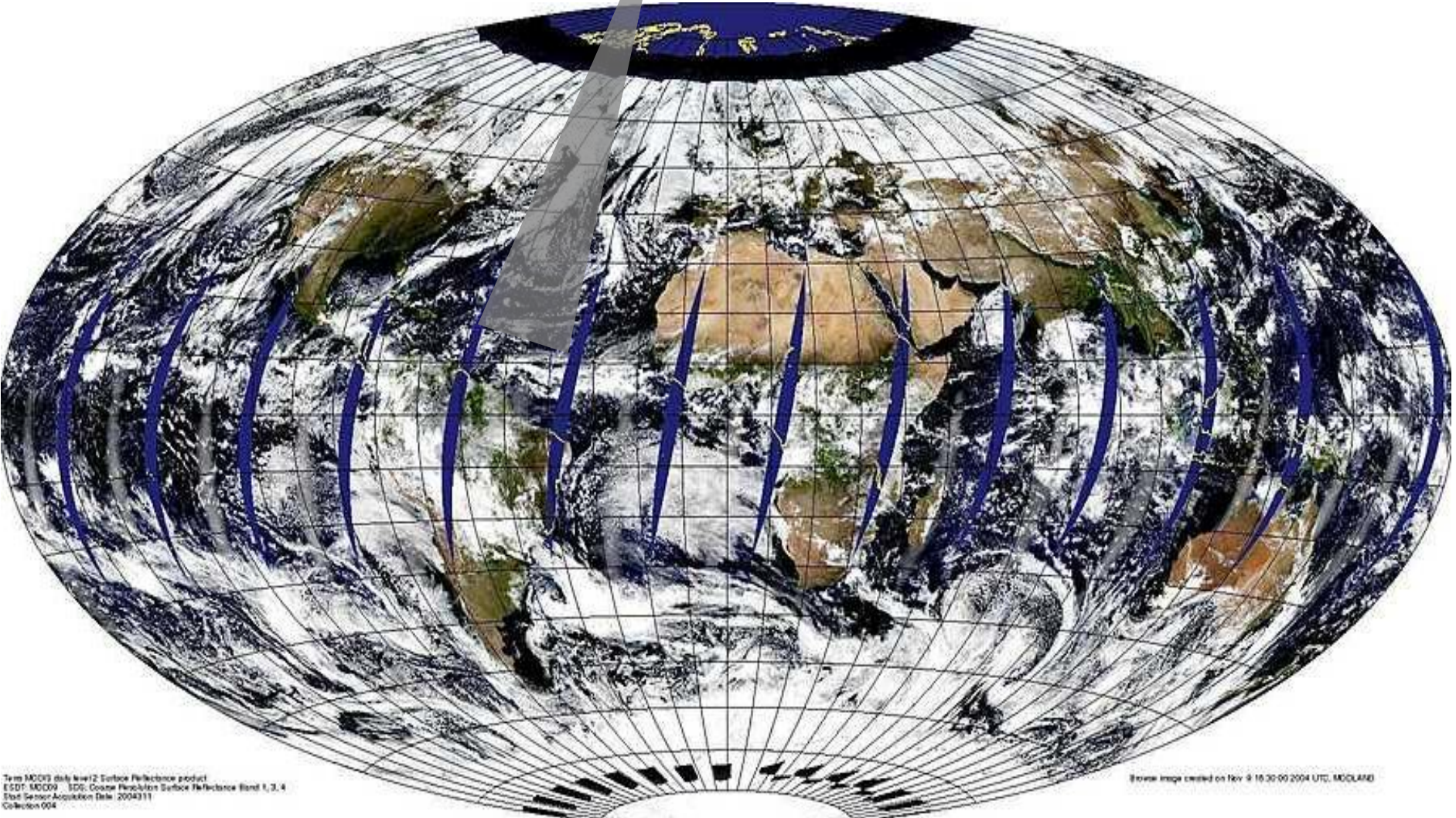
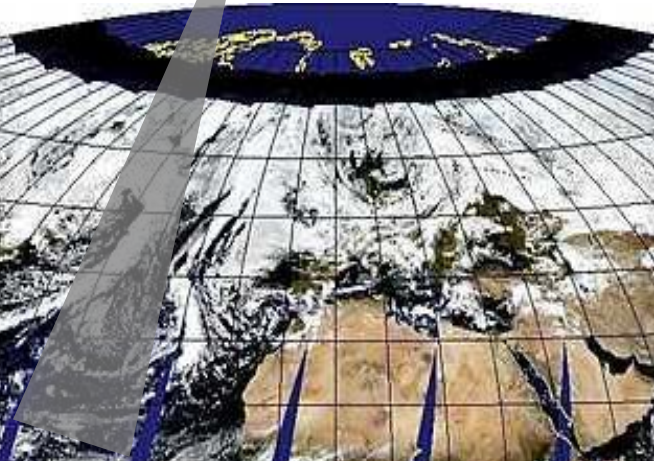
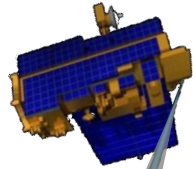
**Resolução temporal
(1 a >26 dias)**

**Resolução espectral
(1 a 220 bandas)**



**Resolução espacial
(0,5m a 1km)**

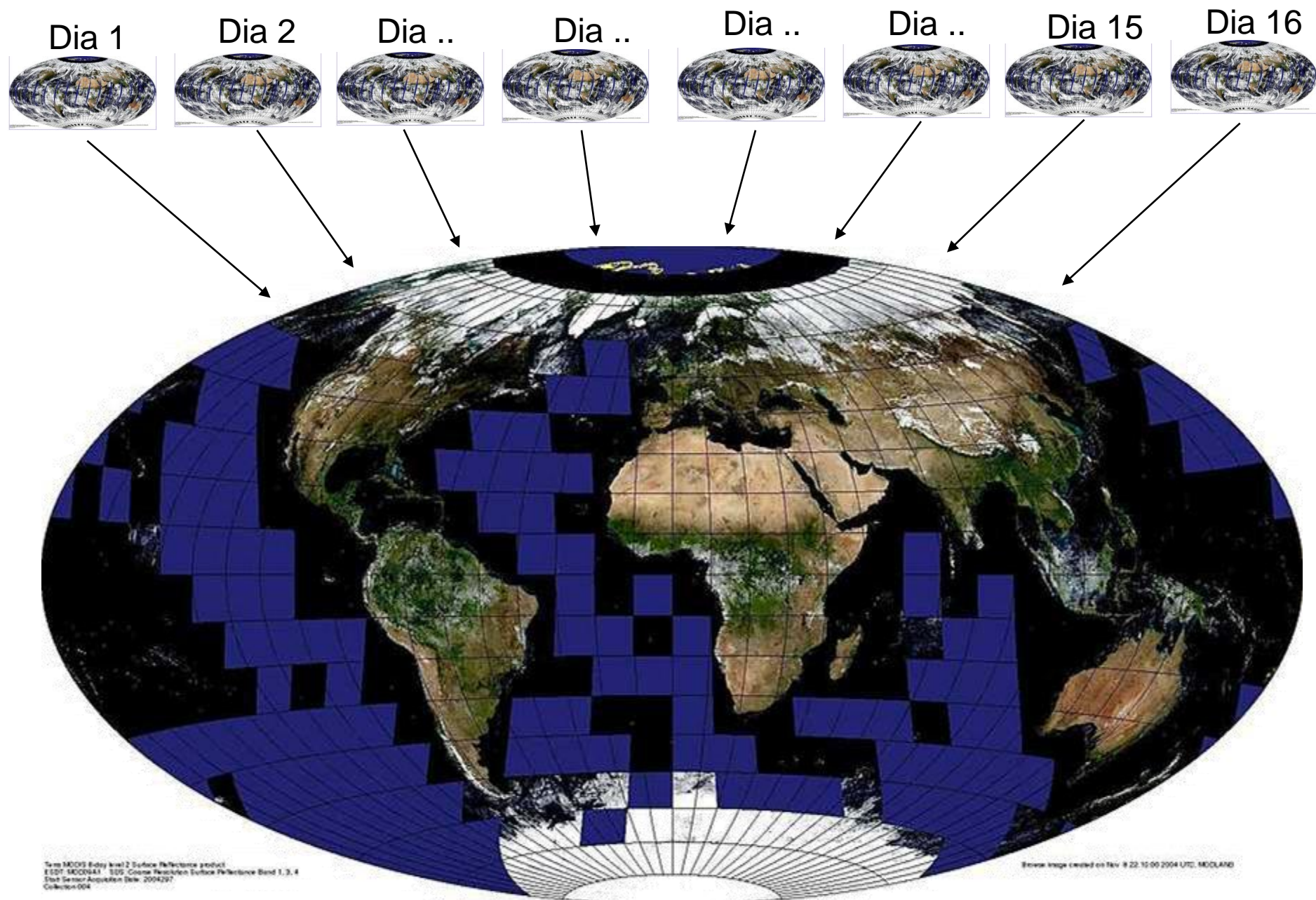
Satellite Terra - Sensor MODIS



Terra MODIS daily level2 Surface Reflectance product
ESDT: MOD09 SDG: Coarse Resolution Surface Reflectance Band 1, 3, 4
Start Sensor Acquisition Date: 2004311
Collection 004

Brown image created on Nov 9 16:30:00 2004 UTC, MODLAMB

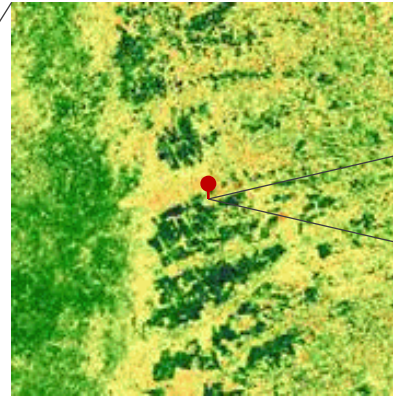
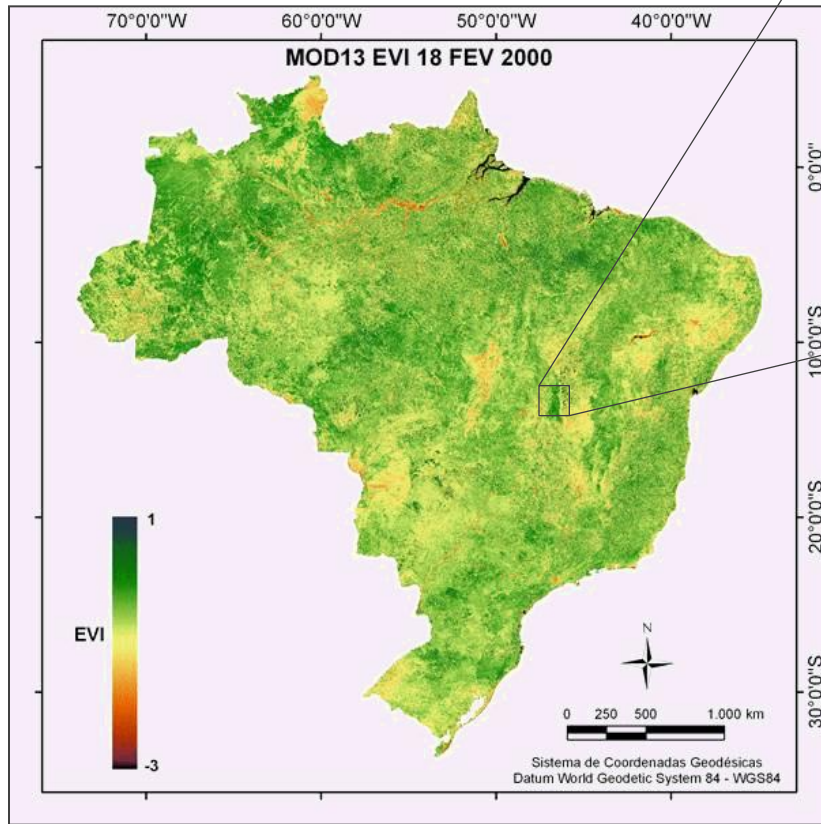
Imagem - Composição para eliminação de nuvens



Visualização de séries temporais MODIS para análise de mudanças de uso e cobertura da terra.

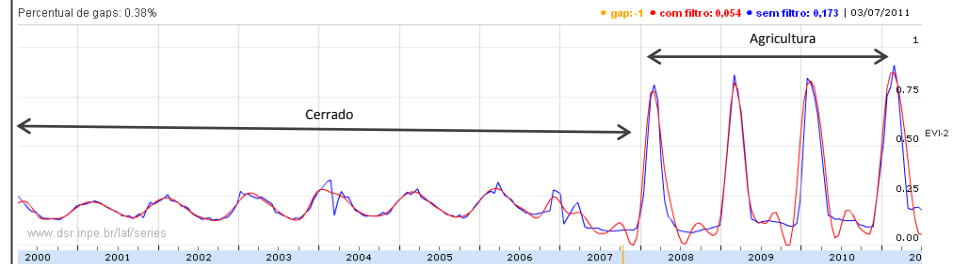
Agricultura BA

Coord.: -12.572770, -46.115332

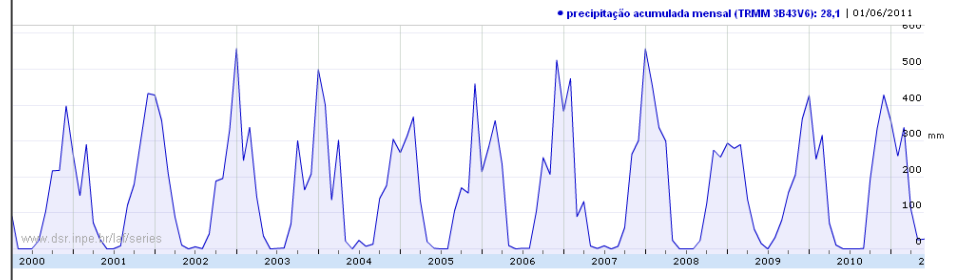


Índice Vegetativo

Coordenadas do ponto: (-12.573285, -46.115235)
Percentual de gaps: 0.38%



Precipitação Acumulada Mensal





baixar curva exibir box

Coordenadas do ponto: (-11.778555, -45.742565) Município: Barreiras - BA

● gap: -1 ● com filtro: 0,353 ● sem filtro: 0,374 | 03/07/2011

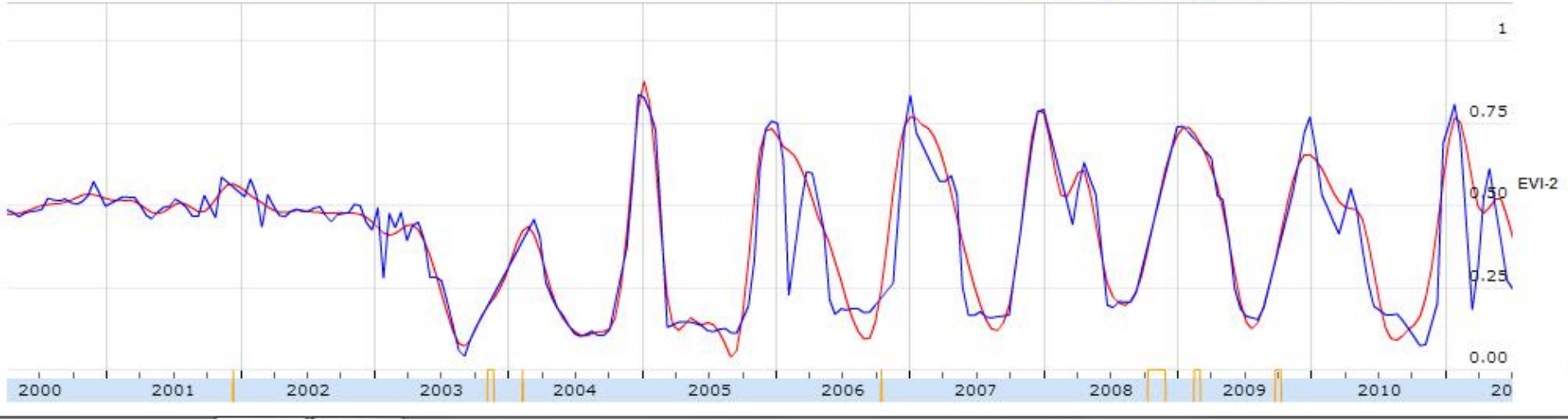




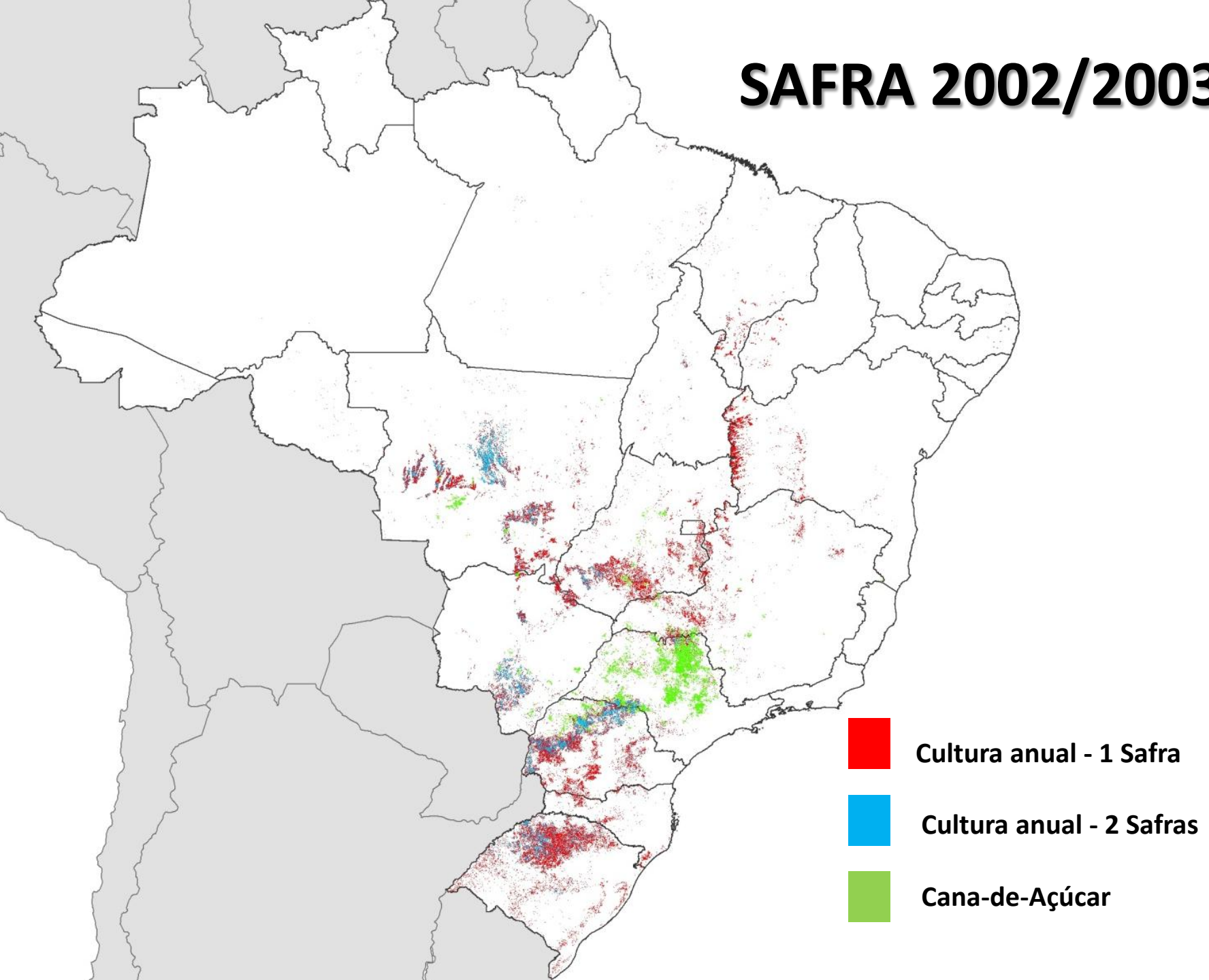
baixar curva exibir box

Coordenadas do ponto: (-12.672065, -55.948335) Município: Sorriso - MT

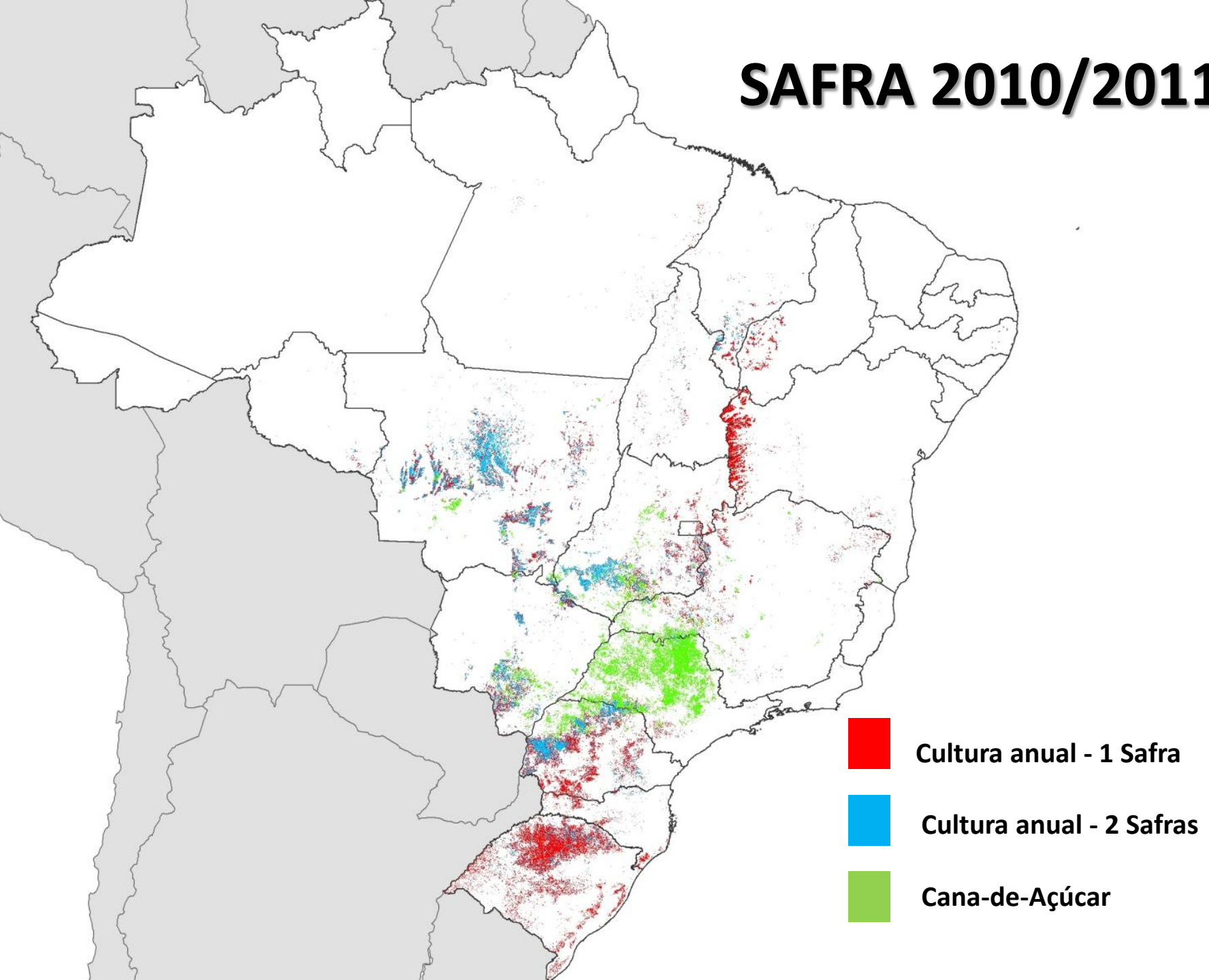
• sem filtro: 0,24 • com filtro: 0,389 • gap: -1 | 03/07/2011



SAFRA 2002/2003



SAFRA 2010/2011



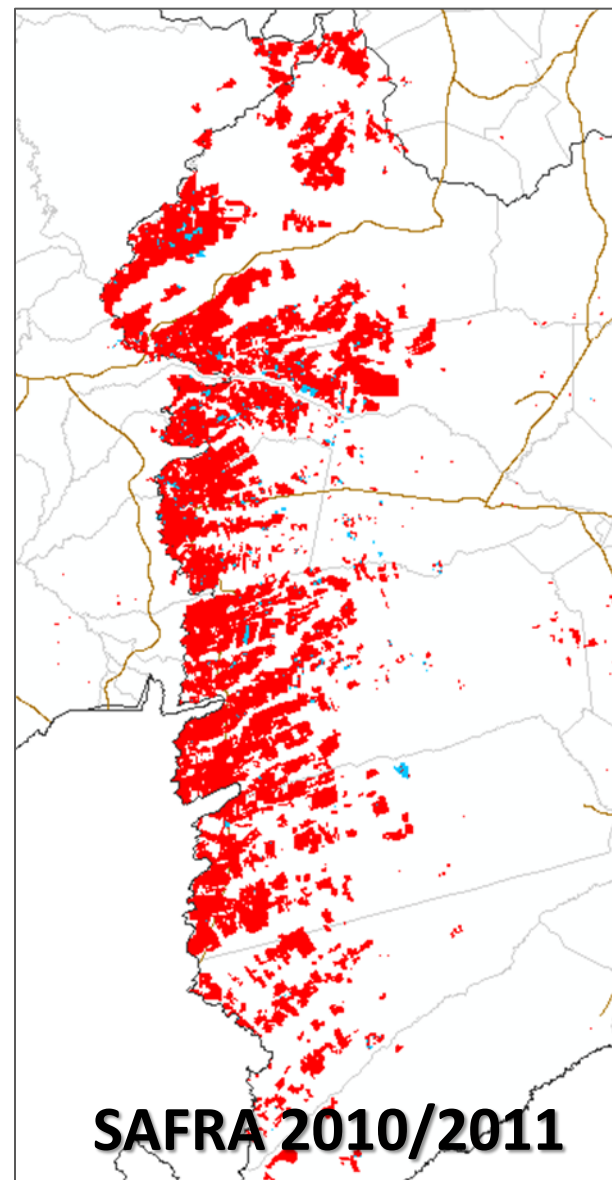
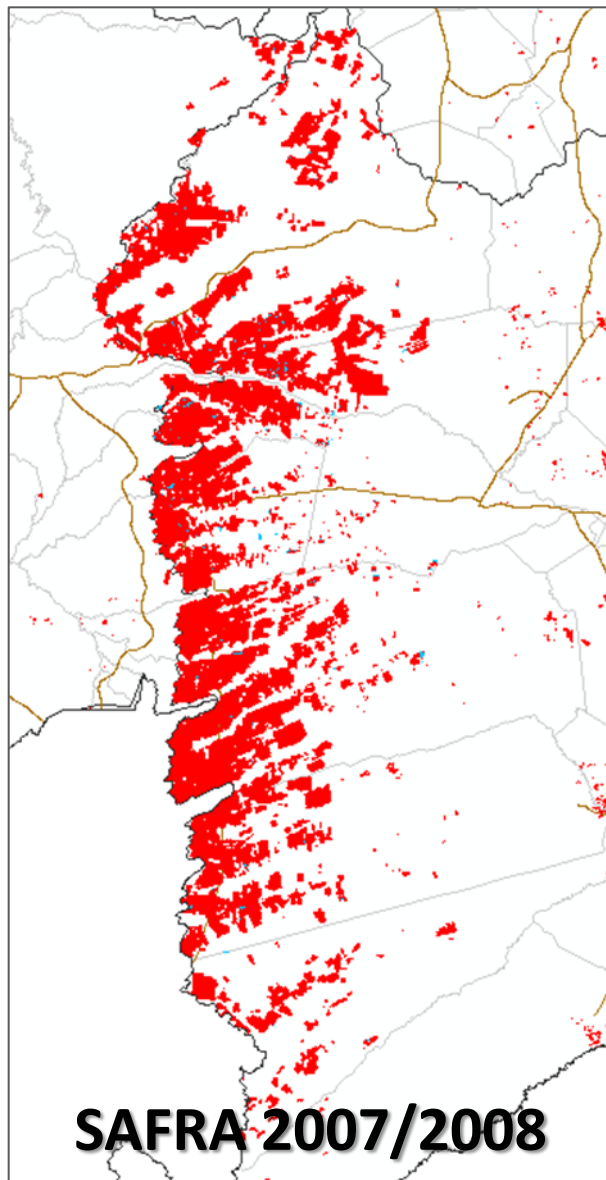
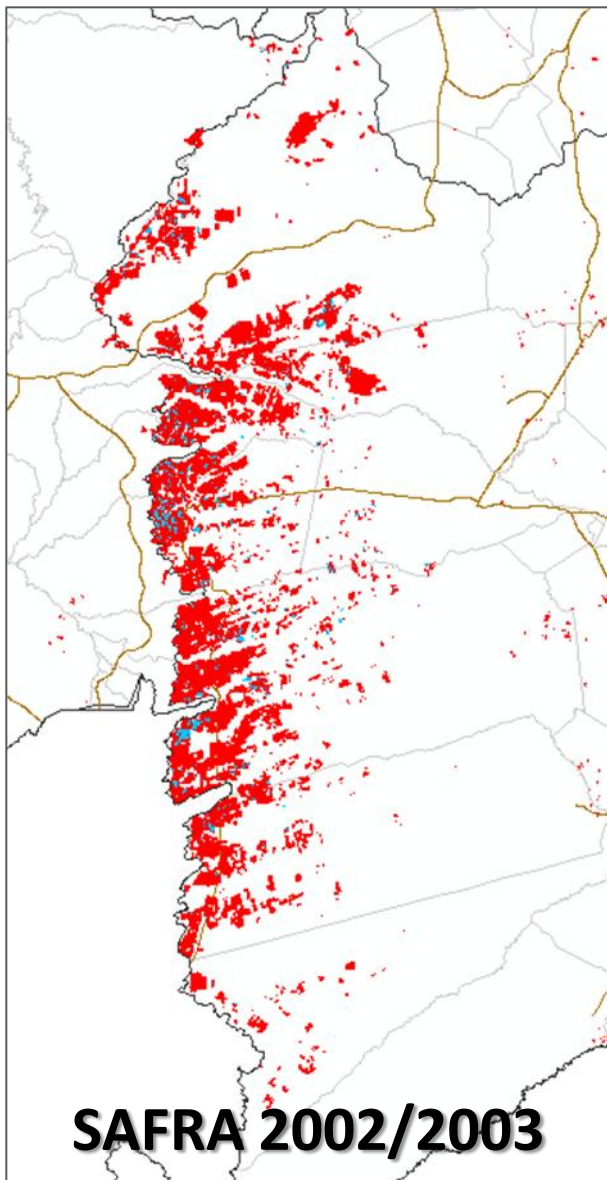
BAHIA - Luis Eduardo Magalhães



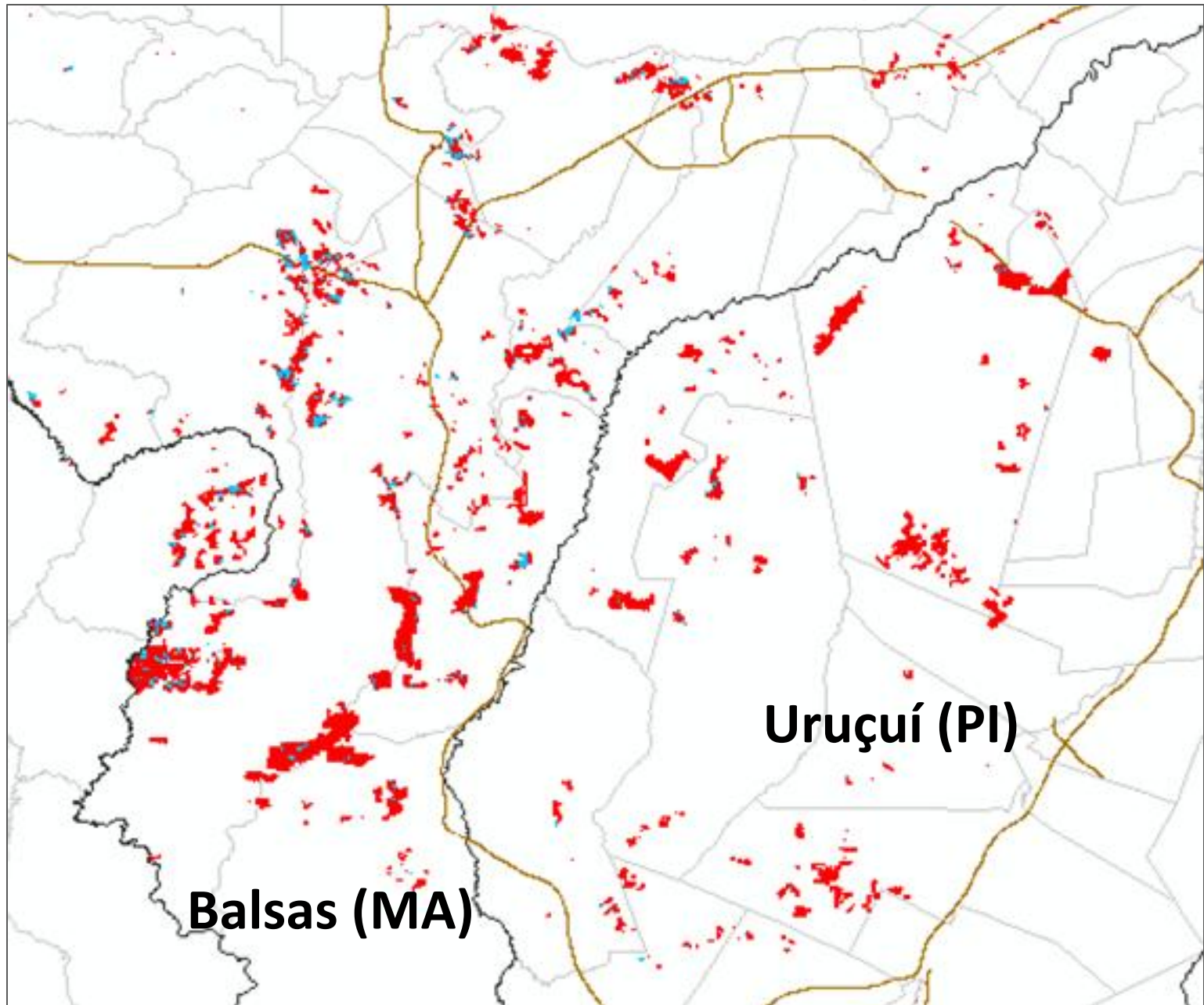
Cultura anual - 1 Safra



Cultura anual - 2 Safras



MARANHÃO e PIAUÍ – SAFRA 2002/2003



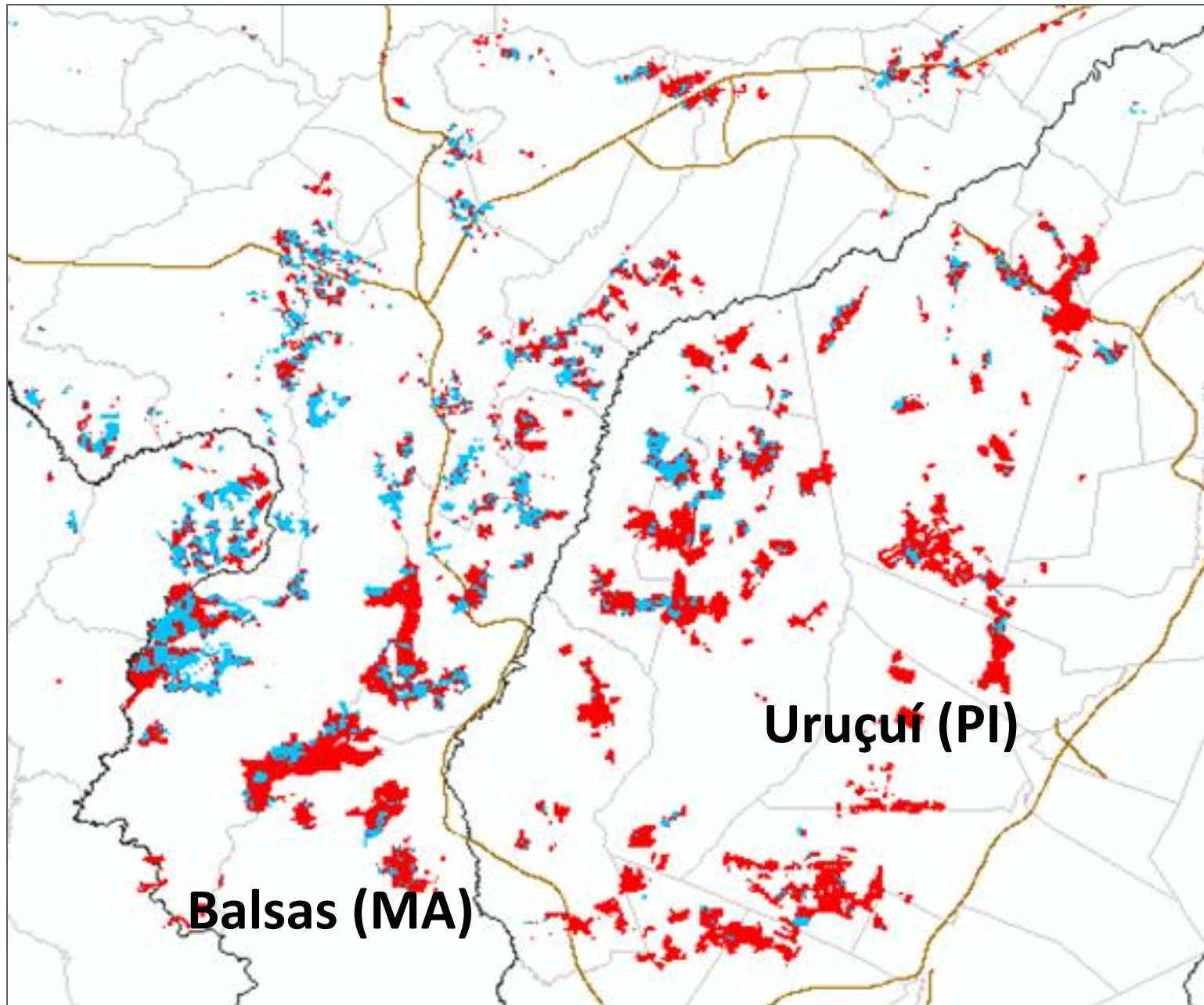
Balsas (MA)

Uruçuí (PI)

Cultura anual - 1 Safra

Cultura anual - 2 Safras

MARANHÃO e PIAUÍ – SAFRA 2010/2011



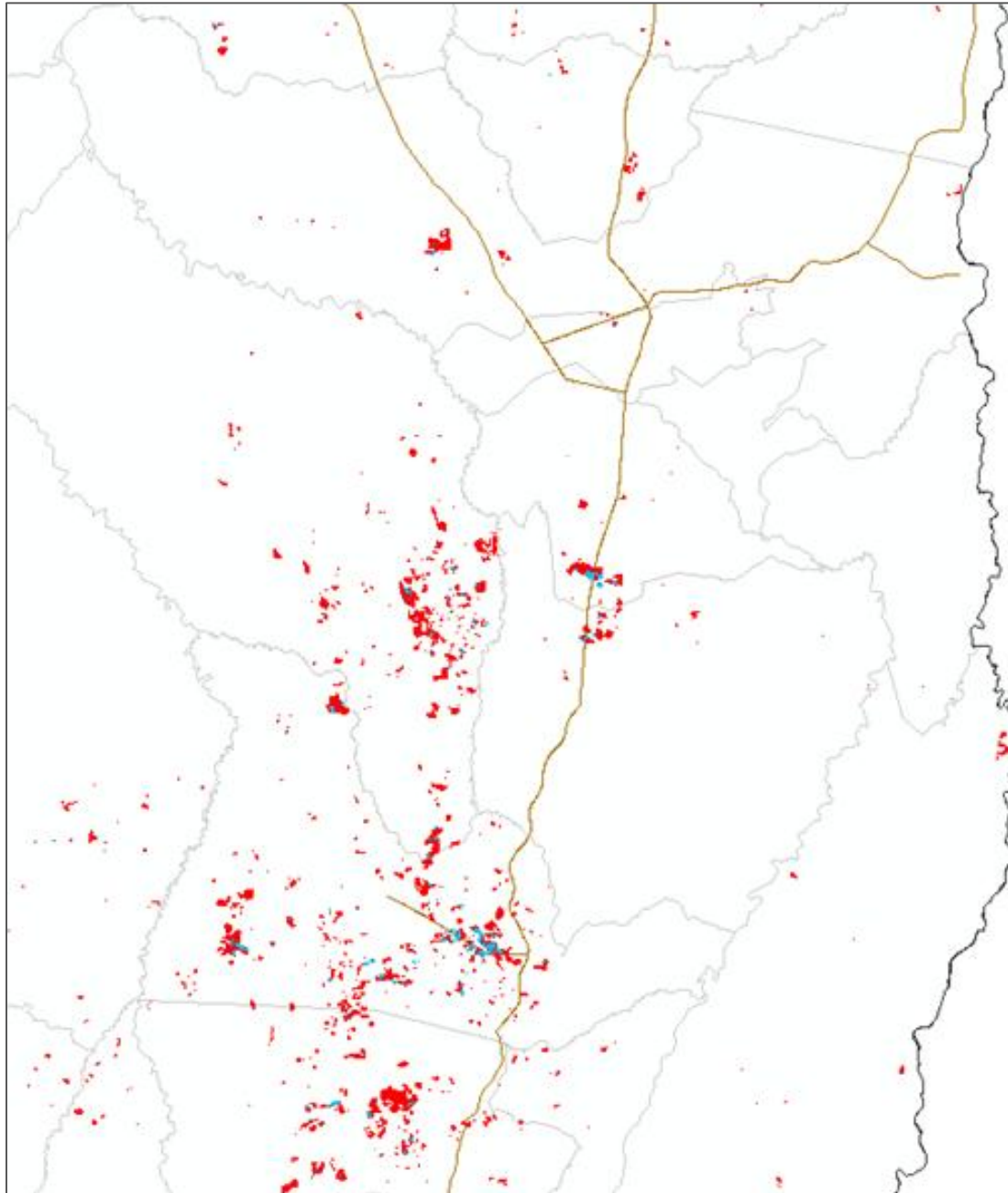
Balsas (MA)

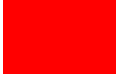

Uruçuí (PI)

Cultura anual - 1 Safra

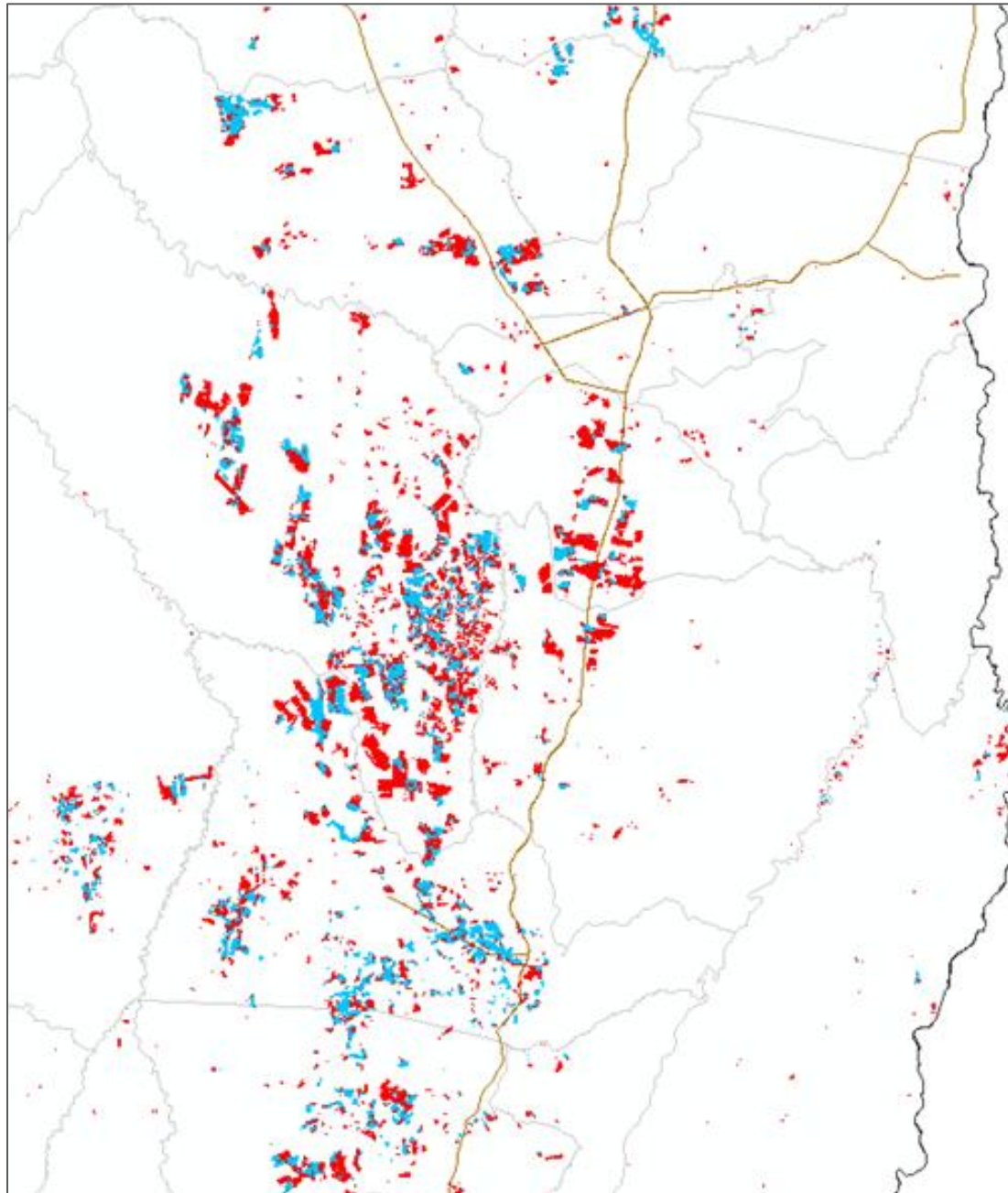
Cultura anual - 2 Safras

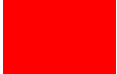

MATO GROSSO – Querência: SAFRA 2002/2003



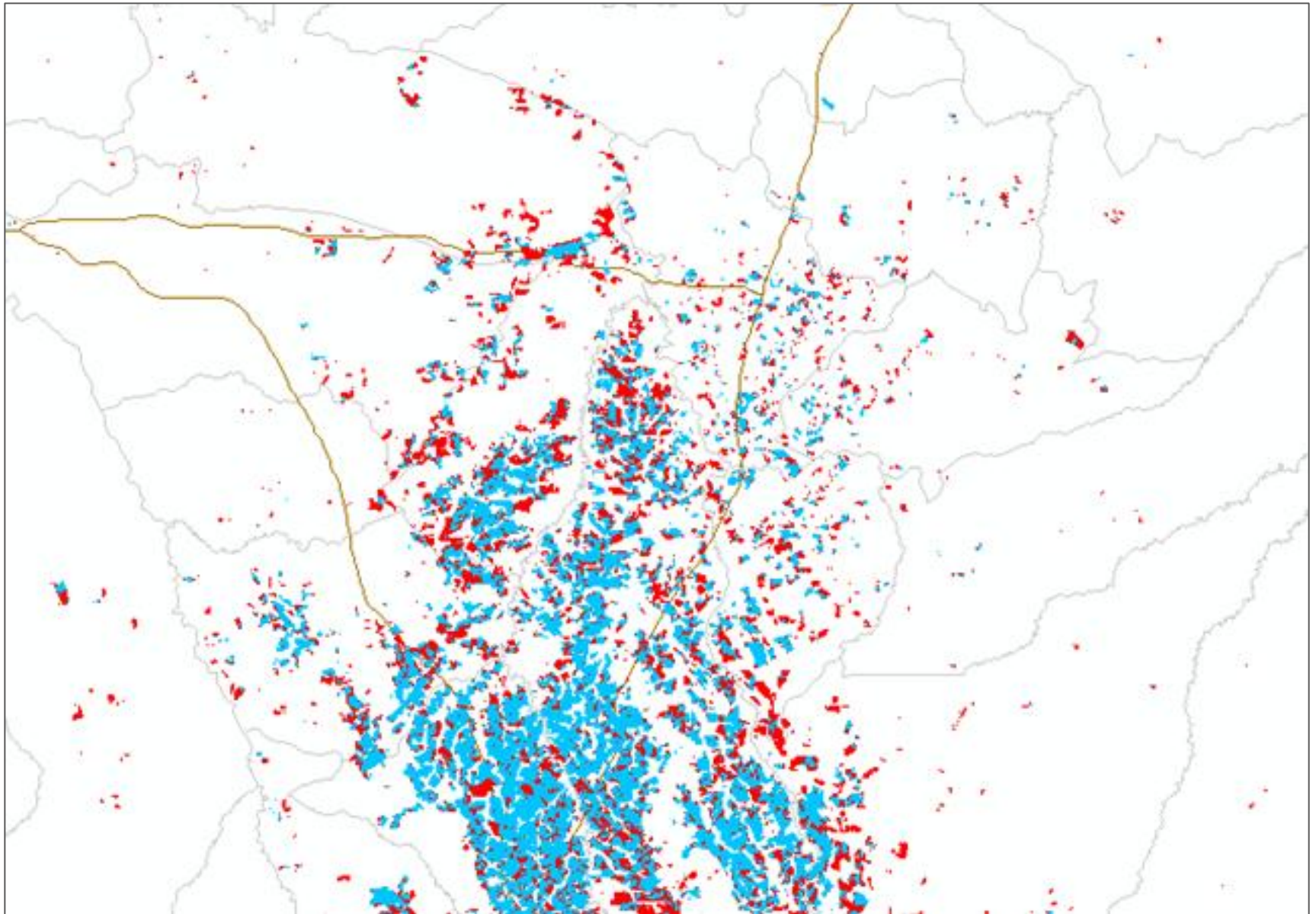
-  Cultura anual - 1 Safra
-  Cultura anual - 2 Safras

MATO GROSSO – Querência: SAFRA 2010/2011



-  Cultura anual - 1 Safra
-  Cultura anual - 2 Safras

MATO GROSSO – Sorriso: SAFRA 2002/2003

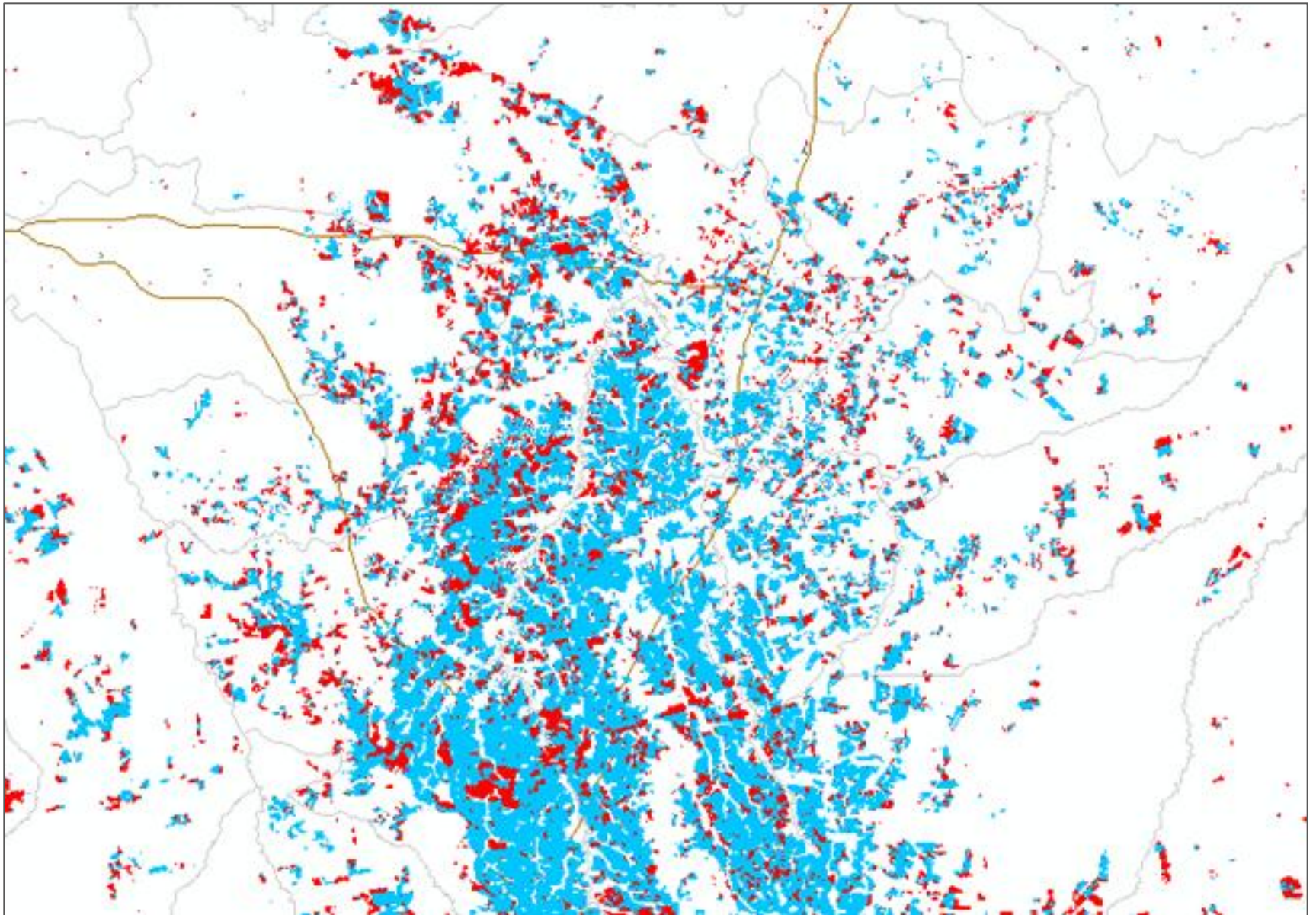


Cultura anual - 1 Safra



Cultura anual - 2 Safras

MATO GROSSO – Sorriso: SAFRA 2010/2011

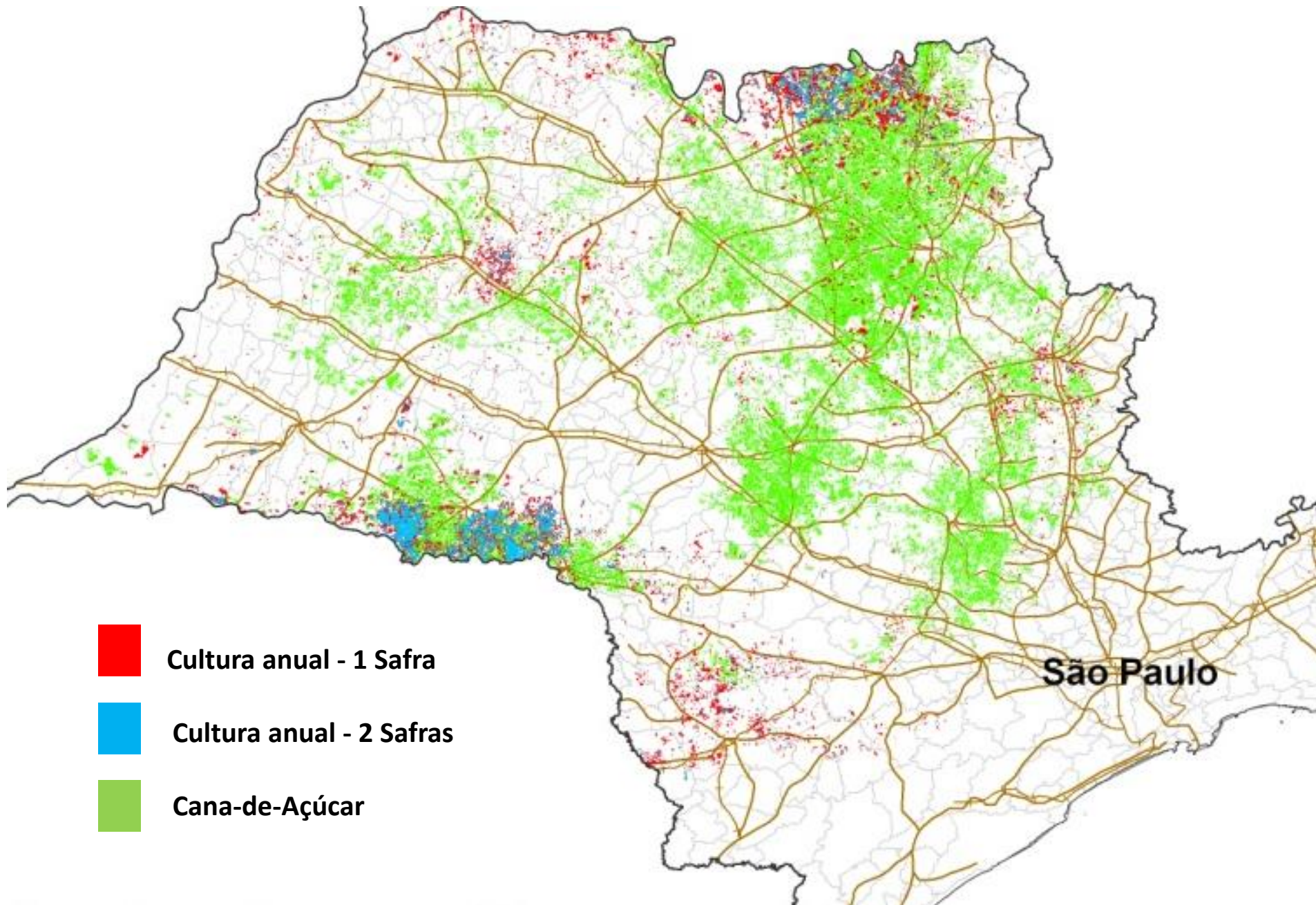


Cultura anual - 1 Safra



Cultura anual - 2 Safras

SAFRA 2002/2003



Cultura anual - 1 Safra



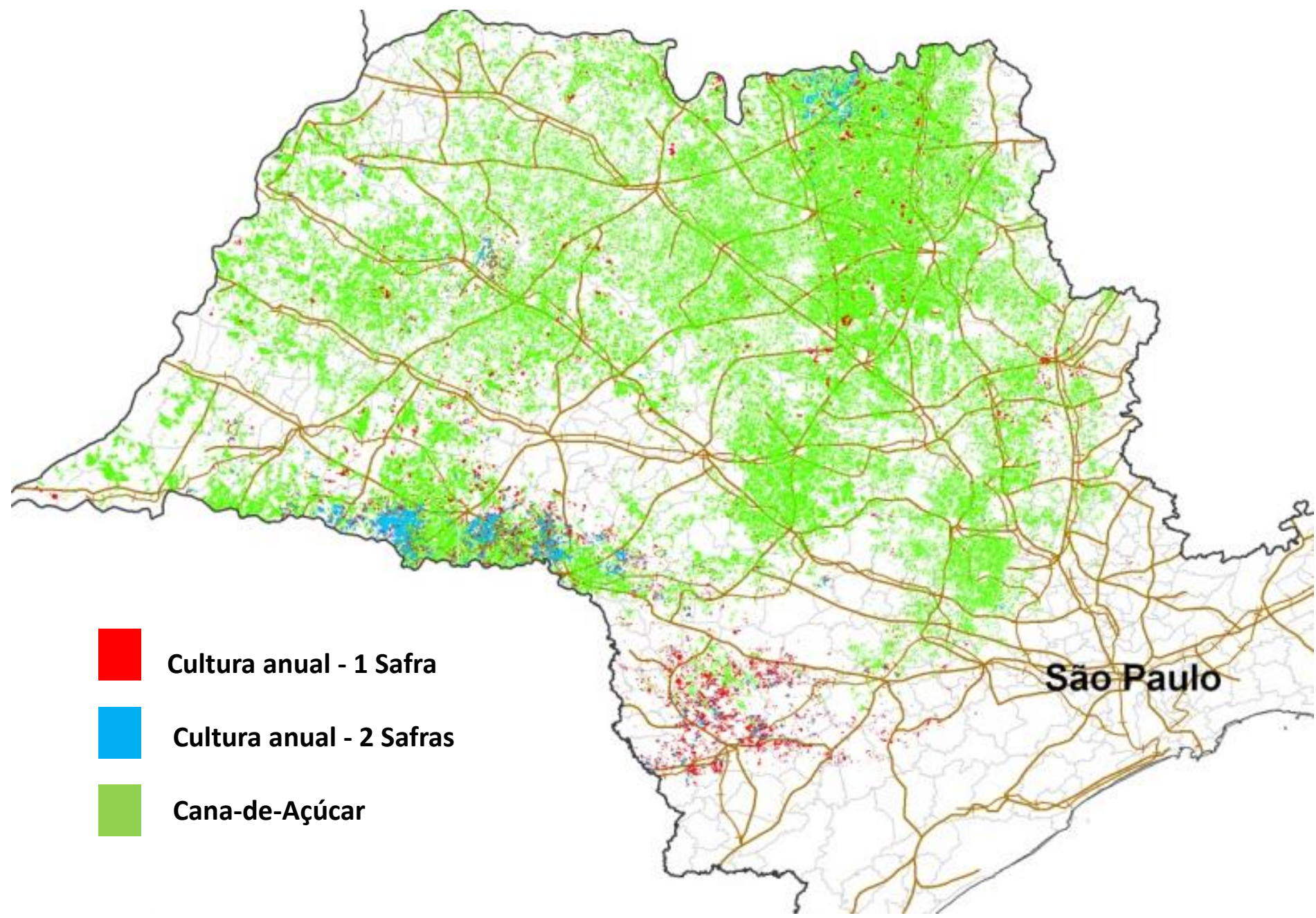
Cultura anual - 2 Safras



Cana-de-Açúcar

São Paulo

SAFRA 2010/2011



Cultura anual - 1 Safra



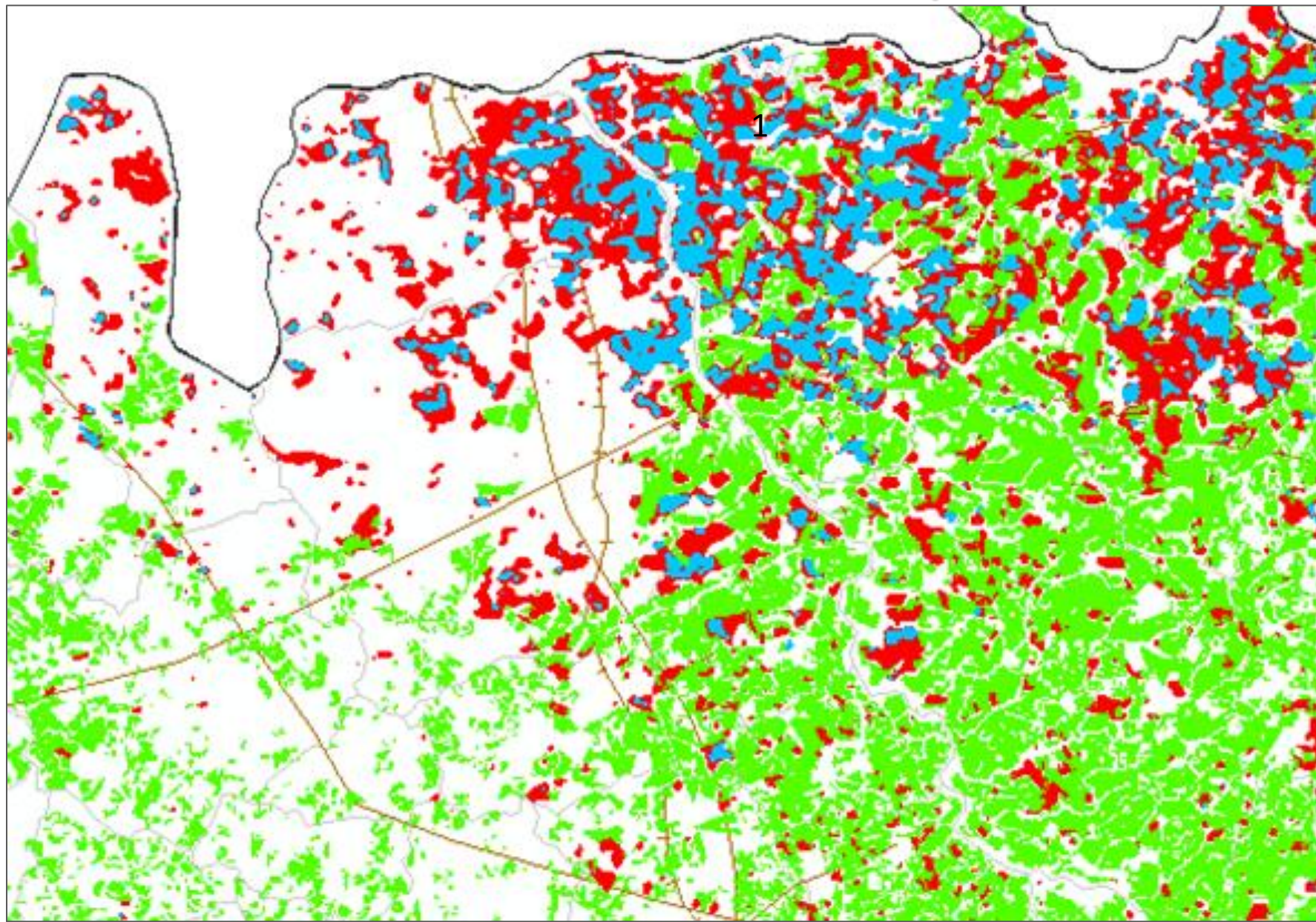
Cultura anual - 2 Safras



Cana-de-Açúcar

São Paulo

SÃO PAULO – Barretos: SAFRA 2002/2003



Cultura anual - 1 Safra

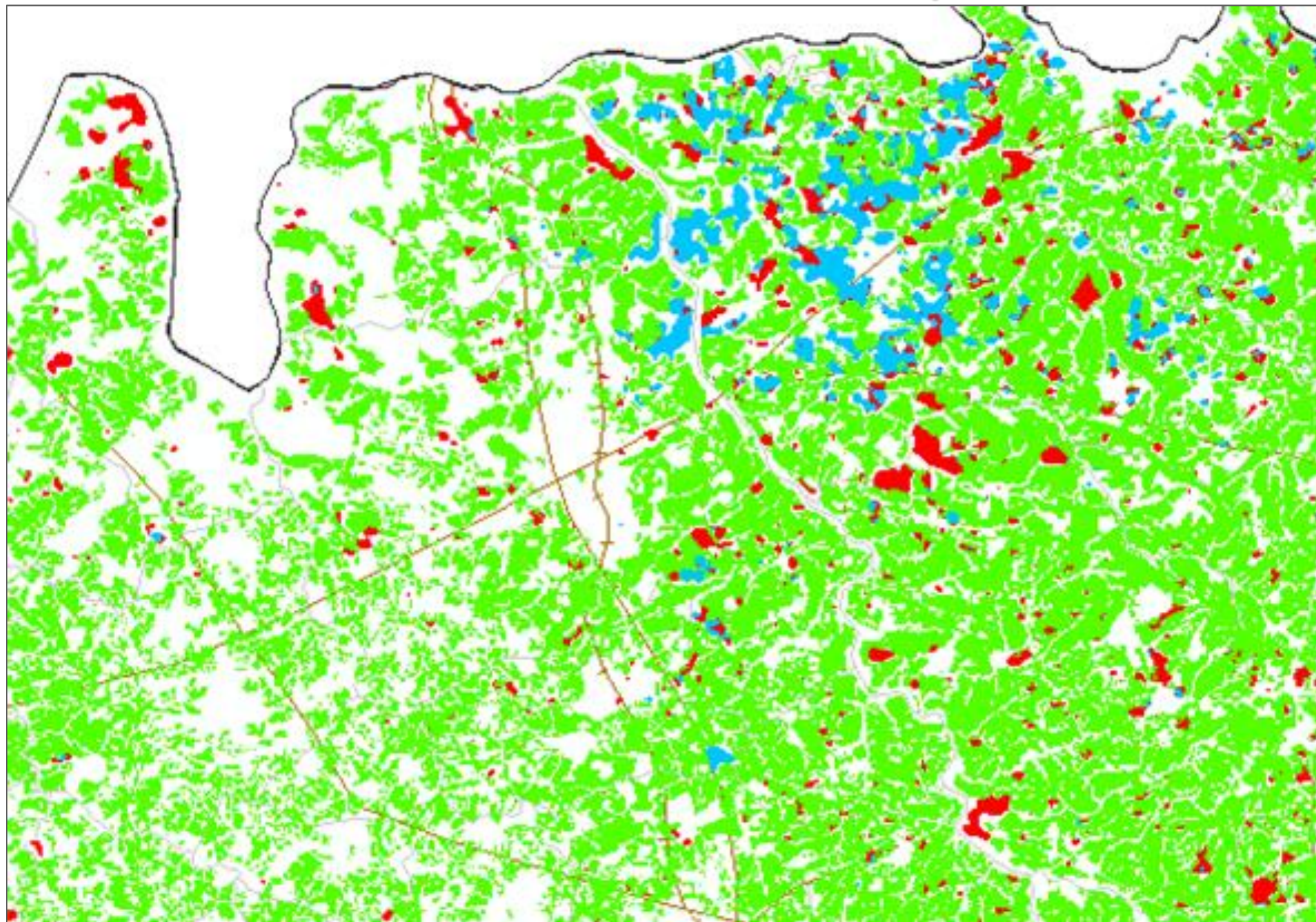


Cultura anual - 2 Safras

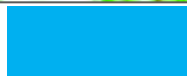


Cana-de-Açúcar

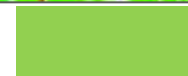
SÃO PAULO – Barretos: SAFRA 2010/2011



Cultura anual - 1 Safra

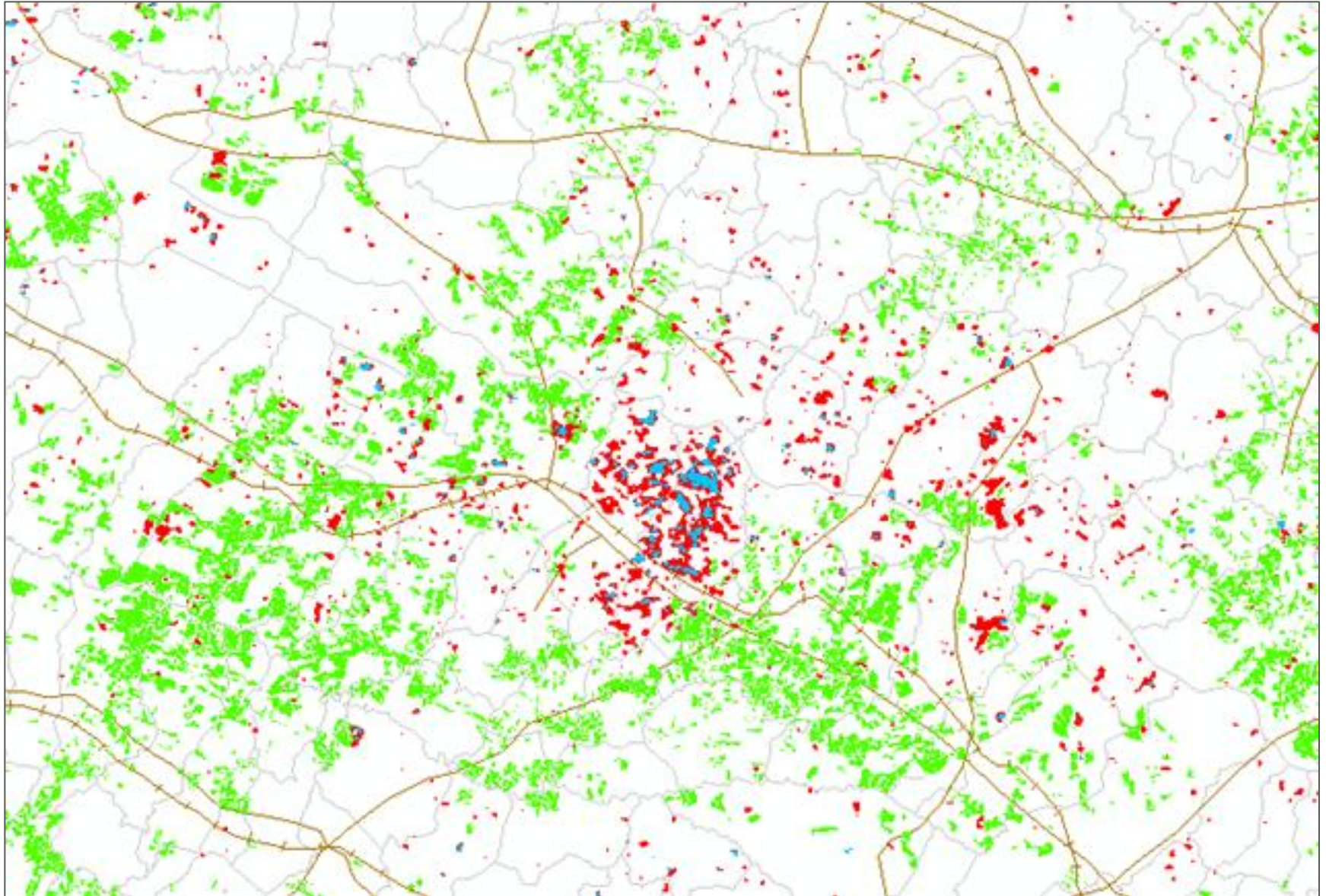


Cultura anual - 2 Safras



Cana-de-Açúcar

SÃO PAULO – Araçatuba: SAFRA 2002/2003



Cultura anual - 1 Safra

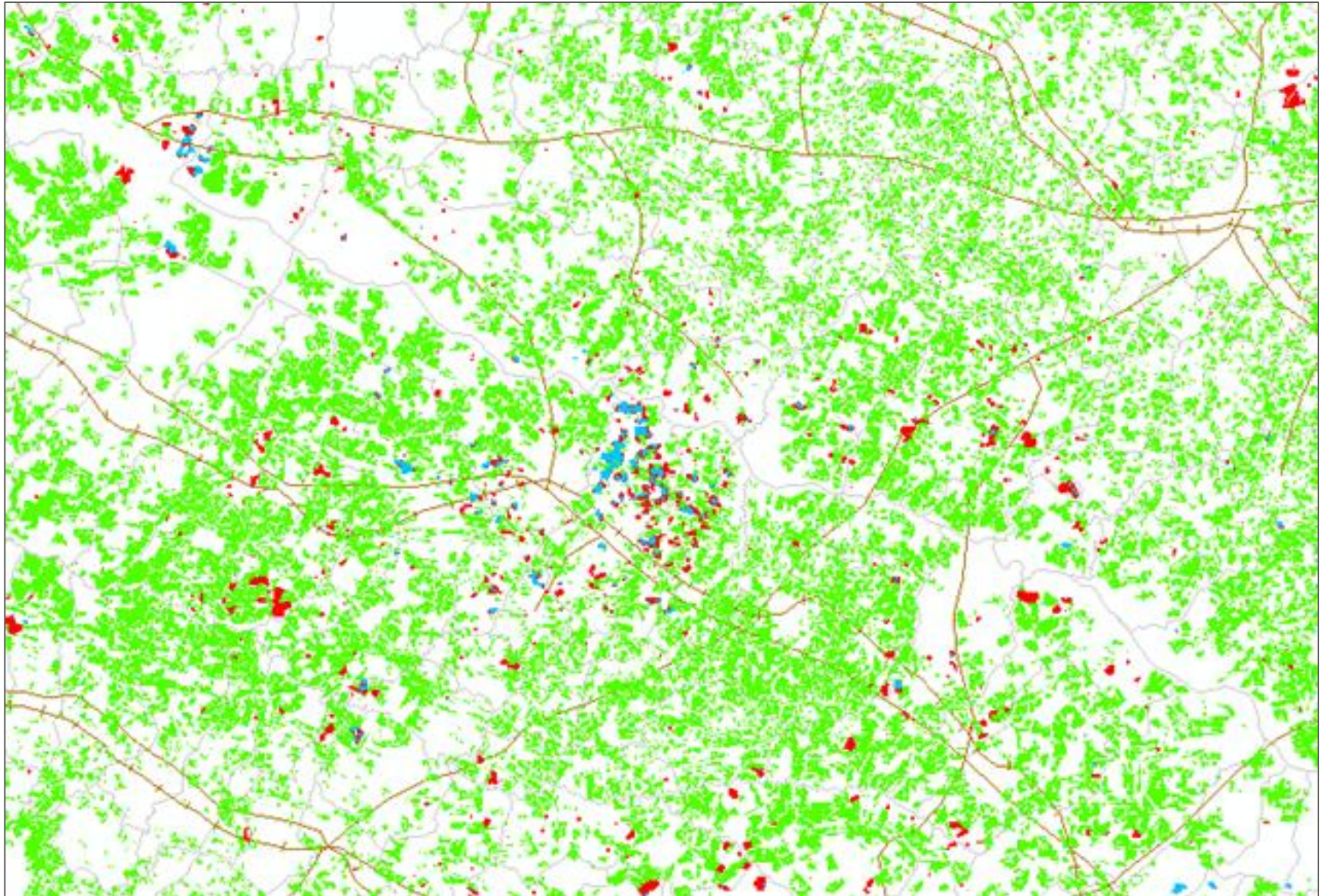


Cultura anual - 2 Safras



Cana-de-Açúcar

SÃO PAULO – Araçatuba: SAFRA 2010/2011



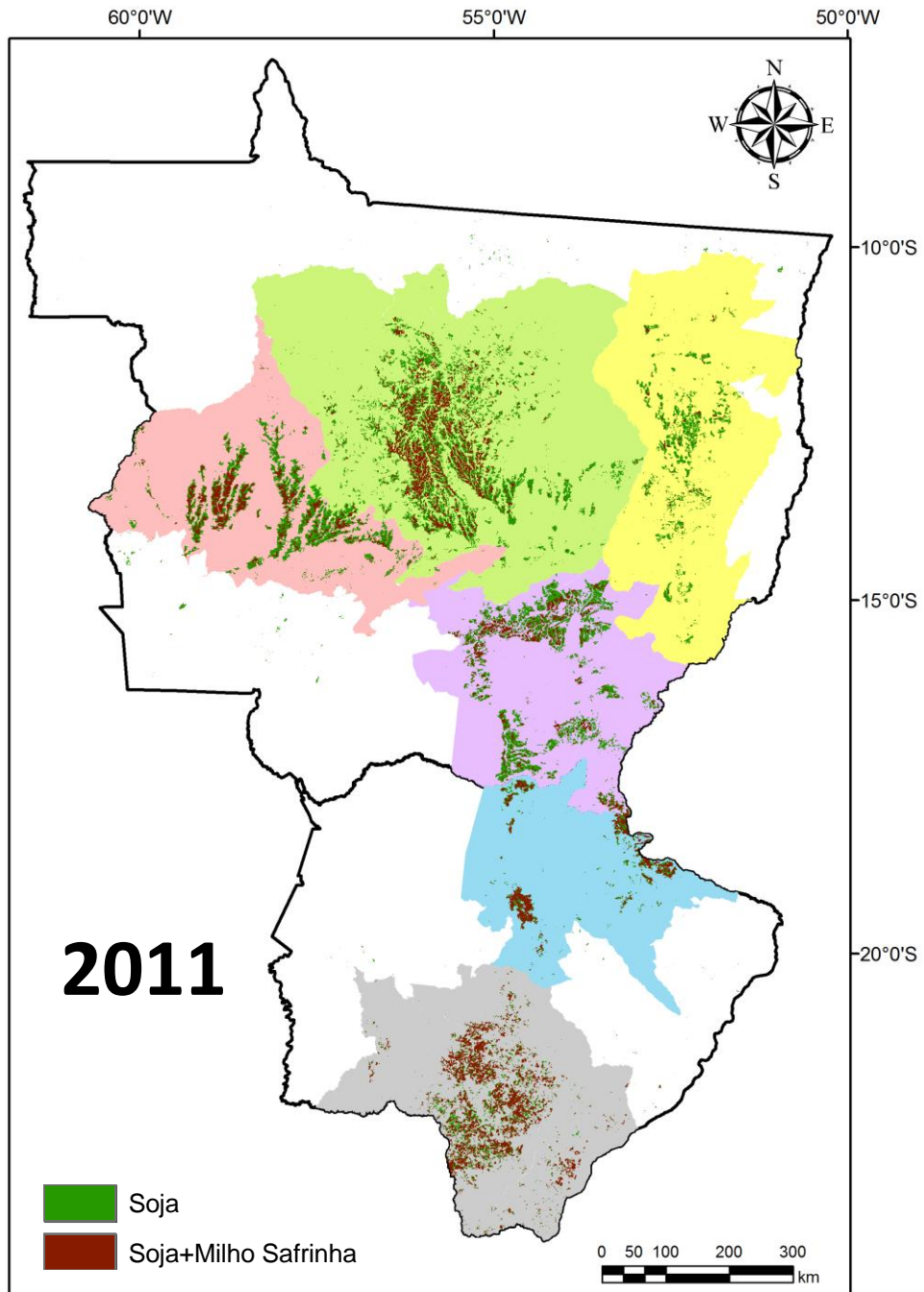
Cultura anual - 1 Safra

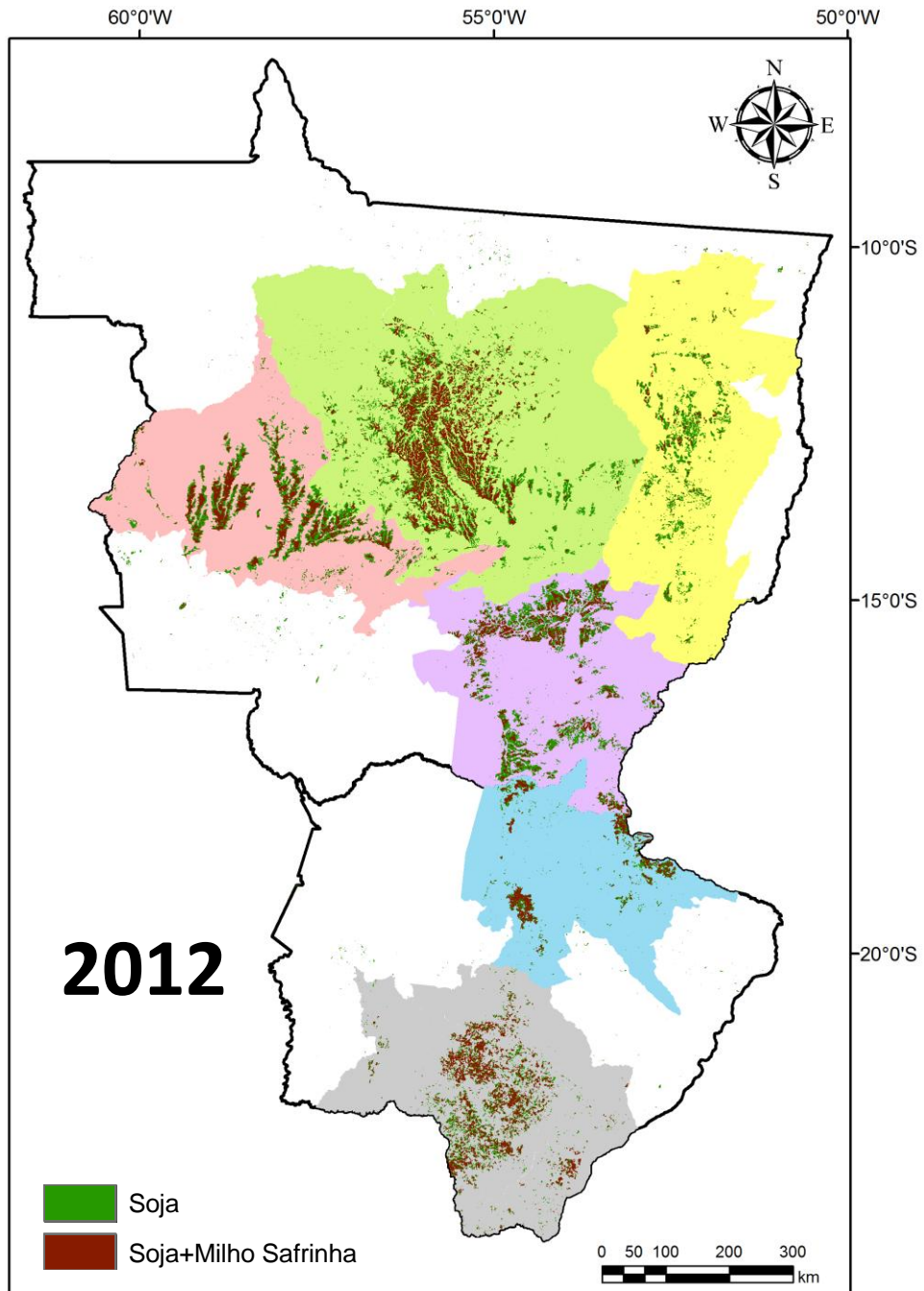


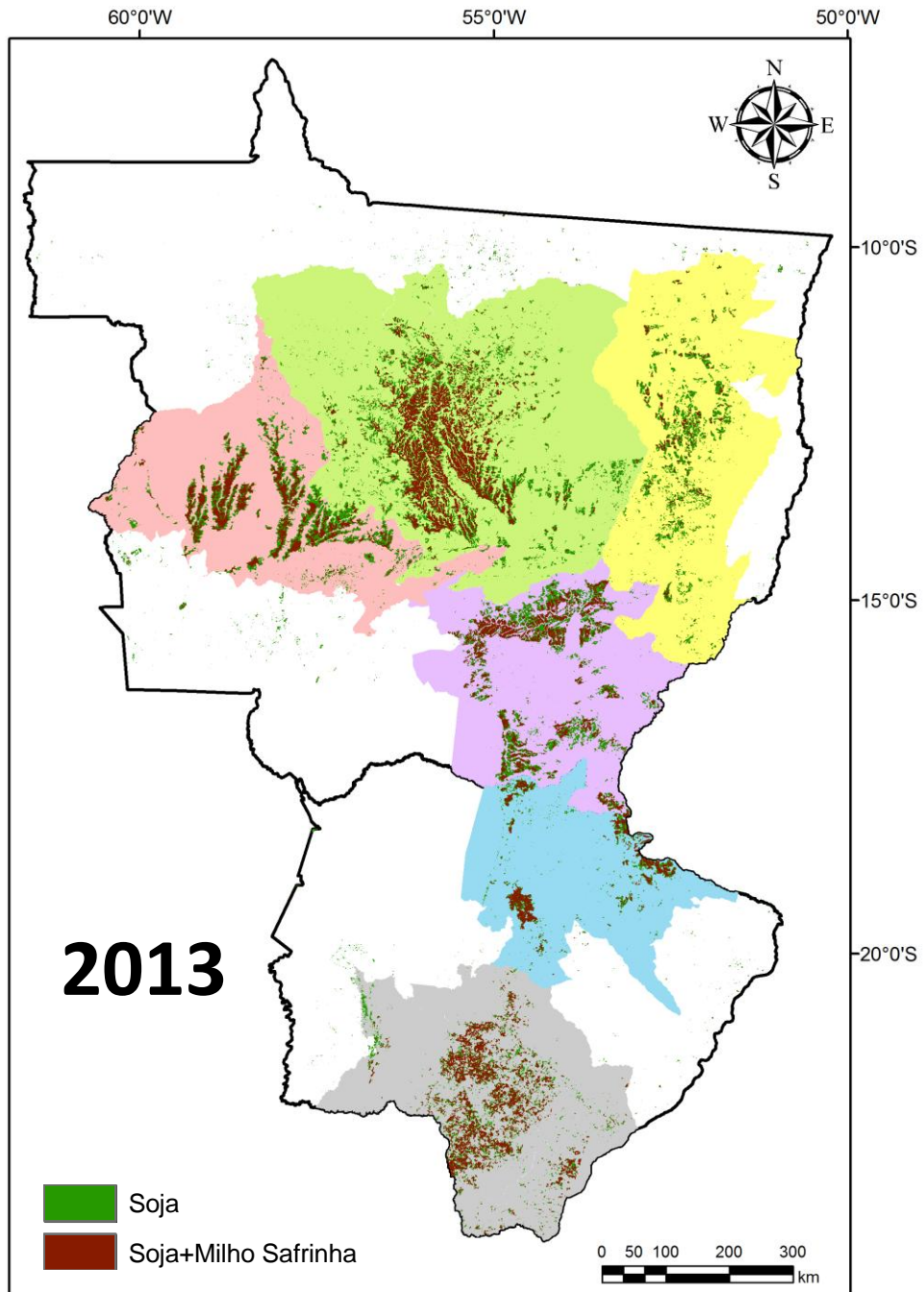
Cultura anual - 2 Safras



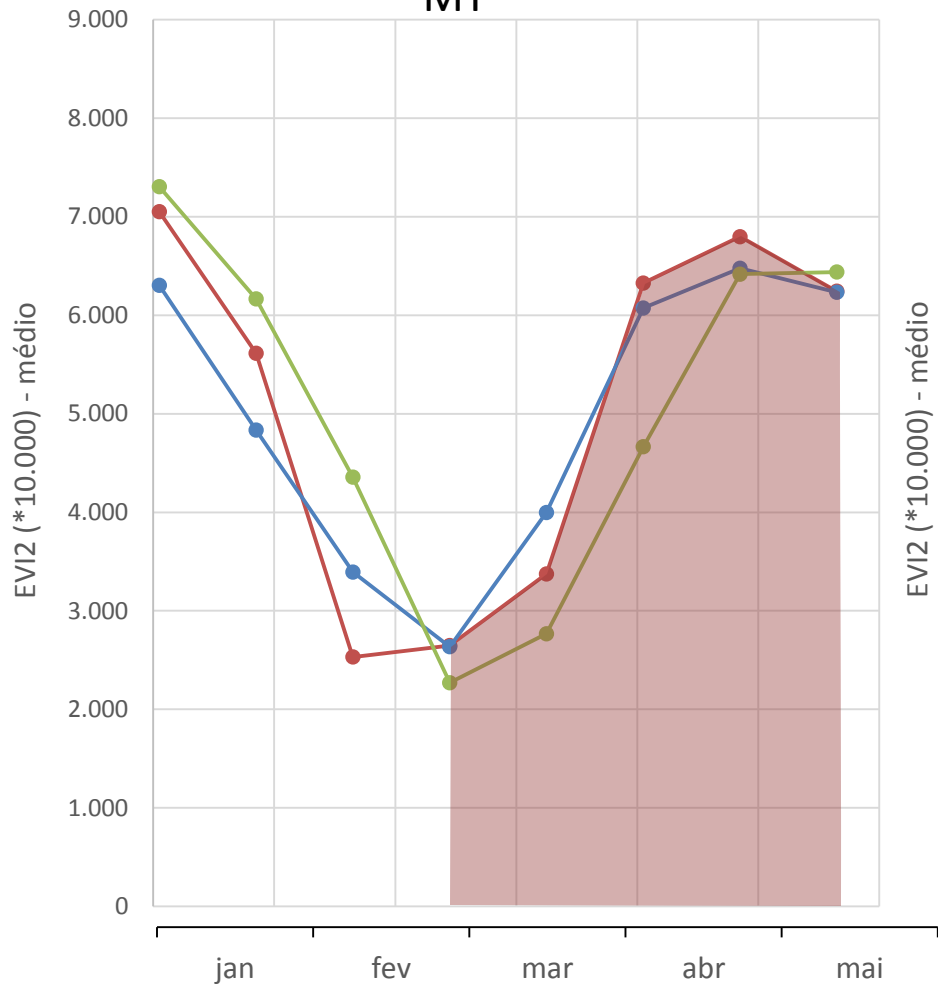
Cana-de-Açúcar







MT



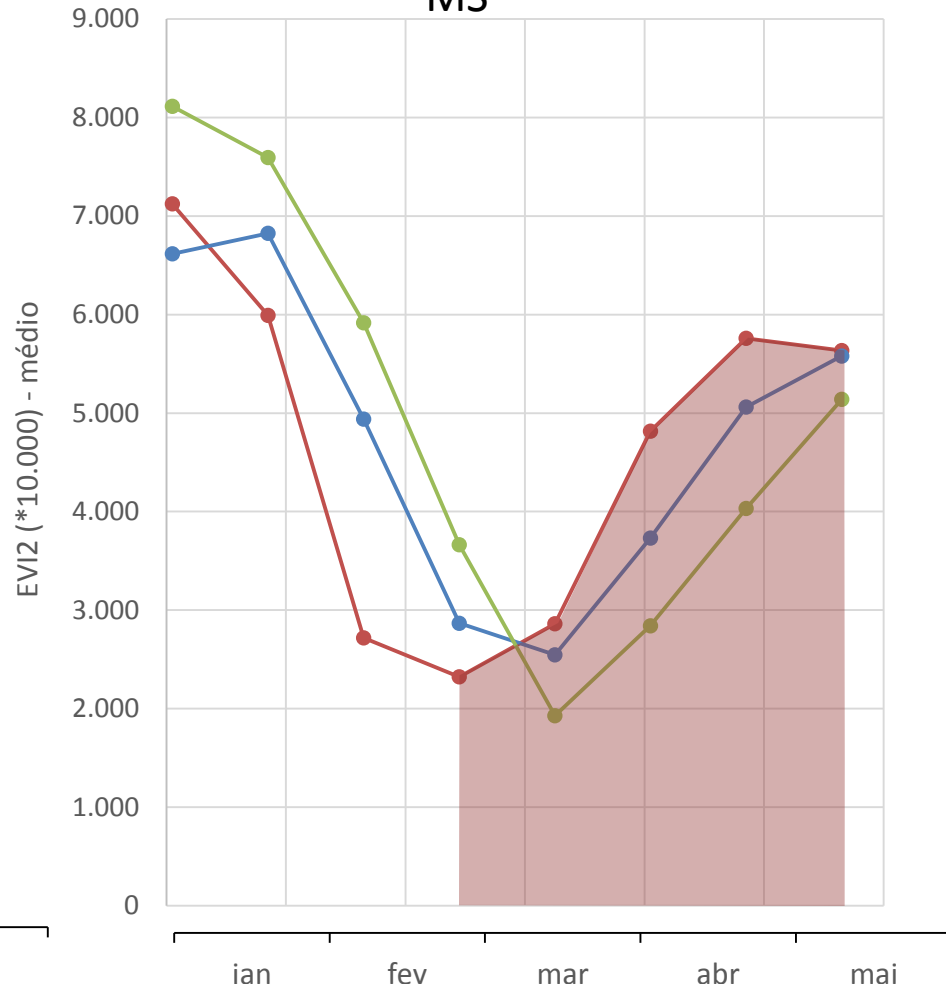
—●— 2012/13 —●— 2011/12 —●— 2010/11

102 sc/ha

95 sc/ha

65 sc/ha

MS



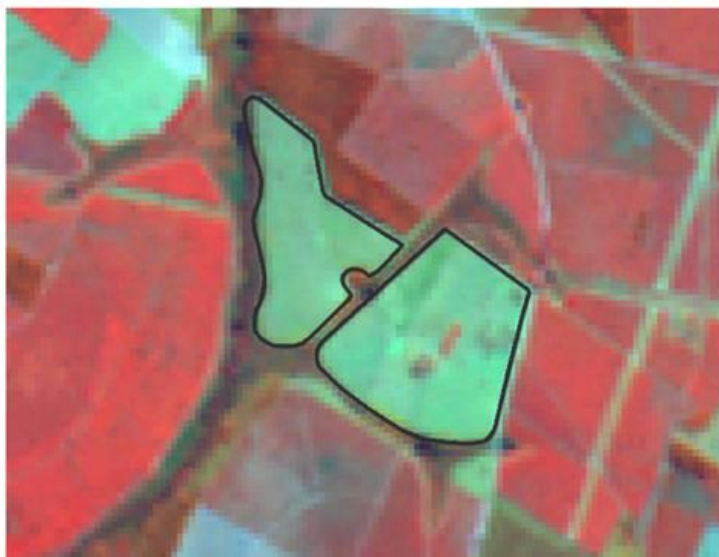
—●— 2012/13 —●— 2011/12 —●— 2010/11

79 sc/ha

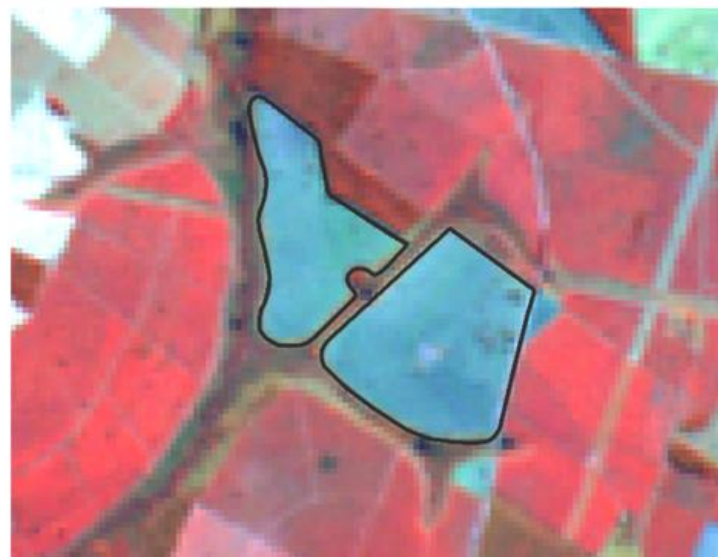
85 sc/ha

54 sc/ha

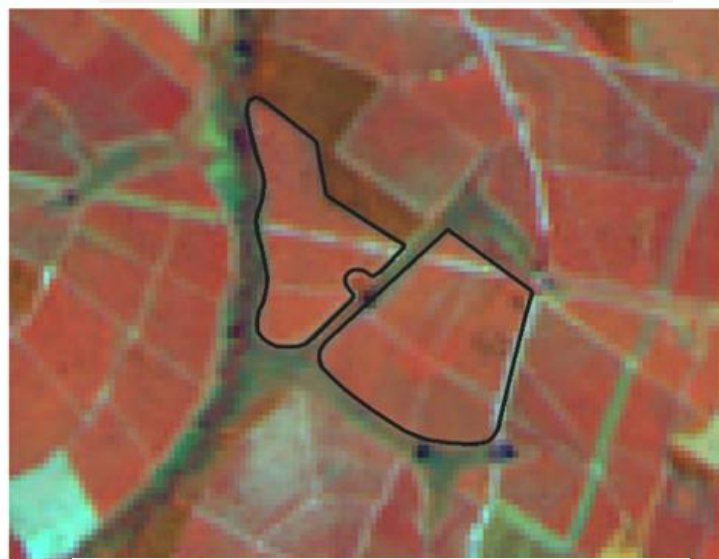
Mapeamento da Expansão – novas áreas de cana



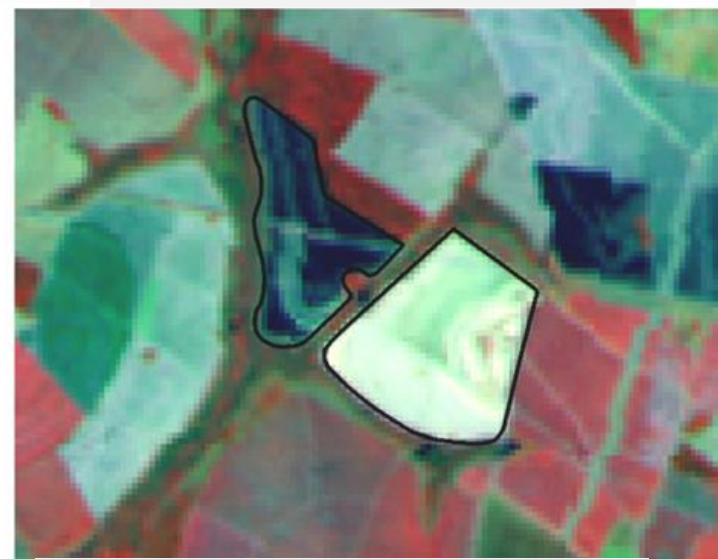
24 abril, 2007



11 junho, 2007

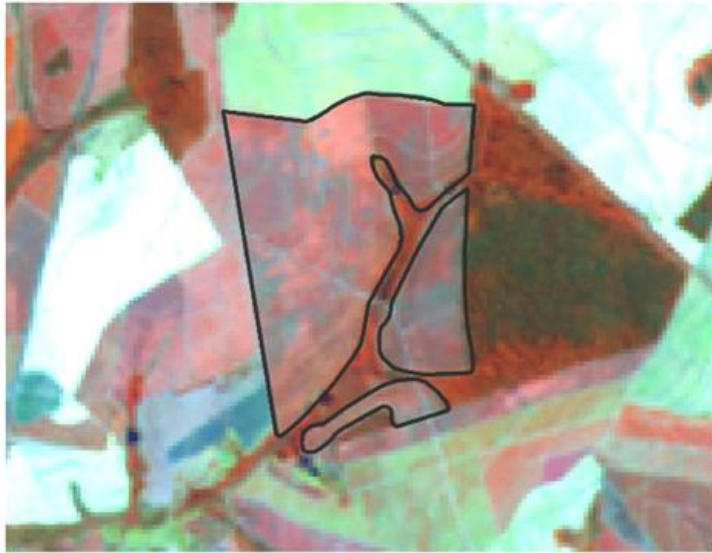


25 março, 2008

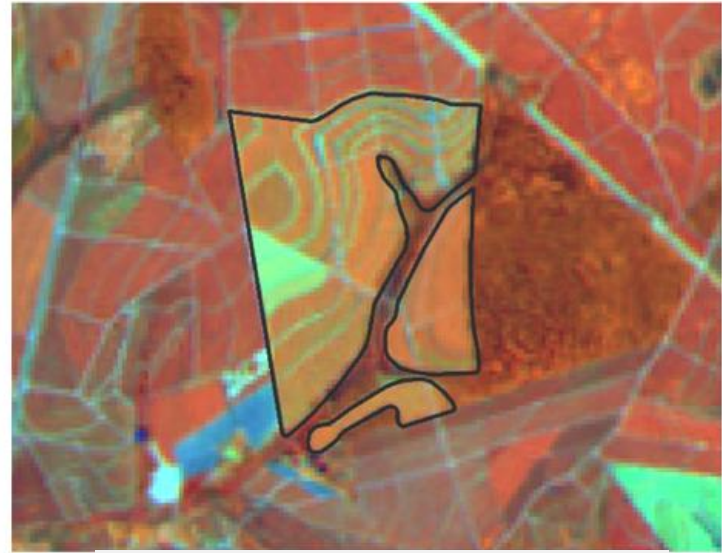


17 setembro, 2008

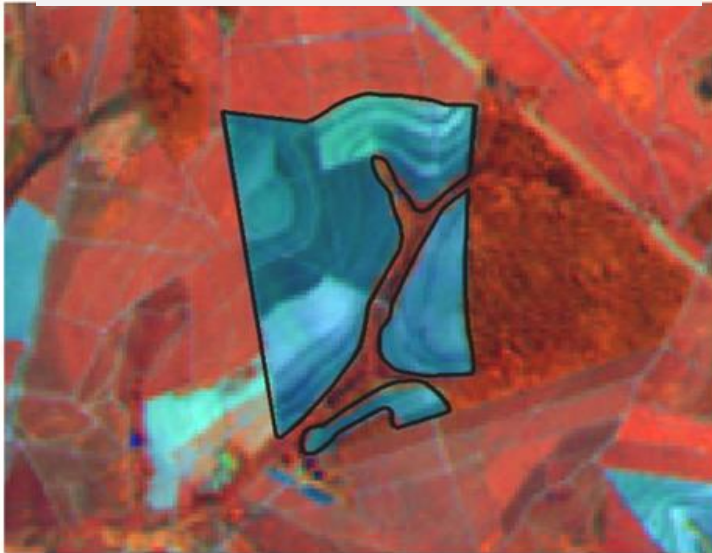
Mapeamento da Renovação – Cana de Ano e Meio



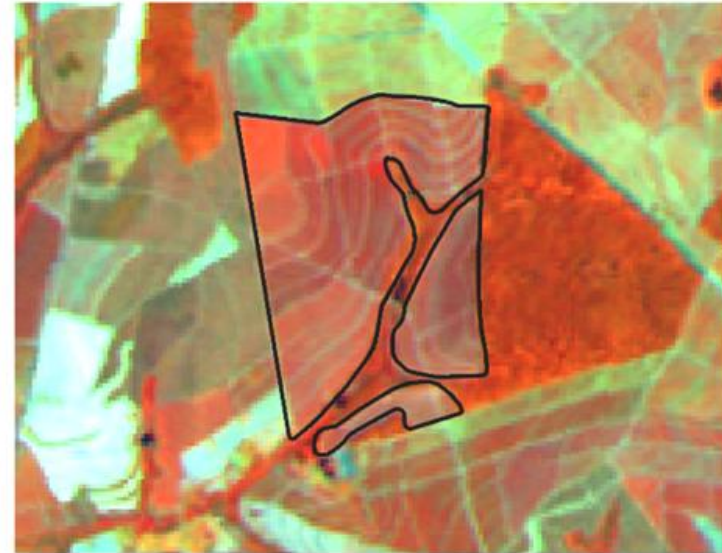
15 setembro, 2007



25 março, 2008

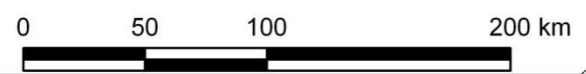
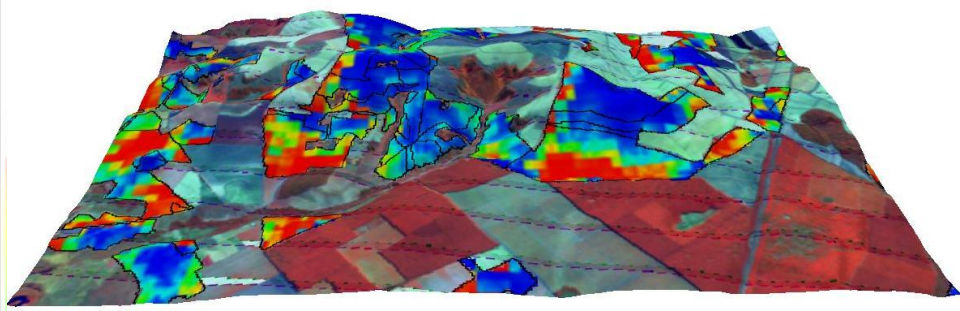
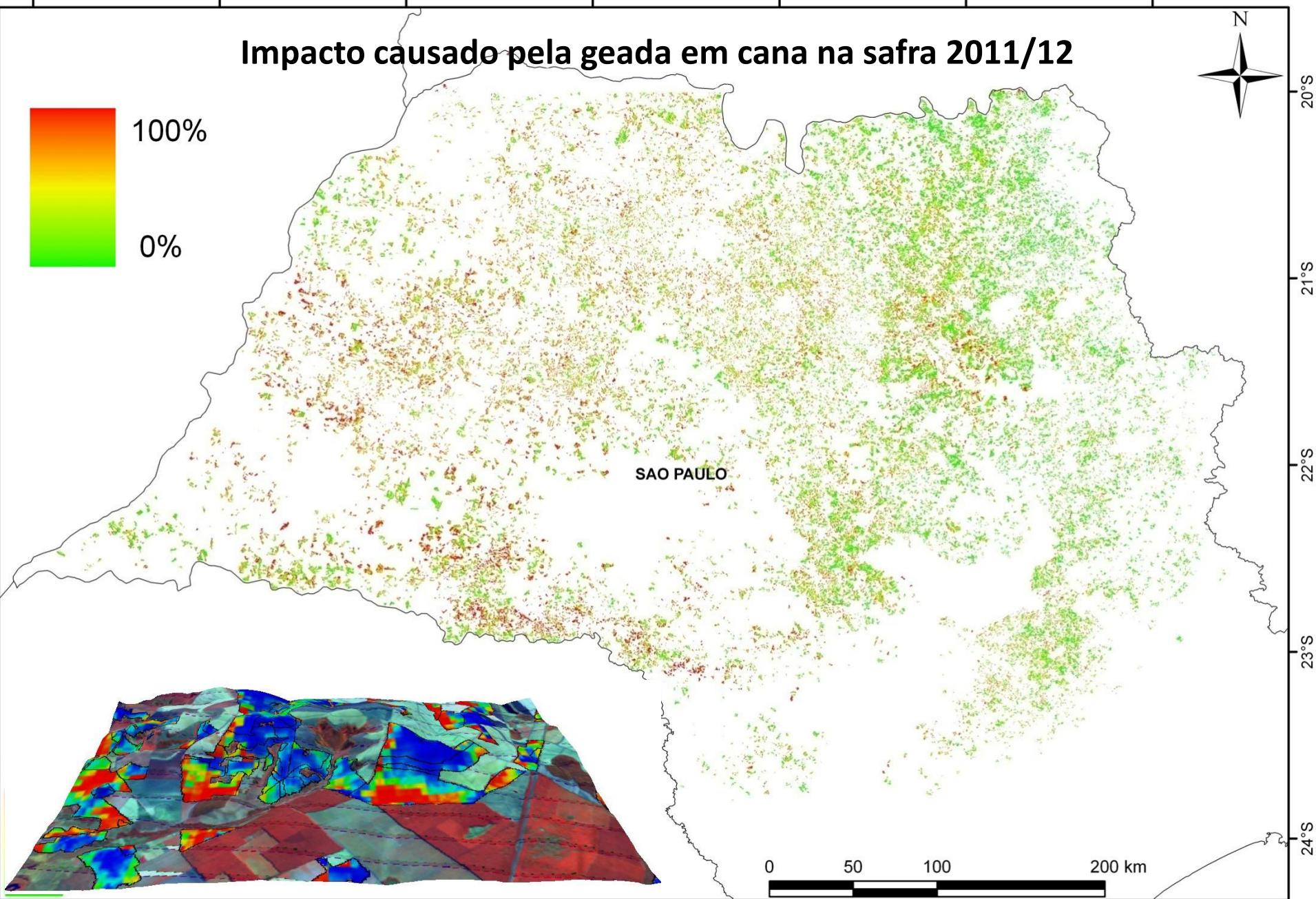
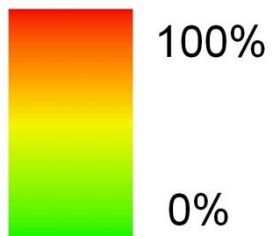


26 abril, 2008



06 dezembro, 2008

Impacto causado pela geada em cana na safra 2011/12



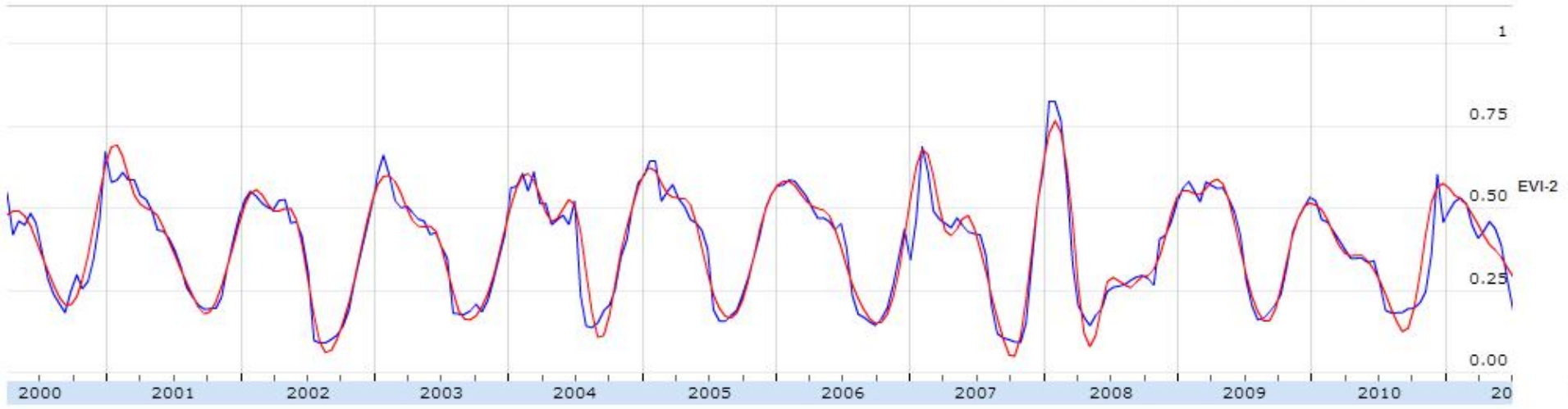


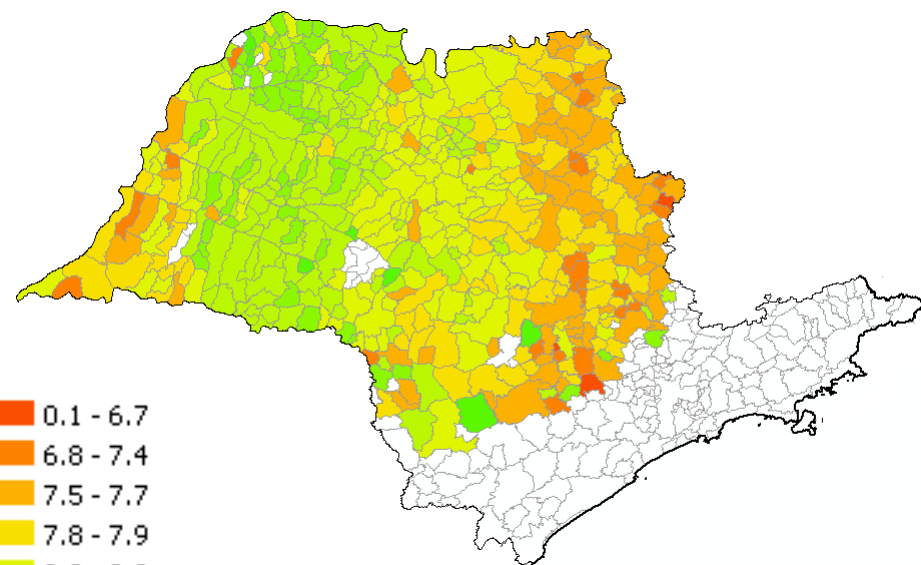
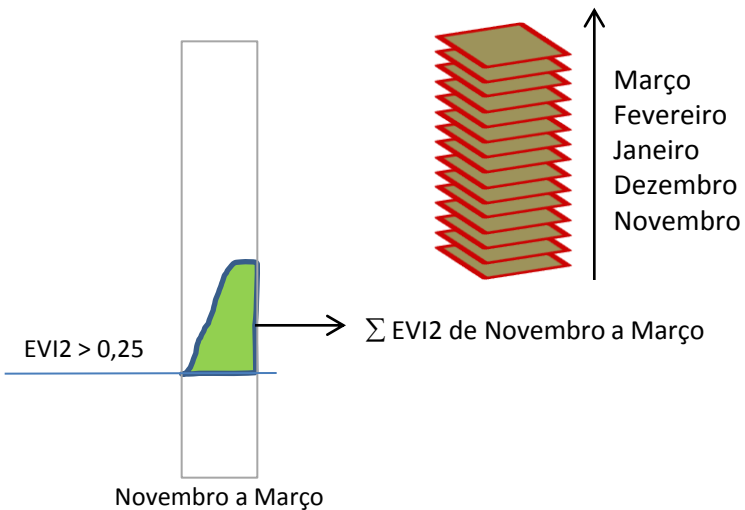
- + CANASAT - ano safra 2005
- + CANASAT - ano safra 2006
- + CANASAT - ano safra 2007
- **CANASAT - ano safra 2008**
- Em reforma
- Expansão
- Reformada
- Soca
- + CANASAT - ano safra 2009
- + CANASAT - ano safra 2010
- + CANASAT - ano safra 2011

baixar curva exibir box

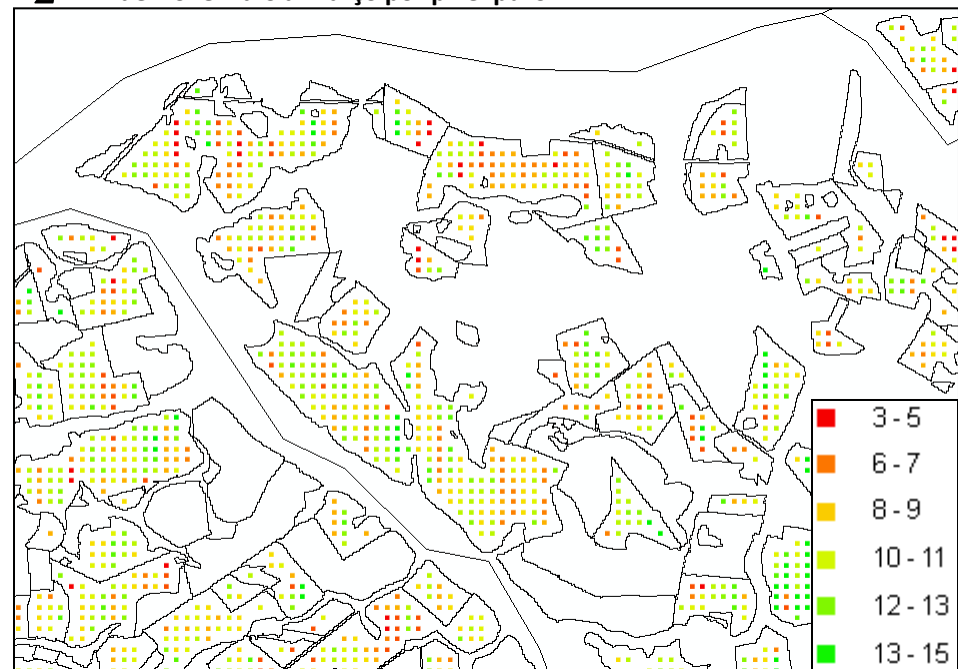
Coordenadas do ponto: (-21.225515, -48.340030)

● gap: -1 ● com filtro: 0,287 ● sem filtro: 0,174 | 03/07/2011





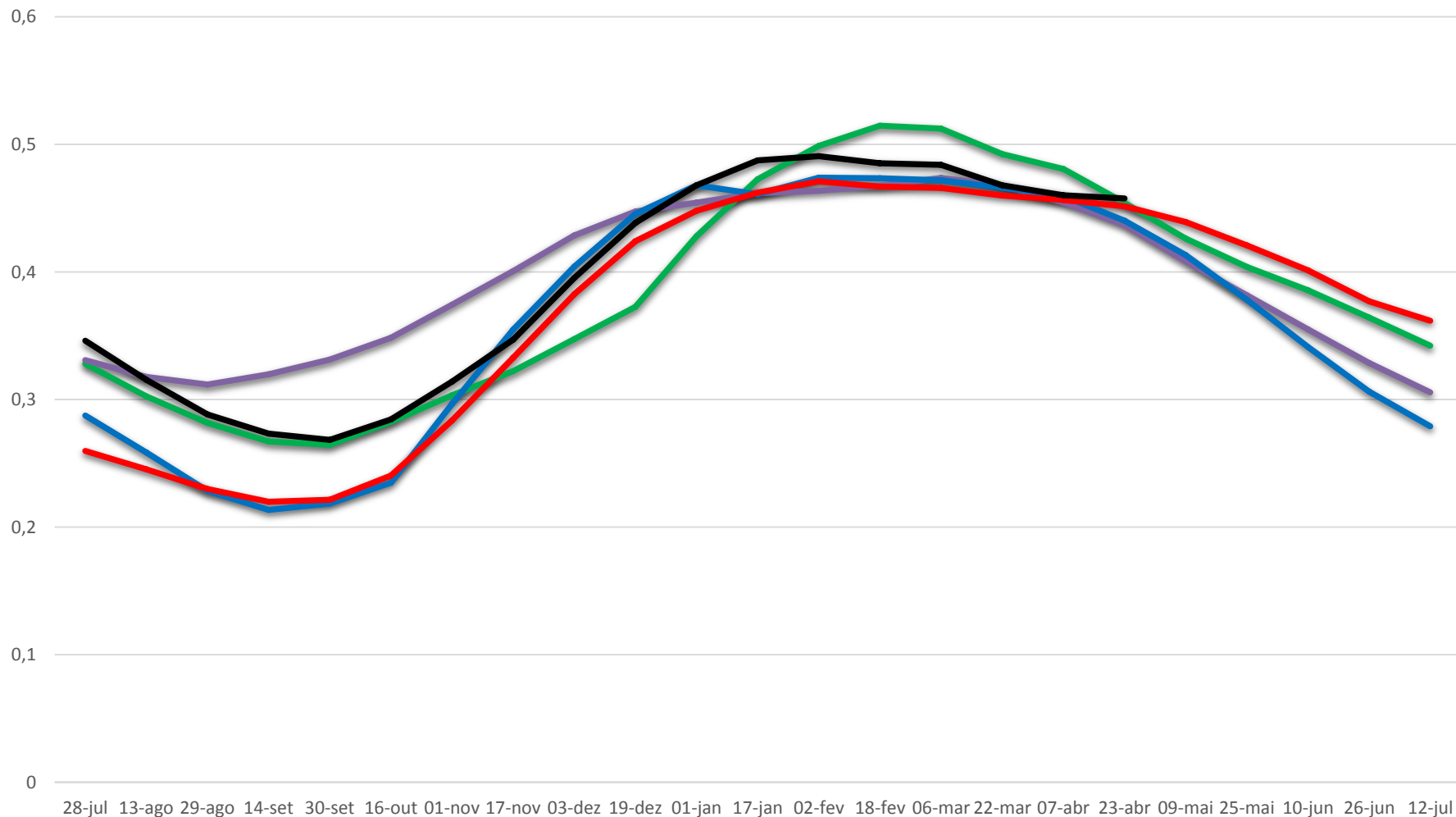
$\Sigma EVI2$ de Novembro a Março por pixel puro



Média por bloco do $\Sigma EVI2$ dos pixels totalmente contidos



Média do EVI2 para as áreas de cana de São Paulo



— can2009 — can2010 — can2011 — can2012 — can2013

Ferramenta *web* para delimitação da propriedade ou lavoura



Segurado

Agente