

GLOBAL CHANGE

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Seminar on Global Change
Universitas Gadjah Mada
Pascasarjana
Yogyakarta October 2019

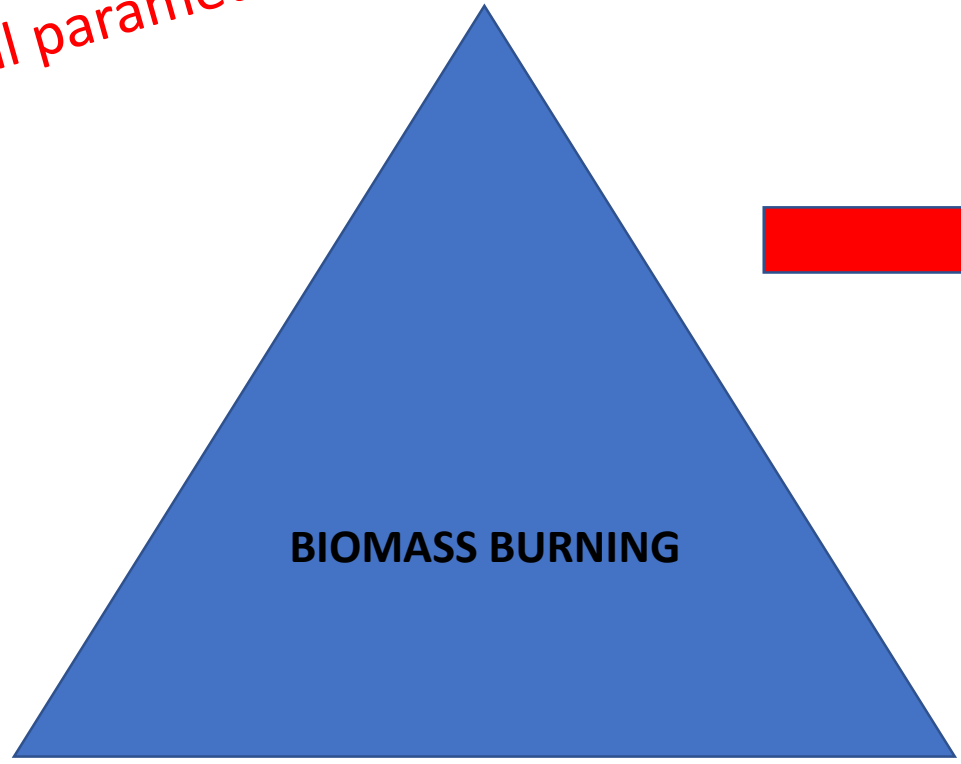
Searching for the Δ in all parameters

**State of
vegetation**

Climate, weather
Vegetation type and structure

Management
Arson
Ignorance
Natural

Ignition

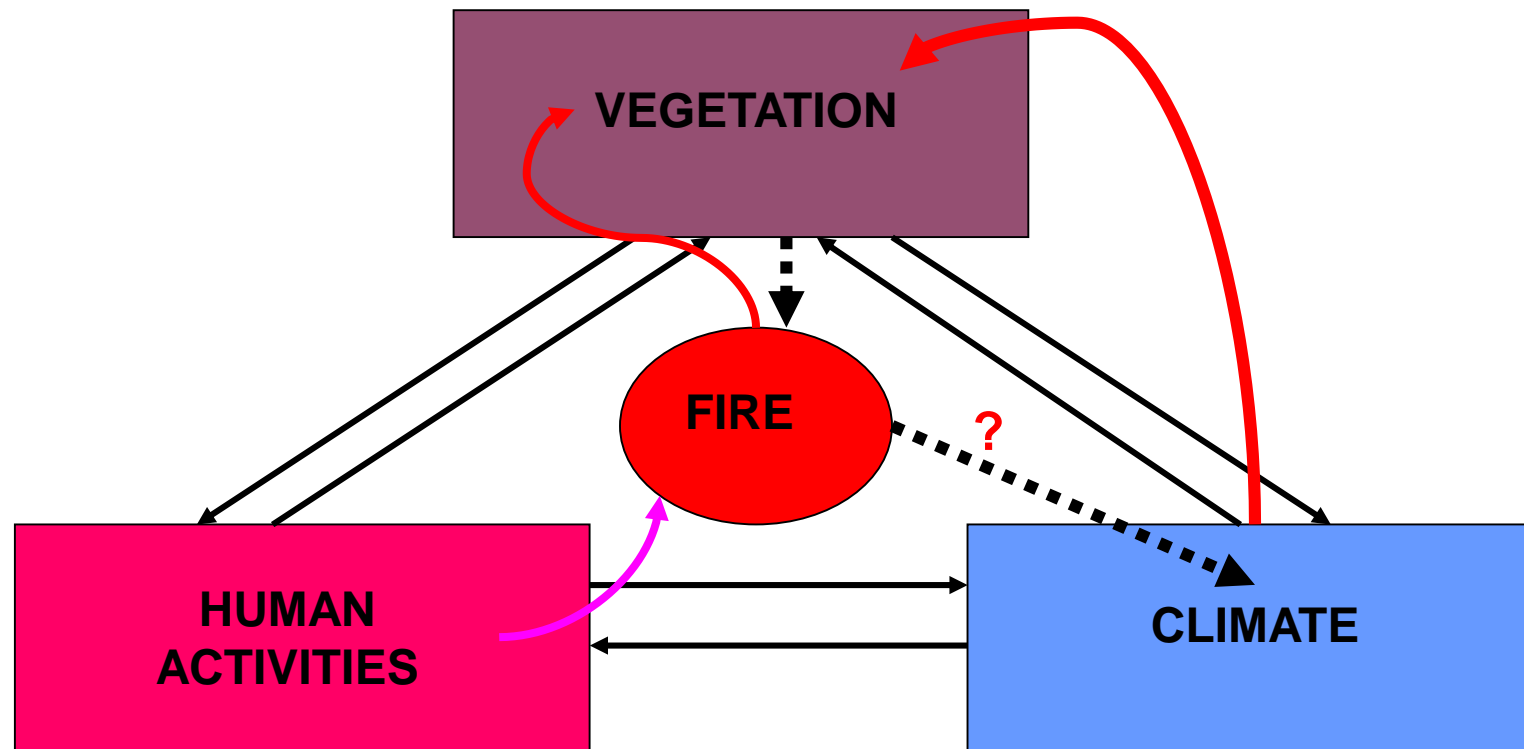


IMPACTS

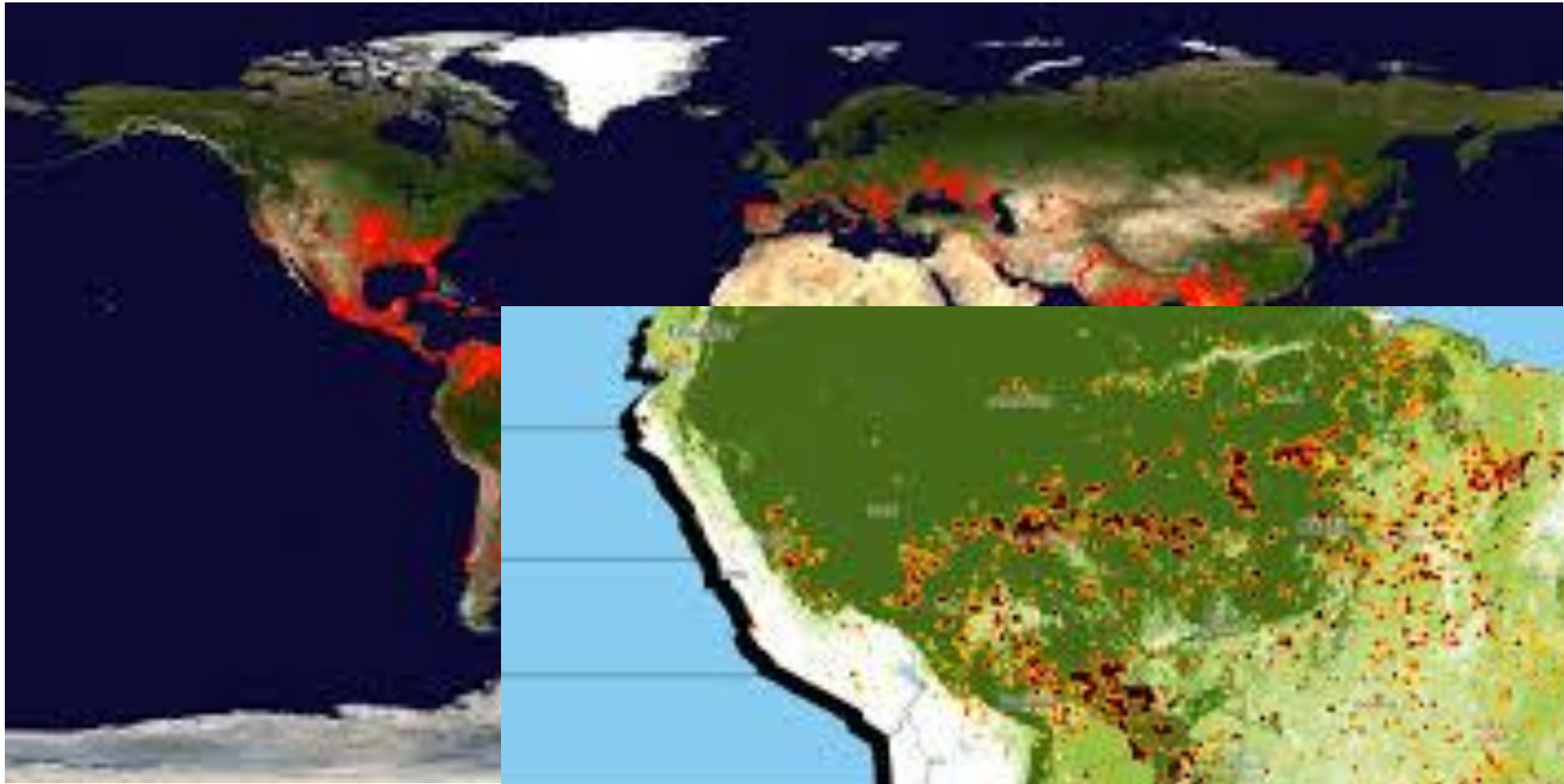
Biomass, burned
Area
GHG
Smoke
Physical Damage
Health
Biodiversity

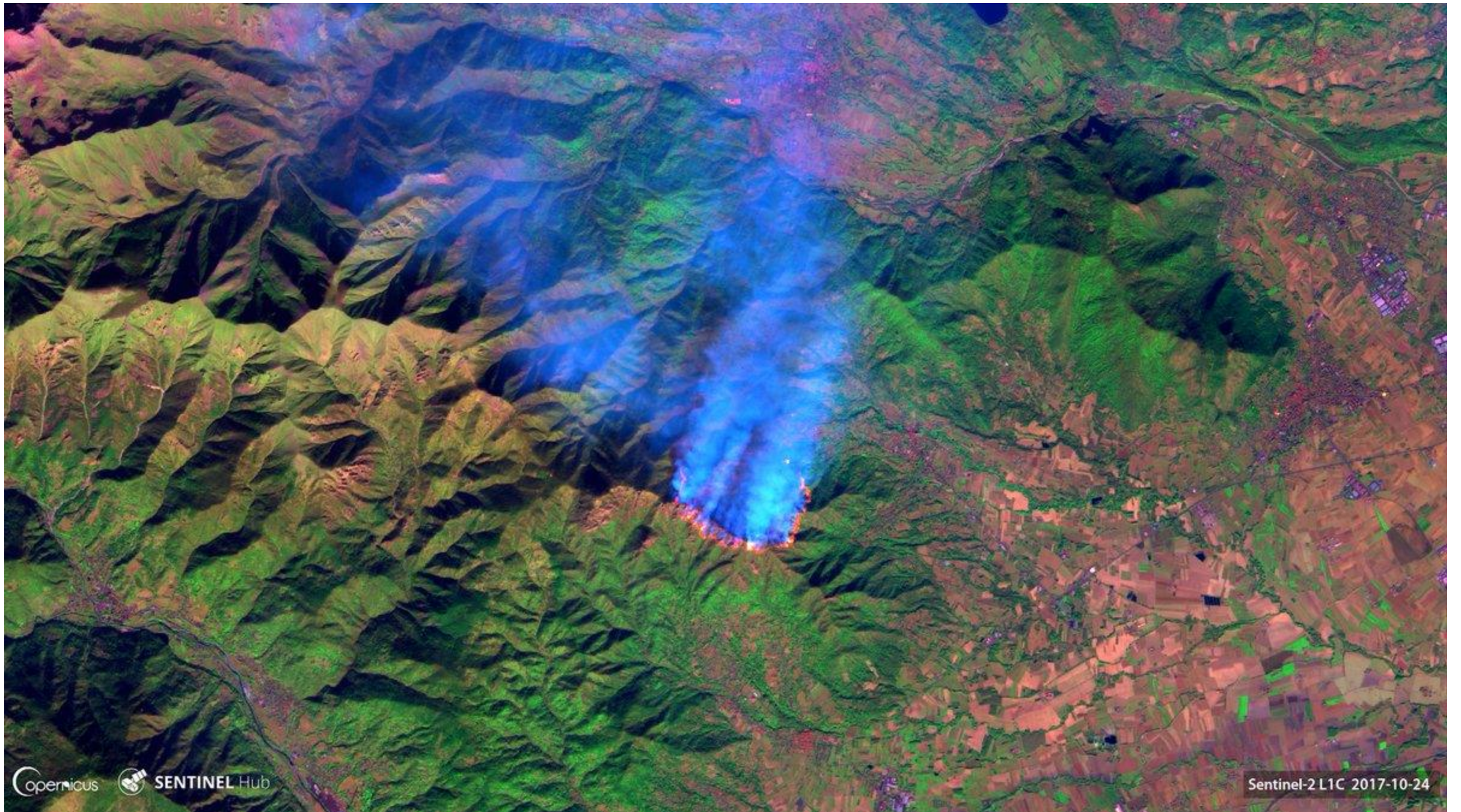
Land use

Demand for agri
products
Land management
Survival , Profit

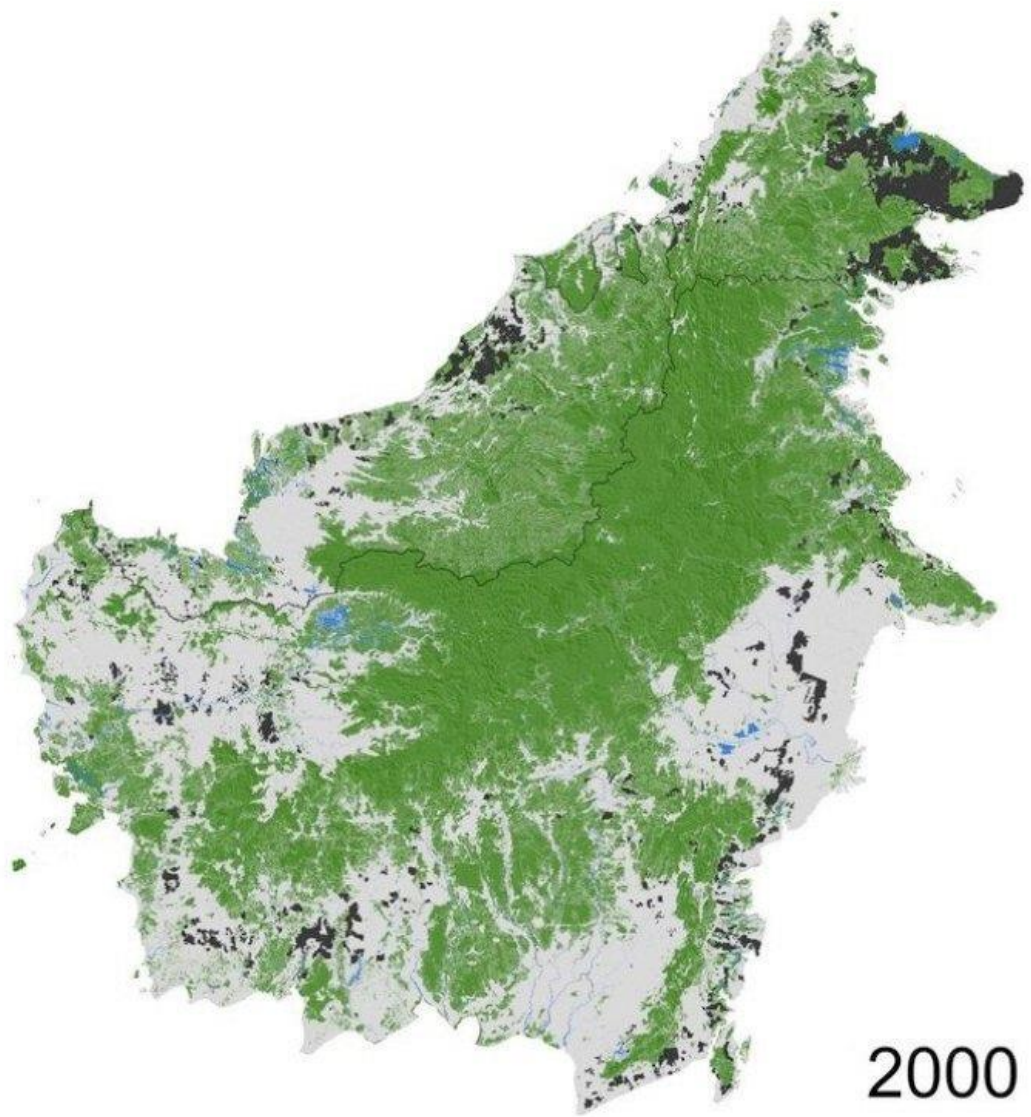




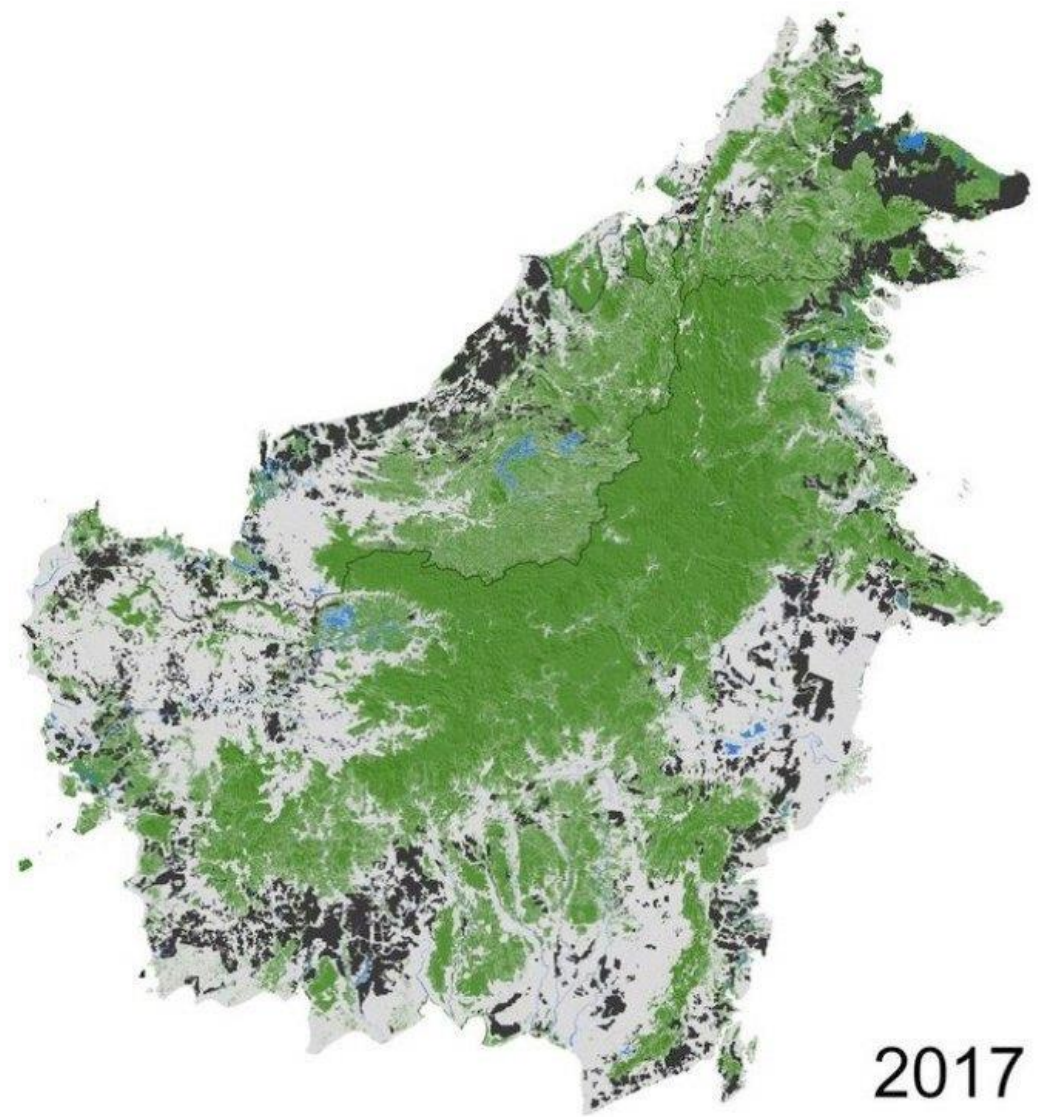








2000

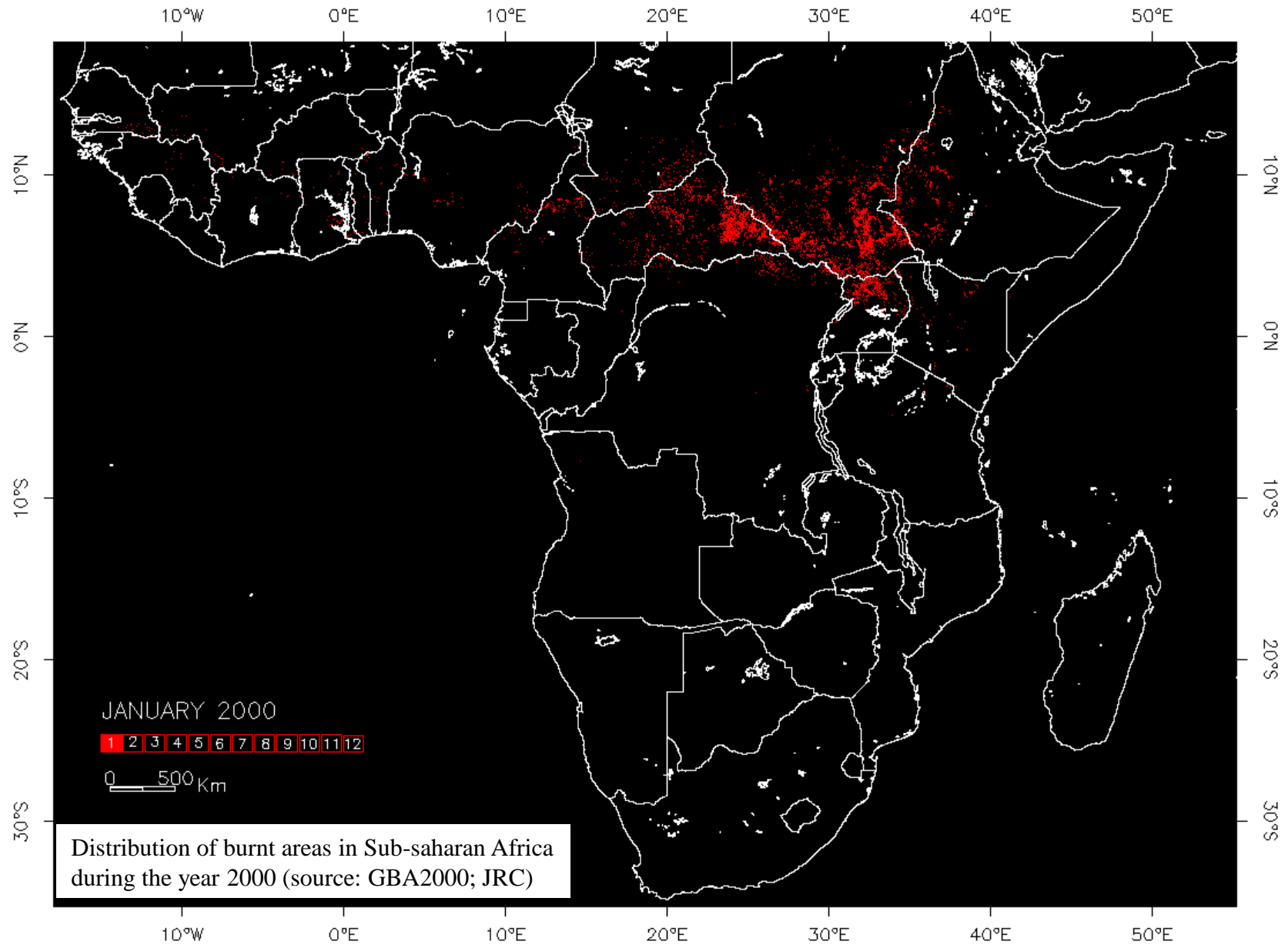


2017

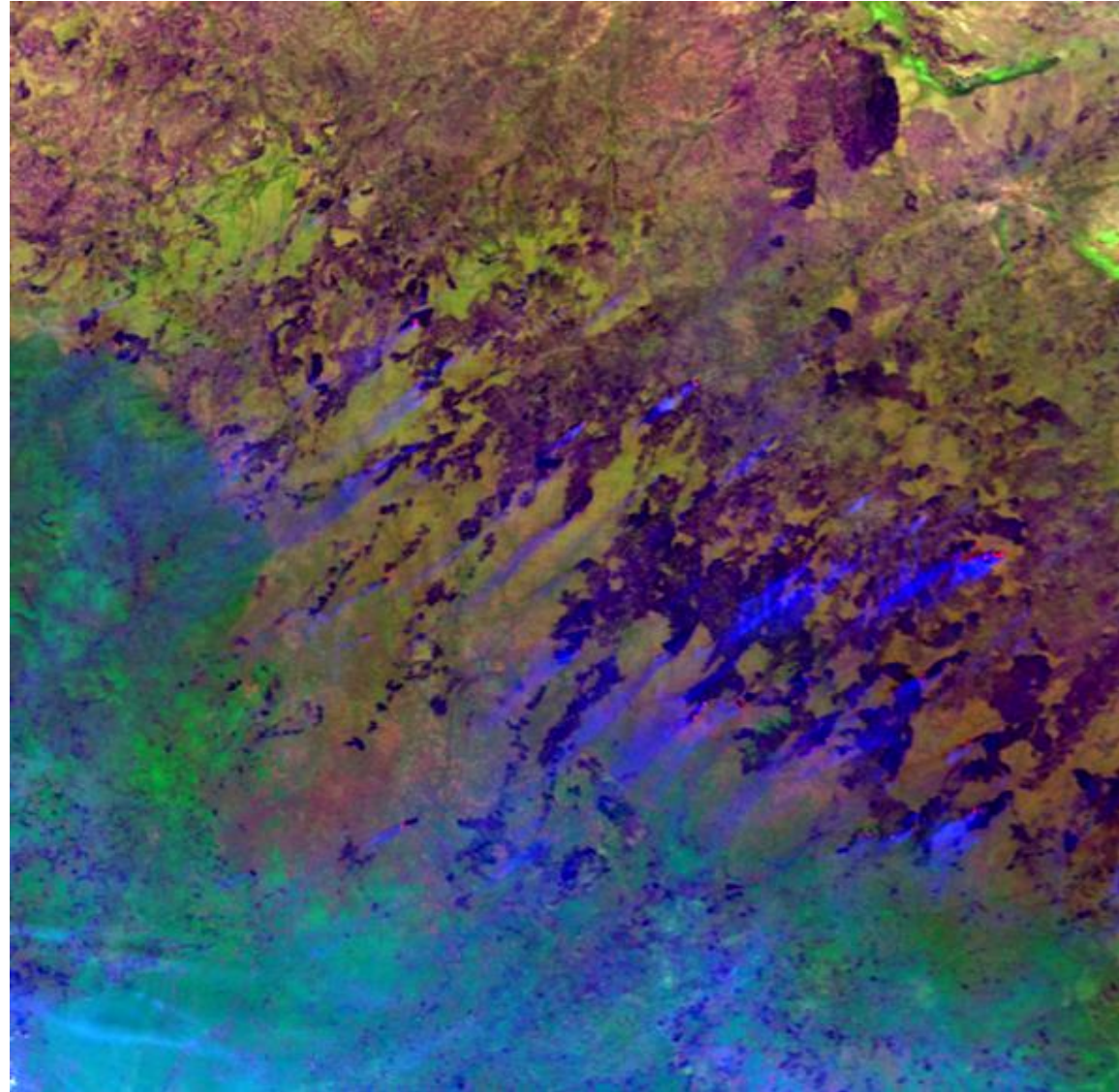


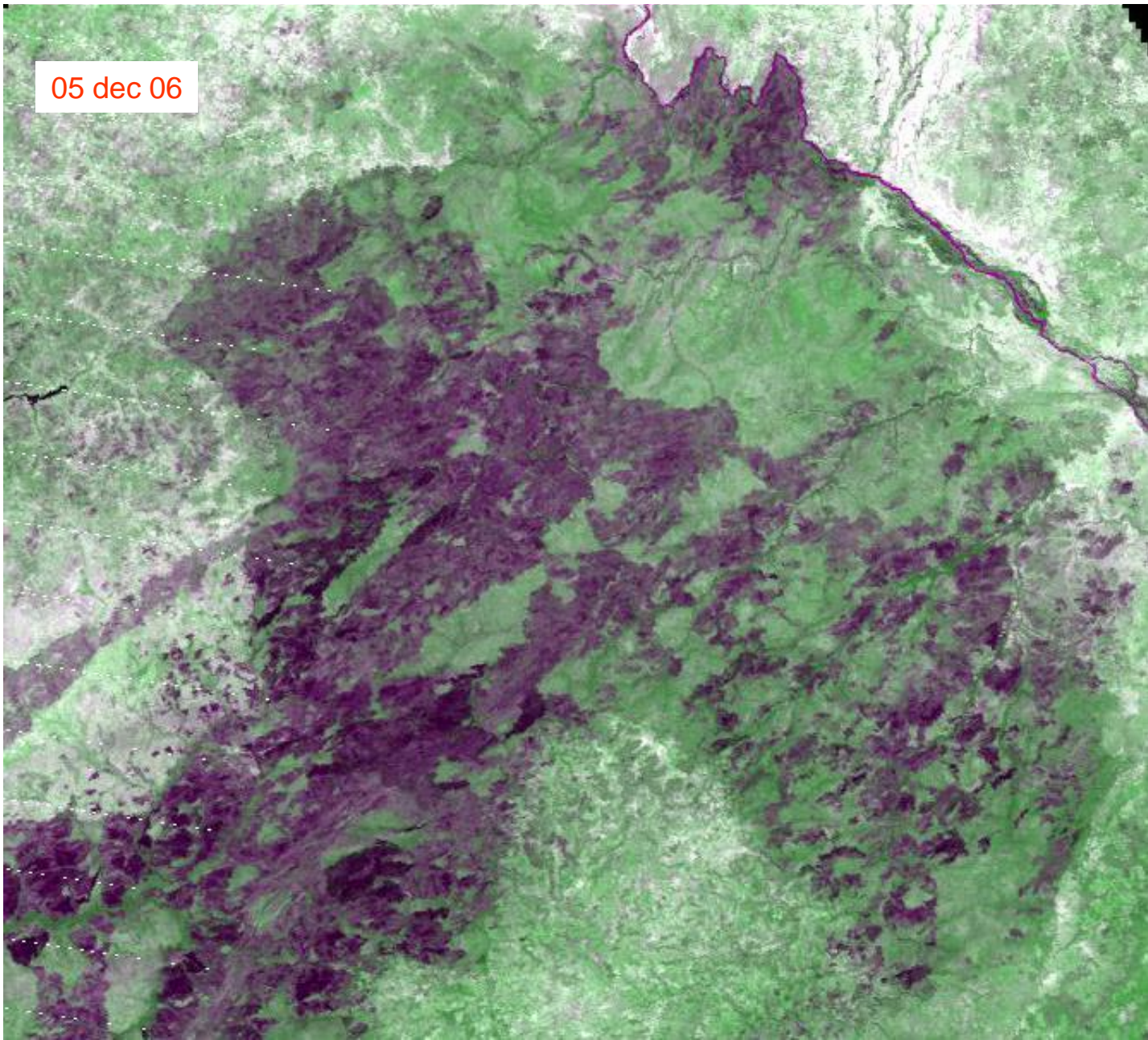
Jambi 2017





Transport produits émissions vers lisière Nord forêt bassin Congo - Feux Sud Soudan/RCA





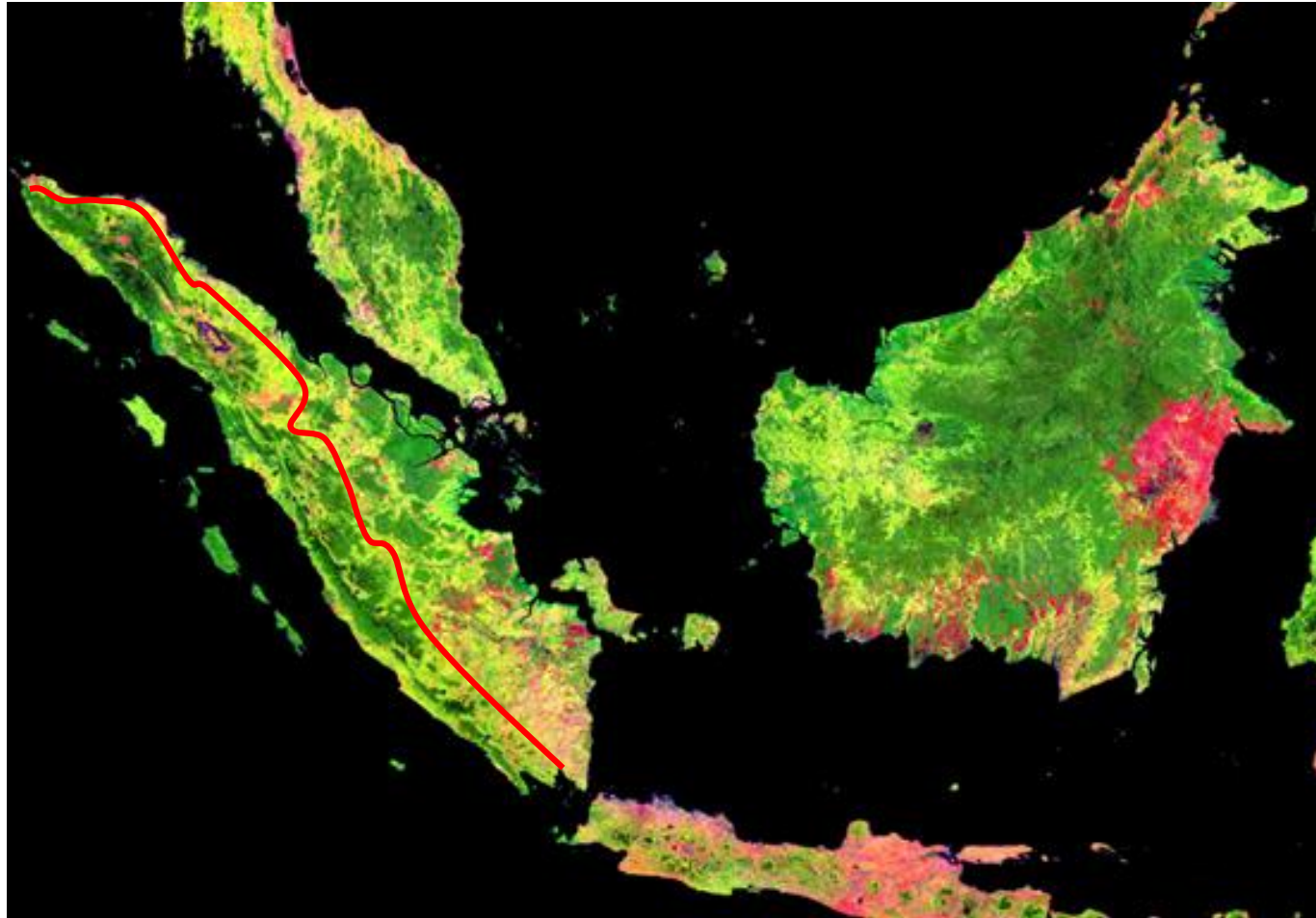
05 dec 06

*Suivi
hebdomadaire
surfaces brûlées.
Parc transfrontalier
du W (MODIS)*



Intensification (Rondonia – Brasil)

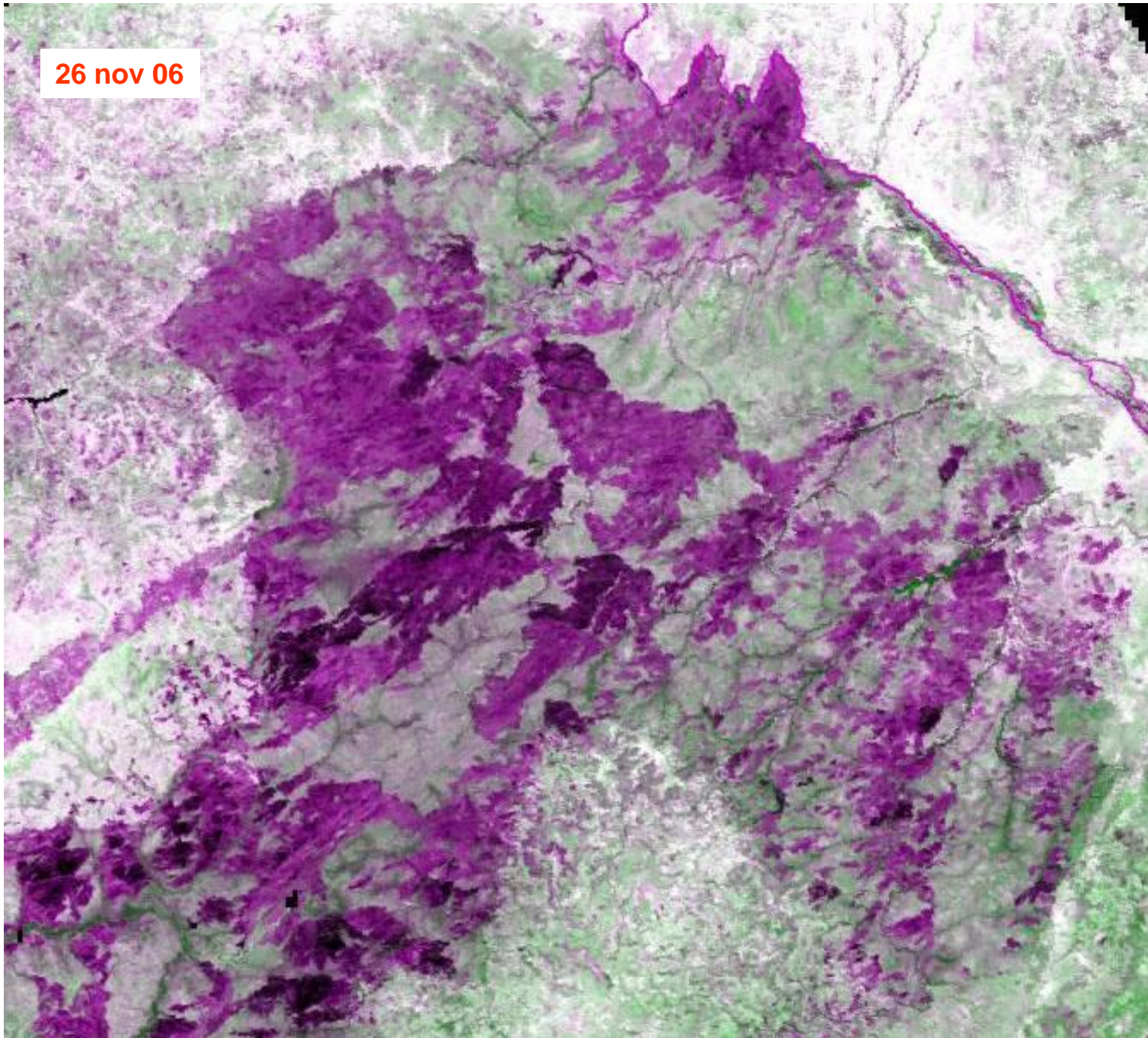


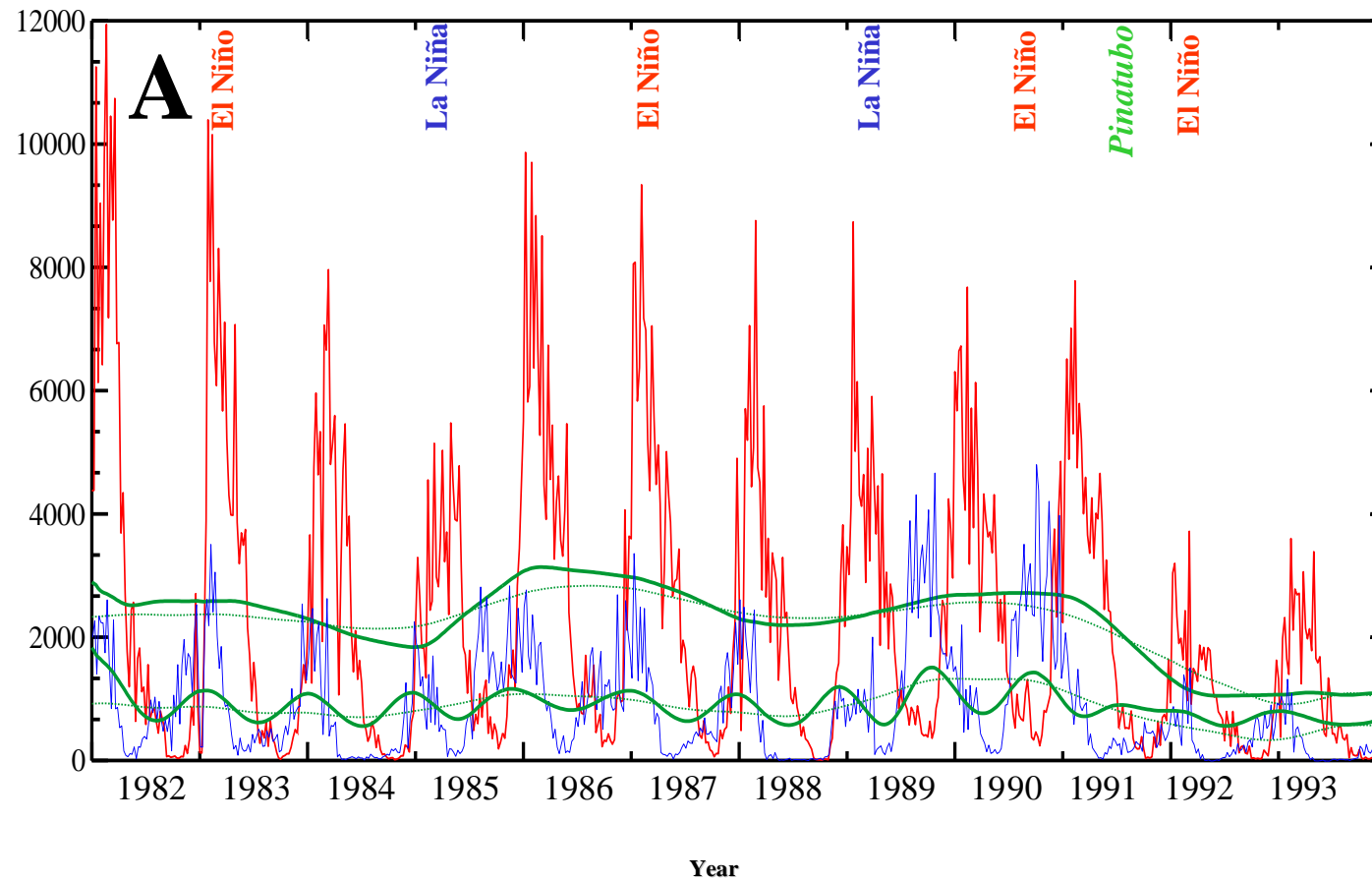


SPOT VEGETATION
composite 1998-99



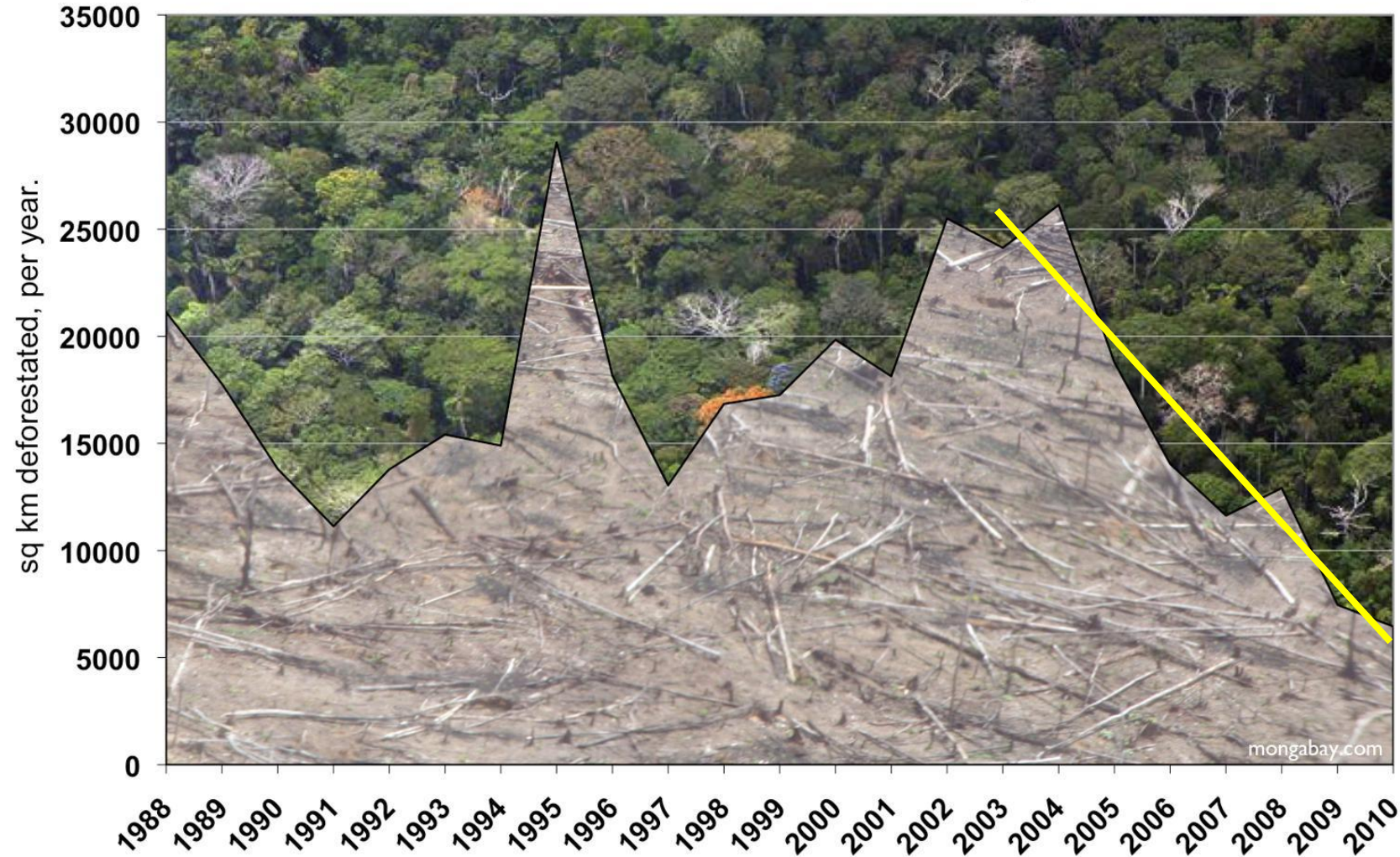
26 nov 06





1982-93 Evolution of burned area ('000 ha) from SPOT VGT data
 – red:Nrth hemisphere, blue: sth hem.

Deforestation in the Brazilian Amazon, 1988-2010



2005 Peak followed by rapid decrease to 2010

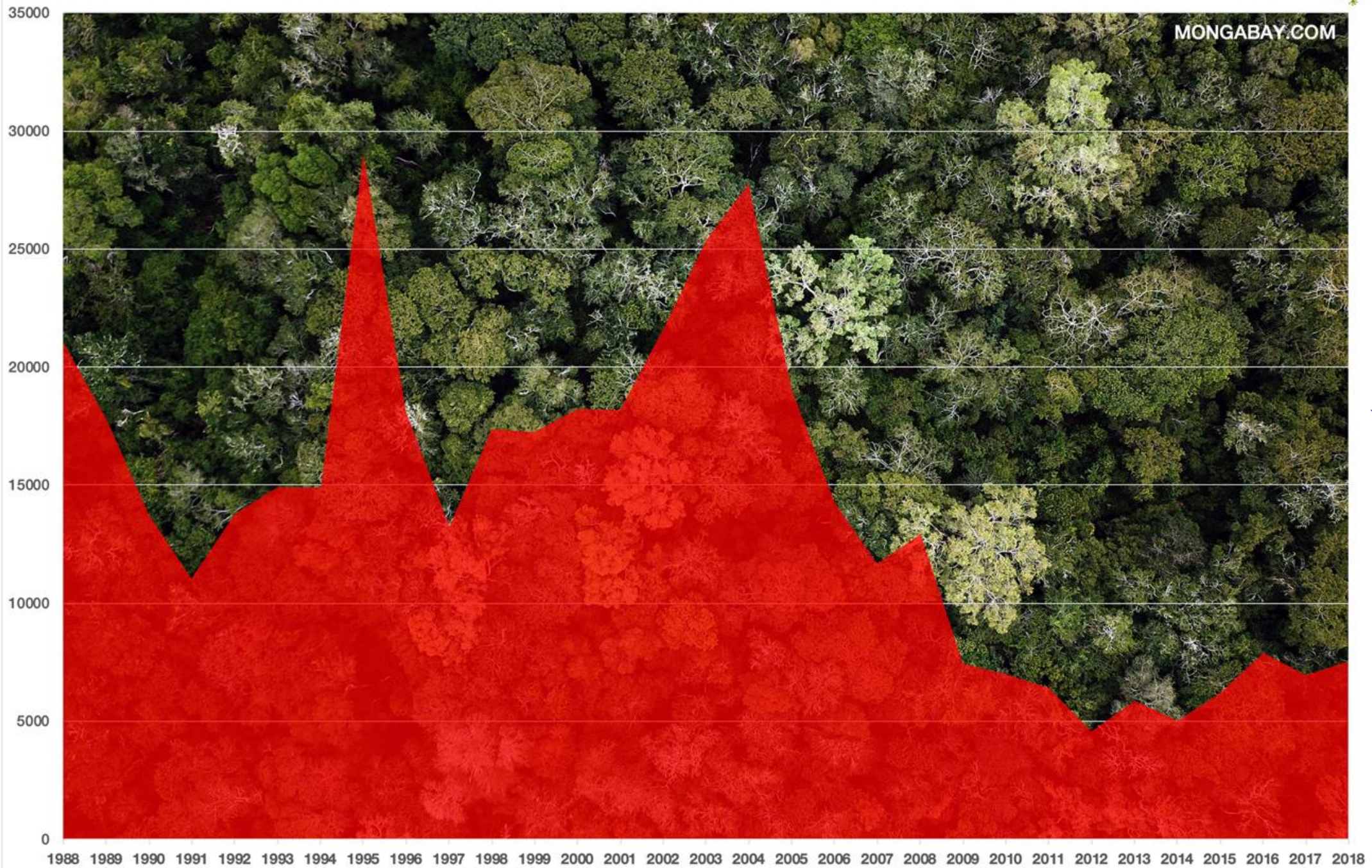
- drivers ?

- 2011 + ?

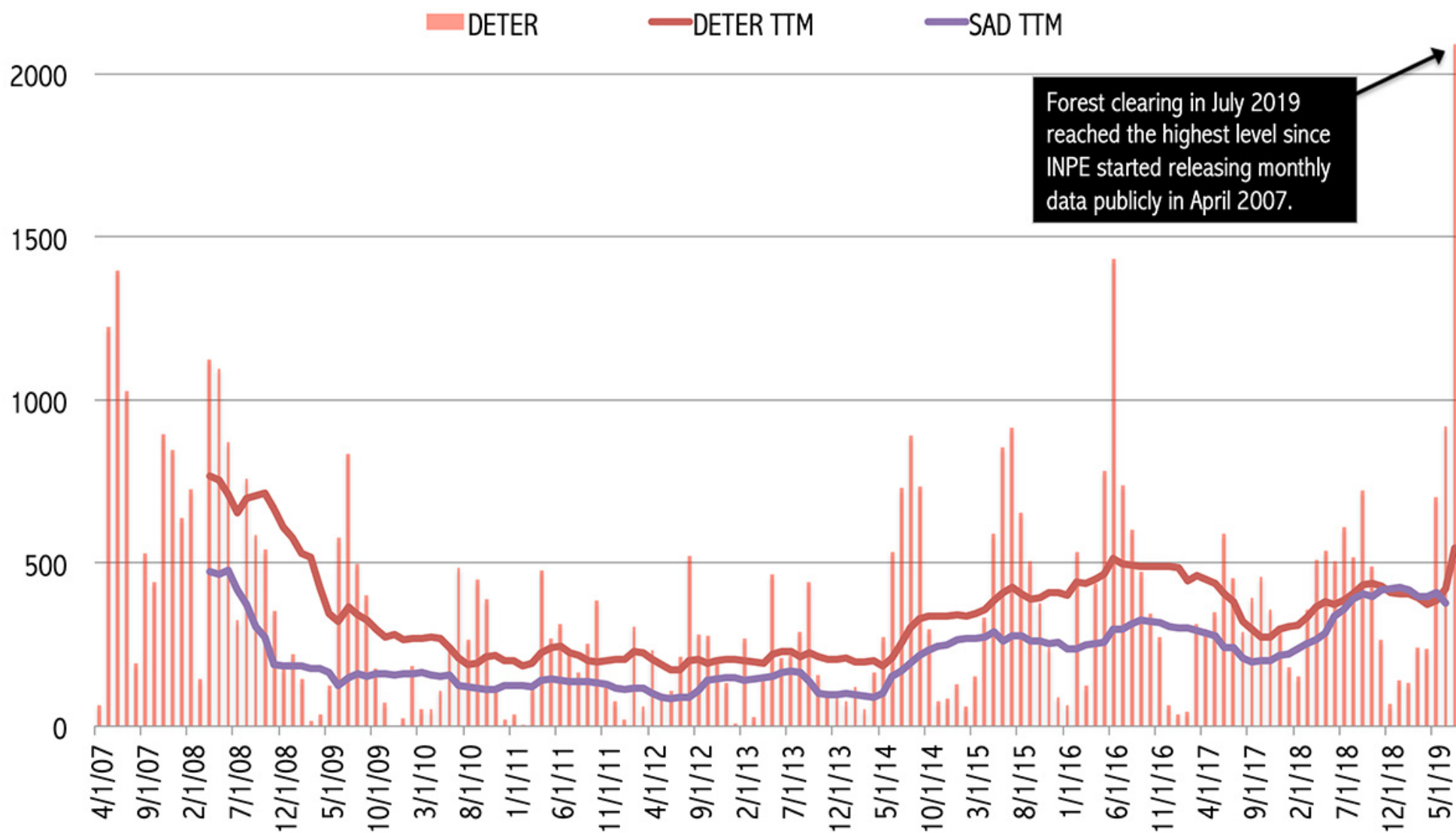
Deforestation in the Brazilian Amazon, 1988-present (sq km)



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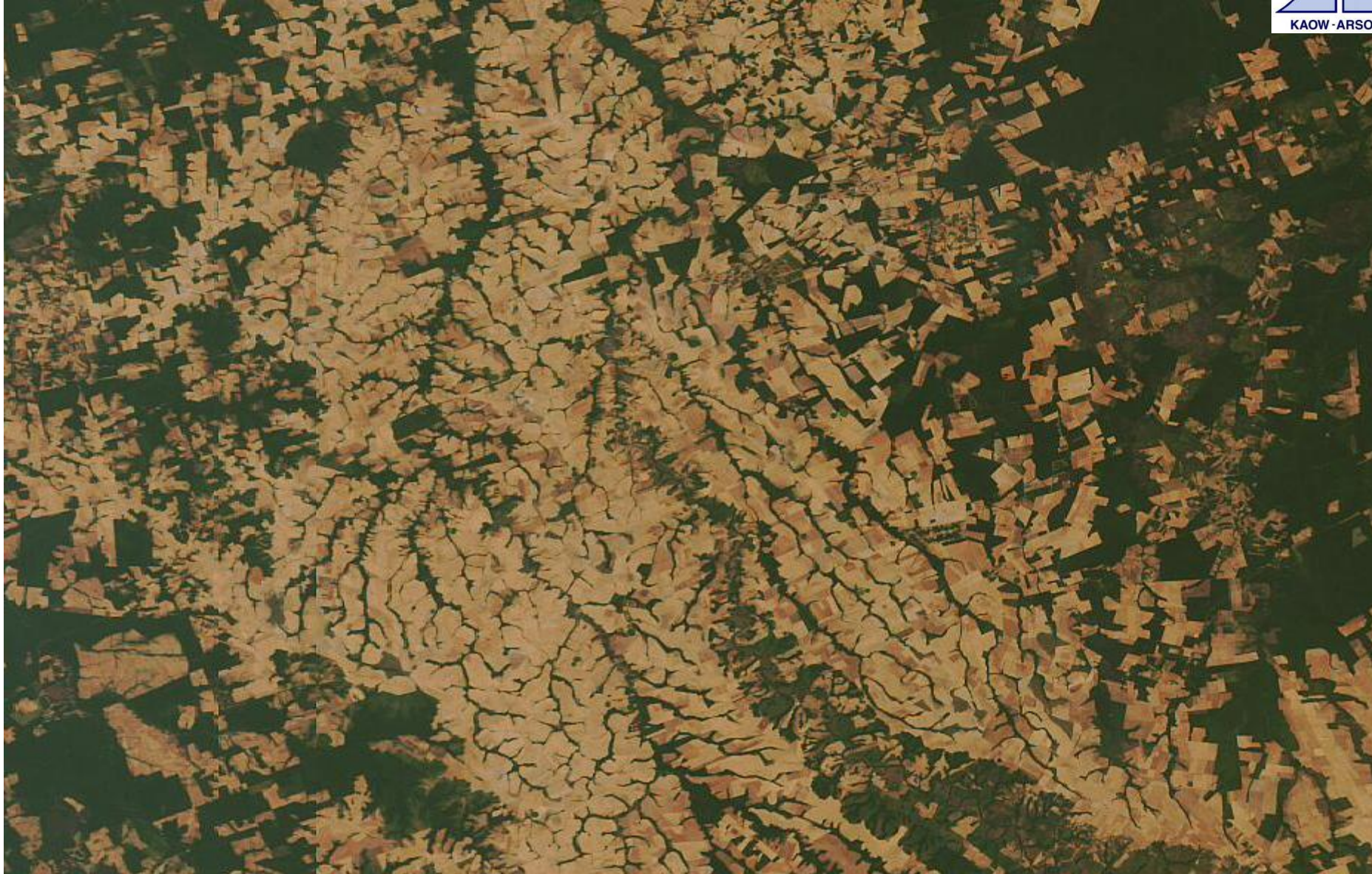


Monthly deforestation in the Brazilian Amazon, Apr 2007-Jul 2019



DETER is INPE's deforestation alert system, SAD is Imazon's system, which is included as a comparative source of data.





**Soya bean agriculture –biofuels-feedstock-tropical
deforestation-Matto Grosso. Meris August 22.08**



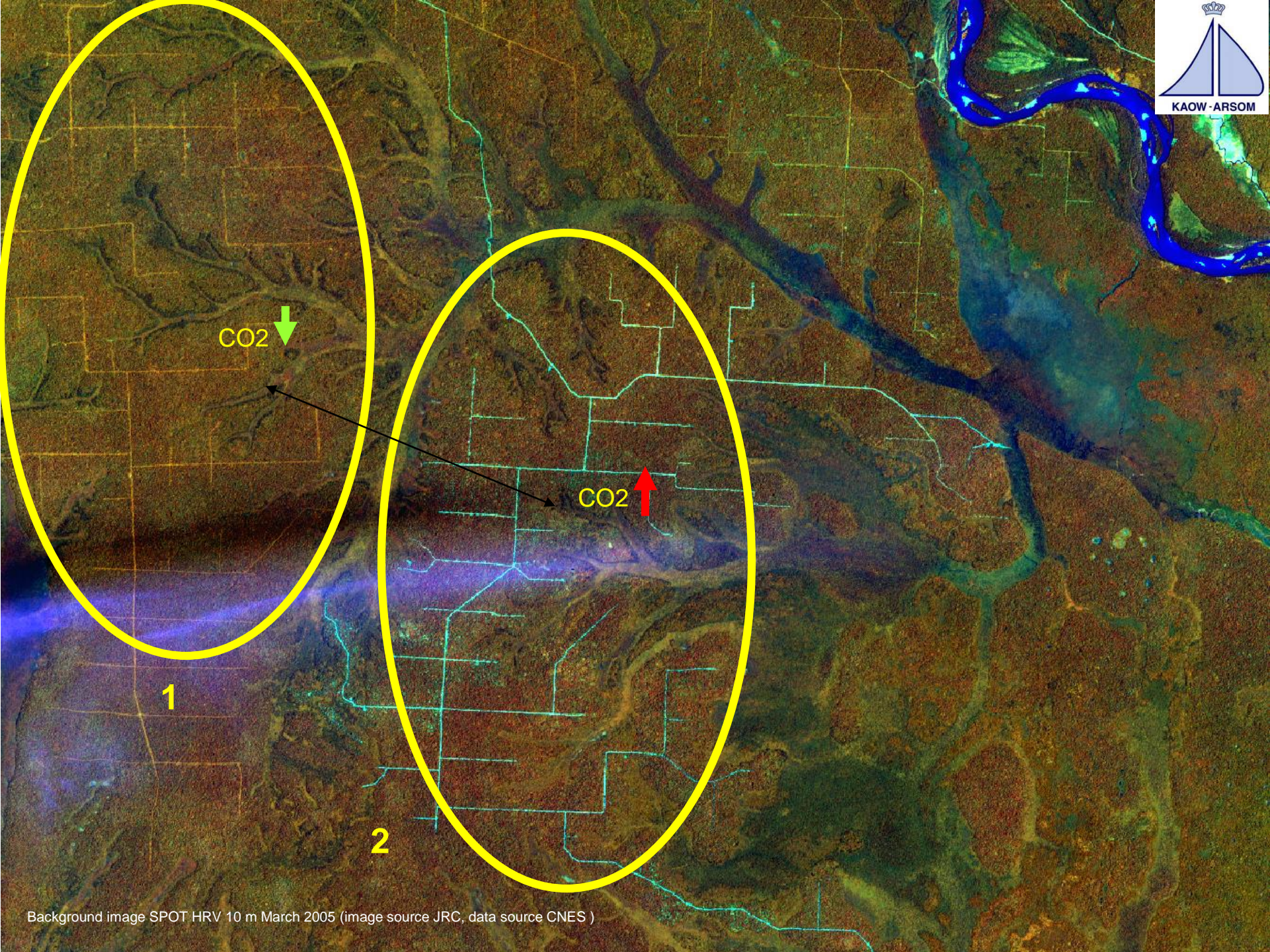
August 2008 Brazil, Mato Grosso: global change in the making

Since the early 80ies:

+1 M Ha in Indonesia Kalimantan

+ 3 M Ha in Malaysia Sabah

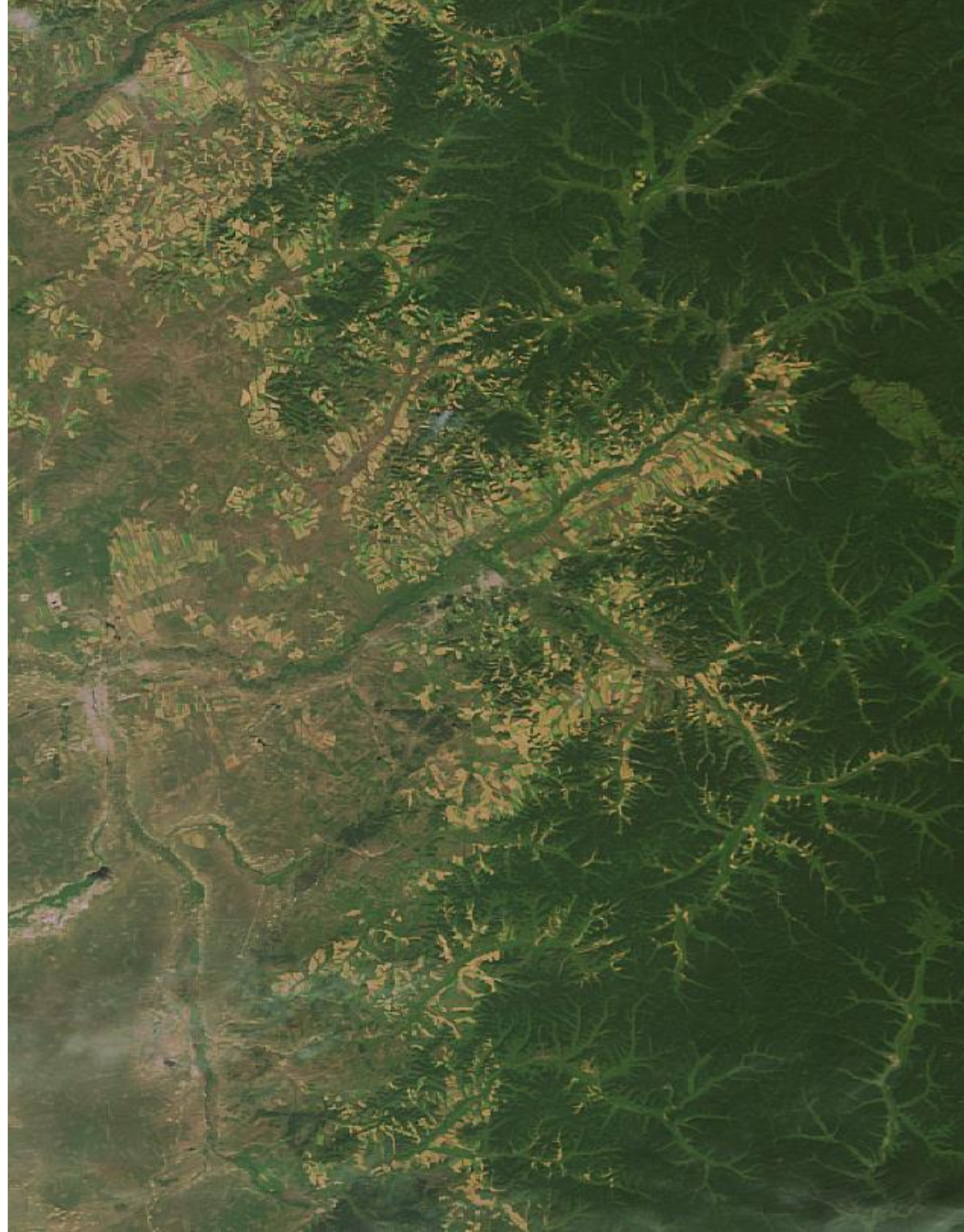






Background image SPOT HRV 10 m March 2005 (image source JRC, data source CNES)

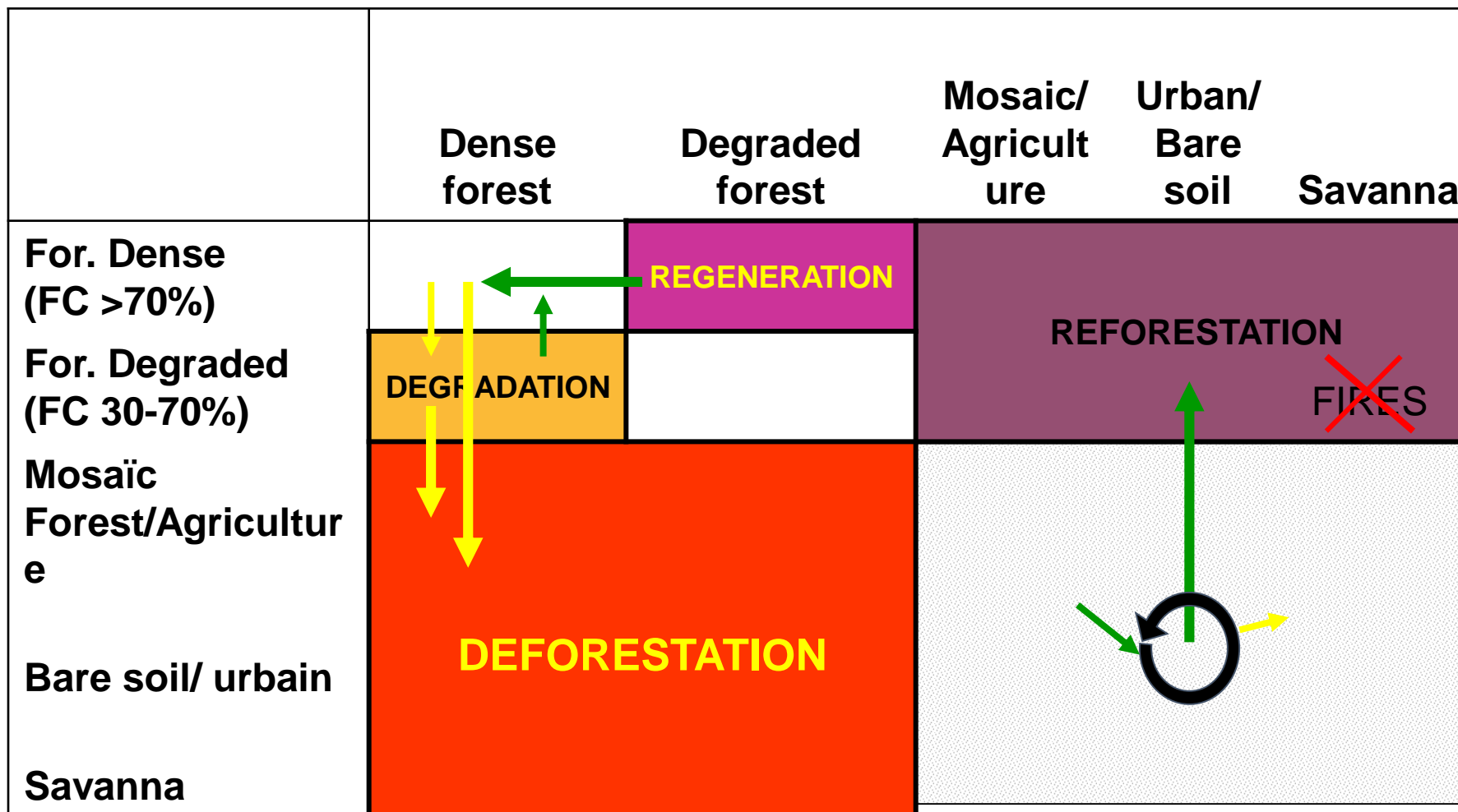
**Creeping
or
organized
deforesta
tion?**

**Northeast
China
(Aug.
2008)**



 C source
 C sink

IN GLOBAL FOREST COVER - PATHWAYS







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