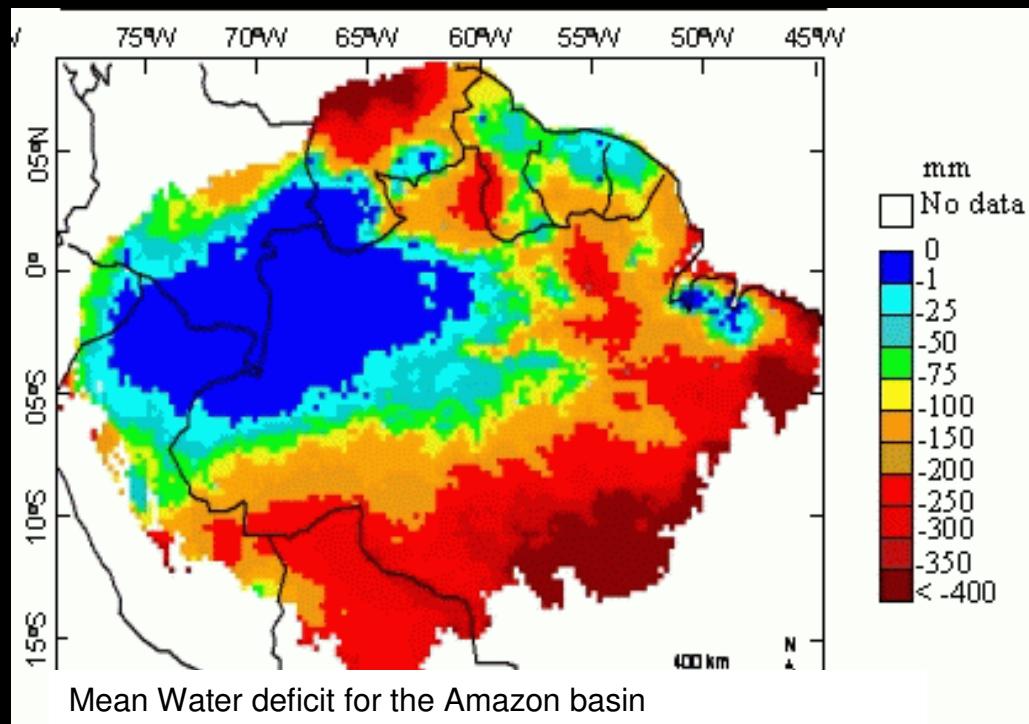
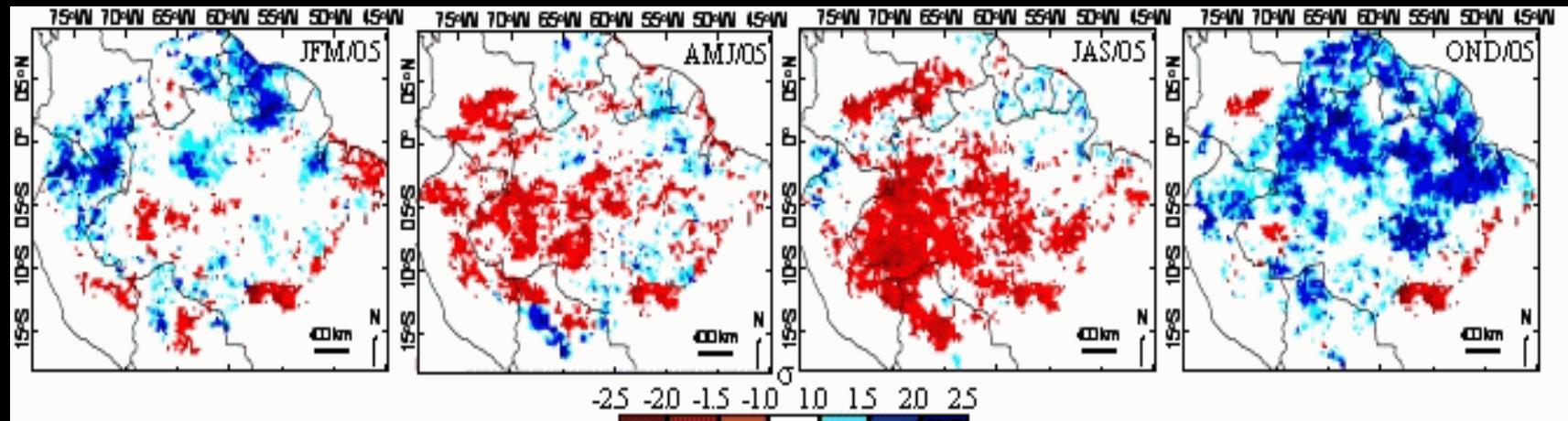


Spatial patterns of the canopy stress during 2005 drought in Amazonia

Liana Anderson*, Yadvinder Malhi, Luiz Aragão,
Diego Navarrete, Nicolas Barbier, Maria C. Puñuela & Sassan Saatchi

*Oxford University Centre for the Environment

OVERVIEW

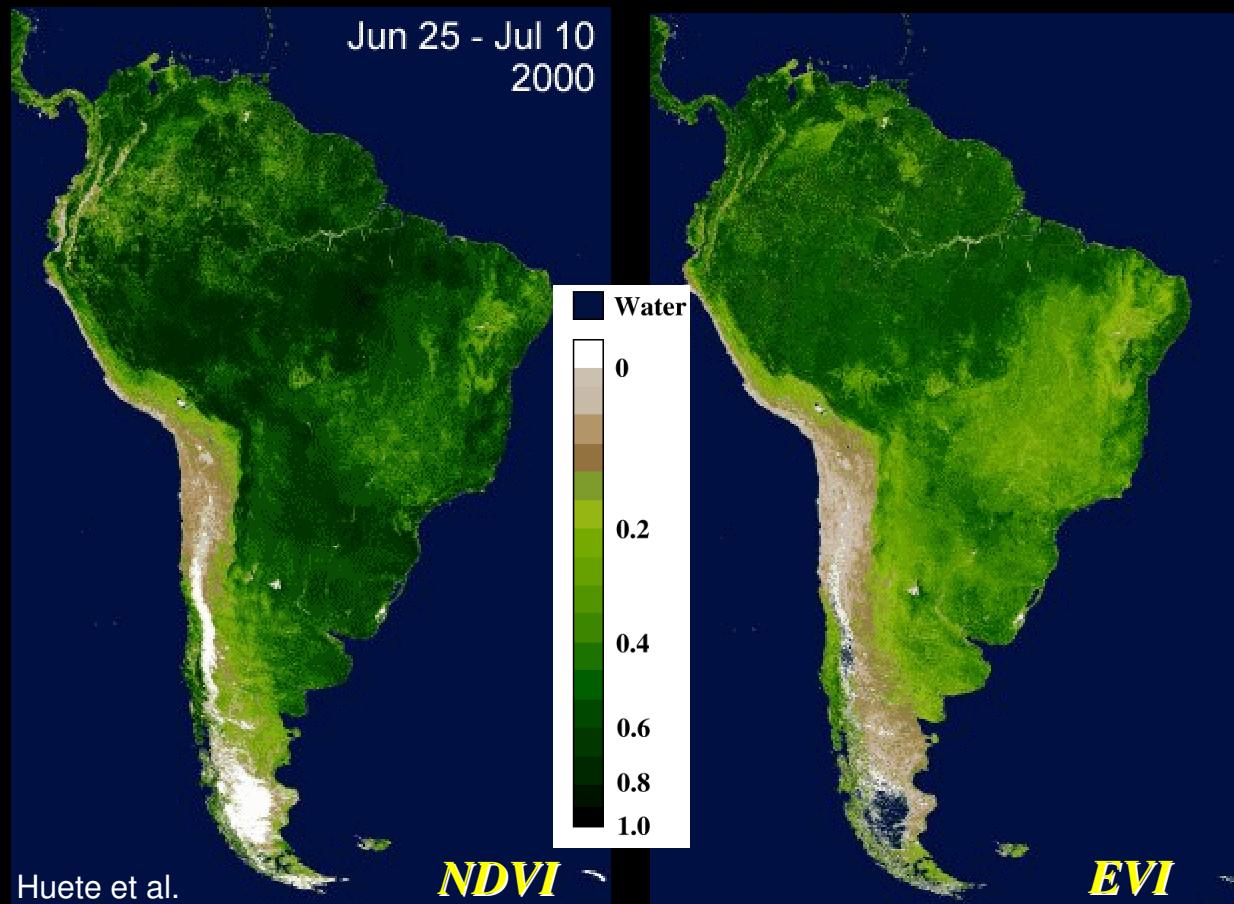


This event brings an opportunity to better understand vegetation response to a drought occurrence in a temporal and spatial scale for a better knowledge of ecosystem functioning in a possible scenario for the future of the region, pointing out more susceptible areas.

Material & Methods

lander@ouce.ox.ac.uk

MOD13A2
2000-2006



$$NDVI =$$

$$(NIR - RED) / (NIR + RED)$$

$$EVI =$$

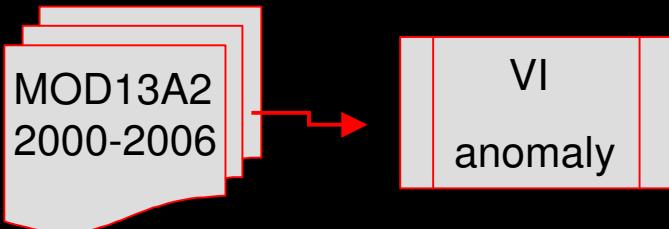
$$G (NIR - R) / (L + NIR + C1red + C2blue)$$

$$NDWI =$$

$$(NIR - SWIR) / (NIR + SWIR)$$

Material & Methods

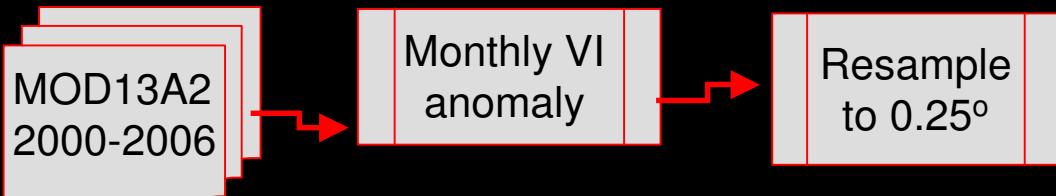
lander@ouce.ox.ac.uk



$$\text{VI}_{\text{anomaly}}(i,j) = \frac{\text{VI}_{2005}(i,j) - \text{VI}_{(2000:2006)}(i,j)}{\sigma_{(2000:2006)}(i,j)}$$

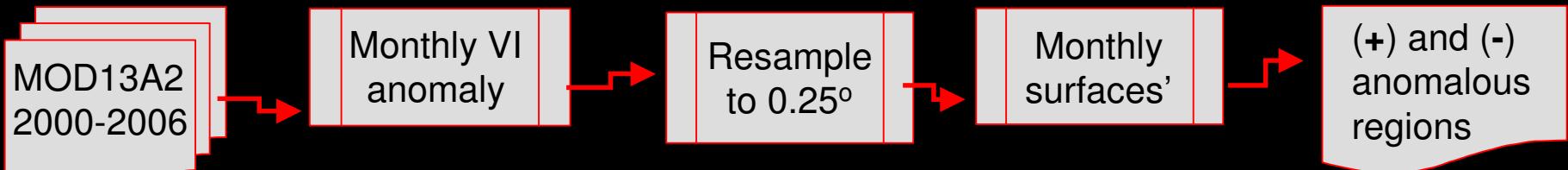
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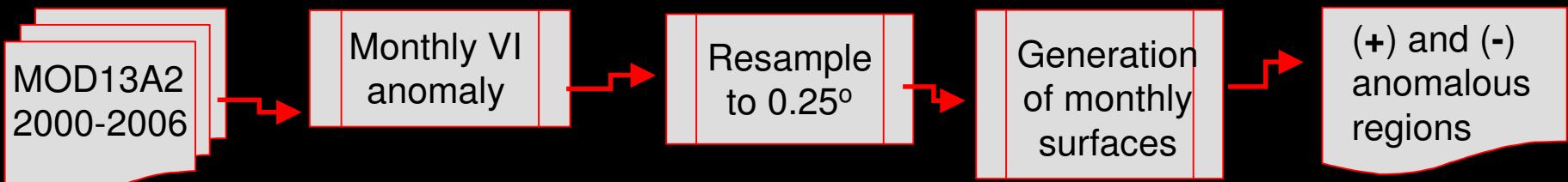
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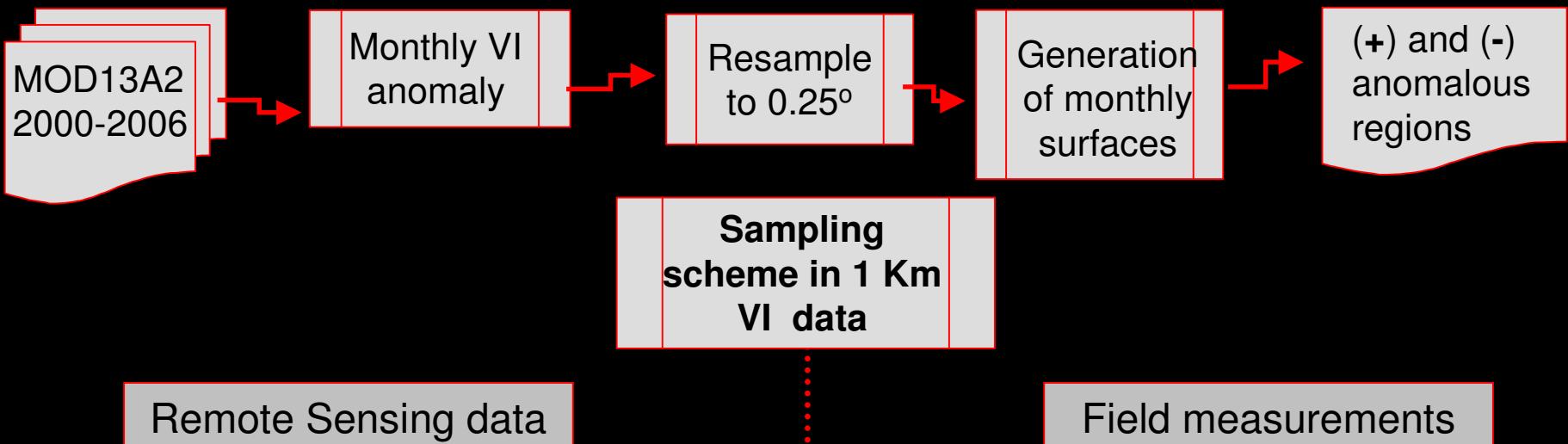


**Sampling
scheme in 1 Km
VI data**



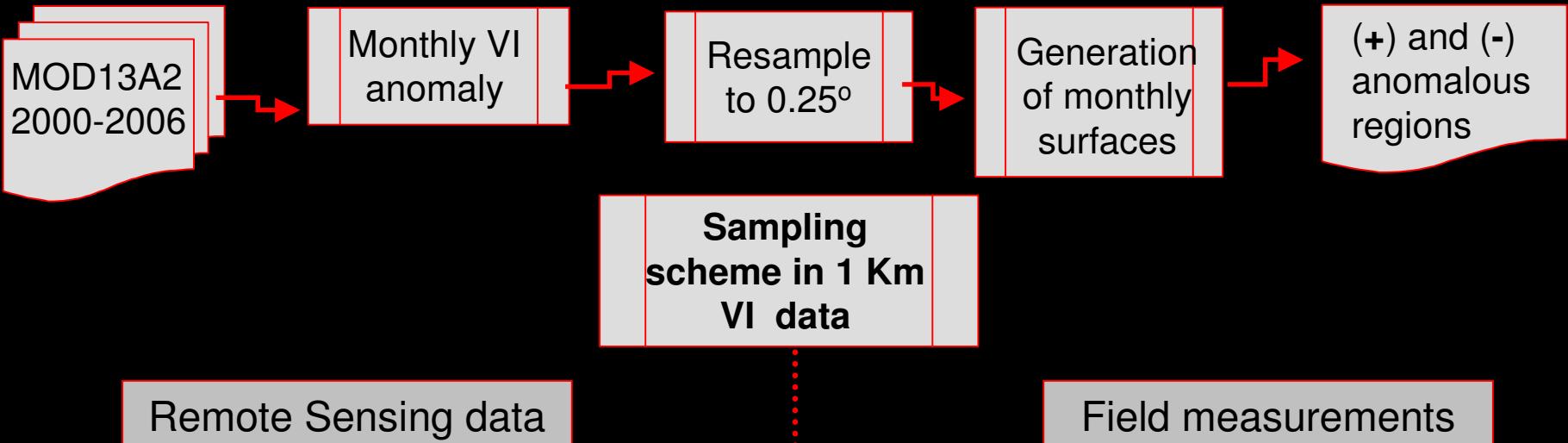
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1- Are the VIs anomalous regions related to Rainfall and Radiation?

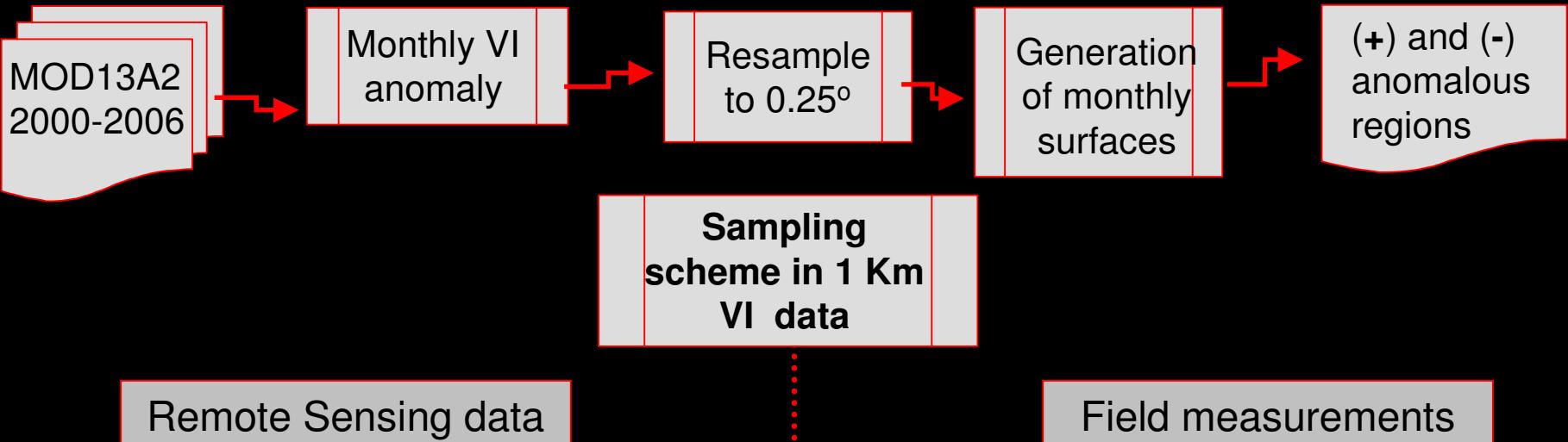
NDWI
NDVI
EVI

X

Rainfall
(TRMM)
Radiation
(CPTEC)

Material & Methods

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1- Are the VIs anomalous regions related to Rainfall and Radiation?

NDWI
NDVI
EVI

X

Rainfall
(TRMM)
Radiation
(CPTEC)

1- Are the VIs reflecting the changes observed in the field?

NDWI
NDVI
EVI

X

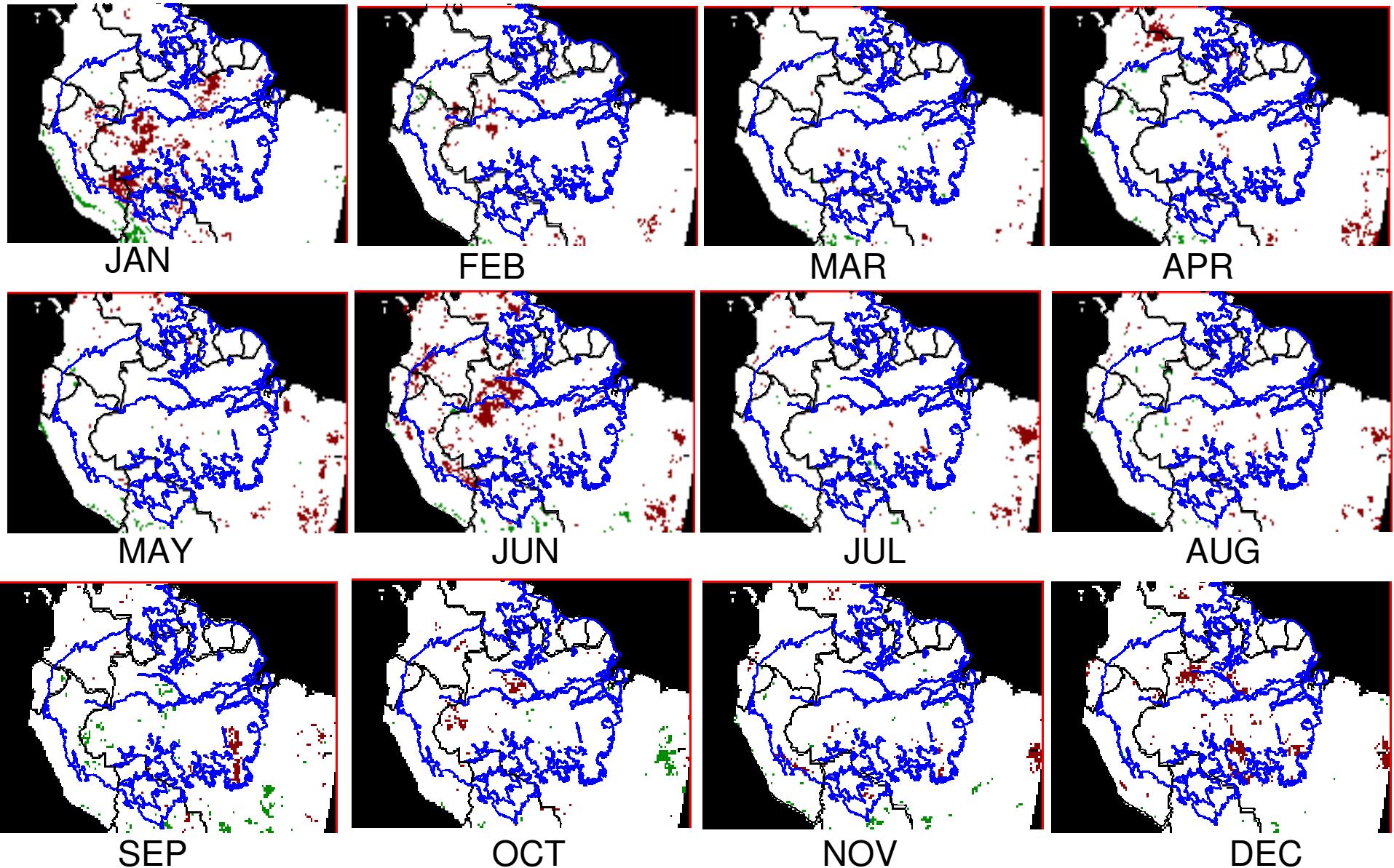
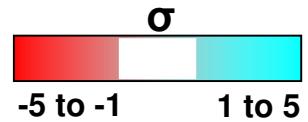
Litterfall
(Zaphire site,
Colombia)

LAI
(under
processing)

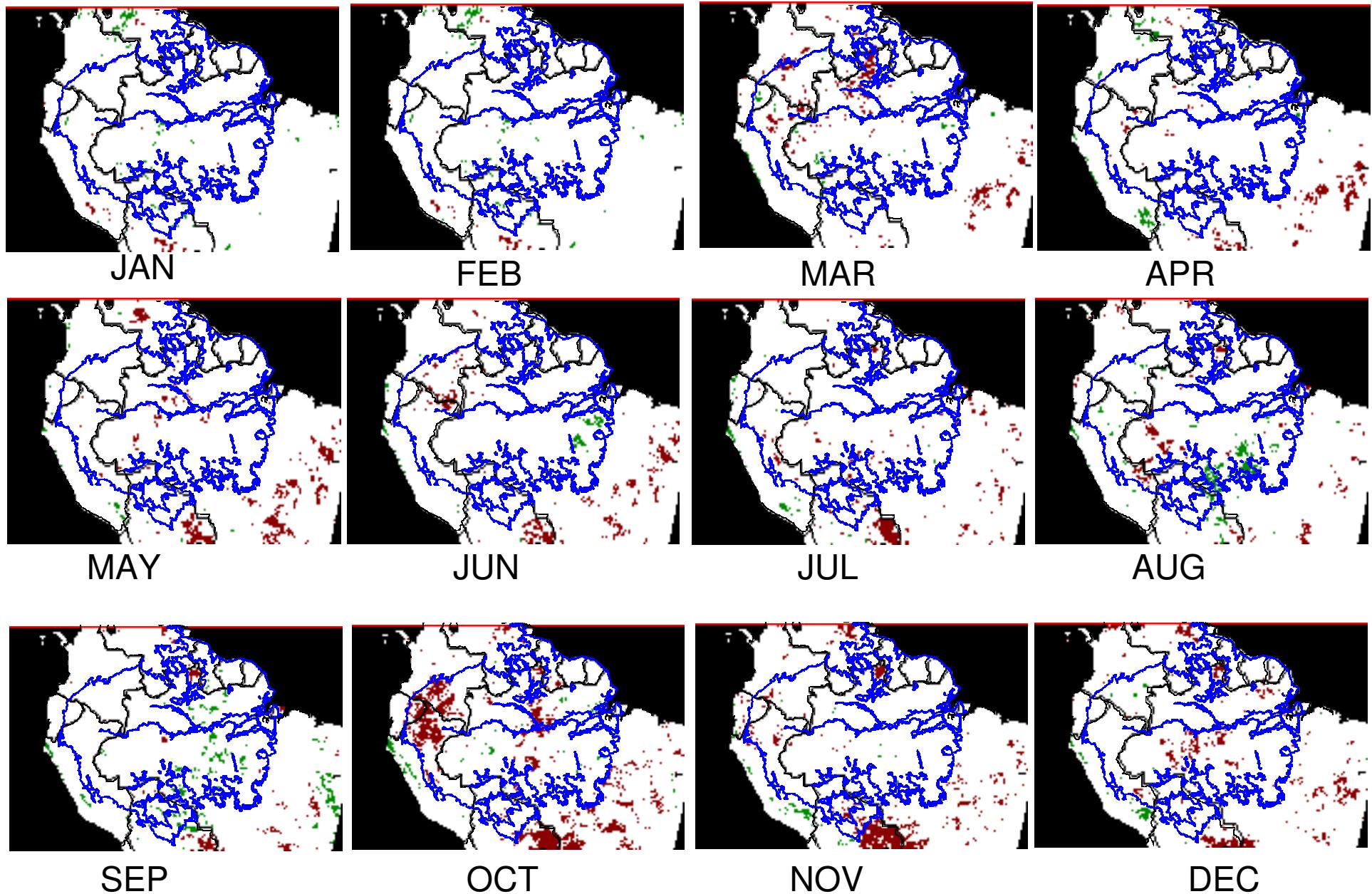
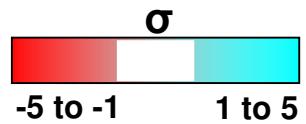


1 ha plot with 25 litter collectors' ; 1 x 0.5 m each

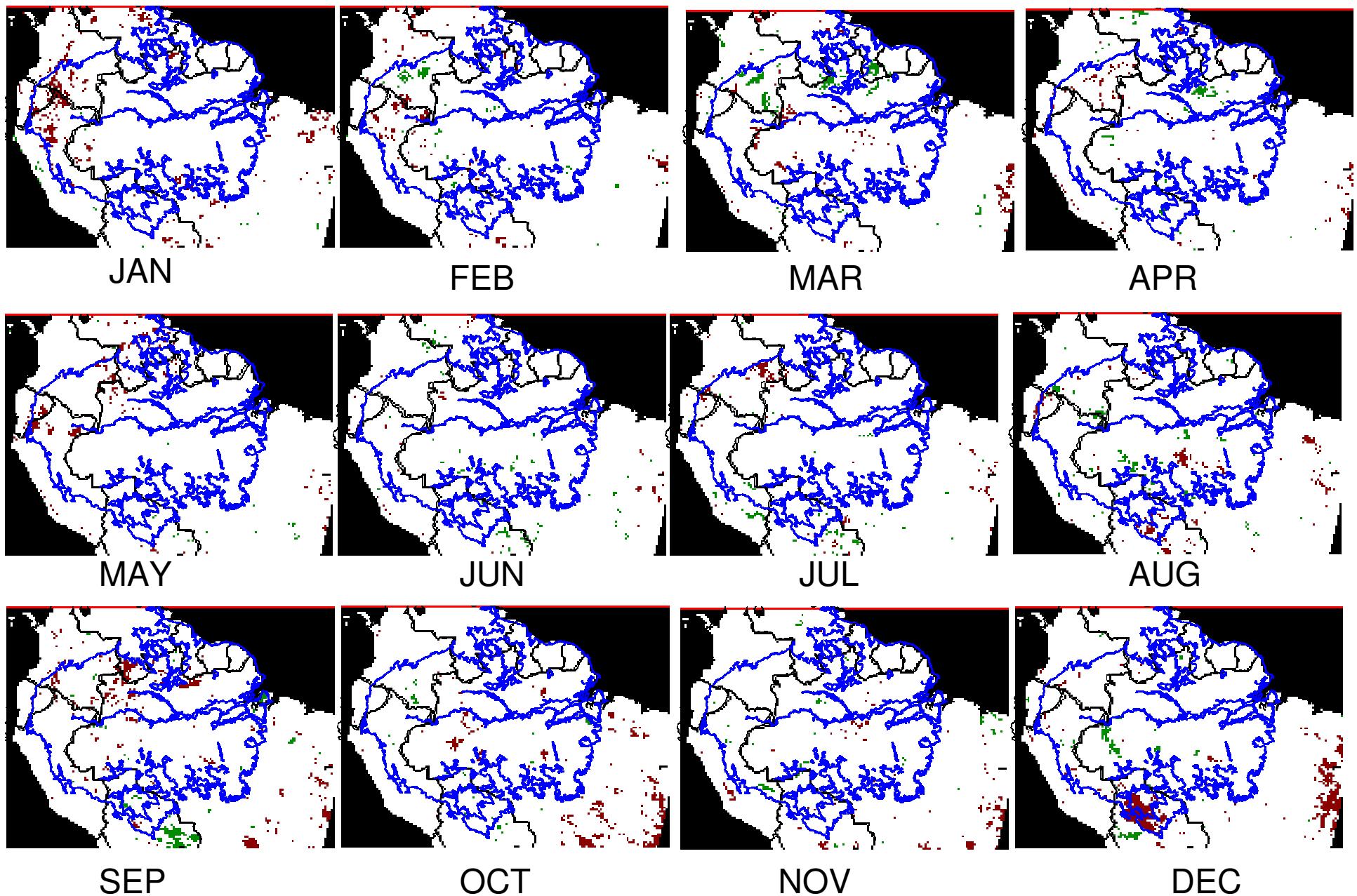
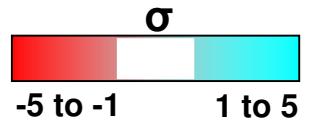
Results: NDWI ANOMALY 2001 0.25°



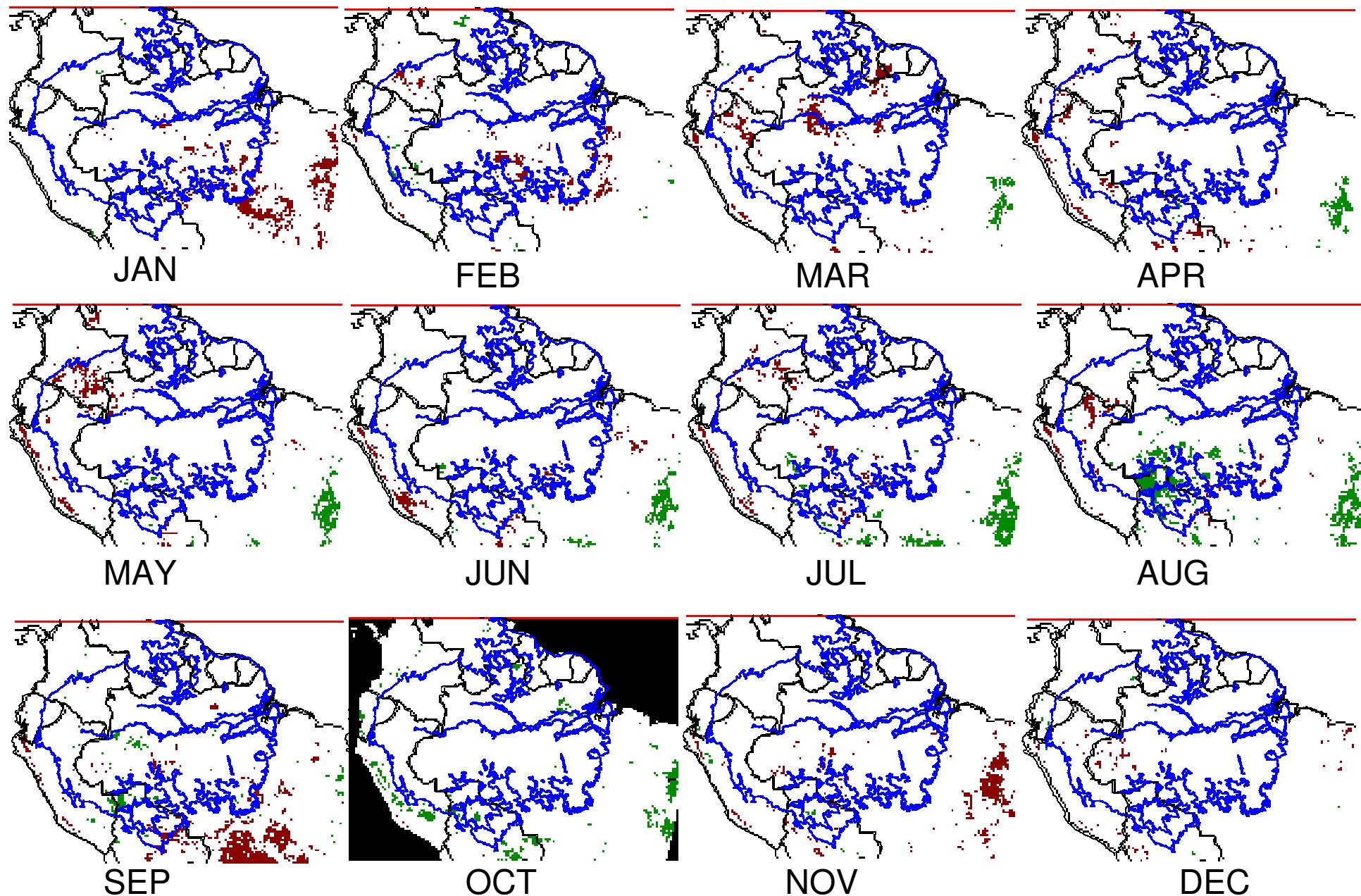
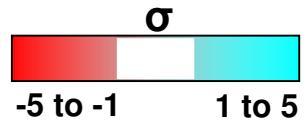
Results: NDWI ANOMALY 2002 0.25°



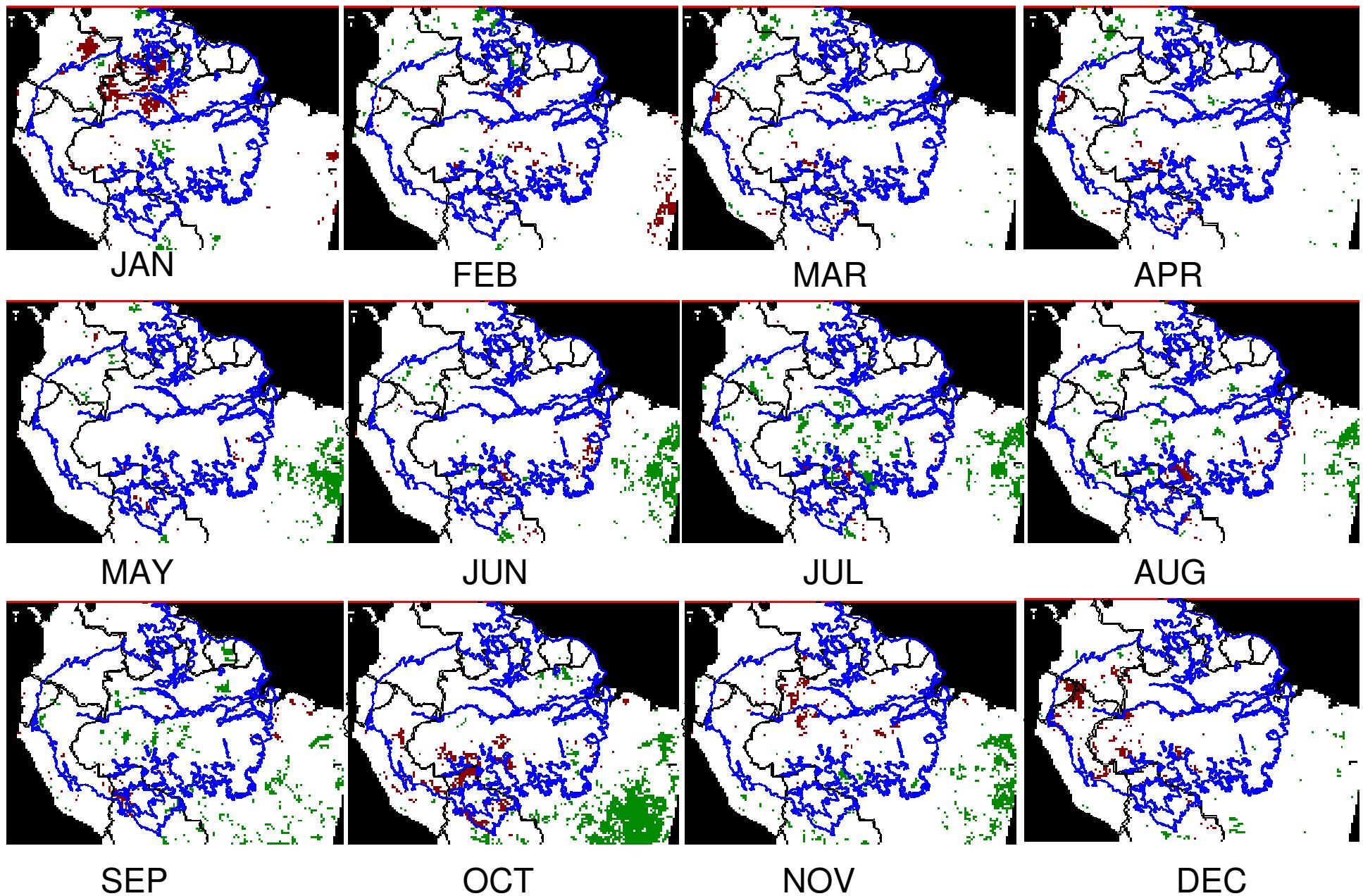
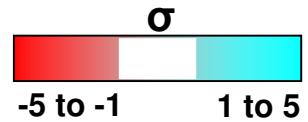
Results: NDWI ANOMALY 2003 0.25°



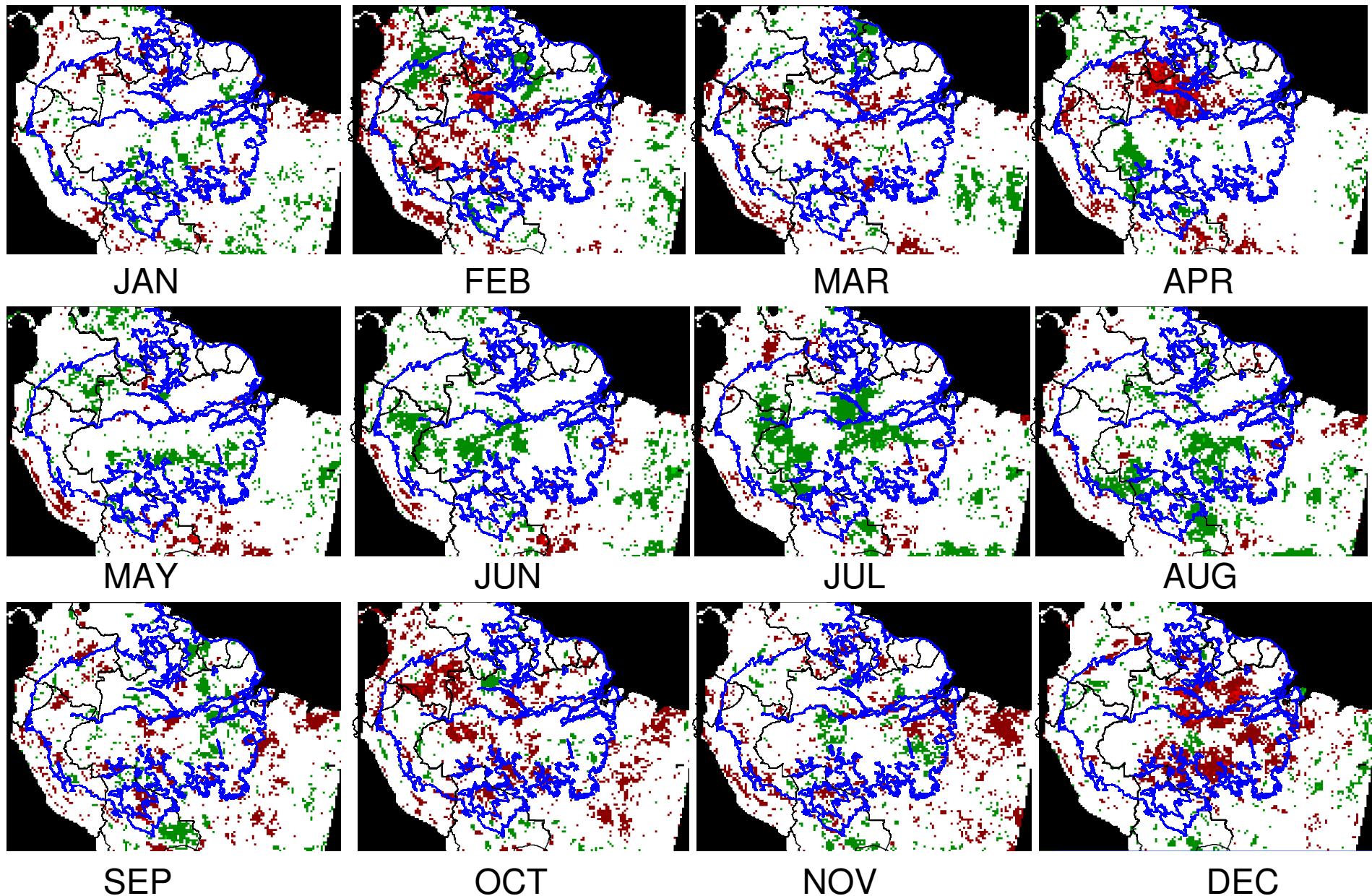
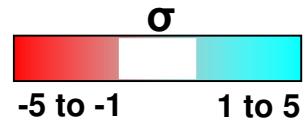
Results: NDWI ANOMALY 2004 0.25°



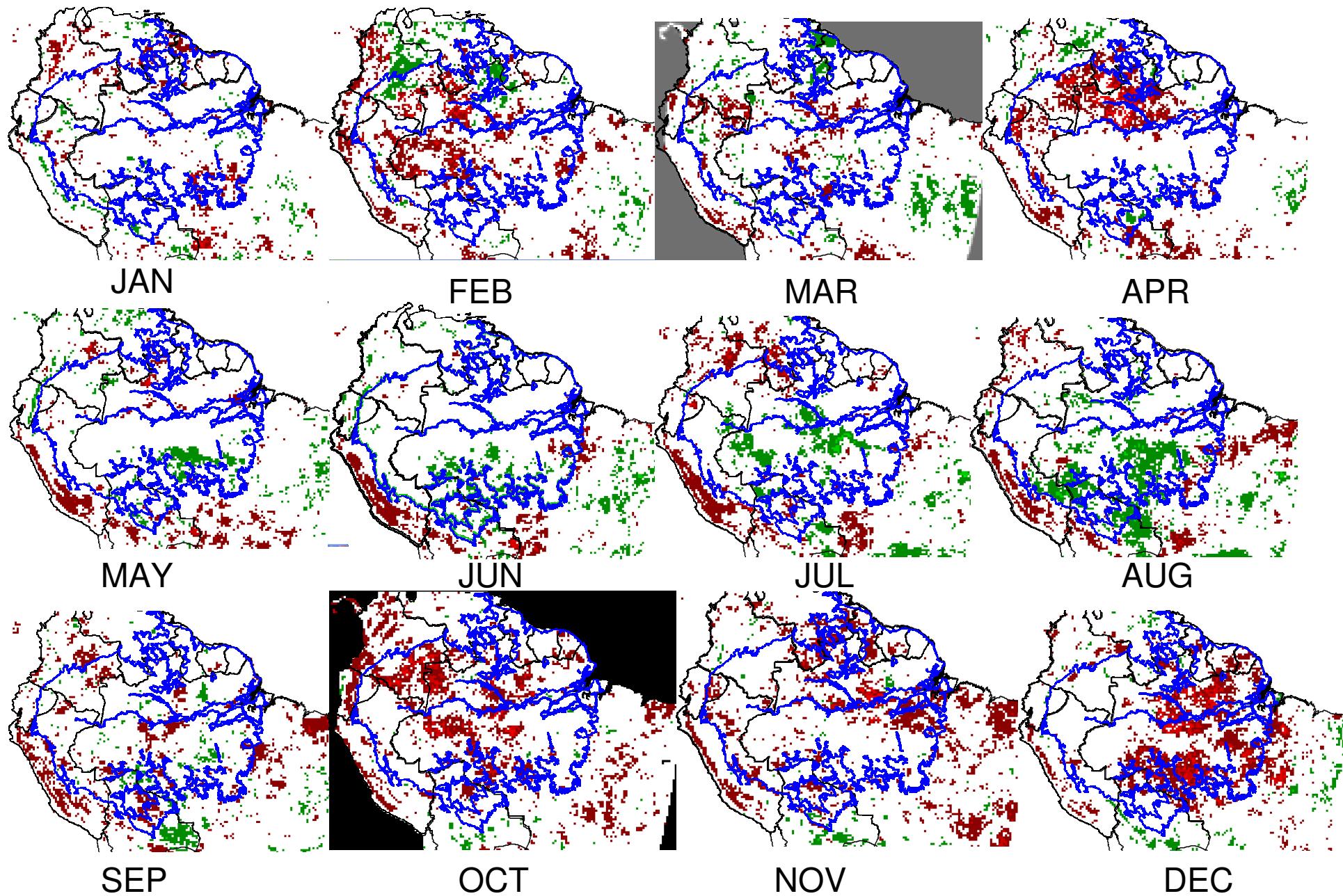
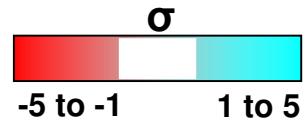
Results: NDWI ANOMALY 2006 0.25°



Results: NDWI ANOMALY 2005 0.25°

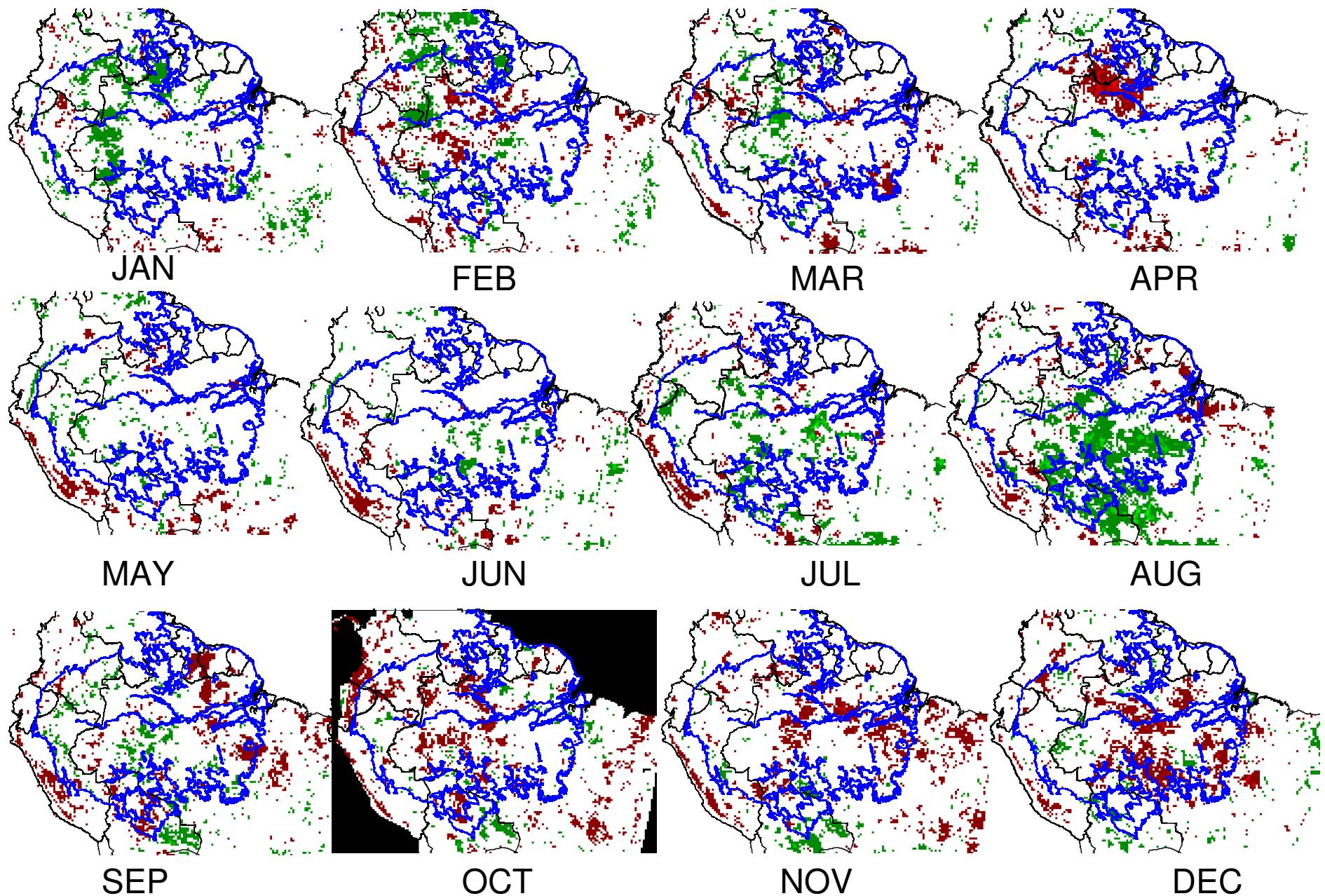
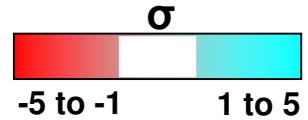


Results: NDVI ANOMALY 2005 0.25°

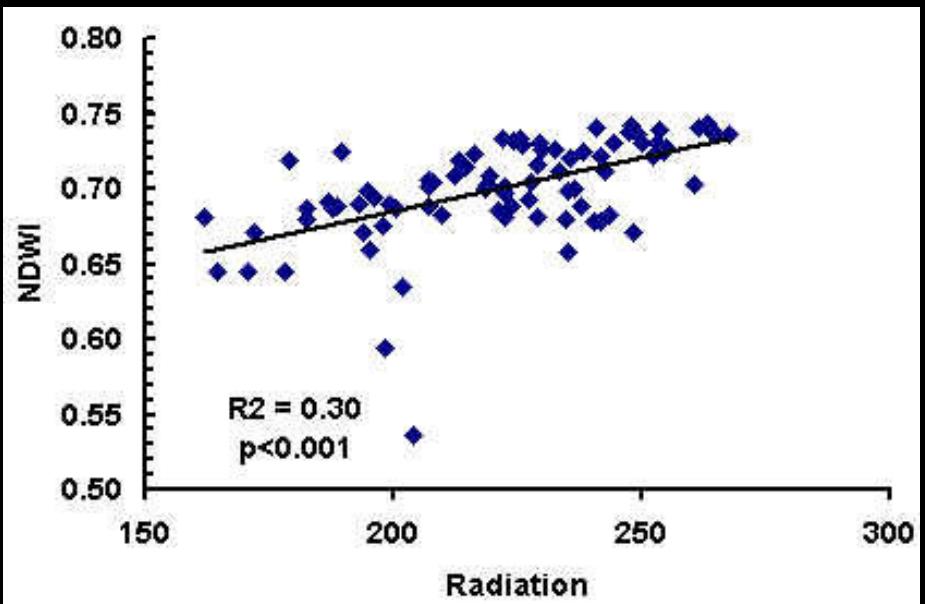
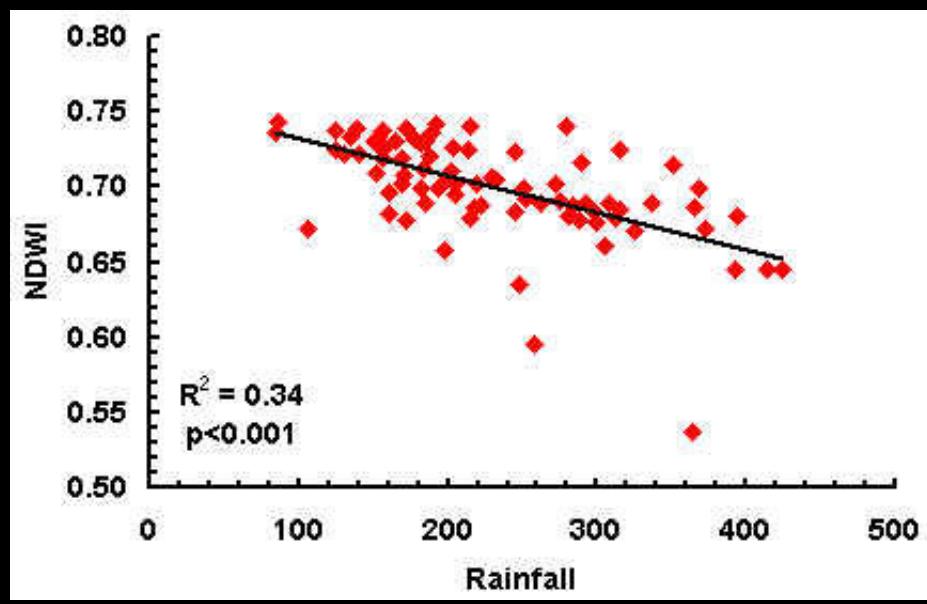
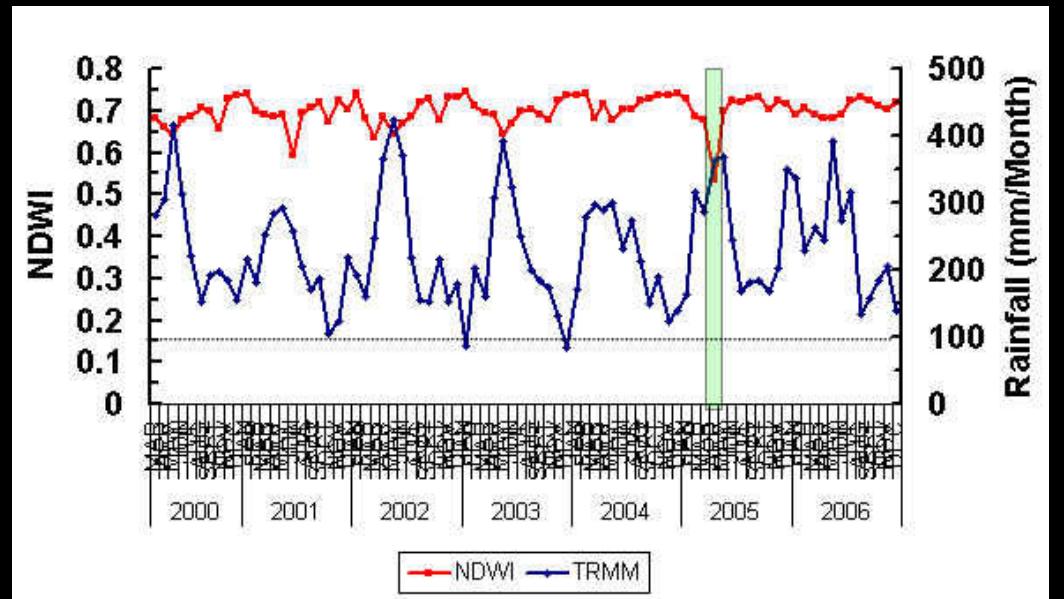
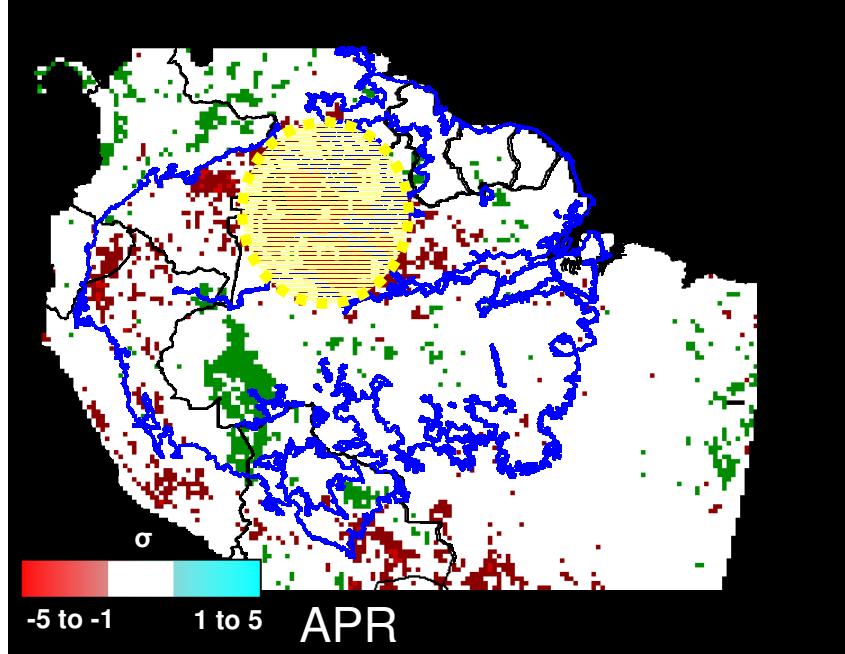


Results: EVI ANOMALY

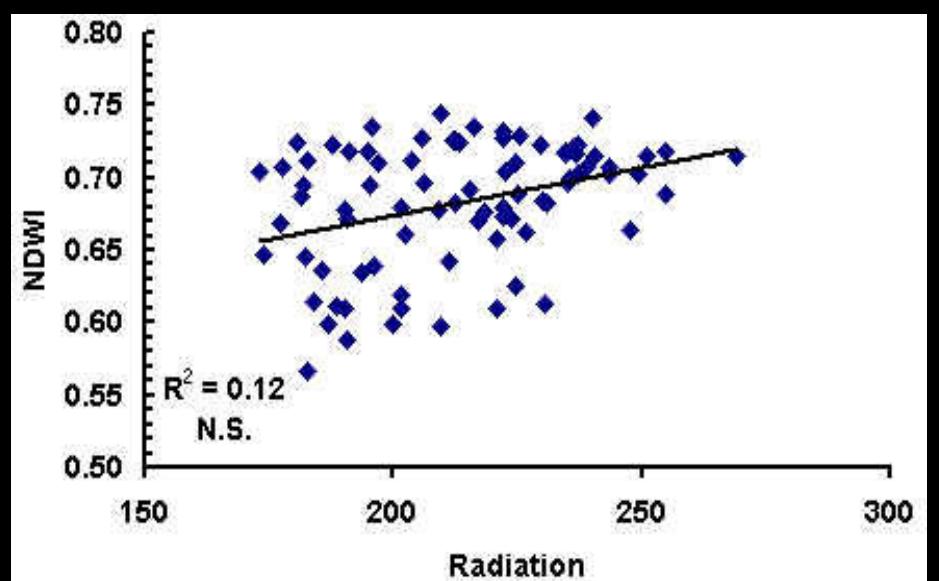
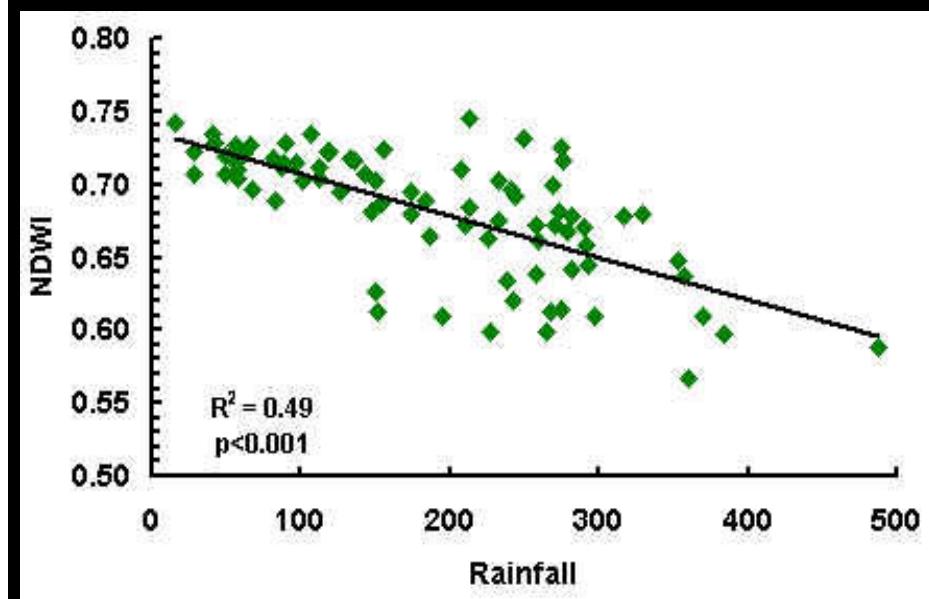
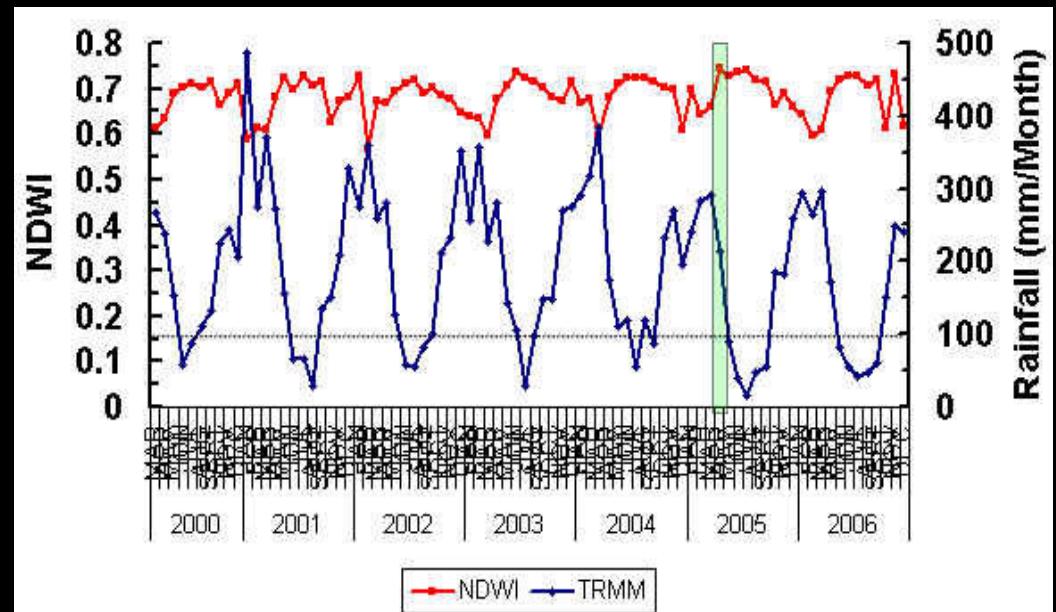
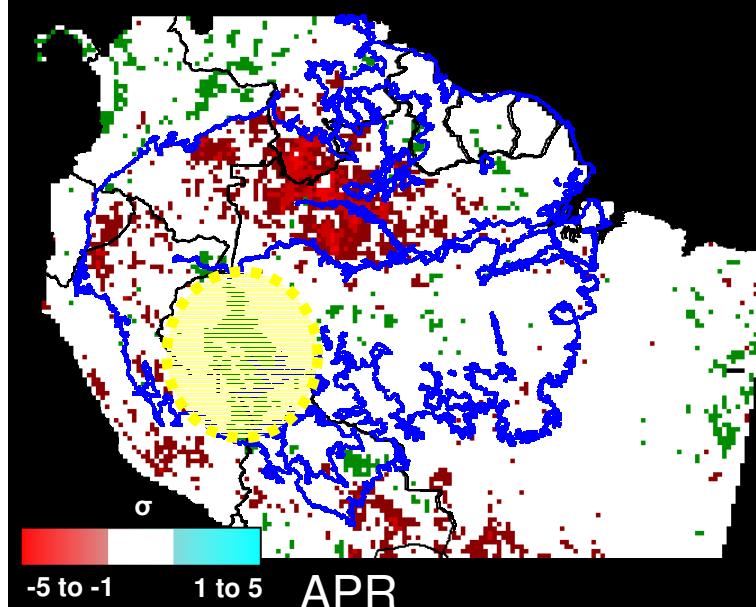
2005 0.25°



Results: Remote Sensing data: NDWI

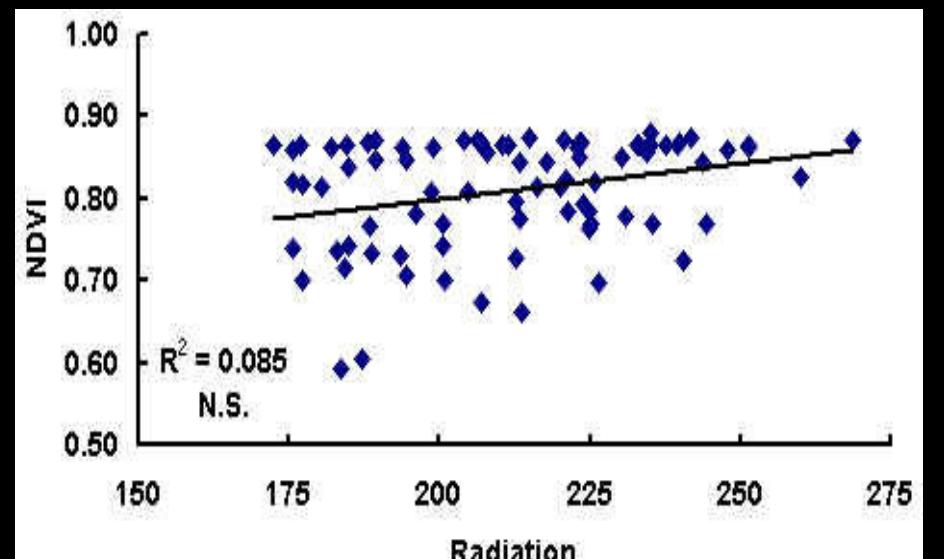
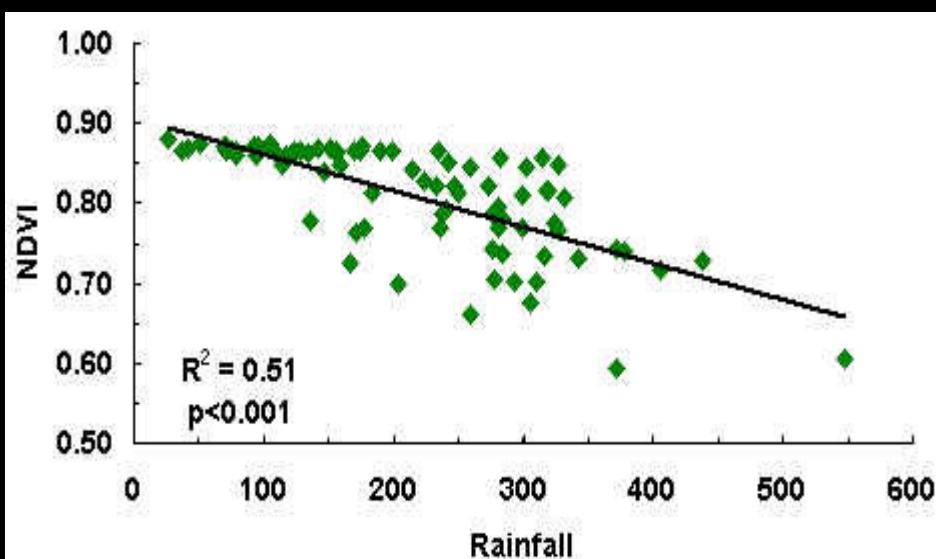
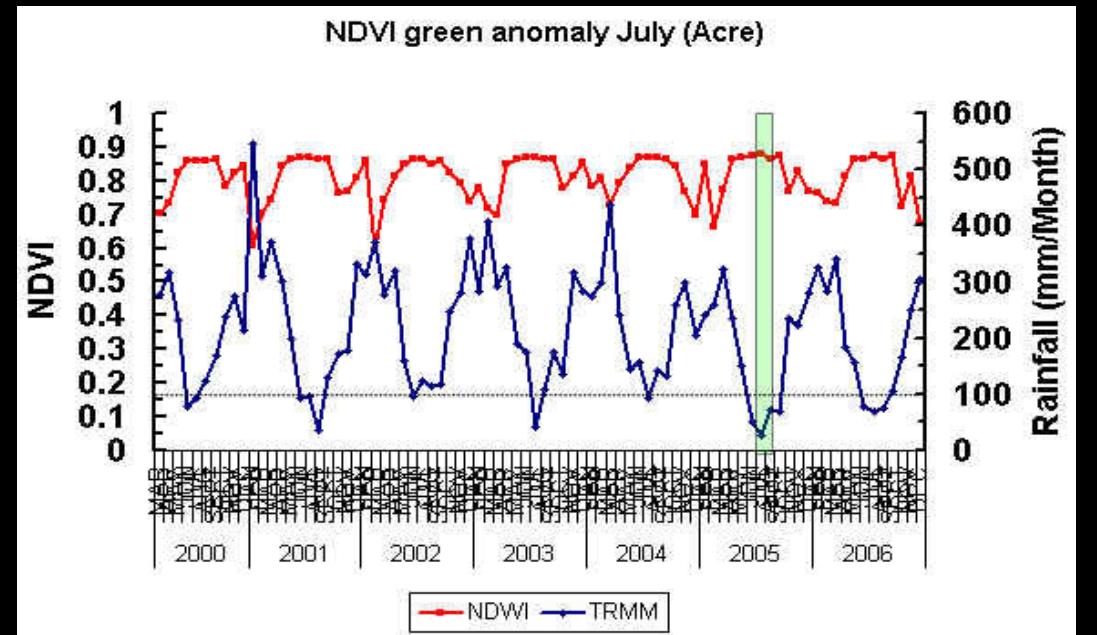
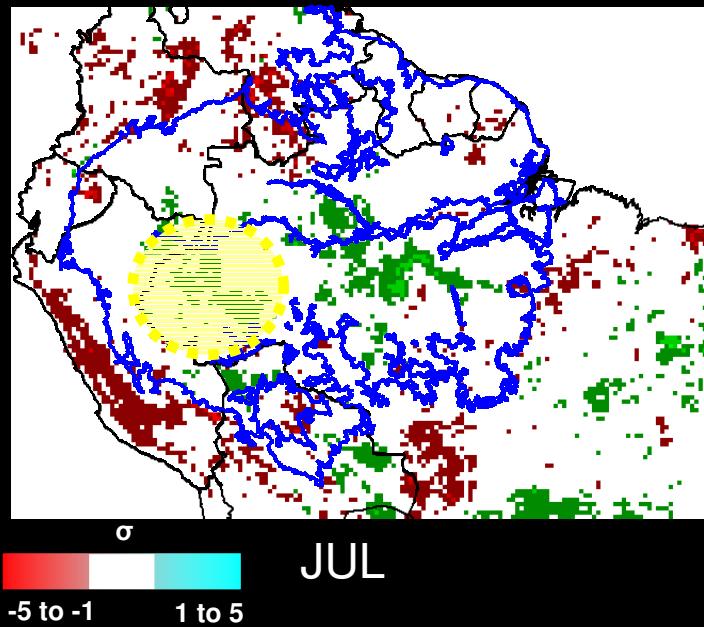


Results: Remote Sensing data: NDWI



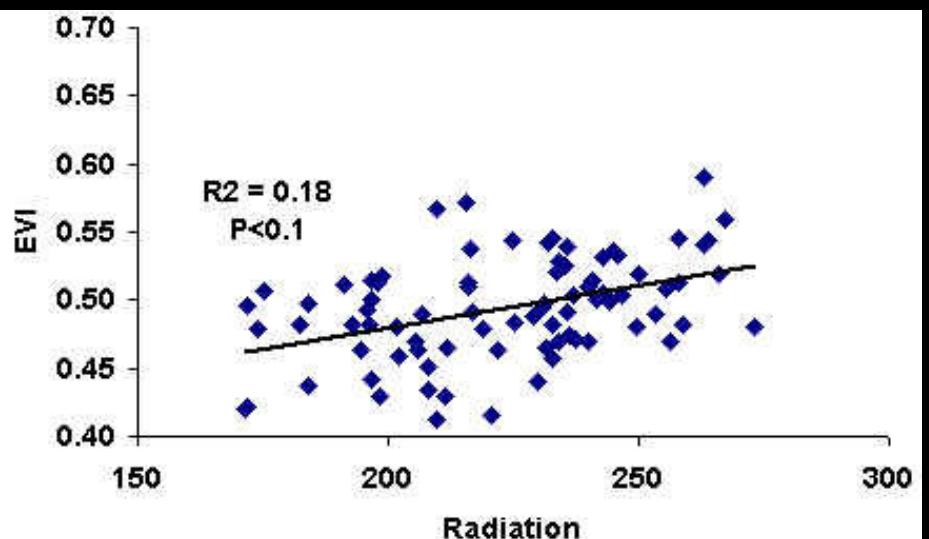
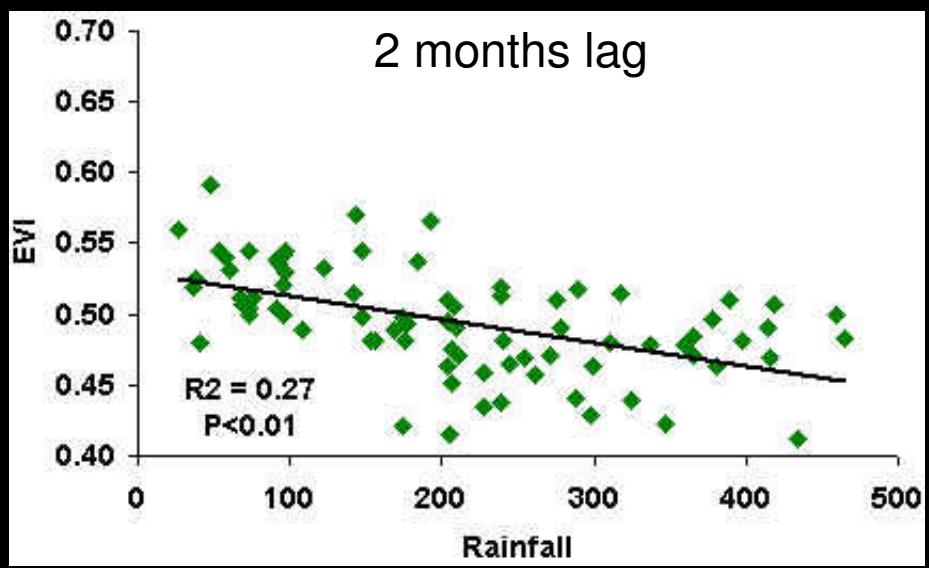
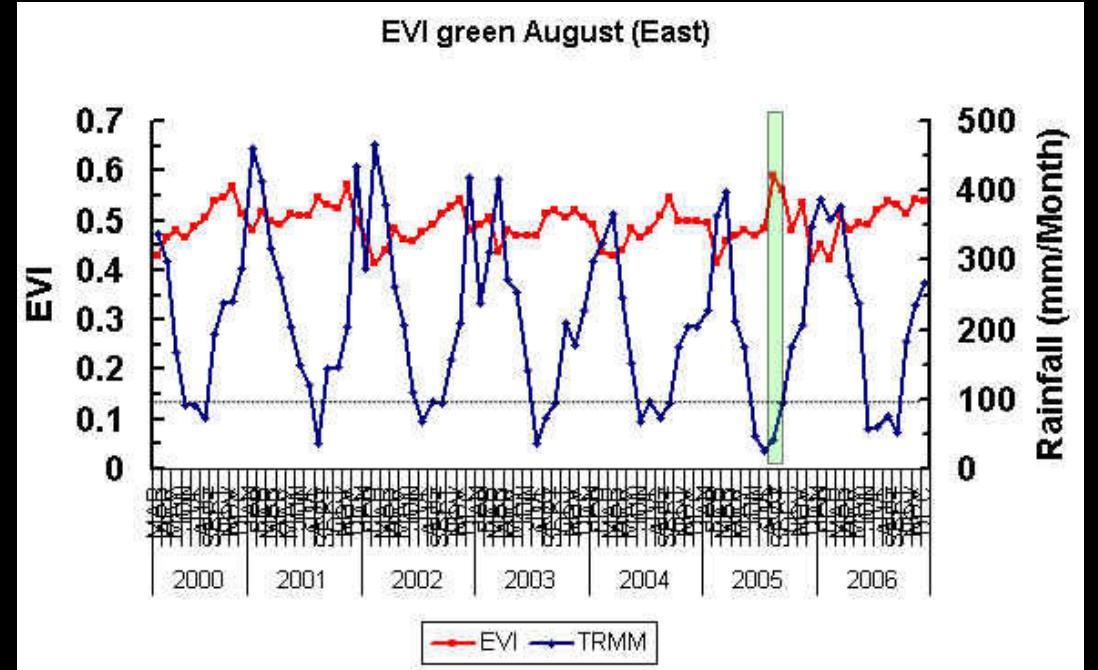
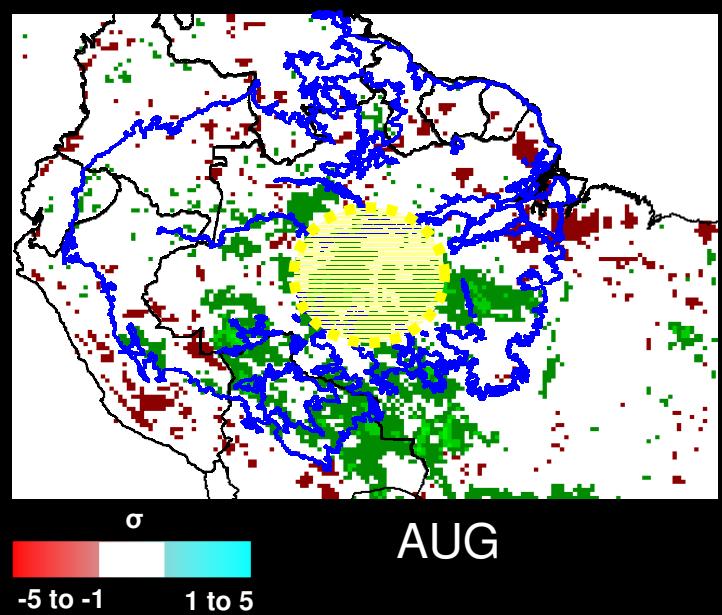
Results: Remote Sensing data: NDVI

lander@ouce.ox.ac.uk

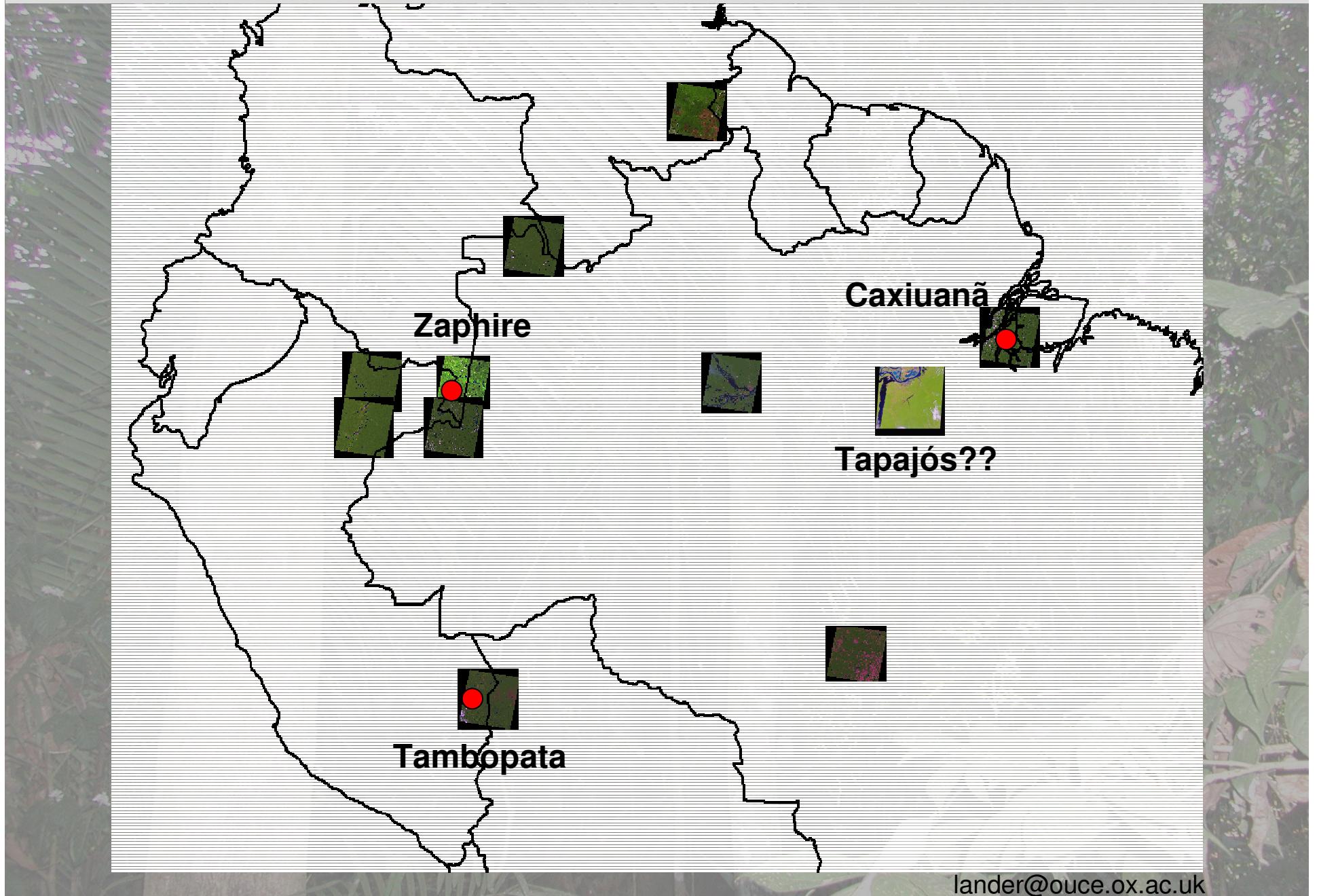


Results: Remote Sensing data: EVI

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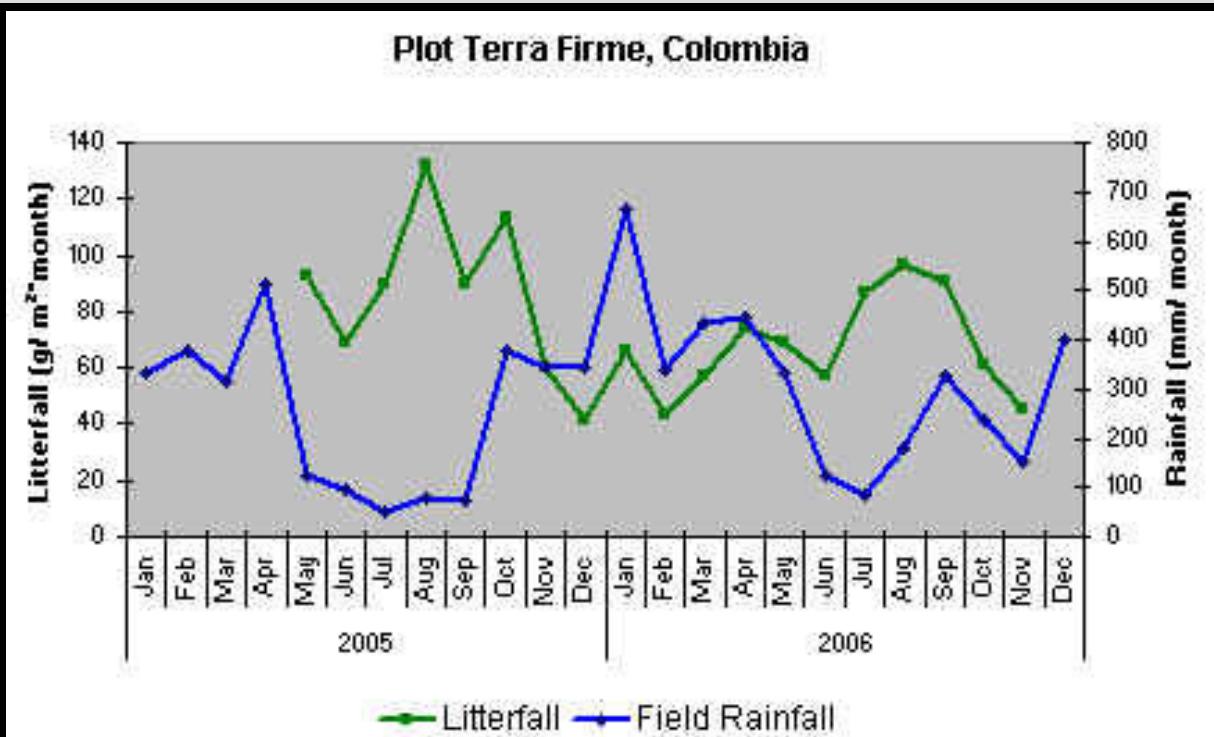


Results: Field data: Litterfall



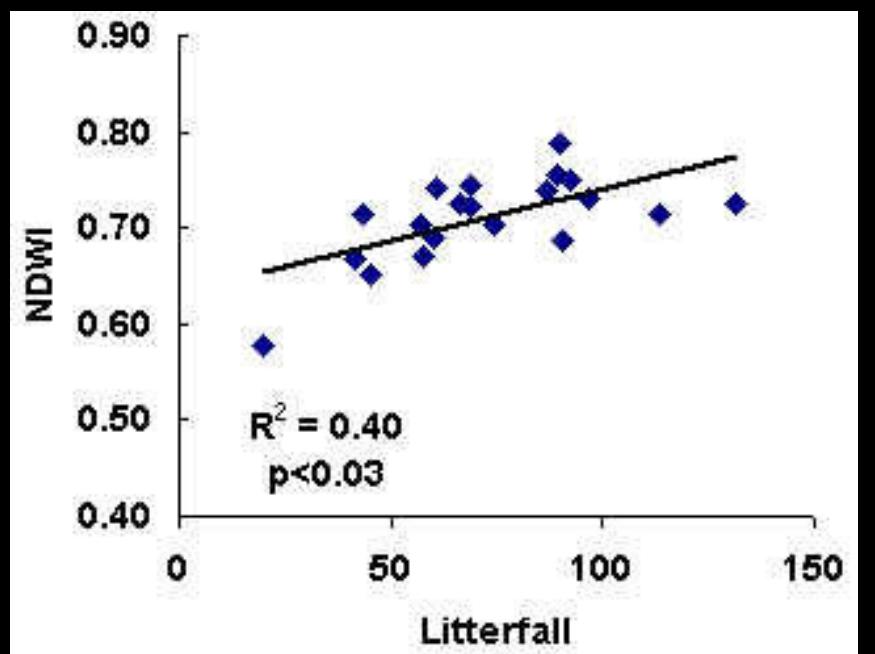
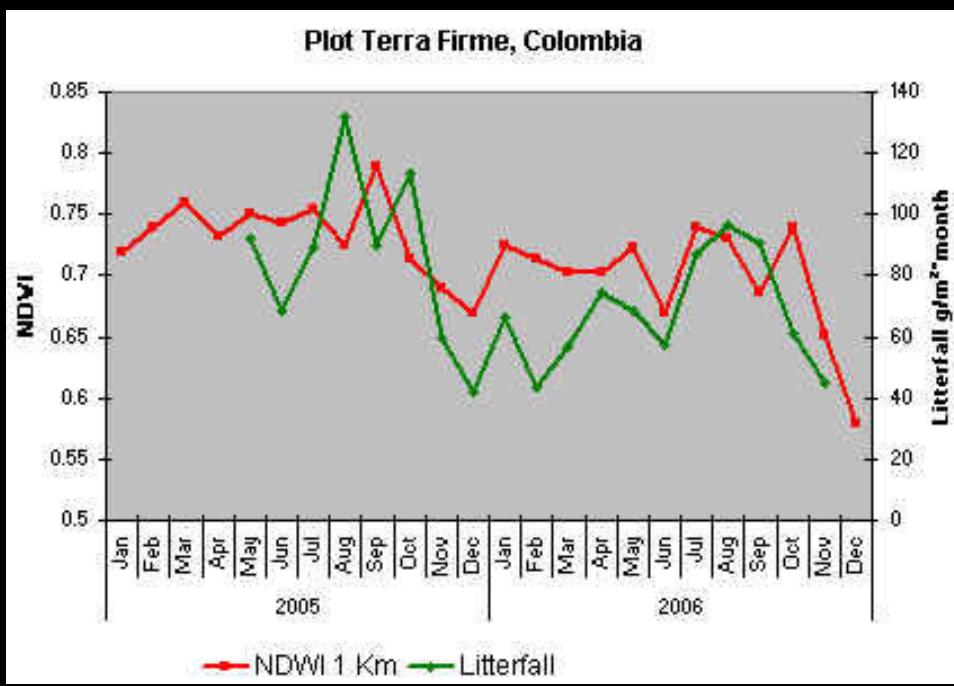
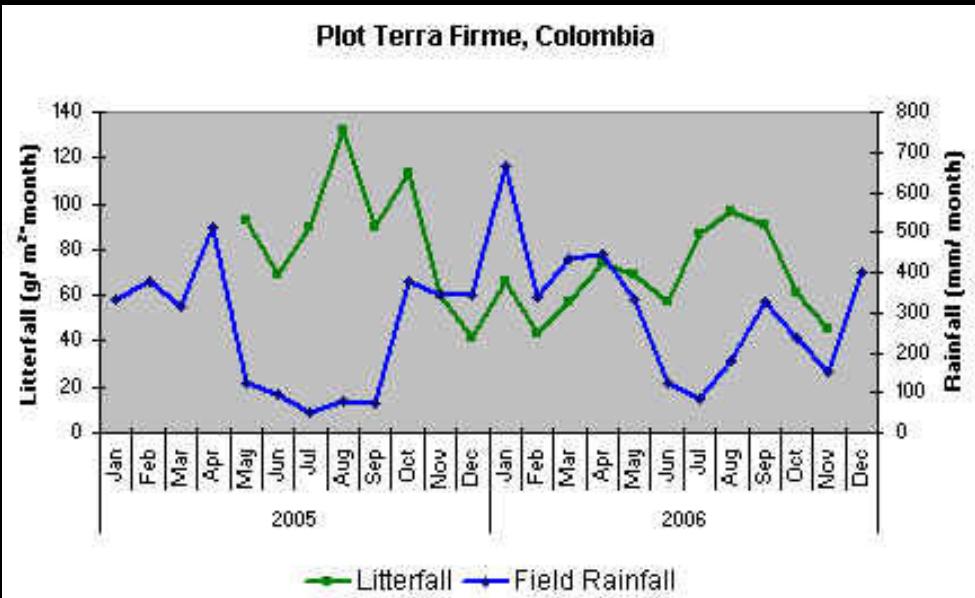
Results: Field data: Litterfall

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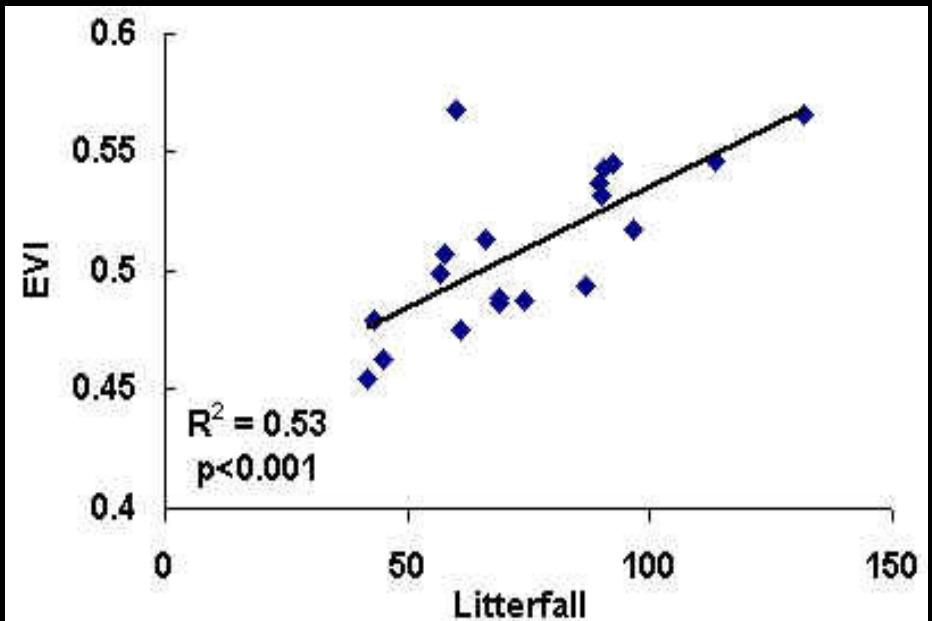
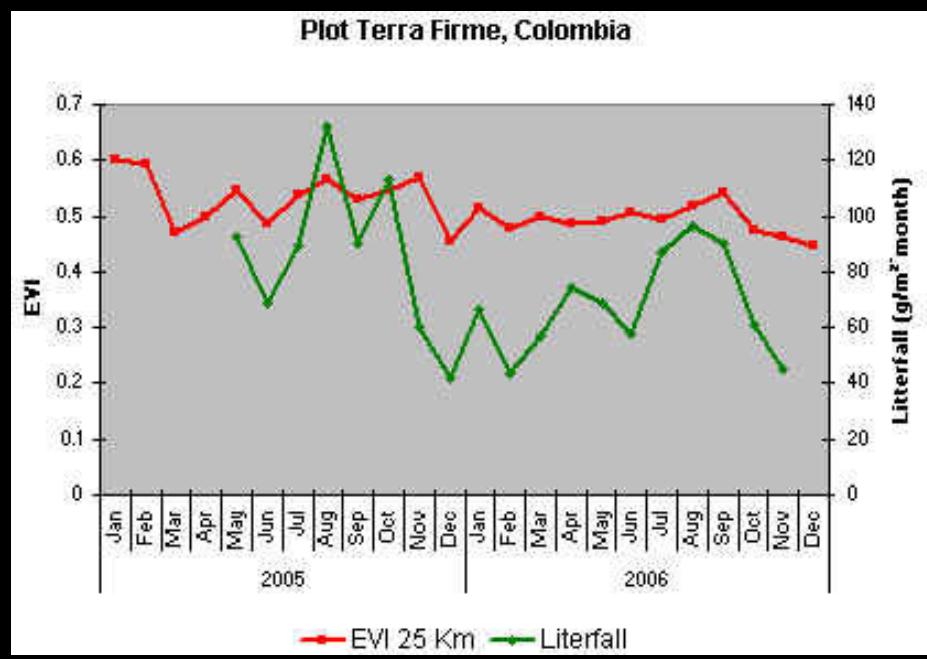
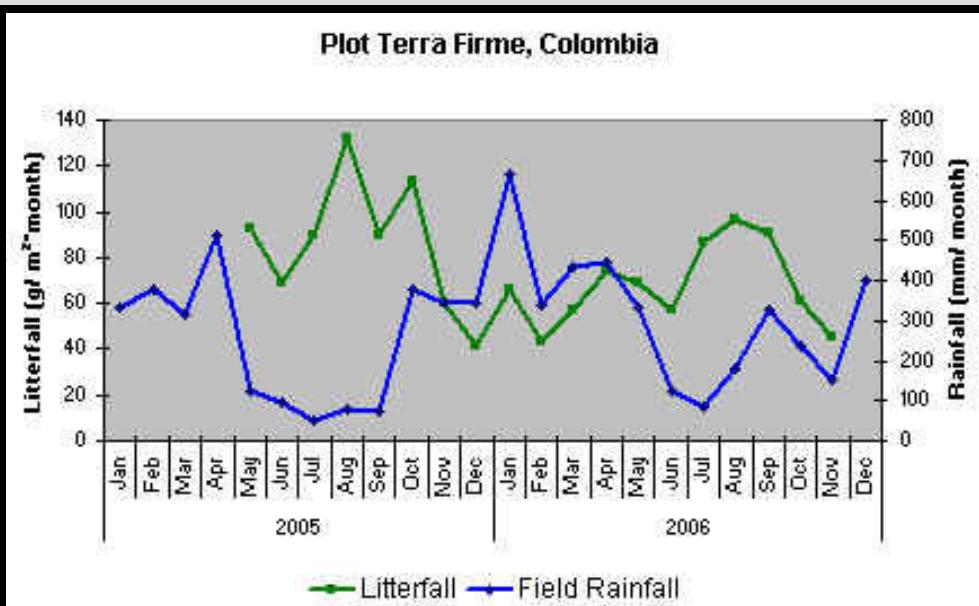
Results: Field data: Litterfall

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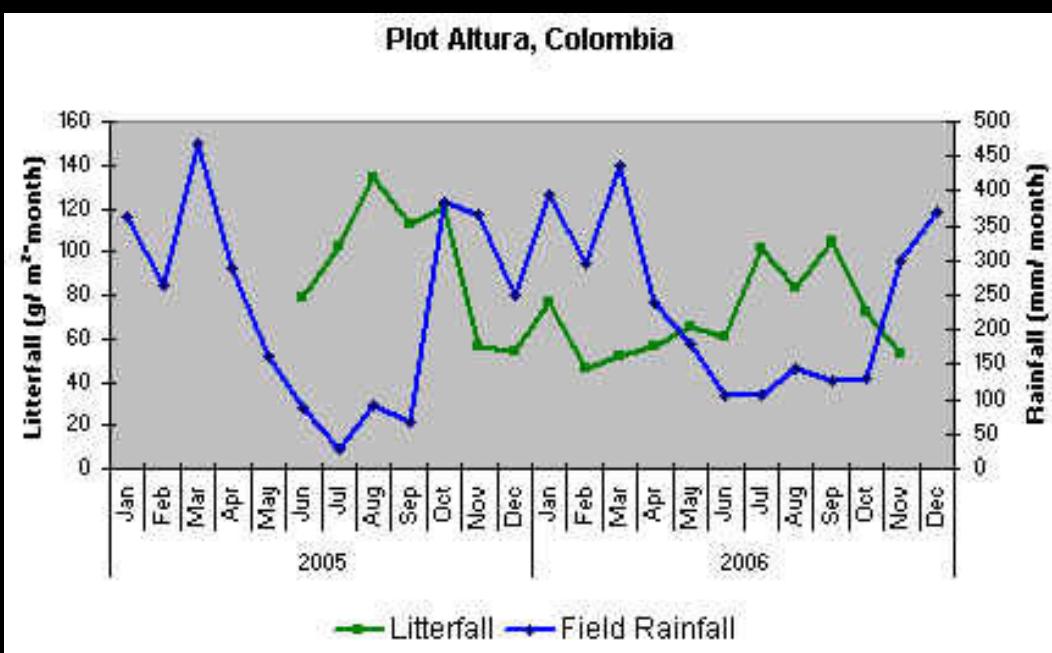
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lander@ouce.ox.ac.uk



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